Econ Change (2007) 40:1–26
DOI 10.1007/s10644-007-9027-z

Dealing sensibly with the threat of disruption in trade with China: the analytics of increased economic interdependence and accelerated technological innovation

Wing Thye Woo

Published online: 22 December 2007

Abstract There is now widespread concern in Washington over the large and growing U.S.-China trade deficit. This concern is premised on the view that the large trade deficit has reduced U.S. welfare by increasing unemployment and reducing wages. But these alleged negative effects cannot be seen. The average unemployment rate in 1999–2006 was 5 percent compared to 6 percent in 1991–1998; and the total compensation (in 2005 prices) of a full-time worker rose from $46,614 in 1991 to $50,523 in 1998 to $55,703 in 2005. The rise in average labor compensation (measured to include benefits) was not caused by a large income increase for high-skilled workers and a moderate income decline for low-skilled workers. The level of compensation for blue-collar workers also rose in the 1991–2006 period. The continued rise in US labor income in 1991–2006 might appear surprising because the post-1990 integration of the Soviet bloc, India and China into the international division of labor has doubled the number of workers participating in the world economy. Accelerated globalization was, however, not the only significant economic development during this period; accelerated technological innovations were perhaps even more significant in their economic effects. The latter development produced large productivity gains that enabled the US labor income to rise despite the greater competition from imports, continued relocation of production facilities to foreign countries, and increased immigration into the United States. The outcome from the accelerated pace of globalization and the increased pace of technological innovation is a more frequent turnover in jobs in the US, which

W. T. Woo (✉)
Brookings Institution, 1775 Massachusetts Avenue NW, Washington, DC 20036, USA
e-mail: wwoo@brookings.edu; wwoo@ucdavis.edu

W. T. Woo
University of California, Davis, USA

W. T. Woo
Central University of Finance and Economics, Beijing, China

translates into increased worker anxiety, and hence increased demand for protection. The optimum solution to the present trade tensions is a policy package that emphasizes multilateral actions. It is bad economics and bad politics to dwell only on just one region (China alone must change), and/or dwell on just one instrument (RMB appreciation alone). China should, in the short run, expand state expenditure to soak up excess savings with an emphasis on import-intensive investments; in the short run, accelerate import liberalisation beyond the commitments made in the negotiations for WTO membership; increase the rate of yuan appreciation to reduce the large depreciation against the Euro in 2006–2007, and speed up the appreciation if inflation rises; lower precautionary savings by providing public social insurance; and improve financial intermediation by replacing the monopoly state banking system with a predominantly domestic private banking system. The United States should quicken the reduction in fiscal imbalance; introduce tax incentives to raise the savings rate; and expand and improve trade adjustment programs and social safety nets, especially those that upgrade the skill of the younger workers. Most important in the face of rising protectionist sentiments around the world, the United States and China must work together to bring the Doha Round trade negotiations to a successful conclusion in order to prevent the WTO system from being eroded.

Keywords Protectionism · Technological innovations · Economic globalization · China · Worker anxiety · Currency manipulation · Occupational obsolescence · Wage inequality

JEL code F16 · F32 · J31 · N25 · O16

1 The gathering storm

The threat of a serious disruption in trade between China and the developed countries should be taken seriously today (middle of October 2007). The turn against free trade is especially notable in the United States (US). The Pew Research Center (2007) reported in the 2007 report of the Pew Global Attitudes Survey that the proportion of US residents who have a positive view of trade was only 59 percent, the lowest satisfaction level in the sample of 47countries. This was also a dramatic drop from the 78 percent reported in the 2003 report; Pew Research Center (2003). Even more worrying for the future of the multilateral free trade system as constituted by the World Trade Organization (WTO) is that this rise in discontent with trade is not limited to the US, it is a general global phenomenon.

Table 1 displays the proportion of population in 38 countries who regarded trade in a positive light in 2003 and 2007. Twenty-seven countries reported a drop in support for free trade, two countries were unchanged in their view, and nine countries 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 trade, then 13 countries turned significantly against free trade, and 4 countries turned significantly in favor of free trade. The most alarming sign of threat to the WTO system is that 5

Table 1 The rise in discontent with trade, 2003–2007

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

Source: Pew Research Center (2003, 2007)

of the G-7 countries are viewing trade in a significantly more negative light than before; the decline in support was 24.4% in USA, 13.9% in Italy, 11.4% in France, 10.5% in Britain and 6.6 percent in Germany. None of the four countries (Bangladesh, Argentina, India and Jordan) which became more ardent supporters of trade is a major trading power at the present.

Why have the largest stakeholders in the world economic system, especially the United States, become more disenchanted with the present WTO system? Our hypothesis is 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, which is 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 they have also caused painful structural adjustments in some other segments of each national economy. 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, the world multilateral free trade system embodied by the World Trade Organization (WTO) system is under threat. This is the overall analytical framework which we should use to consider many of the proposed measures to change the nature of the economic engagement between China and the United States (US) and the European Union (EU).

The proposed disruption in trade with China will unfortunately not solve the major complaints of the US-EU coalition against China because it does not address the true causes that generated the trade tensions between China and US-EU. In particular, the much-touted solution of an immediate down payment of a 25 percent revaluation of the Chinese currency (Yuan) against the US$ 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. We will propose a policy package that uses a wider set of policy instruments (including Yuan appreciation) to reduce the trade tensions between China and US-EU. The policy package is also multilateral in that China is not the only country that needs to make policy change, the US and EU also need to make policy changes as well.

