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Special Commentary

John E. Silvia, Chief Economist
john.silvia@wellsfargo.com • (704) 374-7034
Michael A. Brown, Economist
michael.a.brown@wellsfargo.com • (704) 715-0569
Kaylyn Swankoski, Economic Analyst
kaylyn.swankoski@wellsfargo.com • (704) 715-0526

Insourcing: Manufacturing - A Viable Solution in a Global Economy?

Recent news articles on the topic of insourcing manufacturing jobs have led many to the conclusion that the emerging trend of "insourcing" will be a significant source of job creation in America. This report looks at the evidence behind the insourcing trend through 2006 and sheds light on the facts behind insourcing activity in the modern global economy and what this trend might mean for domestic employment growth.

To understand insourcing the first step in the process is to understand and define what constitutes insourcing activity. When we measure insourcing activity, specifically in the manufacturing sector, we typically refer to multinational firms that bring production operations into the United States. While there may be some examples of domestic firms bringing jobs back into the United States that were previously offshored, reliable data on this activity is unfortunately not available. Thus, our focus will be on an alternative measure of manufacturing investment in the United States by multinational corporations as measured by the Bureau of Economic Analysis due to the consistency and reliability of the data.[1]

Insourcing Activity in the United States

Insourcing manufacturing firms are increasingly capital intensive.

Multinational firms operating in the United States contribute to U.S. economic growth in many ways. They employ our citizens and invest in our industries through research and development and property, plants and equipment. Furthermore, their interactions with domestic firms can help boost the performance of domestic suppliers and competitors through the exposure of new techniques and processes that are introduced by insourcing activity.[2]

One of the most common arguments we hear is that by bringing manufacturing jobs to America, whether bringing them back through onshoring or through enhancing foreign direct investment in the United States, we will bring back the manufacturing jobs that were lost through the past decade. Increasing manufacturing operations in the United States will in fact require firms to hire domestically, however, only marginally. Furthermore, these laborers will be highly skilled and highly specialized and hence, not likely to be the same jobs with the same required skill levels that were lost.

Insourcing manufacturing firms have been able to produce more output with less labor, suggesting that these firms are increasingly capital intensive.[3] From 2004 to 2006, output in manufacturing by these insourcing manufacturing firms increased 19 percent, while adding only

[1] For our purposes we define insourcing activity by using the BEA definition of a U.S. subsidiary of a foreign-headquartered multinational firm in which at least 50 percent of voting securities are held by a foreign entity. One shortfall of this data is that values are only available through 2006 due to structural changes in the data. Under the new BEA collection methodology, we are unable to make comparisons of post-2006 data with pre-2006 data.
[2] Slaughter, M.J. (2004). Insourcing Jobs: Making the Global Economy Work for America.
http://mba.tuck.dartmouth.edu/pages/faculty/matthew.slaughter/pdf/insourcing_study_final.pdf
[3] Manufacturing employment includes all employees on the payrolls of manufacturing plants of U.S. affiliates. Due to data limitations and the desire to create comparisons across data it was necessary to use this measurement of employment.

2 percent to payrolls. Figure 1 demonstrates the past relationship between production and employment up to 2006. In addition, Figure 2 shows how these firms increased their capital expenditures over the same time period. The value of property, plant and equipment increased more than 10 percent from 2004 to 2006. Therefore, insourcing manufacturing firms were able to significantly increase their production by increasing capital which increased production and reduced the need for labor per unit of output.

Figure 1

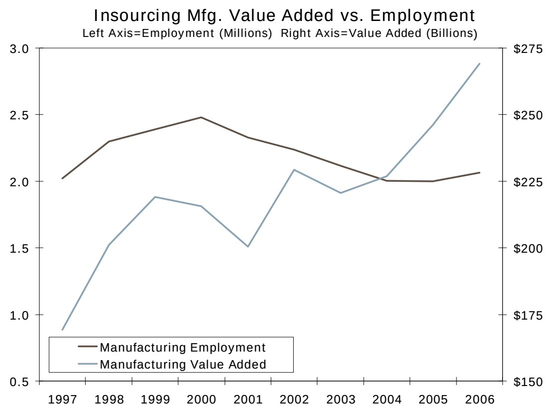
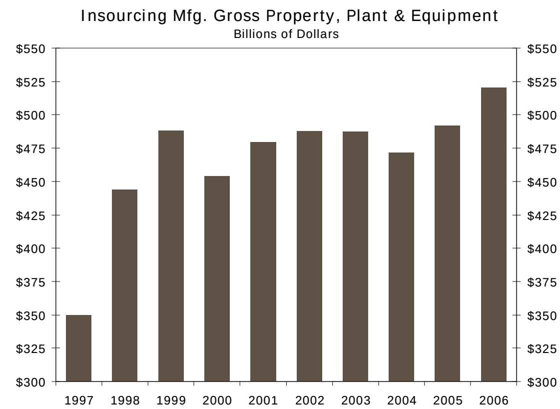


