

MAIN FEATURE



When Can Operations Be Offshored?

[By Donald Rosenfield, Ph.D.]

Globalization, offshoring, and outsourcing represent the most significant and challenging problems facing management. Should we outsource and offshore manufacturing? How do we adapt our business in the face of globalization? The answers to these questions are far from simple and straightforward. Nevertheless, there are some principles that managers can follow in addressing these. I have been following these topics for a number of years and have been formulating these principles as I have talked to a number of companies, both domestic and international.

The first principle is that despite the advent of globalization, manufacturing and operations are still vital for our economy and our standard of living. Thus, it would be foolish for an individual business to offshore all these activities without some careful analysis. Today, despite globalization, operations and manufacturing represent a significant part of our economic activity. While the numbers in manufacturing have decreased, this change is largely due to increased productivity.

The evolution of our economy has shown a similar pattern of improvement in agriculture in past years. Despite the much lower employment in agriculture, there is no clamor to exit from agriculture and offshore it. To the contrary, the enormous productivity improvements in both agriculture and manufacturing have allowed us to devote more resources to services. To continue to improve this standard of living, we must continue to develop and produce the cutting edge products and services that give us an edge in the global marketplace. Thus, for some businesses, the imperative is to continue to invest in operations — product development, production, and distribution — within the U.S.

To live in a world of globalization, there are then two key challenges. Both are related to off-shoring. And remember that off-shoring is not the same as outsourcing. You can offshore without outsourcing, for example,

by owning your own plant in China. You can also outsource without off shoring by using a domestic contract manufacturing. While off-shoring is most often done in an outsourcing arrangement, this does not have to be the case. The first challenge is how to manage the complex flow from global sources to global destinations, which involves the complexities of transportation costs, inventory costs, material handling, and so forth.

This leads to the second principle. The full costs of off-shoring are often overlooked. When you offshore with a long lead time because of ocean transport, it is easy to overlook the significant costs of this lead time. You need inventory to cover the transit time, inventory to cover uncertainties in demand during this increased lead time, and you may incur markdowns and other costs associated with extra inventory. Many companies overlook these.

The third principle is that there are some key indicators which will tell you whether a product should be outsourced. One is the relative weight and value of a product. If a product is high weight and low value, for example, then the priorities are to reduce transportation. The transportation premium from Asia may be limiting. In simple terms, if the domestic manufacturing cost is less than the transportation from Asia, the choice is clear.

The second indicator is the importance of variety. Dell computer (for their desktop line) and New Balance have found that variety can often be obtained more efficiently through domestic sourcing, either by quick response for inventory replenishment or through customization.

The third indicator is the importance of product innovation. Newer products, where cost might be less important, are often produced domestically. While standard commodities are difficult to compete for domestically, other products do not fall into these classifications.

The challenges of globalization, off shoring, and outsourcing are significant, but there are still very important roles for American manufacturing and operations.

About the Author

Donald Rosenfield is a senior lecturer at the MIT Sloan School of Management and the director of the MIT Leaders for Manufacturing Fellows Program. His areas of expertise include supply chain management, logistics planning and strategy, the interface between manufacturing and logistics, management of global facilities networks, and management of logistics supply chains across multiple organizations. He holds a Ph.D. in Operations Research from Stanford University.

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