China's current account balance became chronically in surplus in 1994, and started climbing steadily upward from 2001 onward. The current account surplus went from 1.9 percent of GDP in 2000 to 2.8 percent to 2002, to 4.2 percent in 2004, and then to 8.7 percent in 2006.[1] Recently, Jun Ma (2007), a perspicacious analyst at the Deutsche Bank, forecasted in October 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.

In 2002, Haruhiko Kuroda and Masahiro Kawai (2002), two high-ranking officials in the Japanese Ministry of Finance, accused China of exporting deflation

[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.

to the world and recommended that the Yuan be appreciated in order to end this situation. In 2003, Morris Goldstein and Nicholas Lardy (2003), both of the Peterson Institute for International Economics, begun the first of their many proposals for a substantial appreciation of the Yuan. Goldstein and Lardy called for an immediate 15 to 25 percent appreciation of the Yuan against the US$. China resisted these and other calls for Yuan appreciation until June 2005 when it allowed the Yuan to appreciate slightly because of widespread expectations that the current account surplus in 2005 would be above 7 percent of GDP. This incremental process of appreciation against the US$ has continued as the upward march of China's current account surplus remained unabated.

At a US congressional hearing in March 2007, Morris Goldstein (2007) opined that the Yuan was overvalued by 40 percent against the US$ and accused China of exchange rate manipulation; a charge echoed in 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, have 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 the European Union (EU) that China change its policy regime on external economic engagement. On June 19, 2007, the IMF, with strong endorsement from 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 U.S. Congress that would impose penalties on nations that 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]

Under the headline of "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,

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

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

[4] "IMF set to scrutinise exchange rate policies," *Financial Times*, June 19, 2007.

> [and he called for EU 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.[5]

These recent developments in the US and the EU should be seen as warnings that China, Europe and the United States could be marching toward a trade war. Another sign of the gathering storm of trade conflict is that of the six trade complaints against China that the US has filed with the WTO since 2001, three of them were filed in 2007.

2 The inconvenient truth about the link between globalization and worker anxiety in the US

It is not uncommon to encounter allegations that the bilateral U.S.-China trade deficit represented 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 had suffered a net loss in job from the rise in the bilateral trade deficit over 1997–2006. The alleged job loss in 2006 from the bilateral trade deficit implied that the 2006 unemployment rate was 1.21 percentage points higher than if the bilateral trade balance were zero.[6]

With these alleged job losses, another alleged outcome from US-China trade that is commonly heard is that the bilateral deficit has forced down US wages.[7] As it is well documented that worker anxiety in the US has increased steadily in the last two decades just as US-China trade have increased steadily, it is tempting indeed to blame the rise in worker anxiety[8] in the US on the rise of China 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

[5] According to the *Evening Standard* of UK ("Mandelson: China Trade 'Out of Control'", October 17, 2007): "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".

[6] The US civilian labor force in 2006 was 151.4 million; Table B-35 in United States President (2007).

[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] See Otoo (1997) and Valletta (2007).

Table 2 The Distribution of the Global Labor Force (millions) (SIC countries = former Soviet bloc, India and China)

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

Source: Freeman (2004). Our figure for "total" in 2000 is different from that in Freeman.

decade of the 20th Century; and hence would have argued that economic globalization must have depressed wages in the advanced countries and, thus, the phenomenon of heightened worker anxiety in the advanced countries. The common expectation from 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 U.S. wages. Table 2 shows that the number of workers already engaged in the international division of labor was 1.083 billion in 1990, and the combined labor force of SIC was 1.232 billion. The division of labor in 1990 was certainly an unnatural one because half of the world's workforce had been voluntarily kept out of it by the SIC's autarkic policies.

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.[9]

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.[10] Today, under the heading of a socialist market economy with Chinese characteristics, the Chinese constitution gives private property the same legal status as public property, and the Chinese Communist Party accepts capitalists as members.

In 1991, India faced a balance of payments crisis, and it responded by going well beyond the administration of the standard corrective macroeconomic medicine of fiscal-monetary tightening and exchange rate devaluation into comprehensive adjustments of microeconomic incentives. The trade regime was deregulated significantly, the restrictions on foreign investment were relaxed, reform of the banking sector and the capital markets was initiated, and divestment of public enterprises and tax reform were announced.[11]

[9] For details and analysis of the economic transition in the former Soviet bloc and China, see the papers in Woo et al. (1997).

[10] Sachs and Woo (2000, 2003).

[11] Acharya (2004).

