**Small Matters: Manufacturers can do more today with fewer workers**

By Bill Dunkelberg

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The importance of the manufacturing sector in the U.S. economy has been the subject of hot debate for decades. Many feel that we have lost our position as the leading manufacturer, usually based on the decline in the number of individuals working in "manufacturing."

A deeper look shows it is more complicated than that.

It depends on how manufacturing is defined. Tasty Baking Co., really, is a manufacturer. These definitions change over time, and the nature of manufacturing has adjusted with technology.

Decades ago, large firms were fully integrated, essentially producing everything they needed inside of the corporate walls. Then it became important to find "core competencies" - what the firm does well - focus on them and outsource all the things that were not in the core.

Consider our automobile companies that provided all the services they needed internally. Not being very good at running copy shops, food services, and such, these firms began to shed these activities. Closing their internal copy shops presented the opportunities for new firms to spring up providing those services. Thousands of workers lost their jobs at the auto companies, but were, in a macro sense, reemployed providing the same services to the firms that formerly employed them.

Employment in "business services" and other such areas expanded dramatically. But there was the measurement issue - a copy-shop employee working for an automaker was classified as a "manufacturing" worker, but those working at an independent copy shop providing services to the auto firm were classified as "service" workers.

The loss of these "manufacturing" jobs really did not reduce the number of workers truly involved in manufacturing. Since 1950, the percentage of our workers in the service industry has increased from about 50 percent to 85 percent. Manufacturing accounts for about 10 percent of employment today.

Manufacturing employment has been declining in the United States since 1979 (from about 19 million to 12 million workers). Over that period, manufacturing output increased 600 percent. We are producing lots of manufactured products, much of which we sell to other countries. Most of these jobs have been lost to higher productivity, not to other countries. It takes just 177 manufacturing workers today to provide the same output that 1,000 such workers made in 1950.

Agriculture provides a parallel example. Fifty years ago, 11 million workers were employed in agriculture. Today, with a much larger population to feed, only two million people work in agriculture. This, of course, is due to new technologies, such as bigger and better tractors and farm equipment, better seeds, better irrigation, more science, better fertilizer and pest control. By providing this capital input, each worker can produce and earn much more.

We do not have nine million unemployed farmers; over time they have become employed in other occupations.

We employed the highest percentage of the adult population in history in 2000. If all the jobs we have allegedly lost came back looking for work, we would not have been able to accommodate them. In simple terms, we do not need rising levels of manufacturing employment - or agricultural jobs - to keep our economy "fully employed."

Although small-business owners have been fairly pessimistic since the recession started in 2008, manufacturers have been more optimistic than their peers in other industries. The growth in the economy over the past few years has been driven by manufacturing to restore inventories and to meet export demand. Many small manufacturers are in the supply chain for larger producers that have been doing well in the recovery, and exporting. The percentage of manufacturing firms planning to create jobs has exceeded the planned cuts as much as 15 percent.

On average, manufacturers have been increasing overall employment this year, compared with declines in the general small-firm population. The problem is that we can produce a lot of output using relatively few workers, so the manufacturing sector cannot be expected to solve our unemployment problem, no matter how well it performs.

Manufacturing productivity is responsible for the availability of a wide range of goods at very low costs - we all have the "stuff" they make - and for that, we all enjoy a much improved standard of living than we had 20 or 30 years ago.

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