
Meeting the China Challenge Is Meeting the Challenge of Comprehensive Engagement and Multilateralism

WING THYE WOO

The rise of China should more properly be understood as the return of China. First, China has not always been poorer than Western Europe. The GDP per capita (measured in 1990 international dollars) of China and Western Europe was \$450 for both in 0 AD, but by 1000 AD it was \$450 for China and \$400 for Western Europe (table 6.1). Second, Japanese growth since 1870 suggests that the income disparity between China and Western Europe need not be permanent. In 1870 the average Japanese income was 37 percent that of the average Western European income, but by 1998 it was 14 percent higher, and the growth experiences of South Korea and Taiwan since 1965 confirmed that catching-up growth was not unique to Japan. Third, China's average annual growth rate of 10 percent for the last 30 years gives hope that China has finally embarked on the path of modern economic growth described by Simon Kuznets (1966).

Wing Thye Woo is senior fellow at the Brookings Institution and professor at the University of California, Davis, and the Central University of Finance and Economics, Beijing. The author is grateful for helpful and insightful comments from participants of the Fifth International CASE Conference, Winds of Change: The Impact of Globalization on Europe and Asia, held in Kyiv, Ukraine, March 23–24, 2007. He is also immensely grateful to Marek Dabrowski and Anders Åslund for their kind patience in guiding this paper to its completion.

Table 6.1 GDP per capita around the world, 0 AD to 1998 AD
(1990 international dollars)

Country/ region	0	1000	1500	1600	1700	1820	1870	1913	1950	1973	1998
Western											
Europe	450	400	774	894	1,024	1,232	1,974	3,473	4,594	11,534	17,921
United States			400	400	527	1,257	2,445	5,301	9,561	16,689	27,331
Japan	400	425	500	520	570	669	737	1,387	1,926	11,439	20,413
China	450	450	600	600	600	600	530	552	439	839	3,117
India	450	450	550	550	550	533	533	673	619	853	1,746
World	444	435	565	593	615	667	867	1,510	2,114	4,104	5,709

Source: Maddison (2001, table B-21, 264).

China's very likely return to center stage in the global economy has given rise to immense optimism on some fronts and intense pessimism on others. Optimistic analysts have predicted that China's reemergence as an independent growth pole would create a new web of synergistic relationships that would unleash greater global prosperity. On the other hand, pessimistic analysts have pointed out that rising powers in the 20th century inevitably came into conflict with existing powers: Germany in the First World War, the Japan-Germany axis in the Second World War, and the Soviet Union in the Cold War.

The real lesson from the history of the 20th century is not that conflict is inevitable but that rising powers and existing powers should work hard together to avoid past mistakes—to falsify Karl Marx's quip that "history repeats itself, first as tragedy, second as farce." It is not naïve to think that conflict is preventable, because the most important power to rise and prevail in the 20th century, the United States, has in general been a stabilizing force in the international order. But averting a pessimistic outcome requires adherence to the multilateralist principle of the existing powers accommodating rising powers, and the latter becoming responsible stakeholders in the international system.

The dialogue between existing and rising powers must be comprehensive because the range of global public goods that must be supplied is very broad (ranging from the establishment of a universal postal system to the peaceful use of outer space), and the nature of some of these global public goods is highly complicated (e.g., a scheme to control the emission of greenhouse gases). In this chapter, I focus on an economic issue where the need to engage China in constructive dialogue is important for sustainable global growth: the protection of the world trading system.

Rising Protectionist Sentiments Against Trade with China

The threat of a major disruption in trade between China and the developed countries should be taken seriously. The turn against free trade is especially notable in the United States. The 2007 Pew Global Attitudes Survey revealed that the proportion of US residents who have a positive view of trade was 59 percent, a dramatic drop from the 78 percent reported from the 2003 survey (Pew Research Center 2003, 2007).

The rising skepticism about the benefits of free trade has come to focus on the large US overall trade deficit and the big Chinese overall trade surplus. China's current account balance became chronically in surplus in 1994 and started climbing steadily upward from 2001 on. The current account surplus went from 1.9 percent of GDP in 2000 to 2.8 percent in 2002, 4.2 percent in 2004, and 8.7 percent in 2006.¹ Recently, Jun Ma (2007), a perspicacious analyst at the Deutsche Bank, forecasted in December 2007 that China's current account surplus would reach 9.5 percent of GDP in 2007. One disharmonious result from this large sustained rise in China's current account surplus is that increasingly harsh words are being said about China's trading practices and exchange rate policy.

At a US congressional hearing in March 2007, Morris Goldstein (2007) opined that the renminbi was overvalued by 40 percent against the US dollar and accused China of exchange rate manipulation, a charge echoed by C. Fred Bergsten (2007). On June 14, 2007, four US senators introduced legislation "to punish China if it did not change its policy of intervening in currency markets to keep the exchange value of the currency, the yuan, low."² Both Hillary Clinton and Barack Obama, the frontrunners for the Democratic presidential nomination, declared that they supported the bill.³

The introduction of the US Senate bill was followed by demands from the International Monetary Fund (IMF) and European Union that China change its policy regime on external economic engagement. On June 19, 2007, the IMF, with the strong endorsement of the United States Treasury, adopted a new country surveillance framework that

sets out a catch-all obligation on countries not to adopt policies that undermine the stability of the international system, and lists a set of objective criteria that will be used to indicate whether a country is complying with its commitments. Warning lights will include large-scale currency intervention, the accumulation of reserves and "fundamental exchange rate misalignment"—a term that mirrors language in a bill before the US Congress that would impose penalties on nations that

1. The current account surplus as a percent of GDP was 1.6 in 1999, 1.9 in 2000, 1.5 in 2001, 2.8 in 2002, 3.2 in 2003, 4.2 in 2004, 7.2 in 2005, and 8.7 in 2006.

2. "4 in Senate Seek Penalty for China," *New York Times*, June 14, 2007.

3. "Clinton and Obama back China crackdown," *Financial Times*, July 5, 2007.

fail to correct such misalignments. . . . Rodrigo Rato, managing director of the IMF, said: "This decision is good news for the IMF reform programme and good news for the cause of multilateralism . . . [because this new framework]" gives clear guidance to our members on how they should run their exchange rate policies, on what is acceptable to the international community and what is not.⁴

According to the UK *Evening Standard*:⁵

European Trade Commissioner Peter Mandelson has warned that China is taking business with Europe for granted. Writing to EU President Jose Manuel Barroso, he said: "The Chinese juggernaut is, to some extent, out of control." China is the EU's largest source of manufactured goods but trade the other way is negligible. Mandelson called the relationship "deeply unequal" and said China was being "procedurally obstructive."

Under the headline "EU Hoping to Hit Back at Chinese on Trade," the *International Herald Tribune* reported on October 18, 2007 that:

Peter Mandelson, the European trade commissioner admitted] that dialogue and cooperation with Beijing have failed to secure concessions for Europe, [and he called for the European Union to] align policy more closely with Washington and be more ready to take cases against China to the World Trade Organization.

The comments came before EU heads of government were to meet on Thursday in Lisbon to discuss calls from Nicolas Sarkozy, the French president, and Angela Merkel, the German chancellor, for a more aggressive stance toward emerging Asian economies over trade.

These recent developments in the United States and European Union should be seen as warnings that China, Europe, and the United States could be heading toward a trade war.

