

Understanding Logistics Services through a Factor-Market Rivalry Lens

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Abstract

In recent years there have been shortages in a variety of resources required to effectively support offshore outsourcing and offshoring that have caught many firms and individuals by surprise. This includes shortages of skilled labor, shortages of factory workers, and shortages of logistics capacity. These shortages however are driven by competition from diverse companies from unrelated industries creating unanticipated conditions of scarcity for inputs that are generally considered non-strategic. Firms tend to monitor activities and markets for strategic inputs, or inputs that directly contribute to the firms' unique advantage. However, these firms largely ignore the more non-strategic inputs. The purpose of this research is to examine competition among diverse and unexpected industries in factor-markets using the example of logistics services and the lens of factor-market rivalry theory. Factor-markets are defined as markets where firms buy inputs that are used in the creation or distribution of products or services. As organizations become aware of growing competition and demand for resources in geographical regions in which they operate, they should assess the impact on logistics resources, and develop a plan for addressing potential resource constraints thereby improving cost and on-time delivery performance.

Keywords: Factor-Market Rivalry, Logistics, Strategy, Organizational Issues

Companies continue to outsource and offshore services and move production overseas to lower cost production centers, even in the face of financial and market contraction (Baily and Farrell, 2004). In manufacturing, the primary focus of offshoring, and possibly outsourcing is the make or buy decision. If the firm chooses to buy, the focus shifts to selecting the right supplier. This includes considerations of supplier price, capability, capacity and quality (Kannan and Tan, 2002). However, in recent years, there have been shortages in a variety of resources required to effectively support offshore outsourcing and offshoring in general that have caught many firms and individuals by surprise. This includes shortages of skilled labor in India (Khadria, 2002), sporadic shortages of factory workers in coastal China (Barboza, 2006) and shortages of various types of logistics capacity in India, China, Vietnam, and the United States (Goldstein, Pinaud, Reisen, 2006; Kopczak, 1997; Yusuf, Nabeshima, and Perkins, nd).

All of these shortages have been in part driven by competition for the same resources. The surprising thing about this competition and the ensuing resource scarcity is that diverse companies from unrelated industries are becoming competitors in factor-markets. This is creating unanticipated conditions of scarcity for inputs that generally are considered non-strategic. Whereas firms tend to closely monitor activities and markets for strategic inputs, or those inputs considered to directly contribute to the firms' unique advantage (Porter, 1996), they do not have sophisticated tracking mechanisms in place for non-strategic inputs.

The purpose of this research is to examine competition among diverse and unexpected industries in factor-markets using the example of logistics services. Factor-markets are defined here as markets where firms buy inputs that they use in the creation or distribution of products or services to their customer base. This paper will use the lens of factor-market rivalry theory, a relatively new theory (Markman, Gianiodis, and Buchholtz, 2009), to explore how firms may overlook potential competitors for input resources. Due to this oversight, these firms may experience higher prices and scarcity of supply chain resources that they take for granted as readily available.

The types of input resources studied in factor-market rivalry theory are different than the scarce resources traditionally studied by strategy scholars. The resources analyzed are those that are somewhat generic in nature and therefore often seem to be ubiquitous, thus creating a potential blind spot. Resources that are versatile (multifunctional) and mobile (transferable, tradeable, and maneuverable) are the focus of factor-market rivalry (Markman et al., 2009). Further, factor-market rivalry focuses on competition for resources at any stage in the supply chain, not just in product markets, as is the attention of most rivalry research (Markman et al., 2009).

Using the example of transportation and logistics services, the goal of this research is to demonstrate that logistics and transportation are subject to factor-market rivalry, particularly in light of mass movements of production to low cost regions. Specifically, secondary data is analyzed relative to air cargo capacity in China, port capacity in South Vietnam, and the U.S. port and rail system. Due to paper length constraints, the data analysis will be presented in detail during the March symposium. The rivalry being discussed occurs in markets where diverse firms are competing, generally to their surprise, for the same input resources. The scarcity of these input resources reaches a level of criticality in cases where they are essential and assumed to be available at a competitive price and in unlimited, or at least sufficient supply. In reality, logistics resources that support offshore outsourcing of manufacturing, may be subject to limited supply with increasing costs. This research expands the lens of market rivalry theory by filling in some of the gaps, and broadening the application of this theory to logistics services.

