

THE MANUFACTURING OF DECLINE

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Popular fears that America is an empire in decline rise and fall with the business cycle — or, more recently, the bubble cycle. One can only hope that, as the economy recovers, the surfeit of excited comparisons between the United States and ancient Rome will dissipate, allowing more sober assessments of America's future to take center stage. In a recent book, *Why America is Not a New Rome*, I observed that American decline after 1945 was inevitable, but that the US trade deficit and the significant relative retreat of manufacturing were not. This essay takes a closer look at the rapid decline of American manufacturing in comparison to other wealthy nations, challenges the reasons given for why Americans need not worry, and argues that for the United States to overcome its economic straits it must increase its export of manufactured goods.

1.

September 2, 1945, the day that Japan's Foreign Minister Shigemitsu Mamoru signed his country's surrender on board the USS *Missouri*, was the apex of American military and economic power. There was nowhere for America to go but down. And, relative to the rest of the world, down America went. When compared in constant monies, US GDP was nearly 6.5 times higher in 2010 than in 1945, but as a portion of the world economic product, it declined from 35 to about 23 percent (in nominal terms). This decline was inevitable once the war-destroyed economies of Europe and Japan began to regain strength and even more so once they began to concentrate their innovation and export efforts in some key modern manufacturing sectors: cars and machinery in Germany and cars, electronics, and robotics in Japan.

As befits a large, modern country, America's manufacturing sector remains very large and has been growing in absolute terms. In 2009, US manufacturing accounted for more than 18 percent of global manufacturing and its value was higher (when compared in nominal, exchange-rated terms) than the total GDP of all but seven of the world's economies (behind Brazil at \$2 trillion and ahead of Canada at \$1.6 trillion). The per capita value of manufacturing in 2009 was higher in the United States (\$5,800) than in France (\$3,900), Canada (\$4,200),

Italy (\$5,100), and China (\$1,500). When measured in *constant* monies, US manufacturing expanded by about 60 percent between 1990 and 2009, nearly matching the growth of overall GDP; it grew by 10 percent between 2000 and 2009, compared to a 15 percent increase in GDP.

But these numbers can be deceptive. America's manufacturing sector has retreated faster and further in *relative* terms than that of any other large, affluent nation. US manufacturing as a percentage of GDP declined from 27 percent in 1950 to 23 percent in 1970 to 14 percent in 2000 to 11 percent in 2009. While manufacturing as a share of GDP has also declined in Germany and Japan, both countries have retained relatively larger manufacturing sectors at 17 and 21 percent, respectively. The contribution of manufacturing to per capita GDP is also higher in Germany (\$6,900) and Japan (\$8,300) than in the United States. The most shocking, but underemphasized, fact about global manufacturing is that Germany's share of global merchandise exports is actually higher than America's (9 percent vs. 8.5 percent in 2009), despite having an economy just one-quarter of the size.

As a consequence, the United States is lagging as a global economic competitor. In 2009, Germany and Japan had large manufacturing trade surpluses (\$290 and \$220 billion, respectively) while the United States had a massive manufacturing trade deficit (\$322 billion). The other key measure — little known in popular discussions of manufacturing — is export intensity, the ratio of a nation's exports to its total manufacturing sales. The global average export intensity is twice as high as that of the United States, which ranked 13th out of the 15 largest manufacturing countries in 2009, higher only than Russia and Brazil. Meanwhile, the leading EU countries had export intensities 2.5 times to 4 times higher than America's. Comparisons of the value of manufactured exports on a *per capita* basis are even more dramatic: they are higher in Spain (\$3,700), Japan (\$4,000), Canada (\$4,600), and Germany (\$11,200) than in the United States (\$2,400).

The US manufacturing sector is also badly trailing China's, though in order to fully appreciate this, one must calculate the real value of China's artificially undervalued currency (the *yuan renminbi*, or RMB). The 2009 data from the United Nations lists US manufacturing output at \$1.79 trillion versus RMB 14 trillion or \$2.1 trillion for China when converted at the official exchange rate for 2009 (about RMB 6.8/US dollar). But according to the purchasing power parity (PPP) conversion preferred by the International Monetary Fund, one RMB should be worth 29 cents, or RMB 3.4/US dollar. Even if the real RMB value were only 50 percent higher than the official rate, the total added by China's manufacturing in 2009 would be in excess of \$3 trillion, or about 67 percent above the US total.