Nature of the Link Between Globalization and Worker Anxiety in the United States

It is not uncommon to encounter allegations that the bilateral US-China trade deficit represents the export of unemployment from China to the United States. A recent study by Robert Scott (2007) of the Economic Policy Institute used an input-output model to arrive at the claim that the bilateral trade deficit of \$49.5 billion in 1997 caused the loss of 597,300 jobs that year and the 2006 bilateral trade deficit of \$235.4 billion caused the loss of 2,763,400 jobs, and that every state suffered a net loss in jobs from the rise in the bilateral trade deficit during 1997–2006. The alleged job loss in 2006 from the bilateral trade deficit implied that the 2006 unemploy-

4. "IMF Set to Scrutinize Exchange Rate Policies," *Financial Times*, June 19, 2007.

5. "Mandelson: China Trade 'Out of Control,'" UK *Evening Standard*, October 17, 2007.

ment rate was 1.21 percentage points higher than if the bilateral trade balance were zero.⁶

Another alleged outcome of US-China trade that is commonly heard is that the bilateral deficit has forced down US wages.⁷ As it is well documented that US worker anxiety has increased steadily in the last two decades, just as US-China trade has increased steadily, it is tempting indeed to blame the rise in US worker anxiety (Otoo 1997, Valletta 2007) on China's rise as a major trading nation.

Actually, an analyst with a broader grasp of global developments would have seen that the integration of China into the international division of labor was only part of the broader process of economic globalization that accelerated in the last decade of the 20th century and hence would have argued that economic globalization must have depressed wages in the advanced countries and thus heightened worker anxiety in those countries. The common understanding from the post-1990 integration of the labor force in the former Soviet Union, India, and China (SIC) into the international division of labor is that this must have exerted large downward pressures on US wages.⁸

Table 6.2 shows that the distribution of the global labor force was already 2.315 billion in 1990, of which the combined SIC labor force was 1.232 billion. This division of labor was certainly unnatural because up until then half of the world's workforce had been kept out of it by autarkic SIC policies. A decade after the start of internationalization, the number of workers involved in the international economic system had increased to 2.672 billion in 2000, with 1.383 billion SIC workers. The Heckscher-Ohlin model

6. The US civilian labor force in 2006 was 151.4 million (*Economic Report of the President 2007*, table B-35, available at www.gpoaccess.gov).

7. Strictly speaking, import competition could lower US wages permanently without increasing the unemployment rate permanently. The structural adjustment required to accommodate the increased imports would cause a temporary increase in the unemployment rate.

8. The economic isolation of the Soviet bloc started crumbling when the new non-Communist Solidarity government of Poland began the marketization and internationalization of the Polish economy on January 1, 1990. The economic transition and political disintegration of the Soviet bloc became irreversible when Yeltsin replaced Gorbachev as the unambiguous leader of Russia in August 1991 and implemented market-oriented reforms in January 1992. For the Chinese elite, the events in the Soviet Union confirmed that there did not exist a third way in the capitalism-versus-socialism debate. In early 1992, Deng Xiaoping led a successful campaign to put China firmly on the path of convergence to a private market economy. In 1991 India faced a balance of payments crisis and responded by going well beyond the administration of the standard corrective macroeconomic medicine of fiscal-monetary tightening and exchange rate devaluation to comprehensive adjustments of microeconomic incentives. The trade regime was deregulated significantly, restrictions on foreign investment were relaxed, reform of the banking sector and capital markets was initiated, and divestment of public enterprises and tax reform were announced.

Table 6.2 Distribution of the global labor force, 1990 and 2000 (millions)

Category	1990	2000 ^a
Non-SIC countries		
Developed	403	438
Developing	680	851
Total	1,083	1,289
SIC countries		
Former Soviet bloc	213	214
India	332	405
China	687	764
Total	1,232	1,383
Global total	2,315	2,672

SIC = Former Soviet bloc, India, and China

a. The 2000 total is different from that in Freeman (2004).

Source: Freeman (2004).

would predict that this doubling of world labor, achieved by bringing in cheaper SIC labor, would lower the relative price of labor-intensive goods and hence reduce the income of labor in the industrialized countries.⁹

The fact that US capital could now move abroad to set up production facilities in the SIC economies to service both the US and foreign markets meant another channel (besides the cross-border movement of goods) for globalization to depress the US labor income. It is important to note that the imposition of a very high US tariff would not only drastically curb imports from SIC but also radically reduce US foreign direct investment (FDI) in the SIC.

There is no denying that the Heckscher-Ohlin model provides a coherent mechanism for globalization to lower US labor income and to cause US unemployment to rise in the process. The fact that the overall US trade deficit has widened steadily from 1.5 percent of GDP in 1991 to 2.5 percent in 1996, 4.4 percent in 2001, and 6.7 percent in 2006 could only have worsened the drop in labor income and the rise in the unemployment rate. This is because even if US exports had increased by the same amount as US imports, there would still be deleterious consequences on US workers because US exports are less labor-intensive than US imports.

The inconvenient truth, however, is that the above two expectations based on the Heckscher-Ohlin model have turned out to be wrong. The alleged rise in US unemployment is not seen in the 1998–2006 period chosen by Robert Scott (2007). The average unemployment rate of 4.9 percent

9. More accurately, the wages of the formerly isolated SIC workers would rise while those of workers in the industrialized countries would fall.

during that time was actually lower than the rates in the immediately preceding periods of 1980–88 and 1989–97, which were 7.5 percent and 6 percent, respectively. In reality, the US economy was a highly successful job creation machine in 1998–2006.

Many analysts have pointed out that the inflation-adjusted weekly earnings (wages and salaries) of nonsupervisory employees in 1980 was higher than in every year in the 1982–2006 period.¹⁰ So is the backlash against globalization in the G-7 countries the result of the immiseration of their low-skilled workers? The answer is no because earnings is only one of the two components of worker compensation; the other is employer-paid benefits (e.g., pension contributions and health insurance). The omission of benefits gives the wrong picture on labor income because the growth of benefits has been especially rapid in the last decade due to the soaring costs of health insurance. When we measure labor income as the sum of earnings (wages and salaries) and benefits, then we find that labor income in 1980 was lower than in every year in the 1982–2006 period, refuting the conclusion drawn from looking at only the earnings component of labor income.

Figure 6.1 reports the evolution of four data series over the 1979–2006 period, each indexed at 100 in December 1979:

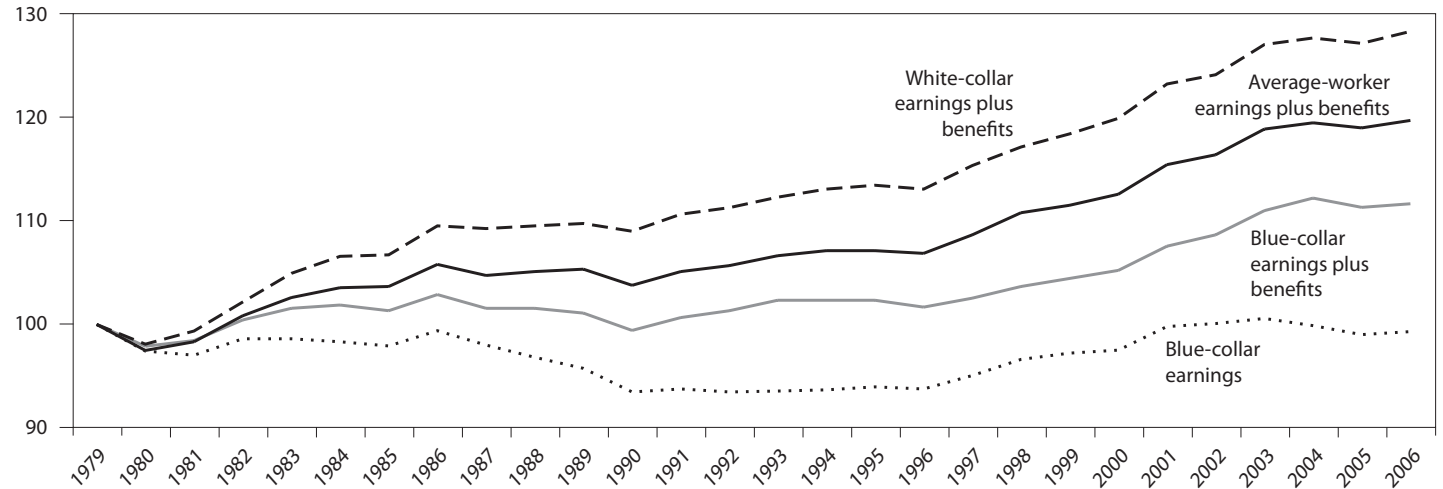
- series (a) is the inflation-adjusted earnings received by a blue-collar worker in December of each year,
- series (b) is the inflation-adjusted compensation of a blue-collar worker in December of each year,
- series (c) is the inflation-adjusted compensation of an average worker in December of each year, and
- series (d) is the inflation-adjusted compensation of a white-collar (excluding sales occupations) worker in December of each year.

