



The Integration of Giants into the Global Economy

By Gary Saxonhouse

Between 1870 and 1913, Germany and the United States emerged as giants in the global economic order. In the quarter century after 1950, Japan likewise emerged as a decisive force. China is the fourth example of a large, rapidly growing export economy being integrated into the international economic system. India may be the next. When viewed from this broader historical perspective, the scale, speed, and global impact of China's emergence seem much less distinctive. This hardly devalues what China has accomplished. After all, German and American economic growth in the late nineteenth and early twentieth centuries allowed those two countries to be dominant military and economic powers in the war-torn half century that followed.

Reactions to China's emergence as a major force in the global economy seem altogether too familiar. Concern that China's rise may pose a threat to American prosperity recalls similar worries not too long ago about the implications of Japanese economic success. In 1970, Hudson Institute director Herman Kahn projected that Japan would surpass the United States by the year 2000 and have the world's largest gross domestic product (GDP) in both per capita and absolute terms.¹ With this accomplishment in prospect, Kahn thought it likely that the Japanese would insist on full superpower status.²

The year 2000 has come and gone and Japan has neither the world's largest GDP nor full superpower status. In 1970, in purchasing power parity terms, Japan's GDP was 32.8 percent of U.S. GDP.³ Thirty-four years later in 2004, it was 31.1 percent of U.S. GDP, leaving Japan relatively smaller compared to the U.S. than in 1970. In 2004, Japanese defense expenditures as a share of GDP remained under 1 percent, just as they were in 1970. Japan's acquisition of nuclear weapons confidently expected by Kahn and many others never happened.⁴

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Concerns about Japan were vastly overblown, but that does not mean that the same concerns about China will prove groundless. Many will say China is different. China is much larger than Japan, and not just in population. In 2004, China's GDP may have been 65.3 percent or, perhaps, even 74.1 percent of U.S. GDP.⁵ And unlike Japan, China is not in a security alliance with the United States and has long maintained an independent nuclear capability. Whatever the extent to which China and Japan are or are not vastly different, Japan, by itself, provides too limited a point of reference from which to understand China's emergence as a major factor in the global economic order. China, since the 1970s, is the fourth example in the past 150 years of a large, rapidly growing export-oriented country being integrated into the international economic system. Japan, between 1950 and 1973, was the third. Germany and the United States, both between 1870 and 1913, were the first two. In the future, India may be the fifth. While there is much in Japan's experience that is relevant for understanding China's emergence today, the German and American cases may be just as pertinent, if not more so.

Speed, Scale, Labor Supply, and Wages

By the standards of these three past emerging giants, what is it about China that is unique? The speed of China's growth is hardly unique. Between 1973 and 2004, China's real GDP grew at an average annual rate of 6.86 percent, but between 1950 and 1973, Japan grew at a still faster average annual rate of 9.29 percent. To be sure, the smaller Japanese economy accounted for only 10 percent of global GDP growth between 1950 and 1973. By comparison, China has accounted for 20 percent of global GDP growth since 1973 and 24 percent since 1998. The scale of China's accomplishment is truly impressive, but consider that the United States accounted for 25 percent of global GDP growth not just for a six- or seven-year period, but for a full forty-three years between 1870 and 1913.

The U.S. experience is especially instructive. The explosive growth of China's manufacturing labor force is widely seen as changing the terms of trade between unskilled labor and other factors of production in unprecedented ways worldwide as China continues to exploit its comparative advantage.⁶ Between 1978 and 2002, China added 30 million manufacturing jobs.⁷ This is double all of manufacturing employment in the United States today.⁸ Consider, however, that during roughly comparable lengths of time in the late nineteenth and early twentieth centuries, Germany and the United States together added 9 million manufacturing jobs at a time when global GDP was 3 percent of what it is today and global population was no more than one-quarter its present size.⁹ The United States in those years, like China today, was able to radically increase the size of its manufacturing labor force by drawing in workers who were effectively outside the international economic system. While Chinese manufacturing draws underemployed workers from elsewhere in the Chinese economy, the United States easily added 6 million employees to its manufacturing labor force between 1880 and 1910 by keeping its borders open to European immigrants.¹⁰

While the United States and Germany dramatically increased the size of their manufacturing labor forces, real wage increases remained quite modest. Between the early 1880s and 1913, real wages in manufacturing in both the United States and Germany grew at no more than an average annual rate of between 1.2 and 1.5 percent. Because of their economic size, the United States and Germany, in the late nineteenth and early twentieth centuries, were able to have just that impact on labor markets in advanced industrialized countries that China is

thought to have today. By drawing on immigrant labor from southern Europe and eastern Europe, the United States and Germany not only kept a relatively tight lid on the growth of real wages in their own economies, they also kept a lid on real wages in the manufacturing industries of their leading trading partners and competitors. Real wages in the manufacturing industries of the UK and France during these same years grew by an average annual rate of less than 1 percent.¹¹

In marked contrast to what the U.S. and Germany experienced, as China has added 30 million workers to its manufacturing labor force between 1978 and 2002, real wages in manufacturing there have risen at an astonishing average annual rate of 12.4 percent.¹² At the same time, just as 100 years ago when the United States and Germany emerged as major players in the international economy, real wages in manufacturing have grown only modestly in at least some of China's trading partners. Between 1978 and 2004, while real wages were growing rapidly in China, real hourly wages in manufacturing in the United States fell at an average annual rate of 0.2 percent.¹³ During these same years, real manufacturing wages in Japan grew by a very modest average annual rate of 0.8 percent.¹⁴

