The common wisdom emerging from the national media frequently notes that the American economy has lost its ability to "make things"...that we lost most of our manufacturing capability to China and to Mexico. The common wisdom notes that we have simply become a nation of hamburger flippers, as well as a nation where we merely trade information with each other.

**Job Losses**
There is no question that employment losses within the U.S. manufacturing sector over the past 30 years have been massive. We all know a neighbor, a friend, or family member who lost their job in manufacturing, particularly in the industrial Midwest.

Total U.S. manufacturing employment peaked in 1979 at 19.6 million people. That total has fallen consistently and painfully to 11.6 million now...a loss of eight million jobs...a loss of 40% of all manufacturing positions.

The common wisdom notes that most of these jobs left in search of less costly havens, initially Mexico and then China. This is certainly true for a share of the jobs. However, the most important factor leading to lesser employment was major gains in worker productivity...we simply make more goods with fewer bodies. While overall U.S. worker productivity gains have run just under 3.0% annually over the past 10 years, productivity gains in manufacturing have run 2-3 times higher.

**U.S. Ranking**
It might surprise you that the U.S. continues to lead the world in manufacturing output. We produce more than the Chinese, the Japanese, the Germans, etc. U.S. output exceeds that of China by 40%.

It might surprise you that the U.S. share of global manufacturing output, at 20%-25%, is essentially the same as it was 40 years ago.

It might surprise you that output per U.S. worker is three times what it was in 1980 and twice as high as it was in 1990.

**Making a Comeback?**
U.S. manufacturing employment actually rose by 136,000 net new jobs during 2010, the first annual increase since 1997. Moreover, the weather-distorted January 2011 employment data saw an estimated jump of another 49,000 jobs, the largest monthly gain in 12 years.

Various estimates suggest that the American economy will add 300,000-350,000 net new manufacturing jobs this year, a rise of roughly 3.0%. Longer-term estimates suggest the manufacturing sector could add one million jobs over the next 4-5 years. Such a rise clearly won't make up for the loss of two million manufacturing jobs in the Great Recession, but it helps.

U.S. manufacturers have largely thrown in the towel on lower cost, lower skill, lesser profit margin manufactured products such as toys and electronics. At the same time, U.S. manufacturers have moved aggressively toward more complex and expensive goods requiring specialized labor, including health care products, jet fighters, computer chips, and industrial machinery (The Associated Press).
Outsourcing of Jobs

American companies have continued the exodus of former American jobs to other less costly parts of the world, although the pace has slowed. The rationale has also changed somewhat.

Hundreds of American firms had sent production and jobs to China, with products then shipped back to the U.S. to be sold. The current environment finds more and more of that production sold within China, or within other Asian nations. This change is identical to that of major foreign automakers who build billion dollar facilities in various communities within the U.S., with the intent of selling those cars not back home, but within the U.S. market.

“Onshoring” of Jobs

seen the costs of operations, particularly wages, climb dramatically across China while shipping costs have surged.

Issues of shoddy products and the theft of intellectual property have blackened the eye of outsourcing. The reality of too many midnight telephone calls and frequent trips halfway around the world to deal with problems has also taken its toll.

Another painful reality faces companies within the U.S. and from around the world with an interest in setting up production in China. The unspoken but understood fact that a company must typically give up its most sensitive trade and technological secrets to the Chinese in order to get in the door, as one might expect, muddies the water as well.

Many foreign companies have set up shop in China, only to then see products nearly identical to their own soon marketed by Chinese competitors, at substantially lower prices. The laundry list above has provided solid incentive for additional onshoring of jobs in coming years. Drug cartel violence across Mexico has also led hundreds of American firms to reconsider doing business south of the border.

Similar issues are at play in the white collar world of back office operations and call centers, where the American job shift to India has drawn great concern. Sharply higher wage costs and higher levels of worker turnover (note: these people are working during their nights to handle our daytime phone calls) have also led to some jobs coming back home. The emerging issue of cloud computing will also impact white collar outsourcing decisions.

“Rural” Outsourcing

More American companies based in large metropolitan areas are taking advantage of “outsourcing” some of their business operations to rural American communities, especially those where a university might be located. The rationale? Access to talented people with lower wage and housing costs, similar operating hours, and a common language come to mind.

Down the Road

The U.S. still accounts for 40% of total world R&D spending. We lead the world in science and technology, although that lead is slipping, according to the Rand Corporation.

Despite more recent successes, major challenges remain. Millions of lost jobs will never return. At the same time, ninety percent of manufacturers report having difficulty in finding skilled production workers. In addition, a large share of the manufacturing workforce will retire sooner rather than later, with the average U.S. manufacturing worker being 50 years old (The Agurban).

Greater cooperation between local universities, community colleges, and high schools to provide quality training for local manufacturers remains a challenge largely unmet. Parents and educators need to promote a career in manufacturing as a highly desirable outcome for tens of thousands of new graduates.