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Global competitive conditions driving the manufacturing location decision

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Abstract Given today's rapidly shifting global competitive conditions—including customer location, natural disasters, currency valuation, labor and transportation costs and availability—many U.S. companies are revisiting decisions about their preferred manufacturing location(s). The purpose of this research is to understand some of the trends that affect whether U.S.-based companies bring their production back to the United States or relocate it to different geographical locations (reshore). The focus is on the key factors that affect companies' manufacturing location decisions, the importance of these factors, and how the importance has changed over time. Because of the complexity involved in the manufacturing location decision, key risk factors inherent in the manufacturing decision are also assessed. Survey responses from 319 companies that currently manage offshore manufacturing plants are analyzed. Among other insights, this study found that 40% of these companies perceived a trend toward reshoring to the U.S. in their industries. The companies involved in this study also place an increasing importance on where their customers want them to locate, as well as how the location could help expand into new customer markets. These and further results and implications for U.S. manufacturing companies are presented herein.

1. Reshoring

Shifting global competitive conditions have spurred many companies to consider changing their manufacturing footprint. The popular press has lauded the emergence of a *reshoring* trend: the relocation of manufacturing facilities from traditional offshore locations to more attractive offshore locations, or even home to the United States. This article focuses on the relocation of manufacturing capabilities back to the U.S., a phenomenon that has received wide attention, including a White House forum hosted by President Obama

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on January 11, 2012. What are some of the recent developments regarding reshoring, and why have we been witnessing this trend? This research explores these issues based on the results from a large-scale survey among companies operating offshore manufacturing facilities. This study is one of the first to use empirical evidence toward investigating these important developments. The goal of this article is to provide practical recommendations for managers to evaluate the reshoring decision.

Those who study and practice in the field of supply chain management have focused on offshoring from the perspective of chronicling best practices and how these can be implemented more broadly, particularly in the areas of outsourced logistics (Wallenburg, 2009) and information technology (Parker & Russel, 2004). Potential risks associated with offshoring include reduction in firms' tacit knowledge, which may well be associated with deterioration of market performance (Weigelt, 2009).

From the early 1990s through the mid-2000s, the practice of offshoring increased significantly (Lewin & Peeters, 2006). However, the economic downturn, a heightened emphasis on sustainability, and increasing customer expectations for flexibility and improved cost performance led firms to reconsider this strategy (Bergman & Ramachandran, 2010). Interestingly, the professional discussion around offshoring is much louder than the discussion of offshoring in the academy. For example, General Electric has been featured in several stories about its efforts to bring back manufacturing to the U.S. (Barr, 2012). Other firms considering increasing or returning manufacturing to the U.S. include—but are not limited to—Chesapeake Bay Candle Company, Peerless Industries, Buck Knifes, Intertech Plastics, All-Clad Manufacturing, Karen Kane, Toyota, Honda, Nissan, General Motors, and Siemens (Booton, 2012; Markowitz, 2012). This reshoring trend has been identified in a number of recent scholarly and consulting studies. A prominent consulting study suggests that 28% of the company's clients have reshored some manufacturing, yielding an average of $23 million in annual cost savings (Acorn Systems, 2012). It is predicted that rising wages in China and improved U.S. productivity will lead more firms to shift a significant portion of their manufacturing back to the United States (Sirkin, Zinser, & Hohner, 2011).

Articles within the domain of reshoring detail the movement of manufacturing activities back to the home country (*homeshoring*), as well as the relocation of manufacturing activities closer to the home country (*nearshoring*). Ellram, Tate, and Feitzinger (2013) suggest that competition in resource markets—or *factor market rivalry*—causes a shift of manufacturing away from what were once low-cost countries toward newer low-cost countries (reshoring) or closer to customer/consumer markets (nearshoring or homeshoring), where labor is readily available, the transportation infrastructure is well established, and the geopolitical environment is conducive to this change. Reasons for homeshoring, particularly back to the U.S., include reduced total cost of ownership, improved quality and supply of materials and services, reduced intellectual property risk (Zimmerman, 2013), improved flexibility (NIST, 2012), and improvements in the speed and simplicity of doing business (DePass, 2012).

The brand appeal of 'Made in America' is also well received by many developed-world customers/consumers (Markowitz, 2012). In general, while Eastern Europe and North Africa remain attractive for European companies (Simon, 2009), Mexico and Latin American countries continue to represent a popular nearshoring location for North American firms (Harrington, 2012).

2. Why is reshoring an attractive option?

For decades, developed nations with mature consumer and business markets sent both blue- and white-collar jobs to countries where labor, engineering, and managerial costs were significantly lower. At the turn of the 21st century, many firms were moving at least some of their operations to East, Southeast, and South Asia. Driving this exodus was the hope of capitalizing on lower costs of raw materials and labor (Lyles & Park, 2013). Just a decade later, many of these formerly 'low-cost' regions are suffering from higher labor costs, higher raw materials costs, and decreased responsiveness and quality[1].

Additionally, working capital is increasingly tied up in inventory trapped on slow-steaming ocean transit and in safety stock held at distribution centers. Innovation also suffers from the physical, and sometimes cultural, distance between manufacturing and design operations. Over time, the balance of labor shifted and the unemployment rate in the wealthier countries soared to new levels. This instigated involvement of developed-market economy politicians and prompted cries to bring jobs home. In the United States, this topic was one of the most

[1] This is perhaps due to greater capacity utilization of manufacturing plants in these regions.