Unlike 100 years ago, the relationship between the emergence of China and the lid on the growth of demand elsewhere for manufacturing labor during the past quarter century may be more coincidental than causal. While China has accounted for 17.5 percent of the growth in world trade since 1998, over the entire period since 1973 it has accounted for no more than 8.5 percent of this growth. By enormous contrast, for the entire forty-three-year period between 1870 and 1913, the United States and Germany together accounted for 29.8 percent of the growth in world trade. Despite China's vaunted size and growth, in the perspective of American and German scale and growth a century ago, China may still not be large enough to have the impact often expected of it. Notice that in the past ten years, when Chinese exports have come to loom largest in global markets, real manufacturing wages in the United States have reversed course and have been growing at an average annual rate of 0.5 percent, after having declined at an average annual rate of 0.7 percent during the preceding fifteen years.¹⁵ The quarter-century lag in manufacturing real wages in the United States has many causes, but China cannot be one of the most important among them. This trend was underway long before imports from China were a factor in the United States or in the markets of other advanced industrialized economies.

Scale, Speed, and the Pace of Structural Change

While the scale and speed of American and German labor growth dampened wage growth both at home and abroad in the late nineteenth and early twentieth centuries, employment in all the industries in all the other advanced industrialized economies with which German and American industries competed kept on growing. Manufacturing employment in countries such as the United Kingdom, France, and Belgium kept growing right up to World War I.¹⁶ Readers of such highly popular, hand-wringing, economic decline—predicting books of that period, such as Ernest E. Williams's *Made in Germany* and W. T. Stead's *The Americanization of the World*, to the extent they might have learned this, were no doubt surprised.¹⁷ Some sixty years later, in the late 1960s and early 1970s, when Japanese imports to the United States were growing at an annual rate of 20.1 percent—and Herman Kahn, as noted, wrote his own hand-wringing book—concerns were raised about the future of manufacturing in the United States. These concerns rose exponentially between 1969 and 1971, when manufacturing employment fell by 1.4 million even as Japanese imports continued to grow.¹⁸ Within a year, however, as unemployment in manufacturing began to dissipate, it became clear that the drop in employment had been driven largely by macroeconomic forces.¹⁹ With imports accounting for no more than 4.5 percent of American consumption of manufactures, it could hardly be otherwise.²⁰ Within a few years, almost all the American industries most subject to Japanese competition employment had recovered to peak levels or greater even as Japanese imports continued to grow. By 1979, more than 1 million new manufacturing jobs had been added.²¹

Since 1998, imports from China have grown at an annual average rate of 18.4 percent.²² Unlike the somewhat faster growth of imports from Japan when it was a newly emerging economic power, this import growth has been associated with important structural changes in the U.S. labor market. During this relatively brief period, even as real wages have been growing again, 3 million jobs have left the U.S. manufacturing sector. In the ten industries (computer and electronic products, machinery, furniture, wood products, primary metals, fabricated metals, transportation equipment, textiles and apparel, printed matter, and paper and paper products) where imports from China have grown at an average annual rate of 20 percent or more between 1998 and 2004, no fewer than 2,565,000 jobs have been lost. Significantly,

unlike the late 1960s and early 1970s in the United States—or for that matter, U. S. and western European experience in the late nineteenth and early twentieth centuries—economic expansion has done little to reverse job losses in these industries. For example, in the two and one-half years since the pace of U.S. economic growth began accelerating in mid-2003, another 150,000 jobs have been lost in these ten industries.

Is there something special about competition from China that underlies this major structural change in the American labor market? Not surprisingly, like the stagnation in real wages in manufacturing, and following its recovery in the late 1970s, employment in manufacturing in the United States has been declining for a quarter century. There has been an acceleration in the decline, however, since 1998. Between 1979 and 1998, manufacturing employment fell at an average annual rate of 0.6 percent. Since 1998, this rate of decline has increased to an average of 3.2 percent per year. This is just the period when Chinese imports have been increasing most rapidly. Note, also, that unlike the late 1960s and early 1970s, in 2004 imports accounted for as much as 25 percent of domestic consumption.²³ In six of the industries where Chinese imports have surged in recent years, imports from there account for as much as 40 percent of the post-1998 increased share of imports in domestic consumption. These industries (computers and electronic products, machinery, furniture, fabricated metals, printed matter, and textiles and apparel) have together lost 1,915,000 jobs between 1998 and 2004. In the case of machinery, fabricated metals, and printed matter, however, it is particularly difficult to see a connection between Chinese imports and the staggering job losses that have occurred. The increases in the market share of Chinese imports in these three industries range from 1.1 percent to 2.7 percent between 1998 and 2004, yet these industries during this same period have experienced employment declines from 14.4 to 23.9 percent. Even in computer and electronic products, furniture, and textiles and apparel, increases in the share of Chinese imports in domestic consumption (12.9, 8.4, and 16.2 percent, respectively) cannot explain more than 35 to 40 percent, at best, of the 1,190,000 jobs lost in these three industries (29, 14.9, and 45.1 percent of the total industry labor force, respectively). Much of the rest of the observed decline in employment in these industries is due to productivity increases. In computer and electronic products, between 1998 and 2004, productivity increased by an astonishing 199.4 percent, while furniture

and textile and apparel experienced more modest but nonetheless non-trivial increases (14.7 and 25.2 percent, respectively).²⁴