Series (a) shows that the earnings of the blue-collar worker in 2006 was 1 percent lower than in 1979. Series (b) shows that the compensation (earnings plus benefits) of the same worker in 2006 was 12 percent higher than in 1979. In fact, blue-collar compensation since 1991 has been higher than in 1979. Furthermore, it started growing faster beginning in 1997, just as the US overall trade deficit started growing faster. Series (d) shows that the compensation of the white-collar worker in 2006 was 28 percent higher than in 1979. This much higher income growth of the white-collar worker caused the compensation of the average worker, series (c), in 2006 to be 20 percent less than in 1979. The important message from figure 6.1 is that the income growth of the United States in the 1990–2006 period of accelerated

10. For example, see figure 1 in Polaski (2007).

Figure 6.1 Compensation received by US workers, 1979–2006

1979 = 100



Note: Each data series is produced by combining the relevant Standard Industrial Classification (SIC)-based series of the 1979–2005 period with the relevant North American Industrial Classification System (NAICS)-based data for 2006.

Source: BLS (2007a, 2007b).

globalization was shared by both low- and high-skilled workers, albeit the latter getting a larger share of the income growth.

In my opinion, the key to reconciling the theoretical predictions of the Heckscher-Ohlin model with the actual outcomes is to recognize that economic globalization was not the only significant economic process in the last two decades. The other was accelerated technological innovation, especially in the advanced economies, notably the United States. The reason US real labor income has not fallen despite economic globalization is that US productivity growth has been remarkably high since the late 1980s, enabled in large part by the information and communication technology (ICT) revolution. It is instructive here to note that Alan Greenspan has attributed his (generally hailed) superior ability in making the “correct” policy to his early recognition that the United States entered a period of rapid technological innovation in the late 1980s.

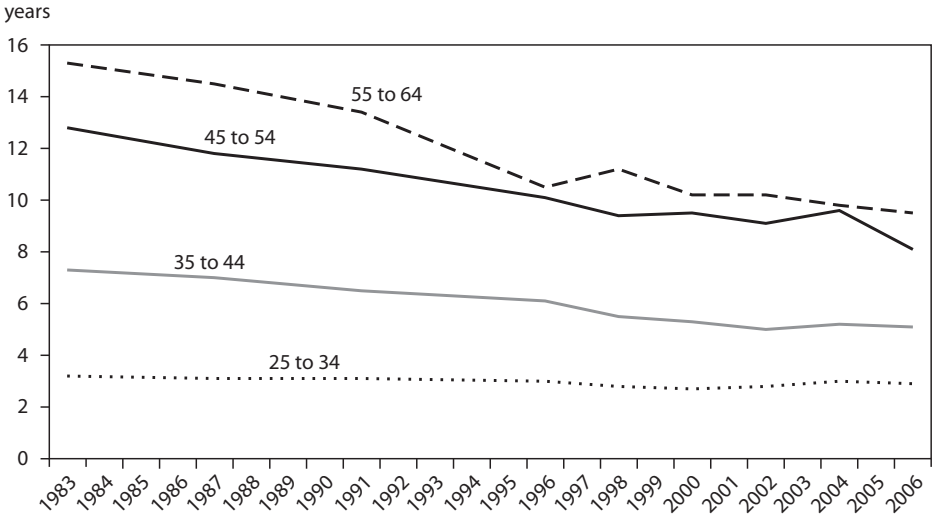
I note that while this high productivity growth was able to offset the downward pressures on the real labor income from economic globalization, it was also likely to have joined economic globalization in diminishing the labor share of GDP.¹¹ Recent technological innovations have not just substituted capital for labor (e.g., fewer secretaries are needed because answering machines can now convert messages into voice files and email them to traveling professionals), they have also transformed many traditionally nontradable services to tradable services, allowing jobs to be outsourced to foreign service providers. For example, the ICT revolution has allowed offshore call centers to handle questions from US customers, offshore accountants to process US-based transactions, and offshore medical technicians to read the X-rays of US patients.¹²

What, then, is fueling US resentment toward imports from China when the average US worker is experiencing neither more unemployment nor lower compensation? The explanation is that the US worker is feeling more insecure in the 2000s than in the 1980s because of the faster turnover in employment. Globalization and technological innovation have required workers to change jobs more often and they find that there are consider-

11. Besides capital-biased technological innovation and economic globalization, two other developments in the US economy are likely to have contributed to the decline in labor share of GDP. The first is changes in the institutional nature of the US labor market; union membership has declined and there has been an upward shift in compensation norms for high-level executives. (This shift in compensation norms could reflect a combination of a shift in social attitudinal norms and more collusion between managers and their boards. Akerlof (2007) provides a recent discussion of “norms” and their economic consequences.) The second development is increased immigration to the United States (before 2001); see Borjas (1994) and Ottaviano and Peri (2005).

12. There is a large empirical literature on the relative impact of technological changes and globalization on the US wage rate; notable contributions include Sachs and Shatz (1994) and Feenstra and Hanson (1996, 1998).

Figure 6.2 Median tenure at current job by age of US workers, 1983–2006



able costs associated with each job change because of the inadequacies of the US social safety nets.

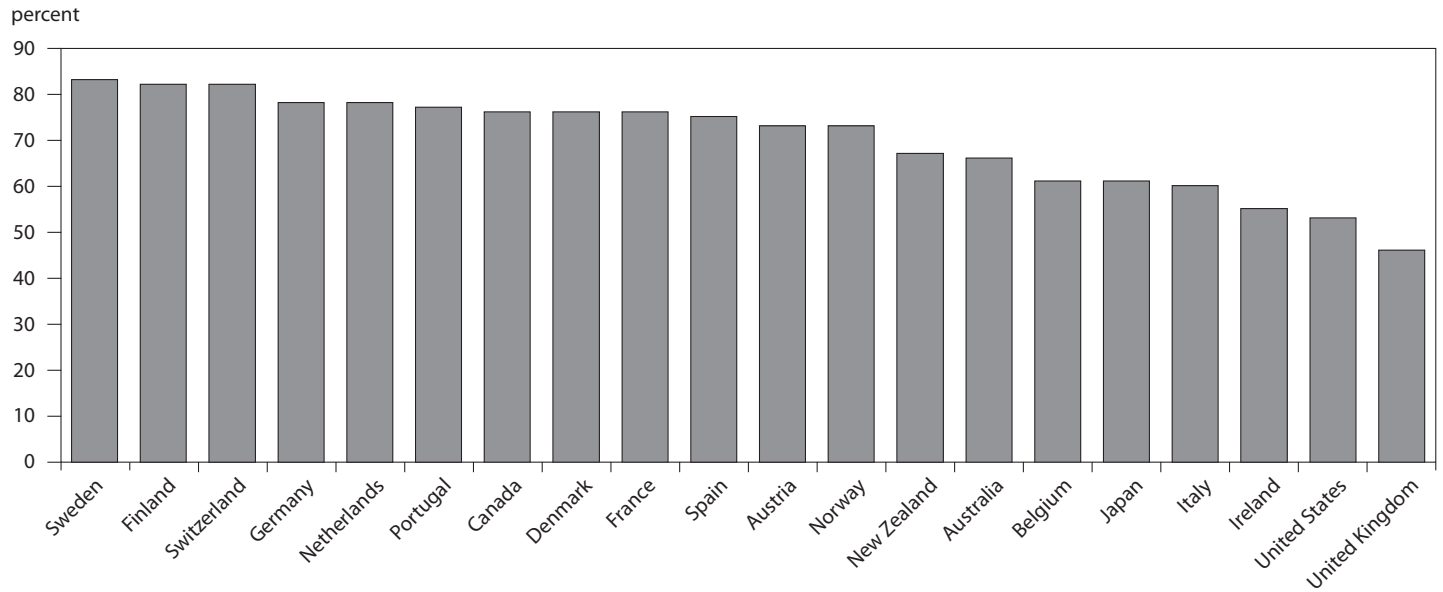
The more frequent job changes are shown in figure 6.2 by the declining trend in the length of median job tenure for older male workers. From 1987 to 2006, the median job tenure for males

