

Closing Views

When **offshore** manufacturing doesn't make sense

Your company could be at sea if it doesn't stay close to home.

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Kevin Kelly

Ever wonder why, in an age when companies are sending thousands of high-wage manufacturing jobs offshore, Toyota Motor still makes Corollas in Silicon Valley—one of the most expensive places on Earth to produce goods? The answer lies in a business principle that Toyota remembers but many others have apparently forgotten: sending goods 500 feet in 24 hours is better than shipping them 5,000 miles across logistical and political boundaries in 25 days. But to act on this principle, a company must be efficient enough to produce its goods close to the places where they are in demand, even when labor costs are high.

For manufacturers in Europe and the United States, offshoring can make good sense. They should look carefully at their economics, however, before they send production overseas. Our experience shows that too many of them overestimate the savings to be had from going abroad and fail to recognize the problems, such as dealing with inventory, obsolescence, and currency exchange rates (exhibit). Unlike companies in service industries, where no physical goods change hands and wages typically represent a higher share of operating costs, many manufacturers may be better served by staying at home—particularly if they successfully implement lean-manufacturing or other initiatives that drastically lower labor's share of overall costs and speed up operations significantly.

We recently investigated the operations and performance of companies in the state of California to gain a better understanding of the complex process they go through when deciding to offshore. The state, a massive consumer market, is a good proxy for advanced manufacturing economies around the world: its major players and their products—from Boeing (aircraft) to Oakley (eyewear)—are diverse enough to encompass the common issues facing companies in most developed nations. Moreover, its regulatory environment is notoriously difficult. If manufacturers can produce their wares profitably in California, chances are they can do so just about anywhere else.

EXHIBIT

No place like home?

Disguised examples of selected manufacturers

How much will be saved by moving production to Asia from California?

¹Lean manufacturers save even less: in apparel, an estimated 13%; plastics, 6%; high technology, <1%.

We found compelling evidence that, in a number of cases, offshore manufacturing isn't all it's cracked up to be. One reason is that for many manufacturers, the importance of direct labor is declining rapidly. Since it often accounts for just 7 to 15 percent of the cost of goods sold, hard-goods and high-tech manufacturers often say that wage rates are hardly the most critical determinants of their overall economic performance.

Consider the case of one fashion apparel company based in Los Angeles. Its 1,500 workers, paid at rates well above the minimum wage, make casual wear in an old, multistory downtown brick warehouse. The executives view labor costs, currently 3 percent of the retail price of these goods and heading lower, as a secondary concern to the company. If it were to move its operations offshore, logistics costs might well swallow up any savings from lower wages. Another example: A consumer electronics manufacturer we interviewed has stripped away roughly 60 percent of its labor costs from production and reduced lead times from weeks to days. Even if an offshore competitor drove down its own labor costs close to zero, this manufacturer would still have an insurmountable advantage in logistics—a fact that has emboldened the company to reverse-engineer low-end Chinese goods for manufacture in California.

Since keeping plants near customers shortens lead times, it facilitates greater responsiveness to changing market conditions. The Los Angeles

apparel maker can fill orders for up to 160,000 units in 24 hours, since the entire supply chain—including weaving, dyeing, and sewing—is located downtown. The company carries less than 30 days' worth of inventory and could even become a build-to-order producer. Another Los Angeles garment maker produces hand-sewn fashion accessories with a lead time of less than five days.

This kind of speed can be a competitive weapon—and its absence a trap. In the fashion apparel industry, with its spiky, unpredictable demand, the five-month lead times that accompany offshore production can leave

*When a fashion craze ended before one designer's shipment had arrived from China, the company was left with a boatload of **velvet knickers***

manufacturers with excess inventories of fading styles or shortages of hot items. When a brief fashion craze ended before one California designer's shipment of goods had arrived from China, for instance,

the company was left with a boatload of velvet knickers, which could be sold only at a high discount. And with mass retailers penalizing suppliers for late orders by as much as 2 percent a day, the cost of miscalculation can be high.

Long lead times also stand out in the high-tech electronics industry, where the need to send products by sea can translate into price declines of 2 to 6 percent. It's a harsh penalty to pay, since almost every product now requires just hours or minutes to make. A high-end telecom router, for example, takes about two hours of nontest time to fabricate, while a car takes six hours, and nearly every consumer electronics device takes less than an hour to assemble. Much of the remaining lead time for these products involves waiting or reworking.

Not that all US manufacturers should make their goods at home; offshoring will always be a valuable *component* of manufacturing strategies. And for companies that make goods such as socks or spark plugs—for which demand is stable, inventory-holding costs low, and labor a high proportion of total costs—overseas production in low-wage countries is a very attractive idea.

Nonetheless, offshoring often isn't the right strategy for companies whose competitive advantage comes from speed and a track record of reliability. And with buyers in advanced markets like California becoming more sophisticated—demanding shorter product life cycles, quicker delivery, and lower inventory costs—slow, unreliable manufacturers forgo valuable opportunities to gain market share or revenues.

So how should manufacturers decide whether to go offshore? Not by starting their decision-making processes with a target for geographic locations or wages, as some appear to do. They should instead consider offshoring in the context of a broader operations strategy by undertaking the following analysis:

- Clearly define, for each key product market, the most important sources of competitive advantage, including specific operating metrics such as production costs, how quickly a company responds to its customers' demands, and inventory. The manufacturer should also take into account its tolerance for (and the cost of) risk: supply interruptions, cost variations stemming from currency swings, and compromised intellectual property relating to products or processes, for example.
- Assess the opportunities to increase productivity at home and to diminish the relative importance of direct labor. When it represents 40 to 50 percent of the cost of products, seeking low wages is imperative. Reducing direct-labor costs by half or more allows manufacturers to build operations that are close and highly responsive to customers, use proprietary technology securely, and can maintain distinctive levels of quality. Companies that take this approach typically use lean-manufacturing techniques (which often raise labor productivity by 30 to 50 percent) and advanced automation.
- Evaluate the possibility of augmenting gains in shop floor productivity by sourcing materials effectively, designing products to minimize production costs, and making overhead functions more efficient. Factory-like improvements in human resources, finance, and customer service are possible.

Some manufacturers that take these steps will reasonably decide to offshore production. But others will try to reach the operational nirvana of a short, direct supply chain with production sites scaled to the size of local markets. Achieving this alignment won't be easy, but if manufacturers succeed, they will have an operational edge that sets them apart from their rivals and is difficult to emulate—alluring rewards in an increasingly competitive age. **Q**

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