Manufacturing employment is not the same thing as total employment. Just as economic expansion from late 1971 meant a recovery of employment, decades later, economic expansion from the second quarter of 2003 has meant a recovery of overall employment, if not manufacturing employment. It is hardly surprising that in an economic expansion in the early 1970s—when imports occupied only narrow niches of the market for manufactures in the United States—workers displaced by imports would find employment elsewhere within the same industry or elsewhere within manufacturing. In the early twenty-first century—with imports occupying one-quarter of the domestic market for manufactures—the probability is inevitably lower that displaced workers will be reabsorbed elsewhere in manufacturing. Whether today or in the 1970s, increasing imports do not change the total volume of jobs in an economy. They do, however, change the composition of these jobs.

Do workers displaced today by imports sustain greater distress because their new jobs are more likely to be outside of manufacturing than was the case decades ago? In the heavily unionized sectors of decades past with labor markets heavily balkanized, the loss of a job could mean considerable destruction of a worker's firm-specific human capital. Movement from an assembler to a supplier of parts, movement from a unionized to a non-unionized sector, reclassification of occupational description and/or geographic relocation could mean a substantial lowering of employee compensation, even if a worker stayed in the same industry.

Today, the consequences for a worker being displaced by Chinese import competition vary greatly according to industry. The 660,000 jobs lost in textiles and apparel and furniture between 1998 and 2004 are, on average, among the lowest paid in manufacturing. Average compensation per full-time employee in these industries is more than one-third below average compensation in manufacturing as a whole. Year in, year out, these industries have the poorest paid manufacturing workers.²⁵ Since 1998, almost 8.5 million new jobs have been created outside of manufacturing. This is almost triple the number of jobs lost in manufacturing. Twenty-one percent of these new jobs, however, are in retailing or in administrative and waste management services that pay on average 15 to 20 percent less than the already low wages in textiles and apparel and furniture. On the other hand, a much larger

49 percent of these new jobs are in construction, health services, and state and local government. Jobs in these three sectors pay on average 15 to 20 percent more than those in textiles and apparel and furniture. Workers leaving the poorly paying manufacturing industries that are contracting are provided significant opportunities by an expanding American economy to maintain and improve their economic situation.

The situation is surely more difficult for the 530,000 workers in the computer and electronics industry whose jobs were lost between 1998 and 2004. Workers in this industry have been the highest paid in manufacturing, with compensation 50 percent above the average in manufacturing. The workers losing jobs in this industry, however, are highly trained and, in general, better educated by comparison with those in textiles and apparel and furniture. The skills and education of these workers, to the extent that they are not tied narrowly to the jobs they have been lost, may give the workers the flexibility to recoup their fortunes in the better paying subsectors that remain in manufacturing, or more likely in the services sector.

Speed, Scale, and the Demand for Energy and Raw Materials

There have been concerns in recent years not just that China's integration into the global economy will bring with it potentially destabilizing new supplies of labor, but also that its emergence will bring with it potentially destabilizing demands for energy, minerals, and other raw materials.²⁶ In 2004, China imported 14 percent of the global output of rubber, 15 percent of the global output of cotton, 18 percent of the global output of copper, and 20 percent of the global output of aluminum.²⁷ In 2004, China accounted for 8.2 percent of global oil consumption, 34.4 percent of global coal consumption, and 13.6 percent of all global energy consumption.²⁸ More significantly, China accounts for 28.2 percent of the increase in global oil consumption over the past ten years, and fully 35 percent of the increase in oil consumption over just the past two years.

Despite China's enormous growth in demand for oil in the past few years, oil is not China's main source of energy. Indeed, its share in China's energy consumption has declined steadily since 2000. In the past five years, following years of stagnating demand, Chinese use of coal reversed course and has now more than doubled. Coal now provides 69 percent of China's energy needs.

That China consumes so much coal and that its use has been growing so rapidly does not mean that there is widespread concern about the very long-term trend of coal prices. As has been well understood for decades, there are abundant reserves of coal worldwide. The problems are rather the long-term environmental issues associated with the use of coal. Should China change its energy policies so that, as with most other economies, its prime reliance would come to be on oil and natural gas rather than coal, its impact on global markets would still be more far-reaching than it has been already.²⁹

A hundred years ago, the emergence of the United States and Germany as players in the global economy did not engender the kinds of concerns about the supplies of energy and raw materials that China's does today. Quite the contrary. The emergence of the United States and, to a lesser degree, Germany rested on their ability to make creative use of those raw materials found in enormous abundance within their borders. By 1913, the United States had 95 percent of the world's natural gas reserves and 65 percent of the world's petroleum reserves. It was the world's leading producer by a wide margin of copper, coal, zinc, iron ore, and lead.³⁰ Like the United States, Germany was a major coal exporter, and with its possession of the Ruhr, its vast iron and steel-iron industry relied exclusively on domestic sources of coal and iron.