Conceptual Development of Factor-Market rivalry

Most of the research to date in market rivalry focuses on rivalry in the product markets. Even the research that considers rivalry in factor-markets tends to focus on rivalry in factor-markets among firms who also compete in product markets (Barney, 1986; Capron and Chatain, 2008; Chen, 1996). While this previous research is interesting and informative, it does not facilitate firms' insight and anticipation of rivalry that occurs when non-competitive industries enter into their factor resource markets. These entries can be domestic, as in the case when Honda of America opened its automotive manufacturing facility in Marysville, OH, in 1982, and competed with the local businesses in a fairly small town for literally hundreds of employees. Chrysler Corporation also met an unexpected competitor in the factor-market for clay used to manufacture prototypes: a kitty litter company (Fine, 1998). This competition can be global, as in American Express facing unexpected competition for labor used in its call centers and back-office operations from companies like Hewlett-Packard, who offshore outsourced its employee benefits desk. Rivalry for input factors occurs for both services and goods. An example on the goods side involves the unanticipated production delays of fryers being produced for Burger King. These fryers ended up competing for air capacity out of Hong Kong with a supplier of automotive parts and a supplier of printers and consumer electronics. The lack of space was not anticipated by any of the companies and the competition for the space drove up the price of the capacity.

Factor-market rivalry is a management theory that focuses specifically on inputs, also referred to as *resources, factors and factors of production* (Markman et al., 2009). The issue that distinguishes factor-market rivalry from other approaches in the management literature is that it views factor-market rivalry in terms of competition over *any resources by any entity at any stage in the supply chain* (Markman et al., 2009). Competition can include very unexpected scenarios, such as Amazon surprising Wal-Mart by poaching some of its key logistics personnel (Markman et al., 2009). This is a departure from other management research which focuses on strategic assets: those that are difficult to transport and utilize in other settings, and those that are important to the firm's success (Barney, 1991; Barney, 2001).

There are three general scenarios associated with factor-market rivalry. The first case is where firms may use different types of resources to compete in the same markets, as is the case with EBay versus live auctions (Markman et al., 2009). Rivalry can move from factor-markets to product markets, as one firm expands and changes its offerings based on perceived opportunities (Markman et al., 2009). The final scenario is where firms use similar resources but do not compete in similar markets or create similar products. This type of rivalry is very difficult to anticipate. This is the example of Wal-Mart hiring Amazon's key logistics personnel. Table 1 summarizes the factors contributing to factor and product market rivalry and provides some examples for clarification.

The focus of this paper is on factor-market rivalry that is restricted to factor-markets where rivals use overlapping resources, but do not compete in product markets. We are interested in this area because of the significant void in the current research. As noted by Michael Porter, "The essence of strategy formulation is coping with competition. Yet it is easy to view competition too narrowly or pessimistically (1979, p 93)." Column 3 in Table 1 is not considered a strategic area and until recently has experienced limited rivalry. This area is the purview of those at the operating level rather than those who are at the more strategic levels or "managing the business." It is this column that is the focus of the research. Columns 1 and 2 in the above table have been the core of strategy research: focusing mainly on areas where there is current (column 1) or potential (column 2) product market rivalry. In increasingly global factor-markets, competition can come from numerous, unanticipated sources.

TABLE 1**Factors contributing to factor and product market rivalry**

	Compete in product markets	Pose a threat of competing in product markets	Do not compete in product markets; unrelated
Use unrelated inputs	Product market rivalry only	Potential for product market rivalry if change product offering.	No product market rivalry.
Example	Ebay and Live auctions	A new company entering an industry, competing using a different technology, such as a company that makes scar fading cream that discovers it removes tattoos, competing w/ laser tattoo removal.	Any two unrelated firms.
Use common inputs (versatile, mobile resources)	Very strong rivalry due to the presence of both product market rivalry and factor market rivalry.	Factor market rivalry; rivalry could be heightened if there is an awareness that the factor market rival poses a product market threat.	Factor market rivalry only
Example	John Deere and Caterpillar competing for capacity at a high quality punch press metal shop in Brazil.	Two auto parts companies that both compete for steel in times of shortage. One serves the OEMs only, the other only the aftermarket. If either decided to expand into the other's market, product market rivalry would also exist.	American Express and Honeywell both competing for the same information technology employees in India or on the goods side a disk drive manufacturer and automotive manufacturer competing for capacity at a plastic parts manufacturer.

The fiercest competition is *not* confined solely, or even primarily, to firms that compete in the same market or industry. Rivalry actually flares up at any level or link within a firm's value chain—from upstream and primary activities to downstream and support activities—and even over generic resources. In fact, wherever firms overlap, coexist, or co-occupy the same space rivalry could follow. Further, because each activity in a firm's value chain could trigger rivalry with a unique set of competitors, an incumbent's rivals in factor markets (rivalry over resources) might not resemble competitors in product markets.

Recognizing that some firms compete over resources without overlapping in product markets helps managers to counteract a tendency to examine only the usual suspects—players with similar product-market profiles. Broadening managers' appreciation of competition beyond product markets is important because it helps to explain how hazardous blind spots occur in competition for secondary resources. Indeed, the most formidable threats are often the least recognized. Increasingly, with globalization and outsourcing, unexpected competition can arise from many sources. How can firms anticipate this competition, especially when it comes from completely different product markets and industries? How can firms plan for such competition and not be caught by surprise, facing severe shortages, extreme cost increases, or both? The answers lie in understanding rivalry over resources.

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