America has historically been an effective mass-maker of low- to medium-quality products for its huge domestic market, but an inferior exporter. As long as America imported few manufactured goods, energy, and food, this weakness did not matter. Today, however, America has enormous manufactured imports, a huge energy import bill, and a lower surplus on its food trade. For the last 35 years, the US has had a positive and rising balance in service trade and, until 2006, a generally worsening balance in trading of goods (including food, fuels, and raw materials). Recent exports of manufactured products increased (in nominal terms) by nearly half between 2000 and 2008 before dropping by 25 percent in 2009 as a result of the economic downturn and then almost recovering in 2010. But the *imports* of manufactures also kept on rising — by about 46 percent between 2000 and 2008.

The United States has imported more than it has exported for so long that few remember the switch from net exporter to net importer. From 1896 to the early 1970s, the United States had a trade surplus. In 1976, America's trade deficit was just \$6 billion, but by 1990, the trade deficit was more than 13 times larger at \$80 billion (all in nominal terms). By 2006 it was almost 10 times bigger still: \$759 billion. While the economic downturn reduced the annual total to \$375 billion in 2009, it rose again in 2010 to nearly \$500 billion. Indeed, America's trade deficit is larger than the individual GDPs of all but 19 countries in the world.

The United States is failing even where it was once dominant. In 1950, American companies made about 95 percent of cars sold in the United States; 60 years later, the country that invented mass automobile production bought most of its light vehicles from foreigners. The crossover occurred in the summer of 2007 when the Detroit Three began to sell less than half of all passenger cars and light trucks bought in the United States. Three years later, the Detroit share had declined further. In 2010, roughly 45 percent of all light vehicles sold were from American makers while 55 percent came from foreign makers (with Japanese companies accounting for nearly 85 percent of the latter share). While Ford did eventually manage to improve its performance, General Motors, previously the world's largest auto manufacturer, lost its primacy and had to be salvaged by public funds. But the US automobile sector isn't the only one losing ground. While the conventional wisdom is that the United States has a strong comparative advantage in advanced technology, the reality is that in this sector, the US trade deficit grew nearly 50 percent from 2009 to 2010, when it was \$81 billion, and by nearly 65 percent in the first three months of 2011 (compared to the first three months of 2010).

The consequences, in terms of jobs, are plain to see. Today, unemployment in the United States is at almost 9 percent compared to around 7 percent in

Germany and 5 percent in Japan. The loss of manufacturing jobs explains a hefty part of the difference. By the end of 2010 only 8.2 percent of American workers were employed in manufacturing, while about 19 percent of German workers and 18 percent of Japanese workers are employed in manufacturing.

2.

The doggedly optimistic camp looks at these trends and sees little reason to fret. Declines in manufacturing jobs are due to higher productivity, they say, which is good for economic growth and economy-wide job creation. America's rising imports of manufactured goods can be easily afforded, they say, thanks to higher incomes generated by the service economy and expanding exports of services. To this camp, the US trade deficit is not a problem — indeed, it is a sign of America's wealth and strength that it can afford to import so much more than it exports. Let us consider each of these arguments in turn.

Manufacturing productivity has indeed been rising — just not fast enough to explain the sector's rapid decline over the last decade. From 1990–2000 manufacturing productivity grew at nearly double the rate of other non-farm businesses. Annual increases in productivity have held stable since 1989 (at about 4 percent per year) but manufacturing employment declined only slightly, from 18 million jobs at the beginning of 1989 to 17.3 million jobs 11 years later, since output also increased during this period. But since 2001, manufacturing has seen much faster job losses, dropping to 14.3 million total manufacturing jobs in 2005 and to just 11.5 million in 2010. Thus, the problem is not productivity, which has been rising steadily for the past 20 years, but rather overall manufacturing output, whose growth rate has been falling at alarming rates. Between 1995 and 2000 the total value added by manufacturing to the US GDP rose by 25 percent. But between 2000 and 2005 the gain was less than 6 percent, and between 2005 and 2010 it was below 5 percent — or barely 1 percent a year.