In the third quarter of the twentieth century, however—when Japanese real GDP growth averaged better than 9 percent annually—concerns about what this would mean for the future price and availability of energy, food, and other raw materials were expressed in terms remarkably similar to those being voiced about China today. It is hardly surprising that this should have been the case. Compared to China's accounting for 8.1 percent of the global oil consumption today, in 1973 Japan accounted for as much as 9.4 percent. Between 1996 and 2004, Chinese oil demand grew at an average rate of 8.1 percent. In contrast, Japanese demand for oil between 1965 and 1973 grew at an average annual rate of 15.3 percent. Of course, Japanese impact on global markets was not confined to oil. In 1969, 73 percent of all the copper imported into Organisation for Economic Co-operation and Development countries went to Japan, as did 35 percent of the iron ore.³¹

Concerns expressed about Japan took the form of very concrete projections about what Japan's continued rapid growth would mean for future global demand and supply balances. In a 1972 study sponsored by the Japan

Society of New York, Kazuo Sato found that even if Japan's average annual rate of GDP were to fall to 8 percent per year, in 1980, 20 percent of all petroleum and 25 percent of all other raw materials entering international trade would be purchased by Japan.³²

Sato's forecast implied that Japan would be consuming 9.9 million barrels of oil per day in 1980. The Boston Consulting Group in 1974 did a study similar to that of Sato's on behalf of the United Kingdom's Department of Trade and forecasted daily oil consumption for Japan in 1980 of 10.8 million barrels per day.³³ Also in 1974, the Japan Economic Research Center in Tokyo forecasted that in 1985, Japanese consumption would be 14.2 million barrels of oil per day.³⁴ All these forecasts proved to be wildly off the mark. In 1980, Japan's oil consumption was no more than 4.9 million barrels a day, and in 1985, no more than 4.4 million barrels a day. Even today, Japanese oil consumption is more than 10 percent below what it was in 1973.

Why did these forecasts of Japan's oil consumption prove so wrong? Most obviously, the GDP growth assumptions behind these forecasts were much too high. Between 1973 and 1980 and 1985, rather than growing at annual rates of 8 to 10 percent, Japan, in part as a result of changes in global energy markets, grew at a more modest 4 to 4.5 percent. Still more important was Japanese energy conservation during these years. Based on historical evidence, these forecasts assumed that for every 1 percent GDP would grow, the demand for energy would likewise grow at 1 percent. In fact, between 1973 and 1980, this assumption was off by a factor of ten, with energy demand in Japan growing at only one-tenth the rate of growth of GDP. For the entire period between 1973 and 1985, energy demand grew at only one-eighth the rate of GDP growth. These forecasts proved wrong because they did not appreciate what Japan's long-term response would be to the higher energy prices that emerged after 1973. Not only was there dramatic conservation of energy in general, but also for reasons of economic security, Japan moved away from oil and toward nuclear energy, coal, and natural gas. In 1973, oil accounted for 78 percent of Japanese energy consumption. Twelve years later, in 1985, oil's share was down to 57 percent. Today, it is 44 percent. This is low by Japanese standards, but, as noted, it is considerably higher than oil's current share in Chinese energy consumption. Even so, calibrating by any of the available estimates of Chinese GDP, including those incorporating the new official revisions, Japan is a very efficient user of energy relative to China.

Scale, Size, and the Stability of the International Financial System

Given concerns, alarmist or prudent, that China's growing demands for imported energy, minerals, and other raw materials will result in hitherto unprecedented increases in the prices of these commodities and a massive change in China's terms of trade with the rest of the world, it may seem odd that there is simultaneously the concern that China may continue to run for many years a large and growing current account surplus. To many, it seems odd that China should be running a current account surplus at all. A nation growing as rapidly as China should be home to many investment opportunities. As such, China should be importing capital and running a current account deficit rather than exporting capital and running a current account surplus that reached 3.2 percent of GDP in 2003, 4.2 percent in 2004, and that is projected to reach to 6.1 percent of GDP in 2005.³⁵ Even if the National Bureau of Statistics of China is correct and China's GDP is underestimated by 16.8 percent, these are unusually large surpluses in relation to GDP.

China's current account surpluses in relation to GDP are unusually large, but not unprecedented. For the entire period between 1870 and 1913, the United Kingdom ran a current account surplus of greater than 5 percent.³⁶ Of more relevance, perhaps, China's experience is similar to those of the United States, Germany, and Japan. In each case, rapid economic growth and emergence as a global economic power went hand-in-hand with a growing current account surplus. China's experience is more in keeping with the norm than the exception. In each of these cases, accelerating productivity increases tended to be unanticipated and, in consequence, tended to run ahead of the money supply, consumption, and investment.³⁷

While neither the U.S., German, nor Japanese current account surpluses ever exceeded 2.5 percent of GDP during their years of fastest economic growth, in each case, their balance of payments surpluses did place significant stress on the international financial system.³⁸ In the late nineteenth and early twentieth centuries, the large American and German surpluses led the U.S. Treasury and the German Reichsbank to accumulate large stocks of gold. Rather than recycling its gold reserves to the Bank of England or to its domestic monetary system as needed, the U.S. Treasury simply sat on them; it purchased gold but did not sell it. By 1913, the U.S. Treasury held one-quarter of the world's monetary gold.³⁹ The Reichsbank,

though not to the same extent as the U.S. Treasury, was also extremely reluctant to recycle its gold reserves internationally.⁴⁰ Through their monetary policies, the U.S. Treasury and the Reichsbank imposed a deflationary bias and unnecessary instability on the international financial system in the late nineteenth and early twentieth centuries. Indeed, it is possible that even without World War I, the international gold standard system might not have survived absent significant adjustment.

