Impact of Outsourcing on the Performance of the Furniture Industry Supply Chain

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Extended Abstract
Many US furniture companies see outsourcing as an option to remain competitive. In fact, in this industry it is estimated that the price difference between buying a product from overseas (primarily from China) versus producing it in the US is about 20% to 30%. However, the price difference does not capture other costs and risks associated with outsourcing furniture components from low-wage countries. We develop a simulation model of the furniture supply chain that captures the uncertainties with respect to lead times and to the quality of products being outsourced. The model simulates the flow of materials from domestic and/or overseas suppliers to furniture manufacturers and the flow of finished products from manufacturers to retailers. The simulation model is used to perform a number of “what-if” analyses. The results of the analysis indicate that outsourcing has a large impact on the inventory level, safety stock, and as a consequence on inventory holding costs.