While service exports have narrowed the country's overall trade deficit, alone they are insufficient to close the more than half-a-trillion dollar manufacturing-trade gap. Service exports doubled from \$268 billion in 1999 to \$543 billion in 2010 — good news, to be sure. Even so, the gap between US service exports and imported goods and crude oil grew from \$200 billion in 1980 to \$1.6 trillion in 2008. Between 2000 and 2010, the United States lost 5.7 million manufacturing jobs but created only 4.9 million jobs in all service-providing sectors — with 35 percent of that total filled by new government jobs. In fact, the government now employs twice as many people as the manufacturing sector. Even assuming an unchanged level of service imports (nearly \$400 billion in 2010), the current positive balance in service trade would

have to nearly quadruple in order to eliminate the 2010 trade deficit in manufactured goods.

Another problematic argument is that job losses in manufacturing are the inevitable consequence of higher stages of economic development. According to this logic, since it is burdened by high labor costs and strong environmental regulations, the United States cannot compete with China and other low-income countries. But as both Germany and Japan demonstrate, high wages and high environmental standards are entirely compatible with continued manufacturing success, if not in low-tech apparel manufacturing, then certainly in high-tech and high-end electronics, automotive, and machine tool manufacturing. Moreover, thanks to rising productivity, labor costs constitute a diminishing portion of overall manufacturing costs, particularly in high-tech sectors. In these sectors, China increasingly attracts manufacturing because of its established networks of suppliers and infrastructure — both of which are comparative advantages created through government policies, not granted by nature.

America's extraordinary appetite for foreign oil accounted for just over half of its trade imbalance in 2010. In nominal terms, crude oil imports grew from \$5 billion in 1973 to \$342 billion in 2008. The don't-worry-be-happy camp assures American policy makers that this dependence on energy imports is nothing to worry about; even the self-proclaimed enemies of America will continue to sell it more oil. But in 2010, half of America's refined liquid fuels came from imports of crude oil or oil products. Such a high degree of dependence makes the country vulnerable not only to price spikes, which are rare but deeply felt, but also to actual physical shortages whose likelihood is, unfortunately, much easier to contemplate given the recent upheavals in the Middle East.

Why should Americans worry about the trade deficit if so many economists say it is a sign of wealth and is nothing to worry about? This rationalization of trade deficits is to be expected from a country that valorizes consumption above all else. But the only reason America has been able to sustain such a high trade deficit for so long is because the United States holds the world's reserve currency: foreigners buy US bonds, allowing Americans to buy foreign products. A smaller trade deficit would allow the United States to properly maintain and expand its substandard infrastructure, creating many new jobs and increasing US exports.

Others argue that the problem isn't the trade deficit, but rather the low domestic savings rate and China's undervalued currency. They are partially right, but that still does not justify such a blasé attitude toward the US trade deficit. Savings rates have been falling through much of the industrial world — including in Japan, a former big saver — and any rapid trend reversal is unrealistic.

And while China's undervalued currency is a major problem, its slow revaluation will not help the United States reach a desirable level for another 15 to 20 years — not soon enough.

3.

Given these realities, the most practical and proven way to reduce America's huge trade imbalance is to export more manufactured goods in well-established sectors. Consider that from 2000 to 2008, America's exports of medicinal and pharmaceutical products expanded nearly threefold, industrial chemicals grew 2.4-fold, primary plastics 2.2-fold, and sales of power-generating machinery equipment rose by 70 percent. These accomplishments point the way: we cannot boost manufacturing by trying to repatriate millions of lost apparel, furniture, or electronics jobs. These losses cannot be reversed rapidly and most of those jobs would not come back even if Chinese exports suddenly ceased, as other countries would fill that vacuum. Rather, the solution is to expand those manufacturing sectors that are already outstanding exporters.

There is no reason the United States could not reverse the fortunes of its manufacturing sector as it did in the 1980s with semiconductors and as Germany did more recently with its high-end consumer and industrial products. German unemployment was much higher than the annual US mean during most of the 1980s, throughout the 1990s, and then until 2006. Mean unemployment between 2000–2006 was 10 percent in Germany and just 4–6 percent in the United States.

Manufacturing produces a variety of economic benefits that finance and service sectors do not. The higher outputs from manufacturing create important backward–forward linkages that include many traditional jobs (from accounting to job training) as well as entirely new labor opportunities (in e-sales, global representation). As a result, sales of every dollar of manufactured products support \$1.40 of additional activity, while the retail sector generates less than 60 cents for every dollar of final sales. In terms of job creation there is no comparison. Facebook is valued by Goldman Sachs at \$50 billion, nearly as much as Boeing, but Boeing employs some 160,000 people, whereas Facebook only employs 2,000.