A decade after the start of the internationalization, Table 2 reports that the number of workers involved in the international economic system had increased to 2.672 billion in 2000 (with 1.363 billion workers from SIC). The Heckscher–Ohlin model would predict that this doubling of the world labor, achieved by bringing in cheaper labor from SIC, would lower the relative price of labor-intensive goods and hence reduce the income of labor in the industrialized country.[12]

The fact that U.S. capital could now move abroad to set up production facilities in the SIC economies to service the U.S. market and foreign markets meant another channel (besides the cross-border movement of goods) for globalization to depress the U.S. labor income. It is important to note that the imposition of a very high U.S. tariff would not only drastically curb imports from SIC but also radically reduce this type of FDI flow from the U.S. to 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 during 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. Figure 1 report the movements of the overall trade deficit as a percent of GDP, the real total compensation of a full-time worker, and the unemployment rate as the movements of three indices benchmarked at 100 in 1983. Figure 1 shows that despite the enlargement of the overall US trade deficit, the inconvenient facts are that the US real labor income has not fallen, and that the US unemployment rate has not increased. For the full-time worker, her real total compensation (that includes fringe benefits, e.g., employer-subsidized health coverage, in addition to labor earnings), measured in 2005 prices, rose from $46,614 in 1991 to $50,523 in 1998 to $55,703 in 2005.[13] The alleged rise in US unemployment is also not seen even if we use the 1998–2006 period chosen by Robert Scott (2007) as the reference point. The average unemployment rate of 4.9 percent in the 1998–2006 period was actually lower than the average unemployment rates in the immediate previous periods of 1980–1988 and 1989–1997, which were 7.5 percent and 6.0 percent respectively. In reality, the U.S. economy has been a highly successful job-creation machine in the 1997–2006 period.

It is important at this point to consider the possibility that the steady increase in the average total compensation received by a worker can be consistent with a large increase in the income of high-skilled workers and a moderate decline in the income

[12] More accurately, the wage of the formerly isolated SIC worker would rise while the wage for the worker in the industrialised country would fall.

[13] I thank Gary Burtless for sharing these estimates with me. These estimates were the basis of his congressional testimony on the movements of US wages; Burtless (2007).

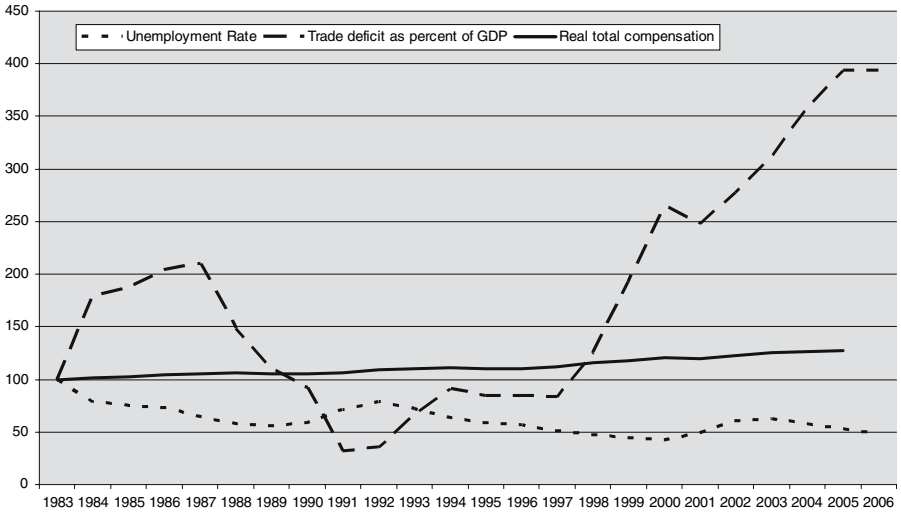

Fig. 1 US trade deficit, unemployment rate and total compensation indices (1973 = 100)

of low-skilled workers. Many analysts have pointed out that the inflation-adjusted weekly earnings of non-supervisory employees in 1980 is higher than in every year in the 1982–2006 period.[14] 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 to compensation, the other component is benefits (e.g., pension contributions, health insurance) paid by employers. The neglect of benefits gives the wrong picture on income received by labor because the growth of benefits has been especially rapid in the last decade because of 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 is lower than in every year in the 1982–2006 period, refuting the conclusion drawn from looking only at the earnings component of labor income.

Table 3 reports four series for inflation-adjusted compensation of blue-collar workers in December of each year. Series (a) and (c) are SIC-based series and cover the 1981–2005 period and 1979–2005 period respectively; and series (b) and (d) are NAICS-based series and cover the 2001–2006 period.[15] Series (a) and (b) cover blue-collar civilian workers in the overall economy; and series (c) and (d) cover blue-collar civilian workers in private industry. These four series are indexed on December 2005 being 100. Series (a) and (c) are virtually identical in values because there are few blue-collar workers in what could be called state-owned industry in the US. Series (c) shows an index value of 87.9 in 1980, and the index

[14] For example, see Fig. 1 in Polaski (2007).

[15] SIC = Standard Industrial Classification; and NAICS = North America Industrial Classification System.