Figure 2



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Not only is there evidence that the allocation of resources became more efficient, the employees demanded by these insourcing manufacturers were highly skilled and highly educated. As U.S. subsidiaries become more capital intensive, they need employees who have a technical understanding of the manufacturing processes and the programming required for the machinery.[4] Figure 3 shows the productivity of insourced manufacturing employees compared with the average of manufacturing employees in the United States.[5] Employees of U.S. subsidiaries were more productive than the average manufacturing employee working in the United States, and increasingly became more productive. For the time period we have been examining, 2004 to 2006, the value added by employees of insourced manufacturers increased 15 percent, while the U.S. average was a 12 percent increase.

These workers are highly skilled, highly educated and more efficient, allowing these firms to produce more output with less labor.

This increased productivity not only helps to explain the 18 percent increase in production over that time period, but also explains the compensation premium paid by insourcing manufacturers. These corporations consistently provided higher compensations to their employees than the average paid to manufacturing employees in the United States. In 2002, the compensation premium reached more than 20 percent, and in 2006 the premium stood at 16 percent (Figure 4). The combination of increasing worker productivity leading to significant gains in production and larger compensation packages suggests that these manufacturing employees do not represent the same demographic that we tend to associate with the manufacturing employees that might have been displaced in the past. Instead these workers were highly skilled, highly educated and more efficient, allowing these firms to produce more output with less labor.

[4] See Whoriskey, P. (2012). Washington Post: U.S. manufacturing sees shortage of skilled factory workers.
[5] Due to data limitations we were unable to separate out the U.S. subsidiaries, and therefore the U.S. average includes all employees, including those already represented as a U.S. subsidiary. In effect, the U.S. average would actually be lower than that which is represented.

Figure 3

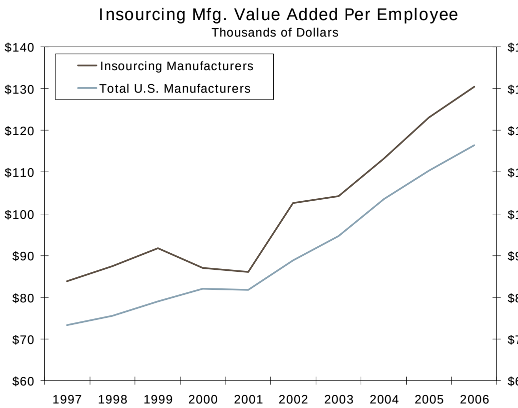
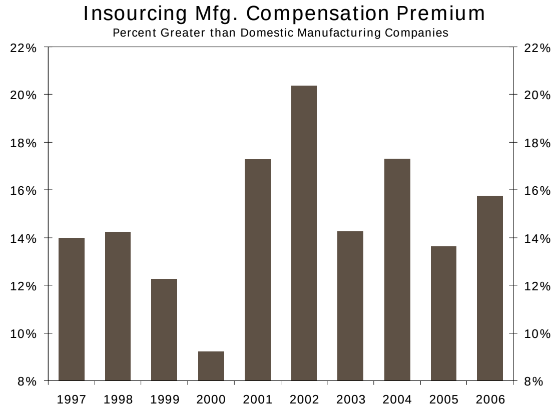


Figure 4



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Encouraging foreign direct investment in the United States would indeed lead to more economic growth and higher standards of living through creating new, high-paying jobs in the United States; however, the additional jobs created would only be marginal in an economy as large as the United States. Insourcing manufacturing in the United States is an investment in the domestic economy by contributing to demand for domestically produced manufacturing technologies as well as supporting domestic research and development (R&D) activities. Over the 10 years for which we have data, 1997 to 2006, U.S. subsidiaries invested more than $20 billion in R&D, which represents more than 15 percent of total U.S. investment in R&D. In addition, U.S. subsidiaries invested more than $4.6 trillion in property, plant and equipment expenditures (PP&E) over that time period. While U.S. subsidiaries of multinationals may not contribute as much to employment growth as has been perceived, they remain an important driver of domestic economic growth, especially in the areas of equipment investment and R&D spending.