In the late 1960s and early 1970s, it was Japan's turn to be the large, rapidly growing economy whose large balance of payments surpluses were straining the international financial system. Japan's surpluses resulted in the buildup of mostly dollar-denominated foreign exchange reserves that in this era had largely replaced gold as the international financial system's store of value. Between January 1967 and August 1971, Japanese foreign exchange reserves swelled from \$2 billion to \$12.5 billion.⁴¹ This Japanese accumulation accounted for more than one-third of the outflow of reserves from the United States. The flow of reserves from the United States to Japan was more than double that of any other country. When the Nixon administration began on August 15, 1971 what turned out to be a three-year, ultimately unsuccessful effort to reshape the international financial system, it was Japanese policies that were widely viewed as having played a major role in necessitating this action.⁴²

Decades later, whether a dramatic reshaping of the international financial system—beyond cutting the anachronistic tie of the dollar to gold—was necessary at all remains an open question.⁴³ Was it possible, perhaps, that the foreign claims building up in dollars, whether in Japan, Europe, or elsewhere, merely reflected the demand for services provided by the U.S. financial system?⁴⁴ Rather than an indication of a lack of competitiveness of the American economy, might the loss of reserves have been a tribute to the American capital market's ability to provide a unique set of financial intermediation services to governments, firms, and individuals throughout the world? With unit labor costs in the United States falling relative to those of all of its major trading partners—particularly Japan—between 1965 and 1971, it is by no means clear that there was a loss of industrial competitiveness at all.⁴⁵ In the absence of oft-stated official concerns in the United States about the buildup of foreign reserves abroad, is it possible that the large component of this buildup that was driven by speculators might never have happened?

In many respects, China seems to pose the same kind of concerns for the international financial system that the United States, Germany, and particularly Japan did in years past. Like Japan in the late 1960s and early 1970s, China in the past five years has been responsible for a large share in the global buildup in foreign exchange reserves. Its foreign exchange reserves have doubled in the last two years. In a matter of months, China's foreign exchange reserves will exceed Japan's, and China's central bank will hold more dollar claims than any other central bank in the world.⁴⁶ This large buildup of reserves is thought by many to have the potential to threaten the centrality of the dollar to the international financial system in the same way that the buildup of dollar reserves abroad did thirty-five or forty years ago. These concerns persist despite the dollar continuing to be—notwithstanding all the changes in the international financial system—as much the system's store of value, unit of account, and medium of exchange as it was in the early 1970s.

As might have been the case decades ago, is there again altogether too much concern about the buildup of foreign claims against the dollar? With too many fragile financial institutions and effective financial intermediation relatively weak in China, is it entirely surprising that investment should fall short of savings there with a current account surplus resulting? At the same time, with private capital export controls still in place if this savings cannot be sent abroad easily, might it be that China's central bank effectively serves as a financial intermediary between China's households and the American capital market? If, as might have been the case forty years ago, the U.S. current account deficit has a capital account surplus as its counterpart that is driven by a demand for the services of U.S. financial intermediaries—both public and private—then widespread concerns about some event triggering a free fall of the dollar may be no more or less legitimate today than they were then. Then, as now, the greatest dangers may arise from self-inflicted wounds that come about from poor policy choices driven by misconceptions about the causes of the U.S. current account deficit, and by speculation based on the assumption that such ill-conceived policies will actually be undertaken.

China, Asia, and the Dollar

In thinking about the role that China might play as a possible source of instability for the international financial system, it may be a mistake just to look at China in isolation. China's foreign exchange rate policies may play

a decisive role in shaping the policies of many of the other economies in Asia that, like China, are also running substantial current account surpluses. In 2004, imports from China accounted for 15 percent of U.S. imports, while imports from Asia as a whole accounted for 40 percent. As such, a broader look at all of Asia might be appropriate. If all Asian international finance policies are moving in tandem with those of China, and maintaining undervalued currencies, it might be expected, for example, that imports from all of Asia into the United States should rise substantially as a proportion of total imports. This has not happened at all. Excluding oil, natural gas, and petroleum products, imports from Asia were 40 percent of total imports in 1998, just as in 2004. Imports from China have increased from 8 percent of total U.S. imports in 1998 to 15 percent in 2004. The increased Chinese share in total imports, however, has come at the expense of Japan, Hong Kong, Taiwan, and Singapore—all countries that have invested heavily in China and all countries that have seen dramatic growth in their exports there. Imports into the United States have grown well in excess of GDP since 1998, but if distinctive Chinese-influenced pan-Asian financial policies have played a decisive role, why is it that imports from the rest of the world have also grown at the same pace as Asian imports?