Table 3 Employment Cost Index (Compensation) in Constant Dollars for Blue-Collar Occupations (December 2005 = 100)

	All civilian workers		Civilian workers in private industry	
	(a)	(b)	(c)	(d)
1979			89.8	
1980			87.9	
1981	88.0		88.4	
1982	89.9		90.2	
1983	90.9		91.2	
1984	91.2		91.5	
1985	90.8		91.0	
1986	92.3		92.4	
1987	91.2		91.2	
1988	91.0		91.2	
1989	90.8		90.8	
1990	89.3		89.3	
1991	90.4		90.4	
1992	91.0		91.0	
1993	91.9		91.9	
1994	92.0		91.9	
1995	92.0		91.9	
1996	91.3		91.3	
1997	92.1		92.1	
1998	93.2		93.1	
1999	93.8		93.8	
2000	94.5		94.5	
2001	96.6	96.9	96.6	97.0
2002	97.6	97.9	97.6	98.0
2003	99.6	99.7	99.7	99.8
2004	100.7	100.7	100.8	100.8
2005	100.0	100.0	100.0	100.0
2006		100.4		100.3

Compensation = (Wages and salaries) + (Benefits received) Series (a) and (c) are based on the Standard Industrial Classification (SIC) system, Bureau of Labor Statistics (2007a). Series (b) and (d) are based on the North American Industry Classification System (NAICS), Bureau of Labor Statistics (2007b)

value in every succeeding year has been higher than that.[16] Series (c) shows that the value of the compensation index fell after reaching 92.4 in 1986, bottomed out at 89.3 in 1990, and went above the 1986 value only in 1998. Series (c) went from 93.1 in 1998 to 100.8 in 2004 and then dropped to 100 in 2005. Series (b) and (d) reported that the index value went up from 2005 to 2006, albeit still below the 2004

[16] During the 1982–2006 period, only the 1990 index value of 89.3 was lower than the 1979 index value of 89.8.

value. Overall, the four income series in Table 3 allow us to conclude that the income of low-skilled (blue-collar) workers in the US rose by about 10 percent over the 1981–2006 period of increased economic globalization.

In our 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 significant economic process was accelerated technological innovation, especially in the advanced economies, notably the United States. The reason why the US real labor income has not fallen despite economic globalization is that there has been remarkably high U.S. productivity growth since the late 1980s, perhaps enabled in large part by the ICT[17] 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 US entered into a period of rapid technological innovation in the late 1980s.

We note that while this high productivity growth was able to offset the downward pressures on real labor income from economic globalization, it was likely to have joined economic globalization in diminishing the labor share of GDP.[18] Recent technological innovations have 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 of what have been traditionally non-tradable services into 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 U.S. customers, offshore accountants to process U.S.-based transactions, and offshore medical technicians to read the X-rays of U.S. patients.[19]

What is fueling the resentment toward imports from China when the average US worker is experiencing neither more unemployment nor lower compensation? The explanation is that the U.S. 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 the worker to change jobs more often and she finds that there are considerable costs associated with the job change because of the inadequacies of the US social safety nets.

[17] ICT = information and communications technology

[18] Beside capital-bias technological innovation and economic globalization, there have been two other developments in the US economy that 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 an upward shift in the 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) is a recent discussion on "norms" and their economic consequences.) The second of these other developments is increased immigration into the United States (before 2001); see Borjas (1994) and Ottaviano and Peri (2005).

[19] There is a large empirical literature on 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).

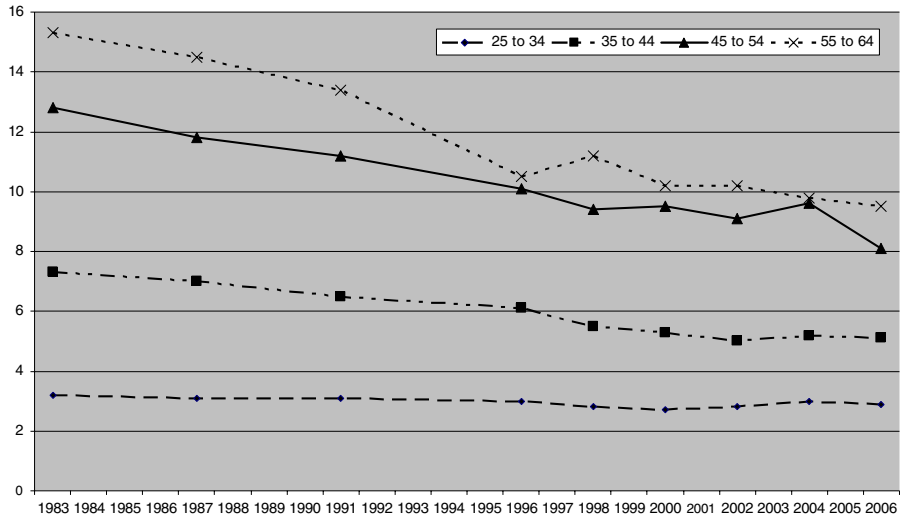

Fig. 2 Median tenure at current job by age of worker (in years) in US

The more frequent change in jobs is documented in Fig. 2 by the declining trend in the length of the median job tenure for older male workers. The median job tenure for males in the:

- 33 to 44 age group, decreased from 7.0 years in 1987 to 5.1 years in 2006;
- 45 to 54 age group, decreased from 11.8 years in 1987 to 8.1 years in 2006; and
- 55 to 64 age group, decreased from 14.5 years in 1987 to 9.5 years in 2006.

In terms of social safety nets, Gary Burtless (2005) reports that within the G-7 in 2004, only the United Kingdom has a less generous unemployment benefits scheme than the United States. Figure 3 shows that an unemployed person in the US received initial unemployment benefits that equaled 53 percent of previous income compared to 78 percent in Germany, 76 percent in Canada and France, 61 percent in Japan, 60 percent in Italy, and 46 percent in UK. Figure 4 documents that the duration of unemployment benefits was 6 months in the US compared to 12 months in Germany, 9 months in Canada, 30 months in France, 10 months in Japan, and 6 months in Italy and the UK.