- aged 33 to 44 decreased from 7.0 to 5.1 years,
- aged 45 to 54 decreased from 11.8 to 8.1 years, and
- aged 55 to 64 decreased from 14.5 to 9.5 years.

In terms of social safety nets, Gary Burtless (2005) reports that in the G-7 in 2004, only the United Kingdom had less generous unemployment benefits than the United States. Figure 6.3 shows that an unemployed person in the United States received initial unemployment benefits that equaled 53 percent of previous income compared with 78 percent in Germany, 76 percent in Canada and France, 61 percent in Japan, 60 percent in Italy, and 46 percent in the United Kingdom. Figure 6.4 shows that the duration of unemployment benefits was 6 months in the United States compared with 12 months in Germany, 9 months in Canada, 30 months in France, 10 months in Japan, and 6 months in Italy and the United Kingdom.

The dilemma is that the fast rate of technological innovation has been good for labor income but bad for job stability because technological improvements in the production process usually mean occupational obsolescence. The unfortunate fact is that the temporary unemployment associated with job changes is especially painful in the United States compared with

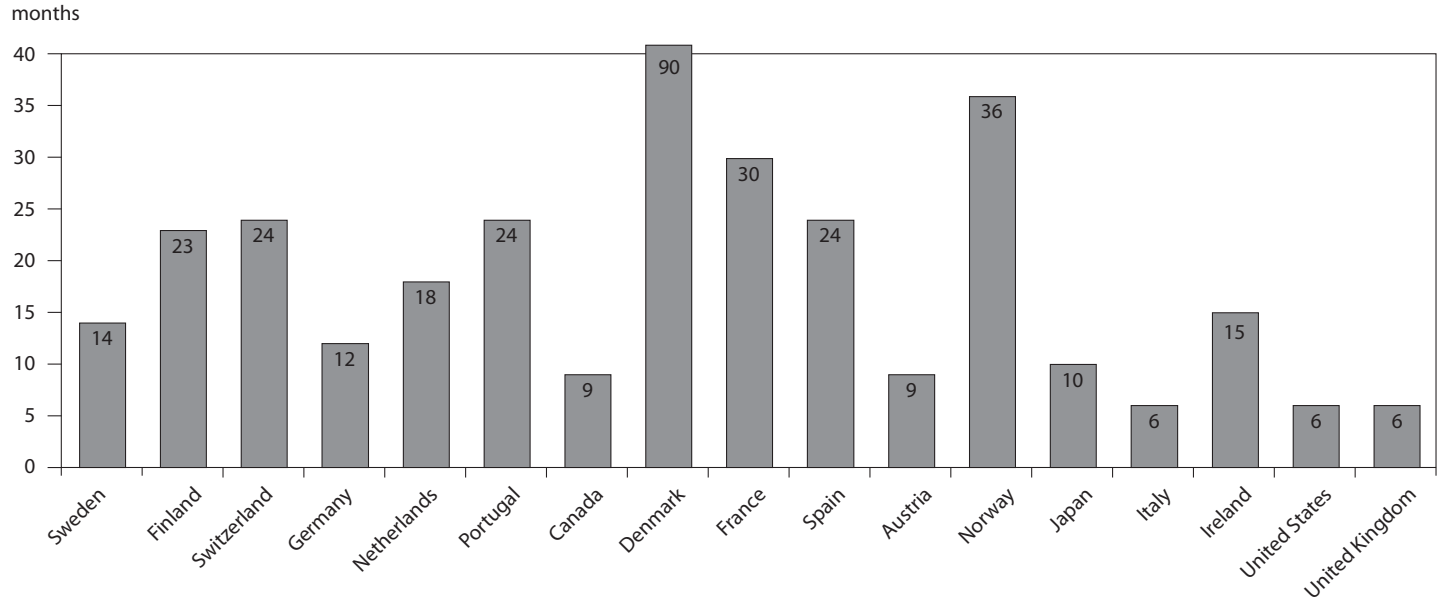
Figure 6.3 Indicators of unemployment benefit generosity in 20 OECD countries, 2004



OECD = Organization for Economic Cooperation and Development

Note: Figure shows percent of net earnings initially replaced by after-tax value of unemployment benefits (married single earner with two children who is paid the average wage).

Source: Burtless (2005).

Figure 6.4 Duration of unemployment benefits, 2004

Note: Australia and New Zealand offer only means-tested benefits. If the eligibility test continues to be met, unemployment benefits can last indefinitely. Belgium essentially provides unemployment benefits of indefinite duration.

Source: Organization for Economic Cooperation and Development, *Benefits and Wages: OECD Indicators*, 2004 edition.

most of the advanced countries because of the less generous social safety nets and because health coverage is usually supplied by the employer.

In short, the popular outcry in the United States and the European Union against China's trade surpluses is really misplaced. Even if China's trade balance were zero, the pains of structural adjustment and income redistribution caused by technological innovations, institutional changes, globalization, and immigration would still be there. The additional pain from the incremental structural adjustment caused by the widening trade deficit is minor by comparison.

In summary, it is my hypothesis that the worker anxiety so well documented in the United States has been created not by a lower real wage and a higher unemployment rate but by job insecurity resulting from (1) occupational obsolescence because of rapid technological innovation and (2) import competition from economic globalization, and that US job insecurity is made worse by inadequate social safety nets and by the inappropriate design of the funding of health insurance.

Understanding the Evolution of China's Current Account Balance

Since 1986,¹³ China's bilateral surplus with the United States has exceeded its overall trade surplus, meaning that China is running massive trade deficits with some of its other trade partners. The changing configuration of China's bilateral trade balances since 1986 reflects mainly the steady expansion of production networks in China. In the new geographical division between the production of components and their assembly, China usually makes the cheaper components and assembles the final products by combining domestically produced and imported components. The fast transfer of manufacturing and assembly operations from Japan, Taiwan, and South Korea to China translates directly into high growth in the China-US bilateral trade surplus because this transfer correspondingly reduces the bilateral Japan-US and South Korean-US trade surpluses. In short, the China-US trade deficit could be reduced by transferring the assembly operations of Korean, Taiwanese, Japanese, and European production networks to Vietnam, but the Vietnam-US trade deficit would then increase, leaving the overall US trade balance unchanged.