Finale

From the 150-year perspective of American, German, and Japanese emergence as very large, rapidly growing, export-oriented economies, China's emergence today seems largely unremarkable. U.S. GDP growth and German export growth in the late nineteenth and early twentieth centuries bulked larger in the global economy than do China's GDP and export growth today. Chinese GDP and export growth rates have been fast in recent decades, but Japanese GDP and export growth rates were still faster in the third quarter of the twentieth century. China seems to be drawing on a seemingly inexhaustible supply of labor to fuel its rapid growth, but 100 years ago, through its then-liberal immigration policies, so too did the United States—with important consequences both for its own wages as well as for those of its leading trading partners. There are also concerns that the sheer size of future Chinese demands for energy and raw materials will greatly increase the prices of these commodities, to the enormous detriment of countries that do not produce them. Astonishingly similar concerns were

voiced about future Japanese demands thirty-five years ago, and yet all dire forecasts proved off the mark. China today is a rapidly growing economy filled with countless new opportunities that hardly existed a few years ago, yet it is the world's largest exporter of capital. However unusual this may seem, this was also the experience of the United States, Germany, and Japan during their years of fastest growth.

For all the similarities of China's emergence into the global economy with the experiences of the United States, Germany, and Japan, there are also important differences. Workers in industries competing with imports from the United States, Germany, and Japan during the years when those economies were experiencing their most rapid growth, when displaced for whatever reason, tended to be reabsorbed elsewhere within the industry in which they were working, or, perhaps elsewhere in manufacturing. Today, as imports from China grow rapidly, the industries in the United States with which these imports compete are going through far-reaching structural changes, with imports occupying many times the share in American manufacturing consumption than they did in the years when imports from Japan were growing rapidly after 1965. Unlike workers displaced decades ago, workers displaced today—whether because of rapid productivity change or imports—are more likely to have to find work outside the industry where they had been working.

Still more significant, by 1913, the emerging United States had the world's highest per capita GDP, while Germany's per capita GDP was about 70 percent of the U.S. level. In 1973, emerging Japan had a per capita GDP that was the same as Germany's and almost 70 percent of the U.S. level. In marked contrast, Chinese GDP per capita in 2004 may be no more than 15 percent, or at best 18 percent, of the U.S. level. GDP per capita is an index of the level of development. If China is to converge to the level of development characteristic of advanced industrialized economies, many more decades of rapid growth lie ahead. Whether this comes to pass depends on the proportion of the Chinese economy that experiences this convergence. As China has grown rapidly, regional and sectoral differences in wages and productivity have widened rather than narrowed to a degree that is far greater than what was experienced in the United States, Germany, and Japan during the decades that their economies emerged as global economic powers. If like many parts of the global economy, many parts of the Chinese economy do not become integrated significantly into the process of development, rapid Chinese economic

growth may end long before China, on average, reaches western European and Japanese—much less American—levels of per capita GDP.

To say that much in China's emergence, rather than being unique, resembles even in scale the emergence of other large, rapidly growing, export-oriented economies, is not to downplay its significance. After all, German and American economic growth in the late nineteenth and early twentieth centuries allowed those two countries to be dominant military and economic powers in the war-torn half century that followed.

Yael Levin and Nicole Passan, editorial assistants at AEI, worked with Gary Saxonhouse to edit and produce this Asian Outlook.

Notes

1. Herman Kahn, *The Emerging Japanese Superstate: Challenge and Response* (Englewood Cliffs, N.J.: Prentice Hall, 1970), 5–6. Kahn actually says Japan will have the world's largest GNP (gross national product), but that is immaterial here. GNP, unlike GDP, includes the earnings of nationals working abroad and excludes the earnings of resident foreigners when aggregating up value-added. See N. Gregory Mankiw, *Brief Principles of Macroeconomics*, 3rd edition (Mason, Ohio: South-Western, 2004), 96.

2. Herman Kahn, *The Emerging Japanese Superstate*, 153.

3. Unless otherwise noted, all GDP statistics used in this essay are from Angus Maddison, *The World Economy: Historical Statistics* (Paris: OECD Development Studies Centre, 2003). Maddison's GDP series are available only through 2001. They have been updated to 2004 using growth rates taken from the World Bank, *World Development Indicators 2005* (Washington, D.C., 2005). The new Chinese GDP estimates for 2005, available at <http://www.stats.gov.cn>, with one exception to be noted later, are not used here. The 2005 estimates do not affect in any material way any of the comparisons made in this paper. See also the discussion in footnote 5 about the recent revision of the official Chinese GDP estimates.

4. Herman Kahn, *The Emerging Japanese Superstate*, 13.

5. The problems with Chinese GDP data are so extreme that plausible cases can be made that Chinese GDP is as low as one-third the size of U.S. GDP or as high as three-quarters. The issues here concern, first, the quality of the GDP estimates the National Bureau of Statistics of China has made and, second, how to price the GDP estimates that are available for purposes of making international comparisons. The summary of the new economic census for China for 2004 has

