

U.S. Manufacturing Sectors with U.S. Staying Power

There has been a great deal of media attention over the past few years to reports that have been published¹ that suggest that the offshoring trend of the past couple of decades has peaked and is reversing. The published reports are credibly based upon tangible offshore cost data and other key and important logistical factors.

But as with any hypothesis, it is easy for TV news to find and cite anecdotal evidence and report upon it from the factory floor of a specific company that has brought some work back or has a strong commitment to never offshore anything. The question is whether it will become a significant trend, or remain only some anecdotal exceptions. No one would be more delighted than me if it turns out to be real and significant.

The challenge is that such shifts are very long-term in nature. This is because it can take from one to even four or five years for a manufacturer to qualify a new source. And then the lifecycle of the products it offshores with them are generally not less than five years in duration. And may in some cases can last for decades. Thus, even if manufacturers have begun looking for domestic sources already, it could be a decade before we see a significant pendulum shift back to the U.S. in the form of increased value added and jobs in the U.S. Also keep in mind that many of the objectives that reshoring would bring can be achieved by bringing them from overseas to Mexico, as opposed to specifically back to the U.S. to manufacture.

But the good news is that there are a significant number of manufacturing sectors that never left the U.S. in the first place. And they make up the majority of the total value added of U.S. manufacturing. J.T. Gabrielsen Consulting, LLC set out to determine² what it is about certain sectors of manufacturing that has kept the majority of their manufacturing in the U.S. And what it is about other manufacturing sectors that have caused them to have well over half, and in some case over 80% of their value added offshored. As it turns out, there are a few key strong factors that more than overpower the lower labor cost of offshoring.

More than a dozen likely suspects for possible driving factors were analyzed. Of those, the six in the following table emerged as having significant correlation to those manufacturing sectors that have remained in the U.S. and continued to grow, versus those that have declined very significantly due to offshoring.

¹ The Boston Consulting Group performed one of the earliest, most credible, and most frequently cited report on this topic.

² Correlation analysis was run between the growth [or decline] rates of each of the U.S. Manufacturing sectors at each level of the NAICS classification from the 3 digit set of 21 sectors all the way down to the 6-digit level of close to 500 detailed subsectors. Every one of them was coded as to whether it had the advantages or disadvantages of the 6 factors described in the columns in the table. The correlations for the sectors defined as 'Winners' in the bar graph that follows the table each had one or more of the four left hand green shaded factors in their favor. The ones that are defined as "Challenged" in the bar graph that follows the table did not have any of the green shaded characteristics and had a strong correlation to the red column.