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 are especially painful in the US compared with 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 U.S. and the EU 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

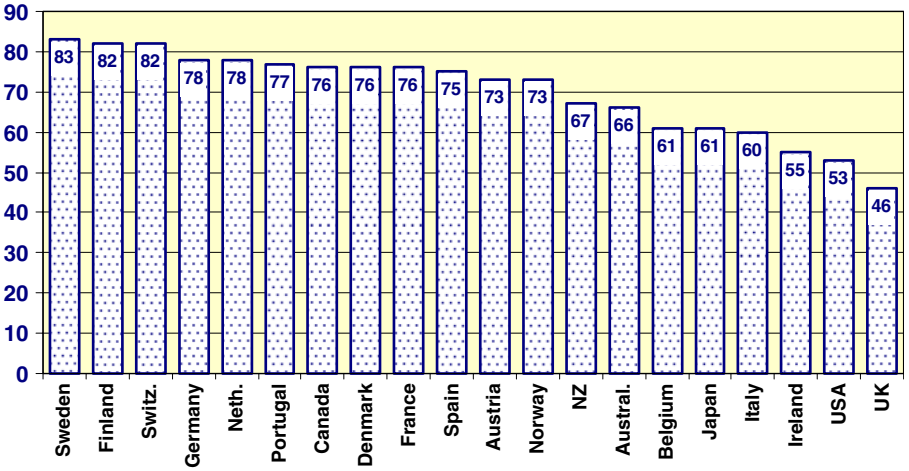

Fig. 3 Indicators of unemployment benefit generosity in twenty OECD countries, 2004. Percent of net earnings initially replaced by after-tax value of unemployment benefits (married single earner with two children who is paid the average wage)

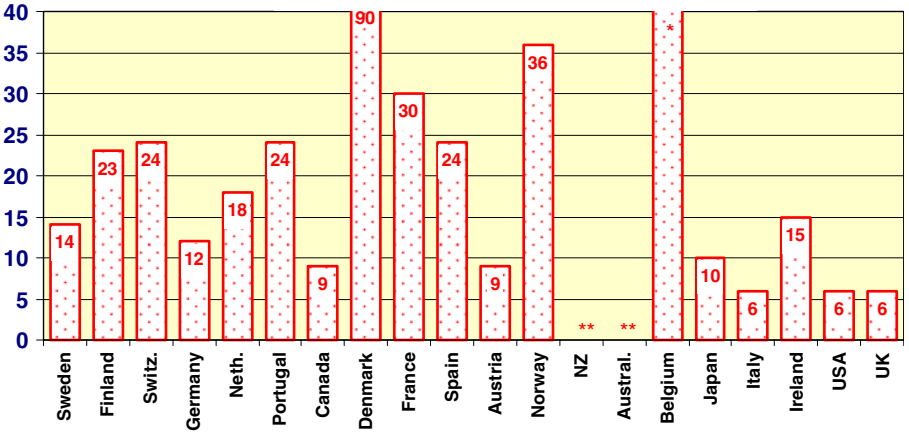

Fig. 4 Duration of unemployment benefits (in months). *Belgium essentially provides unemployment benefits of indefinite duration. **Australia and New Zealand offer only means-tested benefits. If the eligibility test continues to be met, unemployment benefits can last indefinitely. *Source*: OECD, Benefits and Wages: OECD Indicators, 2004 edition (Paris: OECD). Figure is from Burtless (2005)

additional pain from the incremental structural adjustment caused by the widening trade deficit is minor by comparison. It is our hypothesis that the worker anxiety so well documented in the US has been created not by a lower real wage and a higher unemployment rate but by job insecurity resulting from, one, occupational obsolescence because of rapid technological innovation and, two, import competition from economic globalization. The job insecurity in the US is made worse by inadequate social safety nets and by the inappropriate design of the funding of medical insurance.

3 The fundamental determinants of current account balance in China

Since 1986, except for the four years (1990, 1991, 1997 and 1998) associated with an economic downturn in China, the bilateral surplus with the United States has exceeded China's overall trade surplus, meaning that China is running massive deficits in its trade 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 into China. In this new geographical division of the production of components and of the production stages in manufacturing, China usually makes the cheaper components and assembles the final products by combining the domestically produced components with 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-U.S. bilateral trade surplus because this transfer reduces the bilateral Japan-U.S. trade surplus and the bilateral South Korean-U.S. trade surplus correspondingly. In short, the China-U.S. trade deficit could be reduced by transferring the assembly operations of Korean, Taiwanese, Japanese, and European production networks to Vietnam, but the Vietnam-U.S. trade deficit would then increase, leaving the overall U.S. trade balance unchanged.

China's chronic and growing overall trade surplus reveals a deep-seated serious problem in China's 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 government, and the savings-investment decisions of the state-controlled enterprise (SCE) sector and the private sector.[20] Specifically:

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

where CA = current account in the balance of payments; CA = (X−M) + R; X = export of goods and non-factor services; M = import of goods and non-factor services; R = net factor earnings from abroad (i.e., export of factor services); 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; $I_{private}$ = investment of the private sector

The Chinese fiscal position (T-G) has for the last decade been a small deficit, and so it is not the cause for the swelling current account surpluses in 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. The current account surplus has expanded steadily because the non-government savings rate has been rising steadily. We will argue later that there is a link between the existence of the current account surplus and the growth of the surplus.