just been released (see “Key Achievements of the First National Economic Census with New Changes of China’s GDP Aggregates and its Structure” and “Announcement on Revised Result about Historical Data of China’s Gross Domestic Products,” both available at <http://www.stats.gov.cn>). The new census finds that Chinese GDP for 2004 has been underestimated by 2.3 trillion yuan, or 16.8 percent. Underestimation of service sector value-added accounts for 93 percent of the overall GDP underestimation. The new economic census has made its GDP estimates using current market prices. If, for the purpose of making international comparisons, purchasing power parities are used, the degree of underestimation may be considerably larger. Because many service sector activities—particularly the many that are labor-intensive—are not internationally traded, evaluating their value-added at market prices and then making international comparisons by converting the results at current exchange rates will bias downward the GDP of countries with relatively abundant labor. What purchasing power parities should be used to evaluate China’s hitherto underestimated value-added for purposes of making international comparisons? The World Bank uses purchasing power parity estimates that imply, for purposes of international comparison, that Chinese GDP is four and one-half times larger than it would be if instead market exchange rates were used for converting yuan to dollars. The purchasing power parity of four and one-half refers to China’s entire GDP. Purchasing power parities for just the value-added of China’s service sector should be larger. Given that 65 percent of the underestimation is concentrated in service subsectors of transport and storage, post and telecommunications, wholesale and retail trade, catering, and real estate, applying a purchasing power parity of seven to that part of Chinese GDP that has been underestimated does not seem unreasonable. This would mean Chinese real GDP is already 82.4 percent of U.S. GDP. This calculation is likely to be upwardly biased. Maddison’s Chinese GDP series, on which the estimates used here are based, corrected for 60.1 billion yuan in service sector value-added being underreported in his benchmark year of 1987 (see Alan Heston, Robert Summers, and Bettina Aten, “Penn World Table Version 6.1,” Center for International Comparisons at the University of Pennsylvania [CICUP], October 2002, available at <http://pwt.econ.upenn.edu>). If the new official services sector series growth rate for 1987–2004 is applied to Maddison’s correction its value is 1.115 trillion yuan in 2004. This is just under half of the undercounting identified by the new economic census. Correcting Maddison’s series for the undercounting he may not have allowed for leaves Chinese GDP at 74.1 percent of U.S. GDP in 2004. Note, however, that there have been some studies that sug-

gest that the prices used in both the Maddison and the World Bank purchasing power parity calculations are outdated. Using better price data might mean that real Chinese GDP valued at purchasing power parity is no more than twice real Chinese GDP valued at market prices, instead of the four and one-half to five times found by the World Bank and Maddison. Using purchasing power parities drawn from these new studies, it appears—even allowing for the underestimation of the size of China’s services sector—that China’s GDP is no more than 32.1 percent the GDP of the United States. On this, see *OECD Economic Surveys, China* (Paris: Organisation for Economic Co-operation and Development, 2005), annex 1.A1. If these more recent purchasing power parities are used, the Chinese and Japanese economies are roughly the same size. In the analysis conducted here, updated estimates based on Maddison’s series will be used. No allowance will be made for that part of the services sector undercounting that Maddison’s estimates may not capture. Neither will any allowance be made for the possibility that the purchasing power parities used by Maddison and the World Bank overcorrect for the differences in U.S. and Chinese price structure.

6. For a cogent statement of this view, see Martin Wolf, “The World Begins to Feel the Dragon’s Breath on its Back,” *Financial Times*, December 14, 2005.

7. National Bureau of Statistics of China, *China Statistical Yearbook 2004* (China: National Bureau of Statistics of China, 2004) available at <http://www.stats.gov.cn>.

8. Council of Economic Advisers, *Economic Report of the President 2005* (Washington, D.C.: Council of Economic Advisers, 2005), table B-46.

9. Paul Bairoch, *The Working Population and Its Structure* (Brussels: Université Libre, Centre d’Économie Politique, 1968), tables B-4 and D-4b; and Maddison, *The World Economy*, appendix B.

10. Bairoch, *The Working Population*, table D-4b.

11. W. Arthur Lewis, *Growth and Fluctuations 1870–1913* (London: George Allen & Unwin, 1978), 94.

12. National Bureau of Statistics of China, *China Statistical Yearbook 2004*.

13. Council of Economic Advisers, *Economic Report of the President 2005* (Washington, D.C.: Council of Economic Advisers, 2005), table B-47.

14. Ronald I. McKinnon and Kenichi Ohno, *Dollar and Yen: Resolving Economic Conflict between the United States and Japan* (Cambridge, Mass.: MIT Press, 1997), table 4.1; Government of Japan, Ministry of Internal Affairs and Communication, Statistics Bureau, *Consumer Price Index* (Japan: Statistics Bureau), available at <http://www.stat.go.jp>; Government of

Japan, Ministry of Health, Labor, and Welfare, Statistics and Information Department, *Monthly Labor Survey* (Japan: Statistics and Information Department), available at <http://www.mhlw.go.jp>.

15. Council of Economic Advisers, *Economic Report of the President 2005*.

16. Bairoch, *The Working Population*, tables C5, E5, and F5.

17. Ernest Edwin Williams, *Made in Germany* (London: William Heinemann, 1897); and W. T. Stead, *The Americanization of the World* (London: Horace Markley, 1901).

18. Unless otherwise noted, all employment data in this essay are taken from United States Department of Labor, Bureau of Labor Statistics, *National Employment, Hours, and Earnings* (Washington, D.C.: Bureau of Labor Statistics), available at <http://data.bls.gov>.

19. Gary R. Saxonhouse, "Employment, Imports, the Yen and the Dollar," *Discord in the Pacific: Challenges to the Japanese-American Alliance*, ed. Henry Rosovsky (Washington, D.C.: Columbia Books, 1972), 80–95.