Key U.S. Manufacturing Growth Drivers Definitions and Examples³

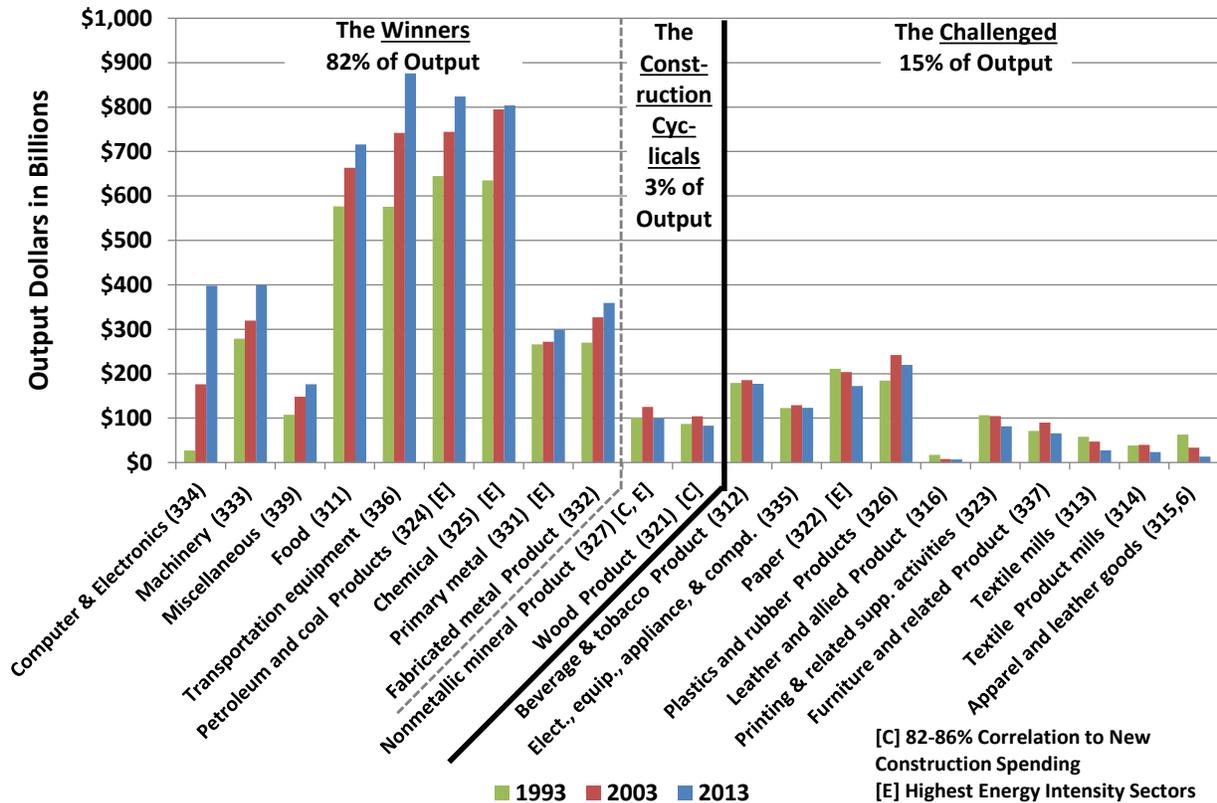
All Sectors Overriding Factors [If any 1 or more of these apply, then nothing in the 2 far right columns matter]				Variable Factors [If none of the first 4 to the left]	
Proximity to Point of Use	Proximity to Point of Extraction	Customized / High Variety / Low Volume	High Energy Cost Intensity	Current Invention / Innovation Advantage	Significant Total Employment Costs
Definition of Metrics					
The nature of the product or service is such that it must be or is most cost and time effective to produce in the country in which it will be delivered [At least the final assembly and/or delivery of it] and/or to understand and be immersed in Customer needs.	The nature of the product is such that it is most cost effective to process it and its resulting end products in the country in which it is extracted.	High and frequent interaction between customer and manufacturer. Every manufacturing run is short, and or/non-repeating. Often or always requires technical and engineering work prior to manufacture specific to that single production run	If the products to be manufactured require a high unit cost of electricity and/or natural gas then there is a significant advantage to manufacturing them in the U.S. as opposed to offshore [Electrical and Natural Gas costs are only half to one-third as high in the U.S. as in Europe and Asia Pacific].	The product or service requires substantial initial and ongoing invention, reinvention, and innovation in order to remain relevant enabling the country or countries with those capabilities to retain manufacture of it even though they do not have a low cost labor advantage.	By far the most powerful determinant of sustaining manufacturing in the U.S. for a given segment [when proximity is not an overriding factor]. The higher the percentage of total employment costs are to total output for a segment the more rapidly it is shrinking in the U.S., generally because it is being off-shored.
Example Sectors:					
Lt / Med / Heavy Vehicles Ag & Construction Equipment Light Bulky Low Value Per Cube Space Products Industrial Gasses Chemicals Paper Products Styrofoam Products	Processing of Natural Resources: Food Products from Oil & Natural Gas Metallic Minerals Non-Metallic Minerals Forestry Products Wood & Wood Products Paper and Paper Products	Machine Tools and Other Capital Equipment Metal Fabrication Wood Fabrication Custom Millwork Machine Job Shops Tooling and Mold Shops	Nonmetallic Mineral Products [Glass, Ceramics, etc.] Primary Metals [Iron, Steel, Aluminum, etc.] Chemicals Textile Mills Paper Mills	Computers and Electronics Telecommunications Equipment Bio-Technology	Apparel Leather and Allied Products Furniture and Related Products Textiles [Clothing, etc.]

So, how has this assessment played out in reality? Over the past 2 decades, those sectors with the characteristic of one or more of the green columns in the table are ‘The Winners’ on the left half of the bar chart⁴ below. And those that don’t have the characteristics of the green columns, but do have a strong need for the low labor costs of red column, are ‘The Challenged’. They are now only a shadow of their former selves and continuing to decline. [Note: The ‘Construction Cyclical’ in the middle of the graph have strong correlation to the green columns of ‘The Winners’ but have not performed well in the most recent decade due to their strong correlation to the level of construction spending in the U.S. which was decimated in the financial meltdown great recession and is still struggling to recover.]

³ “The Bright Future for the Winning U.S. Manufacturing Sectors”. J.T. Gabrielsen Consulting, LLC, February 2012

⁴ “The Bright Future for the Winning U.S. Manufacturing Sectors”. J.T. Gabrielsen Consulting, LLC, February 2012

Output Growth of Major U.S. Manufacturing Sectors



Summary and Conclusions:

- It may be a decade or more before we can determine if reshoring has occurred significantly.
- But 11 of the 21 highest level [2 digit NAICS] manufacturing sectors have very strong and sustainable factors that keep the majority of their value added of production in the U.S. And these sectors comprise over 80% of U.S. manufacturing today.
- What may happen is that some portion of the subcomponent ingredients for those same 11 sectors may have their production value added reshored back from overseas. It remains to be seen how much of that is truly brought back within the borders of the U.S., as opposed to resourced in Mexico.

I am very interested in your own thoughts.

How do you think this will all play out?

What do you see going on around you in terms of any shifting thinking or actions being taken?

The full report is available at: <http://shop.jtgabrielsenconsulting.com/The-Bright-Future-for-The-Winning-US-Manufacturing-Sectors-10A0214-2.htm>

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