The Case for Backshoring

Which manufacturing operations should return to the United States?

by William J. Holstein

For years, the NCR Corporation simply followed the pack. Like many other large U.S. manufacturing companies, in the past couple of decades the maker of automated teller machines (ATMs) relied heavily on offshoring and outsourcing to trim factory costs. By making much of its equipment in cheaper offshore locations in the Asia/Pacific region, and by hiring Singapore's Flextronics International Ltd. to make other equipment, NCR could slash hundreds of millions of dollars in plant expenses and be reasonably certain that its ATMs met quality standards.

But recently, NCR has rejected this strategy — at least to a degree. In 2009, the company decided to move its most sophisticated lines of ATMs from its plants in China and India, and from a Flextronics facility in South Carolina, and instead manufacture the machines in Columbus, Ga., not far from the NCR innovation center, where its new technology is on display. The reason: The company was concerned that outsourcing distanced its designers, engineers, IT experts, and customers from the manufacturing of the equipment, creating a set of silos that potentially hindered the company's ability to turn out new models with new features fast enough to satisfy its client banks. "I think you'll see more of this occurring," says Peter Dorsman, NCR's senior vice president in charge of global operations, who says he has been contacted by dozens of U.S. companies studying whether they should make similar moves. "You'll see a lot more people returning manufacturing to America."

NCR's change in direction has raised the possibility that U.S. manufacturers are getting serious about "backshoring" some of the production they shifted overseas in the wholesale offshoring movement that started in earnest in the 1990s. General Electric Company Chief Executive Jeff Immelt recently attracted attention for remarks he gave to a West Point leadership conference calling for U.S. companies to make more products at home. Demonstrating Immelt's commitment, GE announced in the summer of 2009 that it would build two new plants in the U.S. — a factory in Schenectady, N.Y., to make high-density batteries and a facility in Louisville, Ky., to produce hybrid electric water heaters currently made in China. Dow Chemical Company CEO Andrew Liveris similarly has appealed for a renewed focus on manufacturing in the United States.

Backshoring is primarily an American phenomenon, because U.S. manufacturers have been much more aggressive about outsourcing than their Asian or European counterparts. Japanese companies experimented with outsourcing high-end items to factories in Southeast Asia and China, but quickly changed course after growing concerned about the loss of intellectual property and about disrupting the link between research and manufacturing. As a result, Japanese companies generally farm out only the manufacturing of commodity products.

Cynics might conclude that pronouncements about the need for manufacturing in the U.S. are simply aimed at currying favor with the Obama administration, which is worried enough about the issue that it named former investment banker Ron Bloom as manufacturing czar. Moreover, although cases such as NCR and GE are noteworthy, many U.S. jobs are still going offshore. For example, the Whirlpool Corporation recently announced the closing of an appliance factory in Evansville, Ind., amid plans to move less-skilled jobs to Mexico. And in the financial-services and information technology sectors, there is no letup in sight in the rush toward India. IBM, for example, has more than 90,000 employees in its Indian outsourcing operations.

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But the logic behind backshoring is compelling enough that it cannot be easily dismissed as a mere short-term aberration. Higher transportation costs as well as rising wages and raw materials prices in China, inevitable by-products of the huge gains that the developing country's GDP has made despite the global recession, have frightened some U.S. companies away from Asia. An apt illustration: Wright Engineered Plastics Inc., a Santa Rosa, Calif.–based maker of injection molds, has expanded its West Coast plants and decreased its use of Asian facilities because many of its key customers have shifted their own manufacturing operations back to the U.S. in light of prohibitive increases in the prices for raw plastic in China.

Moreover, some companies are amplifying materials and logistics savings from backshoring by modernizing their U.S. plants to outpace Chinese facilities. Such is the case with Diagnostic Devices Inc., a maker of blood glucose monitoring systems. In August 2009, the privately held company based in Charlotte, N.C., announced that it was moving the manufacturing of its Prodigy line of audible glucose monitors to North Carolina, ending a five-year agreement with a contract manufacturer in China under which Diagnostic Devices sent components overseas and then had the finished devices shipped back to the United States. By automating its U.S. factory with robots and other high-tech hardware and software, and by taking advantage of lower shipping fees for a mostly local customer base, Diagnostic Devices reduced its production budget by 40 percent. And there is an added bonus, according to a company spokesman: "We will also have far more control over and protection of our intellectual property, which you don't have in China."

NCR's decision to backshore goes well beyond dollars and cents — and, in fact, may provide the most convincing rationale for the gains that backshoring can produce. The ATMs being made in Columbus now are NCR's most sophisticated, capable of scanning checks and cash and eliminating the need for the customer to fill out a deposit slip. This feature has provided a welcome revenue lift for NCR — bringing in as much as US$50 million a year, significant for a company with $5 billion in annual sales. But these machines likely never would have been developed had large customers like JPMorgan Chase and Bank of America not persistently prodded NCR to move in that direction. That type of potentially profitable interaction between NCR and its customers is difficult, and launching desirable new products is slowed considerably, NCR's Dorsman says, when the manufacturing facilities are offshore. "We take our cue from our customers," says Dorsman. "They are heavily involved in the development process. And with this new approach we're taking, we can get innovative products to the market faster, no question."

NCR also found that having Flextronics manufacture high-end ATMs in South Carolina — and relying on the vendor's third-party suppliers, many of which NCR was unfamiliar with — left important internal constituencies in the dark, further slowing and complicating new product launches. Hardware and software engineers, sourcing executives, manufacturing and operations staff, and customer service managers all had trouble applying their expertise throughout the many remote handoffs between separate organizations.

Despite backshoring's growing appeal, it's hard to call it a trend yet. Indeed, most Western CEOs remain convinced that offshoring and outsourcing are still the least expensive approach for manufacturing products — and notwithstanding recent anecdotal evidence to the contrary, their position is rigid. For example, Boeing CEO James McNerney Jr. still clings to a radically outsourced supplier model for the company's wildly ambitious 787 Dreamliner aircraft even though the plane is more than two years late and is facing numerous customer cancellations because of supplier glitches in distant factories. Of course, CEOs are also attracted to offshore destinations because the manufacturing tax breaks offered by governments in many developing countries are more generous than those granted by the United States.

But what may be at stake in the schism between offshoring and backshoring is a company's long-term ability to innovate. The making of commoditized staples like shoes, clothing, and consumer electronics will mostly remain in Asia. Backshoring will be more prevalent at the high end of the technology spectrum, in industries such as telecommunications and health care that are sensitive to quality and fast product cycles or in cases in which companies feel they can profit from getting immediate and ongoing feedback from U.S. customers. Those aspects of manufacturing, many experts believe, are where the best opportunities for earnings growth lie. "That's where we can be competitive," says Ron Hira, associate professor of public policy at Rochester Institute of Technology and coauthor of the 2005 book Outsourcing America: The True Cost of Shipping Jobs Overseas and What Can Be Done About It (with Anil Hira; AMACOM).