China's chronic and growing overall trade surplus reveals a deep-seated serious problem in its economy: its dysfunctional financial system. This problem is revealed by the aggregate-level accounting identity that the overall current account balance (of which, in China, the overall trade account is the biggest part) is determined by the fiscal position of the gov-

13. Except for the four years—1990, 1991, 1997, and 1998—associated with an economic downturn in China.

ernment and the saving-investment decisions of the state-controlled enterprise (SCE) sector and the private sector.¹⁴ Specifically:

$$CA = (T - G) + (S_{SCE} - I_{SCE}) + (S_{private} - I_{private})$$

where CA = current account in the balance of payments;¹⁵ T = state revenue; G = state expenditure (including state investment); S_{SCE} = saving of the SCEs; I_{SCE} = investment of the SCEs; $S_{private}$ = saving of the private sector; and $I_{private}$ = investment of the private sector.

The Chinese fiscal position ($T - G$) has for the last decade been a small deficit and so is not the cause for the swelling current account surpluses of the 2000s. The current account surplus exists because the sum of savings by SCEs and the private sector exceeds the sum of their investment expenditures, and it has expanded steadily because the nongovernment savings rate has been rising steadily. I argue later that there is a link between the existence of the current account surplus and the growth of the surplus.

Why has China's financial system failed to translate savings into investments? Such was not always the case. Before 1994, the voracious absorption of bank loans by SCEs to invest recklessly kept the current account usually negative and the creation of nonperforming loans (NPLs) high. When the government imposed stricter controls on the state-owned banks (SOBs) from 1994 onward (e.g., removing top bank officials from banks that lent more than their credit quota or that allowed the NPL ratio to increase too rapidly), the SOBs slowed the growth of loans to SCEs. This cut-back created an excess of savings because the SOB-dominated financial sector did not rechannel the released savings (which were also increasing) to finance the investment of the private sector. This failure in financial intermediation by the SOBs is quite understandable. First, the legal status of private enterprises was, until recently, lower than that of the state enterprises; and, second, there was no reliable way to assess the balance sheets of the private enterprises, which were naturally eager to escape taxation. The upshot was that the residual excess savings leaked abroad in the form of the current account surplus. Thus inadequate financial intermediation has made developing China a capital-exporting country!

This perverse current account outcome is not new. Before the mid-1980s, Taiwan experienced this same problem when all Taiwanese banks

14. The SCE category covers companies classified as SOEs (state-owned enterprises) and joint ventures and joint stock companies controlled by third parties (e.g., legal persons) who are answerable to the state. For an analysis of how the principal-agent problem in SCEs has shaped China's macroeconomic performance, see Woo (2006).

15. $CA = (X - M) + R$, where X = export of goods and nonfactor services, M = import of goods and nonfactor services, and R = net factor earnings from abroad (i.e., export of factor services).

were state-owned and were operated under a civil service regulation that required loan officers to personally repay bad loans that they had approved. The result was a massive failure in financial intermediation that caused Taiwan's current account surplus to rise to 21 percent of GDP in 1986. The reason China has not been producing the gargantuan current account surpluses seen in Taiwan is its persistently large amount of SCE investments.

Why is the saving rate of the nongovernment sector rising? The combined savings of the SCE and non-SCE sectors rose from 20 percent in 1978 to 30 percent in 1987 and has remained above 45 percent since 2004. In discussions about the rise of the saving rate, a common view is that it reflects the uncertainty about the future that many SOE workers feel in the face of widespread privatization of loss-making SOEs. I find this explanation incomplete because it seems that there has also been a rise in the rural saving rate even though rural residents have little to fear about the loss of jobs in the state-enterprise sector because none of them are employed there.¹⁶

Two general changes have caused both urban and rural saving rates to rise significantly. The first change relates to increased worries among the Chinese about the future. The steady decline in state subsidies to medical care, housing, loss-making enterprises, and education coupled with mismanagement of pension funds by the state have led people to save more to ensure against future bad luck (e.g., sickness, job loss), buy their own lodging, build up nest eggs for retirement, and invest in their children.

The second change is the secular improvement in the official Chinese attitude toward market capitalism. Given the high rate of return to capital, this increasingly business-friendly attitude in the Communist Party of China has no doubt encouraged both rural and urban residents to save for investment—in other words, greater optimism about the future has spawned investment-motivated saving.

In my explanations for the existence of the current account surpluses and the growth of the surplus, there is a common element in both: China's financial system. The fact is that saving behavior is not independent of the sophistication of the financial system. An advanced financial system has a variety of financial institutions that enable the pooling of risks by providing medical, pension, and unemployment insurance and that transform savings into education, housing, and other types of investment loans to the private sector. In general, the more sophisticated a financial system, the lower the saving rate, a proposition that finds formal statistical support in my work with Liang-Yn Liu (Liu and Woo 1994, Woo and Liu 1995).

16. The Economist Intelligence Unit (2004, 23) reported that "farmers' propensity to save seems to have increased."

In short, China generates a chronic current account surplus because of inadequate financial intermediation: The dysfunctional financial system fails to pool risks to reduce uncertainty-induced savings and fails to provide loans to reduce investment-motivated saving.

Misplaced High Hopes on the Curative Power of Renminbi Appreciation

While there is little doubt that a large appreciation of the renminbi against the dollar—say, 40 percent as suggested by Morris Goldstein (2007)—could eliminate the bilateral US-China trade deficit as well as China's overall trade surplus, this move would only hurt China and not "save" the world. *Ceteris paribus*, in the aftermath of the 40 percent renminbi appreciation, foreign companies producing in China for the G-7 markets would move their operations to other Asian economies (e.g., Vietnam and Thailand) and export from there, and G-7 importers would start importing the same goods from other Asian countries instead. In the absence of a collective appreciation of all Asian currencies, the renminbi appreciation will only reconfigure the geographical distribution of the global imbalances and not eliminate them significantly.

It is instructive to recall the experience of yen-bashing in the 1980s when the yen-dollar exchange rate went from 248 in 1984 to 202 in 1985, 162 in 1986, 128 in 1987, and then to 123 in 1988. There was a significant decline in the Japanese overall current account surplus, from 3.7 percent of GDP in 1985 to 2.7 percent in 1988, but the improvement in the US overall current account deficit in the same period was insignificant, from 2.8 percent of GDP to 2.4 percent. An important reason for this small change was that Japanese companies started investing in production facilities in Southeast Asia and started exporting to the United States from there. In a way, the present expectation of many analysts that a humongous renminbi appreciation would reduce the US overall current account deficit represents the triumph of hope over experience.

There is only one meaningful definition of the "correct exchange rate," and it is the "market-clearing exchange rate"—the exchange rate generated by foreign exchange markets in the absence of any central bank interventions. The fact that the People's Bank of China has been accumulating foreign reserves every period means that the renminbi is undervalued. However, what would happen if China were to now go further in its marketization of foreign exchange transactions by removing its capital controls? Diversification of asset portfolios by private Chinese agents would surely result in a great outflow of funds, possibly causing the renminbi to depreciate instead. In such a case, the present exchange rate of 7.3 renminbi per dollar would be "overvalued" compared to the "complete free

market exchange rate.” Of course, no one knows whether the “complete free market exchange rate” would be higher or lower than 7.3 renminbi per US dollar.

Suppose the value of the “complete free market exchange rate” is 6.5 renminbi per US dollar, and the “market-clearing exchange rate with controls on capital outflows” is 4.5 renminbi per US dollar, and suppose the government stops intervention immediately and then removes capital controls a few years later after it has strengthened the supervision, management, and technical capability of the domestic financial institutions. One plausible result of this particular two-step market liberalization (which I call option A) would be renminbi appreciation to 4.5 renminbi per dollar upon cessation of foreign market intervention, followed by renminbi depreciation to 6.5 renminbi per dollar upon removal of the capital controls.