[20] The SCE category covers companies that are classified as SOEs (state-owned enterprises); and joint-ventures and joint-stock companies which are 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)

Why has China's financial system failed to translate the savings into investments? Such an outcome 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 implemented stricter controls on the state-owned banks (SOBs) from 1994 onward (e.g., removing top bank officials whenever their bank lent more than its credit quota or allowed the NPL ratio to increase too rapidly), the SOBs slowed down the growth of loans to SCEs. This cutback created an excess of savings because the SOB-dominated financial sector did not then re-channel 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. 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 were state-owned and were operated under a civil service regulation that required each loan officer to repay any bad loan that she approved. The result was a massive failure in financial intermediation that caused Taiwan's current account surplus to be 21 percent of GDP in 1986. The reason why China has not been producing the gargantuan current account surpluses seen in Taiwan in the mid-1980s is because of the still large amount of SCE investments.

Why is the savings rate of the non-government 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 on the rise of the savings rate, a common view is that the rise reflects the uncertainty about the future that many SOE workers feel in the face of widespread privatization of loss-making SOEs. We find this explanation incomplete because it seems that there 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.[21]

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

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

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, i.e., greater optimism about the future has spawned investment-motivated saving.

In our 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 savings behavior is not independent of the sophistication of the financial system. An advanced financial system will have a variety of financial institutions that would enable pooling of risks by providing medical insurance, pension insurance, and unemployment insurance; and transform savings into education loans, housing loans, and other types of investment loans to the private sector. *Ceteris paribus*, the more sophisticated a financial system, the lower the savings rate—a proposition that finds formal statistical support in Liu and Woo (1994) and Woo and Liu (1995).

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.

4 Using yuan appreciation to reduce worker anxiety

We will use the format of question and answer to analyze the question posed in the heading of this part of the paper and to assess the validity of the above assertions.

4.1 Would a yuan appreciation reduce global imbalances as Fred Bergsten (2007) had claimed?

There is little doubt that a large appreciation of the yuan against the dollar, say 40 percent as suggested by Morris Goldstein (2007), could eliminate the bilateral U.S.-China trade deficit as well as China's overall trade surplus. But this move would only hurt China and not "save" the world. *Ceteris paribus*, in the aftermath of the 40 percent yuan appreciation, foreign companies producing in China for the G7 markets would move their operations to other Asian economies (e.g., Vietnam and Thailand) and export from there, and G7 importers would start importing the same goods from other Asian countries instead. In the absence of a collective appreciation of all Asian currencies, the yuan appreciation will only re-configure the geographical distribution of the global imbalances and not eliminate them.

It would be naive to assume that Asian currencies tend to move closely together when one of them moved a large amount like 40 percent. The last time the Asian currencies moved together by a large amount was during the Asian financial crisis of 1997–1998, and China did not join in despite many predictions to the contrary.

4.2 Would a large simultaneous collective appreciation of the Asian currencies be an unambiguous gain for the U.S.?

We are not sure. Immediate cessation of the foreign financing of the U.S. savings gap would translate into an immediate zero current account balance, and this would require an immediate increase in U.S. exports and (or) an immediate decrease in U.S. imports. Exports would increase quickly only either if there were substantial excess production capacity or if there were a substantial drop in domestic demand that freed up the domestic goods for sale abroad. Imports would decrease quickly only either if there were excess production capacity (to enable replacement of imports) or if there were a substantial drop in domestic demand that reduced the use of consumer goods and inputs. Since there is no substantial excess production capacity in the U.S. economy today, the immediate elimination of the current account deficit would require a huge drop in domestic demand, which would have its origin in a large negative wealth shock, possibly in the form of a stock market collapse or an inflationary spike.

4.3 Would the absence of a yuan appreciation cause high inflation in China as Goldstein and Lardy (2003) had claimed?

The growth of Chinese money supply has not slowed drastically despite the heightening of anti-inflation rhetoric by the Chinese government in response to the continued high growth of investment expenditure. Has the Chinese government lost control of its money supply as a number of analysts have warned? Not at all. The speculative inflows and growth in foreign exchange reserves cannot expand the money supply without the agreement of the People's Bank of China (PBC). Besides sterilization through open-market operations, China also has the use of credit quotas on bank lending. The fact is that all the Chinese banks are state-controlled, and their high-ranking executives appointed by the state. Given the choice between maximizing bank profits or heeding orders from the Prime Minister's office, the bank chiefs can always be counted on to choose the latter. There has been no question about the Communist Party of China losing control of the money supply since 2002.

Money supply growth in 2005–2007 has not slowed markedly because China has chosen not enforce the credit quotas stringently. First, the inflation rate, although rising, is still low. Second, it is good politics to have a booming economy in the period leading up to the important meeting of the 17th Party Congress in October 2007 that will ratify important personnel appointments for the following five years.