Manufacturing acts as a powerful motivator for supporting and expanding suitable training and education because of its own demand for better-educated labor and because of its multiple linkages to intellectual services, transportation, and wholesale and retail operations. Losing manufacturing means reducing opportunities for skill-oriented education. And since more than two-thirds of research and development (R&D) occurs within manufacturing, losing manufacturing means losing R&D and with it a variety of multiplier effects for higher

growth. In 2010, the US Department of Commerce released a new study quantifying the American jobs supported by exports: in 2008 that total reached 10.3 million, with nearly 2.8 million in services and 7.5 million in the production of goods. The study also showed how a post-2005 rise in exports increased the share of all manufacturing jobs supported by foreign sales from about 20 percent to more than 25 percent — yet another confirmation of the substantial and realistic opportunities for expanding the sector.

President Barack Obama's 2010 National Export Initiative aims to double US exports by 2015. This goal may be too ambitious as far as timing is concerned, but the target is entirely realistic. Even after reaching it, the US economy would still be much less export-oriented than the economies of all the leading EU countries. Had US export intensity only matched the global average, it would have sold more than \$700 billion worth of additional goods abroad in 2009 — twice the amount needed to eliminate that year's trade deficit. And if the United States were to match just the average export intensity of the European Union's four largest economies (Germany, France, UK, and Italy), its sales of manufactured goods would more than triple, allowing America to enjoy a large trade surplus without needing to address its excessive fuel imports.

Underlying all the false optimism regarding America's trade deficit and declining manufacturing sector is a misplaced fear that acknowledging the dire straits of manufacturing will result in a new industrial policy complete with government bureaucrats determining prices, setting quotes, or subsidizing production targets. And, to be sure, government must be involved. The continuing success of German, Japanese, and South Korean manufacturing for export has been made possible by conditions created by government policies. As detractors of such involvement point out, this has often meant preferential targeting of some sectors and promotion of their advancement. This strategy has not always paid off: it worked well for Japanese car manufacturers during the 1970s and 1980s, but it did not work for Japanese microchip makers. In 2010, semiconductor sales by Intel and Texas Instruments were more than twice as large as the total for Toshiba and Renesas.

But these governments have also rejuvenated their manufacturing sectors in ways that are less intrusive and ultimately far less costly than ignoring the reality of combined public-private competition from abroad. Compulsory high school attendance, combined with the entrenched belief that there is no comfortable future without a university degree, has also undermined America's ability to train the skilled labor force needed in modern manufacturing. The German model offers the greatest contrast, with most pupils (about 70 percent) never attending *Gymnasium* (up to grade 13) but, after *Hauptschule* or *Realschule* (ninth or tenth grade), entering a *Berufsschule* for a wide variety of vocational

training in apprentice programs. Another helpful recent German development was the unions' acceptance of smaller wage increases (or even wage freezes) in return for guaranteed employment, as well as the decision made by many owners not to fire workers during the time of slumping demand, but to retain the skilled labor force in anticipation of economic recovery.

Health care reform, tort reform, and tax reform could help America attract and keep manufacturing domestically. US manufacturers are burdened by more expensive employee benefits (all of its EU competitors and Japan have considerably less expensive national health insurance; the United States spends 16 percent of GDP on health care compared to 9 percent in the United Kingdom and 11 percent in Germany), and by a high incidence of lawsuits. American manufacturers are particularly disadvantaged by a marginal tax rate higher than that of most of its competitors. Supporters of America's high corporate tax rate argue that the tax rate doesn't actually disadvantage manufacturing firms. They point to companies like General Electric, which has avoided paying US taxes for two years in a row. But GE — unlike Daimler or Liebherr or Fujitsu — is as much a finance company as it is a manufacturing company; it uses write-offs from its overseas lending divisions to offset the taxes on its American manufacturing. The example of GE proves that GE has been extraordinarily adept at tax avoidance, not that the high corporate tax rate is working.

Continuously acting as if manufacturing's retreat is inevitable while believing that services will always make up the difference in well-paying jobs will prove costly. No unprecedented steps are needed for the United States to do what more than a dozen affluent countries have done to become more competitive over the last two decades. The first is to recognize the obvious: America can manufacture its way out of decline. /