Suppose China adopts another form of two-step liberalization (option B), incremental appreciation of the renminbi and removal of capital controls after a few years. Option B is better than option A because the exchange rate overshooting in option A creates an unnecessary to-and-fro movement in resources. As mentioned, the removal of capital controls could very well cause the renminbi to depreciate past 7.3 renminbi per dollar to, say, 8.5 renminbi per dollar, meaning that option A would result in very severe exchange rate overshooting compared to option B.

In effect, the Chinese government has been implementing a form of option B since July 2005. But I believe the government has chosen a speed of exchange rate adjustment that is too slow, causing the renminbi to depreciate significantly against the euro. I recommend that the Chinese government increase the speed of the renminbi appreciation—but not in the form of an immediate discrete 10 to 15 percent appreciation as advocated by Goldstein (2007).¹⁷

In my opinion, the calls by some economists for the use of the exchange rate mechanism to solve China’s external imbalance are only partially correct. Given China’s capital controls, a freely floating currency regime could mean a value for the renminbi that would be greatly overappreciated compared to its value under free capital flows and could therefore reduce economic growth significantly.¹⁸ Freeing capital flows is not, however, an option at this time. Given the weakness of the balance sheets of China’s state-owned banks and the considerable embezzlement of state assets that

17. My analysis therefore leads me to agree with the three recent policy positions of the US Treasury: (1) China must increase “the pace of reform in the financial services market” (Paulson 2007); (2) China has not engaged in currency manipulation; and (3) China should increase the rate of renminbi appreciation.

18. In Robert Mundell’s opinion, “China’s growth rate could fall by half and FDI could slow to a crawl if the country were to abandon its long-standing support of pegging the currency.” Quoted in “Abandoning peg will slash growth 50 pc in China,” *South China Morning Post*, September 15, 2003.

has occurred, as well as the experience with the Asian financial crisis, I advise against allowing the free movement of capital in the short term.

The correct way to think about exchange rate management is to analyze the issue in the context of overall macroeconomic management and not just in terms of its impact on the balance of payments. It is very likely that there are alternative combinations of macroeconomic policies that would produce results superior to the one generated by appreciating the renminbi alone. The general point is that because the balance of payments is only one of the main outcomes of concern¹⁹ and the exchange rate is only one of the ways²⁰ to affect it, it is seldom optimal to concentrate exclusively on one policy target (which does not dominate the other policy targets in importance) and then to employ only one particular policy tool (which is chosen idiosyncratically) to achieve that policy target. In short, the much-touted solution of an immediate 25 percent revaluation of the Chinese renminbi against the US dollar does not deserve the central place it has occupied in the discussions of what is to be done about the large and growing trade imbalances with China.

A Multilateral Policy Package to Address Trade Tensions with China

The real source of the anxieties that have given rise to the current US obsession with renminbi appreciation is not the large trade imbalances but the large amount of structural adjustment necessitated by the acceleration of economic globalization and of labor-saving technological progress. Dollar depreciation and trade barriers will slow but not stop the process of structural adjustment because the other main (and most possibly bigger) driver of structural adjustment in the United States is technological progress. The optimum solution is a policy package that emphasizes multilateral actions to achieve several important objectives. It is bad economics and bad politics to dwell on just one region (China alone), one instrument (renminbi appreciation alone), and one target (external imbalance).

The multilateral policy package that I propose can be framed as answers to the following three questions:

1. What should the United States do?
2. What should China do?
3. What should the United States and China do collaboratively?

19. The inflation and unemployment rates would be among the other key concerns.

20. Other ways include monetary and fiscal policies.

What Should the United States Do?

Congress should hasten the reduction in fiscal imbalance, strengthen social safety nets and programs that upgrade the skills of (especially) the younger workers, and make health care insurance coverage independent of individual employers. In particular, the Trade Adjustment Assistance (TAA) program still functions inadequately after its overhaul in 2002. Lael Brainard (2007) reported:

Participation has remained surprisingly low, thanks in part to confusing Department of Labor interpretations and practices that ultimately deny benefits to roughly three-quarters of workers who are certified as eligible for them. TAA has helped fewer than 75,000 new workers per year, while denying more than 40 percent of all employers' petitions. And remarkably, the Department of Labor has interpreted the TAA statute as excluding the growing number of services workers displaced by trade. . . . Between 2001 and 2004, an average of only 64 percent of participants found jobs while they participated in TAA. And earnings on the new job were more than 20 percent below those prior to displacement.

In addition to improving the TAA program, the establishment of wage insurance is an excellent way to bring US social safety nets more in line with the type of structural adjustments driven by globalization and technological changes. Occupational obsolescence created by the latter should not be forestalled by inadequate regulatory measures but accommodated by establishing extensive skill-upgrading programs (e.g., training loans, apprentice stipends) and improving the formal education system, especially at the K-12 level.

What Should China Do?

The obvious short-run policy package has three components. First, the steady process of renminbi appreciation begun in July 2005 should be quickened and used more aggressively as an anti-inflation instrument. Second, import liberalization should be accelerated (e.g., implement seriously the commitments made in negotiations for World Trade Organization [WTO] membership, like intellectual property rights protection) and expanded beyond WTO specifications.

The third component of the short-run policy package is to have an expansionary fiscal policy (e.g., rural infrastructure investments) to soak up excess savings, with an emphasis on import-intensive investments (e.g., buying airplanes and sending students abroad). There must be time limits on expanded public works and SCE investments because, in the long run, the large public investments could follow an increasingly rent-seeking path that is wasteful (e.g., building a second big bridge to a little-populated

island to benefit a politically connected construction company, as in Japan), and the large SCE investments could convert themselves into nonperforming loans at the SOBs.

It is now common to hear calls for China to rebalance its growth path by reducing savings to increase consumption. This advice makes sense only if increasing consumption will reduce the current account surplus without reducing the level of investment. Growth requires an enlargement of output capacity, and a government-induced increase in consumption that lowers investment will maintain full usage of the existing output capacity but will diminish the expansion of output capacity, causing a lower GDP growth rate and, hence, a slower absorption of China's surplus labor. Furthermore, China still has a long way to go before its technological level reaches that of the G-7, and technological upgrading requires investing in more modern capital equipment. So a policy that increases consumption and decreases investment is not only a slow-growth policy, it is also a slow technological-upgrade policy.

It is likely that consumption could be increased without lowering investment by (1) the state's provision of an integrated health insurance system, a comprehensive pension system, and an extensive scholarship program; and (2) the financial system's provision of more sophisticated financial products (e.g., education and housing loans) and various types of insurance schemes and discontinuation of its discrimination against private investors. The establishment of a modern financial system requires the establishment and growth of competitive *domestic* private banks. As China is required by its WTO accession agreement to allow foreign banks to compete against its SOBs on an equal basis by 2007, it would be akin to self-loathing not to allow the formation of truly private banks of domestic origin.

I therefore recommend that, after the recapitalization of the four big state banks, at least two be broken into several regional banks and most of these privatized. It would be a good idea to sell a few of the regional state banks to foreign banks to facilitate the transfer of modern banking technology to Chinese banks because the more local staff the foreign bankers train, the larger the pool of future managers for Chinese-owned banks. At the same time, the laws governing the establishment of new banks should be loosened and interest rates deregulated. However, it is most crucial that financial sector liberalization proceed no faster than the development of the state's financial regulatory ability in order to avoid the danger of substituting financial crash for financial repression.