What Would Insourcing Mean for America?

The problem is that there are few jobs created by insourcing activity.

We find that while there is evidence in the recent past that insourcing activity by manufacturers has been picking up in the United States, the problem is that there are few jobs created by insourcing activity. In the future, low-cost mass-production where labor skills are less demanding will likely continue to move away from the United States to other low-cost-producing countries, which translates into permanent job losses. The only insourcing job growth that will continue to occur is in highly specialized, mostly durable goods, manufacturing that requires higher-skilled workers. Future insourcing decisions will primarily be based on a manufacturer's need for shorter delivery times, higher levels of quality control, along with increased supply chain reliability. For example, the supply of automotive technologies that were affected by the Japanese Tsunami over the last year halted automobile production for automakers that had plants within the United States. This supply chain risk could be reduced while decreasing delivery times and improving quality through the insourcing process. The U.S. remains globally competitive in the production of highly specialized goods and will likely remain so given the technologically advanced facilities that allow domestic production to be price competitive with goods produced in lower labor-cost countries.

However, the trade-off of maintaining global competitiveness through the use of technology means that a manufacturing worker today needs to possess a much higher skill-set than in the past and must continue to do so in the future. This higher skill requirement is the challenge for America, with many manufacturers reporting that they cannot find qualified workers due to these

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higher skill requirements.[6] In order to maintain our status as a key manufacturing nation, a greater focus on education and skills upgrades will be required.

While the data are anecdotal, we suspect that U.S. firms that decide to move operations back into the United States would use the same criteria. Thus, when a U.S. company moves operations back to the United States the skill requirements of the workers increase along with the use of automation technologies in the production process. So while insourcing activity may be an engine for U.S. economic growth, there is little evidence that insourcing would supercharge job creation within the economy.

[6] Society for Human Resource Management. (2012). Hiring Gains Expected In February, but Rate of Job Growth Still Behind 2011. LINE Employment Report for February 2012.
Deloitte and The Manufacturing Institute. (2011). Boiling Point? The Skills gap in U.S. manufacturing.

Wells Fargo Securities, LLC Economics Group

Diane Schumaker-Krieg	Global Head of Research & Economics	(704) 715-8437 (212) 214-5070	diane.schumaker@wellsfargo.com
John E. Silvia, Ph.D.	Chief Economist	(704) 374-7034	john.silvia@wellsfargo.com
Mark Vitner	Senior Economist	(704) 383-5635	mark.vitner@wellsfargo.com
Jay Bryson, Ph.D.	Global Economist	(704) 383-3518	jay.bryson@wellsfargo.com
Scott Anderson, Ph.D.	Senior Economist	(612) 667-9281	scott.a.anderson@wellsfargo.com
Eugenio Aleman, Ph.D.	Senior Economist	(704) 715-0314	eugenio.j.aleman@wellsfargo.com
Sam Bullard	Senior Economist	(704) 383-7372	sam.bullard@wellsfargo.com
Anika Khan	Economist	(704) 715-0575	anika.khan@wellsfargo.com
Azhar Iqbal	Econometrician	(704) 383-6805	azhar.iqbal@wellsfargo.com
Ed Kashmarek	Economist	(612) 667-0479	ed.kashmarek@wellsfargo.com
Tim Quinlan	Economist	(704) 374-4407	tim.quinlan@wellsfargo.com
Michael A. Brown	Economist	(704) 715-0569	michael.a.brown@wellsfargo.com
Joe Seydl	Economic Analyst	(704) 715-1488	joseph.seydl@wellsfargo.com
Sarah Watt	Economic Analyst	(704) 374-7142	sarah.watt@wellsfargo.com
Kaylyn Swankoski	Economic Analyst	(704) 715-0526	kaylyn.swankoski@wellsfargo.com

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