4.4 What is the correct level for the exchange rate?

The Economist magazine constructs a PPP[22] exchange rate based on the prices of Big Mac sandwiches sold in different countries. In 2006, it cost 10.4 yuan to buy a Big Mac in China and $3.15 in the U.S., and so the PPP exchange rate was 3.3 yuan per U.S. dollar in 2006 compared to the actual (nominal) exchange rate of exchange

[22] PPP = purchasing power parity

rate of 8 yuan per U.S. dollar. So is it meaningful to hence say that the Chinese exchange rate was under-valued by almost 60 percent in 2006? The answer is no because the prices of the sandwiches included nontradable inputs, and the prices of nontradables were lower in China than in the United States. In general, the prices of nontradables are lower in developing countries than in the developed countries because labor costs are lower in the former. With economic development, the prices of nontradables in the developing country will rise to bring the price ratio of nontradables to tradables closer to the price ratio in the developed country.

To see that the gap between the usual PPP exchange rate and the actual exchange rate reflects the development gap between the two countries, we first make the following definitions:

(a) Defining the consumer price index in China and United States

$$\text{CPI of China, } CPI^{C} = (1 - a)\, P_T^C + a\, P_N^C$$

$$\text{CPI of United States, } CPI^{U} = (1 - a)\, P_T^U + a\, P_N^U$$

where CPI = consumer price index; C = China; U = United States of America; P_T^i = price of tradable good in country i; P_N^i = price of non-tradable good in country i; a = weight of non-tradable goods in price index

(b) Defining the PPP exchange rate

$$e^{PPP} = CPI^{C} / CPI^{U}$$

we next state the equilibrium conditions.

(1) Goods arbitrage

$$P_T^C = e^{actual}\, P_T^U$$

where e^{actual} = actual (nominal) exchange rate expressed as number of yuan per US$

(2) Relationship between prices of tradables and nontradables within each country

$$\text{for developing China, } P_N^C = d\, P_T^C$$

$$\text{for developed United States } P_N^U = f\, P_T^U$$

(3) The difference between developed and developing country is that relative price of nontradables is higher in the former

$$0 < d < f$$

We can now derive the following relationship between the PPP exchange rate and the actual exchange rate:

$$e^{PPP} = CPI^{C} / CPI^{U}$$

$$e^{PPP} = [(1 - a + ad)/(1 - a + af)]\ e^{actual}$$

$$e^{PPP} < e^{actual}$$

The above exercise above shows that it is conceptually difficult to determine the "correctness" of a country's exchange rate on the basis of PPP exchange rates. The actual exchange rate of a developing country would always be "undervalued" in relation to the PPP exchange rate, and it would be ludicrous to demand that the government of the developing country set its exchange rate equal to the PPP exchange rate (because this is not a sustainable policy).

One meaningful definition of the "correct exchange rate" is that it is the "market-clearing exchange rate"—the exchange rate that is generated by the foreign exchange markets in the absence of interventions by any central bank. The fact that the People's Bank of China has been accumulating foreign reserves every period means that the yuan is under-valued according to this definition. 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 yuan to depreciate instead. In such a case, the present exchange rate of 8 yuan per dollar would be "over-valued" 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 8 yuan per U.S. dollar.

Suppose the value of the "complete free market exchange rate" is 6.5 yuan per U.S. dollar, and the "market-clearing exchange rate with controls on capital outflows" is 4.5 yuan per U.S. 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 we call Option A) would be yuan appreciation to 4.5 yuan per dollar upon cessation of foreign market intervention followed by yuan depreciation to 6.5 yuan per dollar upon removal of the capital controls.

Suppose China adopts another form of two-step liberalization (Option B), incremental appreciation of the yuan and removal of the 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 yuan to depreciate past 8 yuan per dollar, say, to 9.5 yuan 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. In our opinion, however, the Chinese government has chosen a speed of exchange rate adjustment that is too slow, causing the yuan to depreciate significantly against the euro. We recommend that the Chinese government increase the speed of the yuan appreciation—but not in the form of an immediate discrete 10–15 percent appreciation as advocated by Goldstein (2007).[23]

In our opinion, the instinctive calls by some economists for the use of the exchange rate mechanism to solve China's external imbalance is only partially

[23] Our analysis therefore leads us to agree with the three recent policy positions of the U.S. Treasury: (1) China must increase "the pace of reform in financial services market" (Paulson, 2007); (2) China has not engaged in currency manipulation; and (3) China should increase the rate of yuan appreciation.

correct. Given China's capital controls, a freely floating currency regime could mean a value for the yuan that would be greatly over-appreciated compared to what its value would be under free capital flows, and could therefore reduce economic growth significantly.[24] 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 has occurred, and the experience with the Asian financial crisis, we 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 within the context of overall macroeconomic management and not just in regard to its impact on the balance of payment. It is very likely that there are alternate combinations of macroeconomic policies that would produce results superior to the one generated by appreciating the yuan alone. The general point is that because the balance of payments is only one of the main outcomes of concern[25] and the exchange rate is only one of the ways[26] to affect the balance of payments, 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 one policy target.

5 A multilateral policy package to address the trade tensions with China

The real source for the anxieties that have given rise to the present US obsession with yuan 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 down the process of structural adjustment but will not stop it because the other main driver (most possibly, the 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), dwell on just one instrument (RMB appreciation alone), and dwell entirely on one target (external imbalance).

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

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

[24] In Robert Mundell's opinion: "China's growth rate could fall by half and foreign direct investment (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.