An important part of financial reform should be the promotion of the development of sound rural financial institutions. In particular, I draw attention to the successful Indonesian experience of establishing a self-sustaining and profitable banking system (the *Unit Desa* system) in the countryside as a starting point for discussing how to accelerate financial

development in rural China.²¹ China should allow the establishment of new small-scale rural financial institutions that will mobilize local savings to finance local investments as quickly as adequate prudential supervision can be put in place.

What Should the United States and China Do Collaboratively?

I reported earlier the survey finding of the Pew Research Center that there has been a dramatic decline in US support for free trade. But we should really worry about the future of the multilateral free trade system as constituted by the WTO because this rise in discontent with trade is not limited to the United States but rather is a global phenomenon. Table 6.3 displays the proportion of population in 38 countries that regarded trade in a positive light in 2003 and 2007: From one year to the next, 27 countries reported a drop in support for free trade, 2 were unchanged in their view, and 9 increased their support. If we take an absolute change of 5 percentage points or less to be indicative of an unchanged level of support for free trade, then 13 countries turned significantly against it and 4 significantly in favor of it. The most alarming sign of threat to the WTO system is that 5 of the G-7 countries view trade in a significantly more negative light than before; the decline in support was 24.4 percent in the United States, 13.9 percent in Italy, 11.4 percent in France, 10.3 percent in Britain, and 6.6 percent in Germany. None of the four countries (Argentina, Bangladesh, India, and Jordan) that became significantly more ardent supporters of trade is a major trading power.

Why have the largest stakeholders in the world economic system, especially the United States, become more disenchanted with the present WTO system? I contend that many analysts have drawn the wrong conclusions on globalization because they have not been sufficiently cognizant of the other major driver of the world economy, the accelerated pace of technological innovation. The two mutually interacting international trends of deep economic globalization and dynamic technological innovation have brought huge increases in prosperity to some segments in each national economy but have also caused painful structural adjustments in others. Because the international community is having trouble dealing with some of the negative consequences from structural adjustments created by the enhanced economic interaction among countries and by the accelerated technological progress, global multilateral free trade embodied by the WTO system is under threat.

21. Indonesia is very similar to China in key economic and institutional features: It has a geographically vast and heavily populated economy, and the rural financial system is dominated by branches of a state bank (Bank Rakyat Indonesia and Agricultural Bank of China, respectively); see Woo (2005).

Table 6.3 Rise in discontent with trade, 2003–07

Country	Proportion of population with a positive view of trade (percent)		Increase in level (percentage points)	Proportionate increase in level (percent)
	2003	2007		
India	69	89	20	29.0
Jordan	52	72	20	38.5
Argentina	60	68	8	13.3
Bangladesh	84	90	6	7.1
Pakistan	78	82	4	5.1
Kenya	90	93	3	3.3
Bolivia	77	80	3	3.9
China	90	91	1	1.1
Ghana	88	89	1	1.1
Japan	72	72	0	0.0
Tanzania	82	82	0	0.0
Brazil	73	72	-1	-1.4
Poland	78	77	-1	-1.3
South Africa	88	87	-1	-1.1
Bulgaria	89	88	-1	-1.1
Mexico	79	77	-2	-2.5
Peru	83	81	-2	-2.4
Lebanon	83	81	-2	-2.4
Ukraine	93	91	-2	-2.2
Ivory Coast	96	94	-2	-2.1
Slovakia	86	83	-3	-3.5
Senegal	98	95	-3	-3.1
Czech Republic	84	80	-4	-4.8
Canada	86	82	-4	-4.7
South Korea	90	86	-4	-4.4
Egypt	67	61	-6	-9.0
Russia	88	82	-6	-6.8
Germany	91	85	-6	-6.6
Venezuela	86	79	-7	-8.1
Turkey	82	73	-9	-11.0
Britain	87	78	-9	-10.3
Mali	95	86	-9	-9.5
France	88	78	-10	-11.4
Nigeria	95	85	-10	-10.5
Italy	79	68	-11	-13.9
Uganda	95	81	-14	-14.7
Indonesia	87	71	-16	-18.4
United States	78	59	-19	-24.4

Source: Pew Research Center (2003, 2007).

It is important that the United States and China start collaborating immediately to push the Doha Round to a successful conclusion. China's commitment to work for continued economic globalization will help strengthen the now wavering US commitment to the WTO system (as captured in the Pew Global Attitudes Surveys).

The United States, which has traditionally been at the forefront for expanding multilateral free trade, is now beset by self-doubt for three major reasons. First, the country was willing to put up with the pains of structural adjustments during 1960–90 to accommodate the growing imports from Japan, South Korea, Taiwan, and the Association of Southeast Asian Nations (ASEAN) because these were frontline allies in the Cold War. With the end of the Cold War, it is natural for the United States to reconsider the economic cost of structural adjustment because the security and ideological benefits that went with it have decreased.

Second, the amount of US structural adjustment required to accommodate the rise of the SIC bloc is far greater than the earlier adjustment to the rise of its Cold War allies. As noted, the entry of the SIC economies has doubled the labor force participating in the international division of labor (table 6.2).

Third, the strongest lobby for free trade in the United States has been the economics profession, and the free trade doctrine has come under strong internal criticism in the last few years. Paul Samuelson has made many fundamental contributions to the development of the standard trade models that convinced mainstream economists that free trade is the best policy; it was therefore an intellectual earthquake when he argued in 2004 that under free trade, when outsourcing accelerates the transfer of knowledge to a developing country, there could be a decline in the welfare of the developed country.²² And intellectual apostasy is spreading; in 2005, Alan Blinder, another eminent economist, joined Paul Samuelson in criticizing free trade fundamentalism.

In April 2007, the United States bypassed multilateralism in free trade by agreeing to form a free trade area (FTA) with South Korea. With the United States weakening in its resolve to protect the multilateral free trade system, it is time for China to show that it is a responsible stakeholder by joining in the stewardship of the multilateral free trade system from which it has benefited immensely. With China so far playing a very passive role in pushing the Doha Round forward, Brazil and India have by default assumed the leadership of the developing economies camp in the trade negotiations. According to US Trade Representative Susan Schwab, at the G-4 (Brazil, European Union, India, and the United States)

22. See Samuelson (2004); "Shaking Up Trade Theory," *Business Week*, December 6, 2004; and "An Elder Challenges Outsourcing's Orthodoxy," *New York Times*, September 9, 2004.

meeting in Potsdam in June 2007, Brazil and India retreated from their earlier offers to reduce their manufacturing tariffs in return for cuts in agricultural subsidies by the developed economies because of “their fear of growing Chinese imports.”²³ The Brazilian-Indian action caused the Potsdam talks to fail and hurt the many developing economies that were agricultural exporters.

Brazil is now attempting to bypass multilateral trade liberalization by entering into FTA negotiations with the European Union. A growing number of nations like Brazil “are increasingly wary of a multilateral deal because it would mandate tariff cuts, exposing them more deeply to low-cost competition from China. Instead, they are seeking bilateral deals with rich countries that are tailored to the two parties’ needs.”²⁴

Because the present international atmosphere is ripe for protectionism, China and the United States must work together to provide the leadership to prevent the unraveling of multilateral free trade. Of course, while it is desirable for Chinese economic growth for China to become more active in supplying global public goods, the country might not be allowed to do so because of the usual reluctance of existing dominant powers to share the commanding heights of world political leadership. The sad experience of Japan being denied permanent membership of the Security Council of the United Nations is a case in point.