20. William H. Branson and Helen B. Junz, "Trends in U.S. Trade and Comparative Advantage," *Brookings Papers in Economic Activity 2* (1971): table 2.

21. Council of Economic Advisers, *Economic Report of the President 2005*, table B-46.

22. Unless otherwise noted, Chinese and other Asian import data used in this essay are from the United States Department of Commerce and available at <http://tse.export.gov>.

23. Domestic consumption is defined as gross output plus imports minus exports. Inventories are assumed to be constant. Gross output figures for 2004 that are used in this essay, unless otherwise noted, are taken from United States Department of Commerce, Bureau of Economic Analysis, *Annual Industry Accounts* (Washington, D.C.: U.S. Department of Commerce, 2005), and are available at www.bea.doc.gov.

24. Increases in Chinese import penetration and productivity change are by themselves not large enough to account for decline in employment in textiles and apparel. This is not surprising because Chinese import penetration accounts for only 50 percent of the increase in import penetration between 1998 and 2004. In contrast, Chinese import penetration accounts for 79 percent of the increase in import penetration in the computers and electronic products market and 88 percent of the increase in import penetration of the furniture market.

25. The compensation data used in this analysis, unless otherwise noted, are taken from United States Department of Commerce, Bureau of Economic Analysis, *Annual Industry Accounts* (Washington, D.C.: U.S. Department of Commerce, 2005), available at www.bea.doc.gov.

26. Martin Wolf, "The World Begins to Feel the Dragon's Breath."

27. James T. Areddy, "What China Wants, China Plans to Get," *Wall Street Journal*, December 21, 2005.

28. Unless otherwise noted, all energy data used here are taken from *BP Statistical Review of World Energy Markets* (London: BP, June 2005).

29. The only economy that relies more heavily on coal than China is South Africa. Coal accounts for more than 75 percent of South Africa's energy consumption.

30. These data and the interpretation of the role of natural resources in American industrialization are drawn from Gavin Wright, "The Origins of American Industrial Success, 1879–1940," *The American Economic Review* 80, no. 4 (September 1990): 651–68. On Germany, see Ernest Edwin Williams, *Made in Germany*, 33.

31. Boston Consulting Group, *Japan in 1980: The Economic System and Its Prospects* (London: Boston Consulting Group, 1974), 127.

32. Kazuo Sato, "Japan's Foreign Trade—Retrospect and Prospect," *Pacific Partnership: Prospects and Recommendations for the Seventies*, ed. Jerome Cohen (Lexington, Mass.: Lexington Books, 1972), 106.

33. Boston Consulting Group, *Japan in 1980*.

34. Japan Economic Research Center, *The Structure of a Three Trillion Dollar Economy: The Japanese Economy in 1985* (Tokyo: Japan Economic Research Center, 1974), 153.

35. *IMF Economic Outlook 2005* (Washington, D.C.: International Monetary Fund), table 1.5, available at <http://www.imf.org>. The projected 2005 current account surplus relies on the trade data in the new 2005 Chinese GDP estimates available at <http://www.stats.gov.cn>.

36. Paul Krugman and Maurice Obstfeld, *International Economics* (Glenview, Ill.: Scott, Foresman, 1988).

37. An early statement of the analytical framework accounting for this phenomenon can be found in Ryutaro Komiya, "Economic Growth and the Balance of Payments: A Monetary Approach," *Journal of Political Economy* 57, no. 1 (January–February 1969): 35–48.

38. Simon Kuznets, *Economic Growth of Nations: Total Output and Production Structure* (Cambridge, Mass.: Harvard University Press, 1971); William Woodruff, *Impact of Western Man: A Study of Europe Role in the World Economy 1750–1960* (New York: St. Martin's Press, 1967); and William Woodruff, *America's Impact on the World: A Study of the Role of the United States in the World Economy 1750–1970* (New York: John Wiley & Sons, 1975).

39. Marcello de Cecco, *The International Gold Standard: Money and Empire* (London: Frances Pinter, 1984), 110–117, 247.

40. Oskar Morgenstern, *International Financial Transactions and Business Cycles* (Princeton, N.J.: Princeton University Press, 1959).

41. Bank of Japan, *Economic Statistics Annual 1992* (Tokyo: Bank of Japan, 1993), 22–23; and Bank of Japan, *Economic Statistics Monthly* (Tokyo: Bank of Japan), various issues.

42. See the discussion in Gary Saxonhouse, “Employment, Imports, the Yen and the Dollar.”

43. Ronald McKinnon, *The Rules of the Game: International Money and Exchange Rates* (Cambridge, Mass.: MIT Press, 1996), 41, 45, 51.

44. Emile Despres, Charles Kindleberger, and Walter Salant, “The Dollar and World Liquidity: A Minority View,” *The Economist* (February 5, 1966): 526–529.

45. Ryutaro Komiya and Yoshio Suzuki, “Inflation in Japan,” *Worldwide Inflation*, eds. Lawrence B. Krause and Walter S. Salant, (Washington, D.C.: The Brookings Institution, 1977), table 30; Council of Economic Advisers, *Economic Report of the President* (Washington, D.C.: Council of Economic Advisers, 1972), table 34.

46. International Monetary Fund, *International Financial Statistics*, available at <http://www.imf.org>.