Manufacturing: The True Economic Link

Mike Collins

Wealth is created in only three ways: agriculture and fishing, mining, and manufacturing. Beyond these three activities it can be argued that all other forms of economic activities transfer wealth, but don't *create* it. Many economists dispute this because accepting it would throw cold water on many of their theories about the post-industrial economy.

Of the three ways of creating wealth, manufacturing is the most important in terms of the number of jobs and its historical ability to improve middle class living standards. But for many years, American manufacturing's ability to create wealth has been diminishing.

Manufacturing is a sector of the economy that is now almost invisible to most Americans. 135 million people work in service jobs and only 11.9 million work in manufacturing jobs. Most citizens I have asked say that they feel we are transitioning to a service economy and they don't really see any connection between manufacturing and their job or their industry. This article is an attempt to highlight the subtle but extremely important economic relationship between manufacturing and other sectors of the economy.

1. **Mining and Extraction**: Manufacturing is strongly linked to the raw materials or mining industries. Manufacturing buys all types of raw materials to turn into finished goods. There are 7,523 mining establishments (excluding oil and gas establishments) and 7,599 companies who support the activities of mining companies. The mining companies alone represent shipments of more then $47 billion per year, and the majority of these raw materials are sold to manufacturing establishments.

2. **Transportation Networks**: These infrastructure networks are the vital link between the production of goods and services and their delivery to buyers. Essentially, the production of goods drives the demand for infrastructure and the growth of infrastructure fuels the demand for manufacturers, creating synergies for investments in both sectors.

   Most products hauled by the major modes of transportation in this country are tied to manufacturing. About 70 percent of all ton-miles of products carried by trucks are manufactured products, and they account for 87 percent of the value of goods hauled by trucks. For rail transport, about 80 percent of the value of products transported is manufactured goods.

3. **Communications and Software**: Modern communications networks are also an increasingly important tool in improving manufacturing efficiency. Beyond basic mail and telephone networks, manufacturing is making more intensive use of communications networks to increase its efficiency. In 2000, 38 percent of manufacturing plants used electronic networks to place online orders for materials and supplies. Of those plants, 83 percent used either the Internet or Electronic Data Interchange to process their transactions Manufacturers also uses many different types of high tech software programs like MRP and ERP.

4. **Secondary Jobs**: Manufacturing stimulates employment in other sectors at a greater pace than any other industry. On the average, each $1 million in final sales of manufactured products supports eight jobs in the manufacturing sector and six jobs in other sectors of the economy.

5. **R&D**: In 2002, manufacturers performed 60 percent of the $291 billion invested in R&D in the U.S. Innovation and R&D have been the traditional strength of the U.S. for decades, but the reduction in manufacturing companies, workers, and industries is beginning to show a reduction in R&D expenditures.

6. **Manufacturing & Exports**: Despite continuing trade deficits, manufacturing contributed the majority of American export earnings. But, with the continued decline of manufacturing, the U.S. is beginning to lose its place as “exporter to the world.” In 2007, U.S. exports were $700 billion and imports were $1.3 trillion, with a deficit of $600 billion. Our only chance of reducing the trade deficit, which drastically affects the overall economy, is to increase manufactured exports.

7. **State Economies & Taxes**: The bureau of Economic Analysis shows that “during the last 10 years, manufacturing corporations have paid 30-34 percent of all corporate tax payments for state and local taxes, social security and payroll taxes, excise taxes, import and tariff duties, environmental taxes, and license taxes.” I am convinced that unless we can grow manufacturing and the tax revenue it generates, the states will have no choice but to drastically cut back on government jobs and services.

8. **Small Towns & Cities**: Rural America's small towns and cities are often dependent on one or two large manufacturing plants to survive. When the plants are closed, the workers and all of the service businesses are immediately in jeopardy. A good example is the Maytag plant in Newton Iowa. When it was transferred to Mexico, more then 3,800 well-paid employees were out of work. When this happens, the employees in the town have only a few choices. They can move to another town or city, commute long distances, or find whatever work they can in the town – which inevitably means a pay cut.

GDP Growth & Critical Mass

A research report from economists at the National Association of Manufacturers says, "U.S. manufacturing is the heart of a significant innovation process that generates economic growth and has produced the highest living standards in history. But today this complex process faces serious domestic and international challenges which, if not overcome, will lead to reduced economic growth and ultimately decline in living standards for future generations of Americans." The report's Executive Summary ends with the statement: "If the U.S. manufacturing base continues to shrink at its present rate and the critical mass is lost, the manufacturing innovation process will shift to other global centers. Once that happens, a decline in U.S. living standards is all but assured."

Our economy is like a giant skyscraper, with manufacturing as its foundation and all of the service industries housed in the floors above. The lower floors of the service sector are crowded with the many desks of the data processors and other low pay service jobs. The top floors are the spacious and opulent offices of the credentialed elite with the best views. But if the foundation erodes, the whole building is in jeopardy regardless of the floor or office you occupy.

I have tried to make the case that if manufacturing continues to decline it is not just manufacturing employees and businesses that will suffer. The decline of America's manufacturing base will affect all other sectors of the economy, many service jobs, and eventually reduce the overall growth of GDP. All sectors of the economy depend on manufacturing – they just don't know it.

Mike Collins is the author of Saving American Manufacturing.

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