Final Remarks

China’s rapid movement toward the center of the world stage has sparked much global concern on other fronts besides China’s impact on the international economic system. With China building a power generation plant every week, would the country be willing to work with the international community to amend the Kyoto Protocol to achieve effective control over the emission of greenhouse gases and hence slow (or even reverse) climate change? Following China’s inept handling of the severe acute respiratory syndrome (SARS) epidemic in 2002–03 and the appearance of other new diseases such as avian flu and a yet-to-be-identified pig disease, is China now better prepared to cope with new potential pandemic diseases and to cooperate fully with foreign health organizations? As North Korea has just tested a nuclear device and Iran has reiterated its determination to develop one, will China reassess its traditional ties with these two countries and help stop nuclear proliferation?

Clearly, enhanced global prosperity and improved global security require extensive cooperation on many issues between China and the rest of

23. “Schwab Surprised by Stance of India and Brazil,” *Financial Times*, June 22, 2007; and “China’s Shadow Looms over Doha Failure,” *Financial Times*, June 22, 2007.

24. “Brazil, Others Push Outside Doha for Trade Pacts,” *Wall Street Journal*, July 5, 2007.

the world. An important first step in building the foundations for cooperation on these issues is to save the world from lapsing into protectionism in the form of fragmented trading blocs. A failure on this easier task is unlikely to bode well for future cooperation to slow climate change, stop nuclear proliferation, and fight pandemic diseases.

I expressed the hope earlier that the return of China to the world stage in the 21st century would be like the stabilizing rise of the United States in the 20th century, but there are two major differences both between the return of China now and the earlier rise of the United States, and in their implications. The first difference is that the world stage is now more crowded. Since 1914, the United Kingdom, France, and Germany have been joined at the center stage by Japan, Russia, and the United States. The greater number of influential players means higher organizational costs and more diversity in preferences, both of which mean that cooperative decision making will become harder. It is therefore necessary to expand the size of the stage to accommodate the greater number of sharp elbows. In short, we must enlarge global governance (i.e., allow more sharing of global responsibilities) in order to strengthen it.

The second difference between the return of China and the rise of the United States is that we now have the addition of not one but two giants, China and India, to the world stage. By 2050, the size of the Indian economy will have become larger than the combined economies of Canada, France, Germany, Italy, Japan, and the United Kingdom. The global economic restructuring and environmental stress that will result will be tremendous, and so we need to strengthen the trusses that support the world stage to accommodate the weight of the Chinese dragon and the Indian elephant. In short, we must establish more effective global institutions in order to supply the needed global public goods.

References

- Akerlof, George A. 2007. The Missing Motivation in Macroeconomics. Presidential address to the American Economic Association meeting in Chicago, University of California at Berkeley. Photocopy.
- Bergsten, Fred C. 2007. The Dollar and the Renminbi. Statement before the Hearing on US Economic Relations with China: Strategies and Options on Exchange Rates and Market Access, Subcommittee on Security and International Trade and Finance, Committee on Banking, Housing and Urban Affairs, US Senate, May 23, Washington.
- BLS (Bureau of Labor Statistics). 2007a. Employment Cost Index, Historical Listing, Constant-Dollar, 1975–2005. Washington. Available at www.bls.gov.
- BLS (Bureau of Labor Statistics). 2007b. Employment Cost Index, Historical Listing, Constant-Dollar, March 2001–June 2007. Washington. Available at www.bls.gov.
- Borjas, George J. 1994. The Economics of Immigration. *Journal of Economic Literature* 32, no. 4: 1667–717.
- Brainard, Lael. 2007. Testimony on Meeting the Challenge of Income Instability. Joint Economic Committee Hearing, February 28, Washington. Available at <http://jec.senate.gov>.

- Burtless, Gary. 2005. Income Supports for Workers and Their Families: Earnings Supplements and Health Insurance. Paper presented at the conference on Workforce Policies for the Next Decade and Beyond, November 11, Washington.
- Economist Intelligence Unit. 2004. *Country Report: China* (December). London.
- Feenstra, Robert C., and Gordon H. Hanson. 1996. Globalization, Outsourcing, and Wage Inequality. *American Economic Review* LXXXVI: 240–45.
- Feenstra Robert C., and Gordon H. Hanson. 1998. The Impact of Outsourcing and High-Technology Capital on Wages: Estimates for the United States, 1979–1990 (September, 1998). Manuscript. Davis: University of California, Department of Economics.
- Freeman, Richard. 2004. Doubling the Global Work Force: The Challenge of Integrating China, India, and the Former Soviet Bloc into the World Economy. Harvard University, Cambridge, MA. Photocopy (November 8).
- Goldstein, Morris. 2007. Assessing Progress on China's Exchange Rate Policies. Testimony before the Hearing on Risks and Reform: The Role of Currency in the US-China Relationship. Committee on Finance, US Senate, March 28, Washington.
- Kuznets, Simon. 1966. *Modern Economic Growth's Rate, Structure, and Spread*. New Haven: Yale University Press.
- Liu, Liang-Yn, and Wing Thyee Woo. 1994. Saving Behavior under Imperfect Financial Markets and the Current Account Consequences. *Economic Journal* (May).
- Ma, Jun. 2007. China. *Asia Economics Monthly*. Frankfurt am Main: Deutsche Bank.
- Maddison, Angus. 2001. *The World Economy: A Millennial Perspective*. Paris: Organization for Economic Cooperation and Development.
- Otoo, Maria Ward. 1997. *The Sources of Worker Anxiety: Evidence from the Michigan Survey*. Board of Governors of the Federal Reserve System Finance and Economic Discussion Series, no. 97-48. Washington: Federal Reserve Bank.
- Ottaviano, Gianmarco I. P., and Giovanni Peri. 2005. *Rethinking the Gains from Immigration: Theory and Evidence from the US*. NBER Working Paper 11672. Cambridge, MA: National Bureau of Economic Research.
- Paulson, Henry M. 2007. Prepared on the Growth and Future of China's Financial Markets. HP-301 (March 7). Washington. Available at www.treas.gov.
- Pew Research Center. 2003. *Views of a Changing World*. Pew Global Attitudes Survey. Washington. Available at <http://pewglobal.org>.
- Pew Research Center. 2007. *World Publics Welcome Global Trade—But Not Immigration*. Pew Global Attitudes Survey. Washington. Available at <http://pewglobal.org>.
- Polaski, Sandra. 2007. *US Living Standards in an Era of Globalization*. Policy Brief 57. Washington: Carnegie Endowment for International Peace.
- Sachs, Jeffrey D., and Howard J. Shatz. 1994. Trade and Jobs in US Manufacturing. *Brookings Papers on Economic Activity*, no. 1: 1–84. Washington: Brookings Institution.
- Samuelson, Paul. 2004. Where Ricardo and Mill Rebut and Confirm Arguments of Mainstream Economists Supporting Globalization. *Journal of Economic Perspectives* 18, no. 3: 135–46.
- Scott, Robert E. 2007. *Costly Trade with China: Millions of US Jobs Displaced with Net Job Loss in Every State*. EPI Briefing Paper 188. Washington: Economic Policy Institute.
- Valletta, Rob. 2007. Anxious Workers. Federal Reserve Bank of San Francisco Economic Letter 2007-13. San Francisco: Federal Reserve Bank of San Francisco.
- Woo, Wing Thyee. 2005. China's Rural Enterprises in Crisis: The Role of Inadequate Financial Intermediation. In *Yasheng Huang, Financial Sector Reform in China*, eds. Anthony Saich and Edward Steinfeld. Cambridge, MA: Harvard University Press.
- Woo, Wing Thyee. 2006. The Structural Nature of Internal and External Imbalances in China. *Journal of Chinese Economic and Business Studies* 4, no. 1: 1–20.
- Woo, Wing Thyee, and Liang-Yn Liu. 1995. Investment-Motivated Saving and Current Account Malaise. *Asia-Pacific Economic Review* 1, no. 2: 55–68.