[25] The inflation rate and the unemployment rate would be among the other key concerns.

[26] Other ways include monetary and fiscal policies.

5.1 What should the US do?

Congress should quicken the reduction in fiscal imbalance; strengthen social safety nets and programs that upgrade the skills of the younger workers; and make healthcare 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 that:

> 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 U.S. 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 Luddite 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 level of the grade school and the high school.

5.2 What should China do?

The obvious short-run policy package has three components. First, the steady process of yuan appreciation begun in July 2005 should be quickened, and be used more aggressively as an anti-inflation instrument. Second, import liberalization should be accelerated (e.g., implement seriously the commitments made in negotiations for WTO membership like IPR 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 the excess savings, with an emphasis on import-intensive investments (e.g., buying airplanes and sending students abroad). There must be time limits put on the expanded public works and SCE investments because, in the long-run, the increased public investments could follow an increasingly rent-seeking path that is wasteful (e.g., building a second big bridge to a lowly populated island to benefit a politically connected construction company as in Japan), and the increased 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 it 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 upgrading policy.

It is likely that consumption could be increased without lowering investment by, one, the state providing an integrated health insurance system, a comprehensive pension system, and an extensive scholarship program; and, two, the financial system providing more sophisticated financial products like education and housing loans, and various types of insurance schemes, and stopping its discrimination against private investors. The establishment of a modern financial system requires the appearance 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.

We therefore recommend that following the recapitalization of the big four state banks, at least two of them should be broken into several regional banks, and that the majority of these regional banks should be 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 as 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 on the establishment of new banks should be loosened, and interest rates should be deregulated. However, it is most crucial that financial sector liberalization proceeds no faster than the development of the financial regulatory ability of the state 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, we wish to draw attention to the successful Indonesian experience of establishing a self-sustaining and profitable banking system (the *Unit Desa* system) in the countryside to provide a starting point for discussing how to accelerate financial development in rural China.[27] China should allow the appearance 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 into place.

[27] Indonesia is very similar to China in key economic and institutional features: 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).

5.3 What should US and China do collaboratively?

The two countries should start collaborating immediately to push the Doha Rounds to a successful conclusion. The commitment of China 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 Survey that showed a large fall in US public approval of international trade.

The US, which has traditionally been at the forefront for expanding the multilateral free trade system, is now beset by self-doubt for three major reasons. First, the US was willing to put up with the pains of structural adjustments in the 1960–1990 period to accommodate the growing imports from Japan, South Korea, Taiwan, and ASEAN because they were frontline allies in the Cold War. With the end of the Cold War, it is natural for the US to re-consider the economic cost of structural adjustment because the security and ideological benefits from it have gone down.

Second, the amount of required structural adjustment in the US 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 2).

Third, the strongest lobby for free trade in the US 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, and it was therefore an intellectual earthquake when he argued in 2004 that under free trade, where outsourcing accelerates the transfer of knowledge to the developing country, there could be a decline in the welfare of the developed country.[28] Intellectual apostasy is spreading; in 2005, Alan Blinder, another eminent economist, has joined Paul Samuelson in criticizing free trade fundamentalism.

In April 2007, the US bypassed multilateralism in free trade by agreeing to form a Free Trade Area (FTA) with South Korea. With the US weakening in its resolve to protect the multilateral free trade system, it is the time for China show that it is a responsible stakeholder by joining in the stewardship of the multilateral free trade system which it has benefited immensely from. With China so far playing a very passive role in pushing the Doha Round forward; by default, Brazil and India have assumed the leadership of the developing economies camp in the trade negotiations. According to Susan Schwab, the U.S. Trade Representative, at the G4 (US, EU, Brazil and India) 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 subsides by the developed economies because of "their fear of growing Chinese imports"[29] The Brazilian–Indian action caused the Potsdam talks to fail and hurt the many developing economies that were agricultural exporters.

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

[29] "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.

The reality is that Brazil is now attempting to bypass multilateral trade liberalisation 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."[30]

Because the present international atmosphere is ripe for protectionism, China and the US must now work together to provide the leadership to prevent the unraveling of multilateral free trade. We realize of course that while it is desirable for Chinese economic growth for China to become more active in supplying global public goods, it might not be allowed to do so because of the usual reluctance of the existing dominant powers to share the commanding heights of the 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.

The rapid movement of China 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 China 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 down (reverse) climate change? Following China's inept handling of the SARS[31] epidemic in 2002–2003, other new diseases like avian flu and a yet-to-be-identified pig disease have appeared in China, is China now better prepared to cope with new potential pandemic diseases and to cooperate fully with foreign health organizations? North Korea has just tested a nuclear device and Iran has reiterated its determination to develop one, will China re-assess its traditional ties with these two countries and help halt nuclear proliferation?

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

Acknowledgements I am grateful to Gary Burtless for many patient lessons on labor economics; Barry Bosworth for careful explanations on the intricacies of data construction; Roberta Benini for countless interesting conversations on economic issues; Robert Feenstra and Jeffrey Sachs for guidance over the years in thinking through trade issues; Geng Xiao for sharing his insights on China with me; Alberto Bagnai and Xiaolan Fu for helpful comments; Ann Doyle for excellent advice on exposition; and Sara Messer for outstanding research assistance.

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