LOGISTICS MANAGEMENT INCREASES PROFIT, CUSTOMER SATISFACTION

FAYETTEVILLE, Ark. – Grocery shopping frustrates both consumers and retailers. Nearly 40 percent of grocery shoppers leave the store without finding items that they wanted, and grocers struggle to meet customer needs in a low-margin industry. University of Arkansas researchers Matt Waller and Robert Stassen have found that managing product depth, or the number of different products available, is the significant driver in both inventory costs and lost sales.

“Supermarket sales are more than $351 billion per year, but the average consumer shops in three or four different grocery stores each week,” said Waller. “Because the magnitude of the situation is so large, retailers who manage the logistics issues resulting from their merchandise assortment can take market share from their competitors and increase their sales.”

Waller and Stassen, associate professors of marketing and logistics in the Walton College of Business, conducted two unique studies to assess the logistics factors affecting assortment depth and their impact on profitability. Study parameters included space availability, inventory holding costs, gross margin, substitutability of the items and expected cost of lost sales do to stockouts. Their results and analysis appeared recently in the Journal of Business Logistics.

The researchers found that managing the logistics of assortment depth gives retailers the opportunity to increase profitability. However, retailers are shifting the responsibility of depth management to suppliers, not only for their own brands, but often for an entire category of goods.
Assortment depth is a key issue for grocers. Frequent introductions of new products, both branded and private label crowd available space. But adding space and inventory increases costs, and a store that is too large may actually confuse or intimidate customers.

“Today’s grocery customers buy what they want, not just what is available,” Waller explained. “Therefore, managing retail assortment is classified as demand chain oriented. And demand-chain logistics have the greatest impact on firm profitability.”

Increasing assortment depth can increase profits by satisfying a broader range of customers and providing opportunities for higher margins on unique products. But space availability, inventory costs and other factors can lead to diminishing returns.

“While there are gains resulting from increased depth, there is an optimal amount of depth with regard to its effect on inventory costs,” Waller explained.

The first study looked at depth and inventory cost by examining categories and brands within a single grocery chain, the Marsh stores in Indianapolis. It evaluated the performance of 118 grocery categories over a 65-week period. As expected, their results showed that categories with more depth had greater returns on the inventory investment, but the overall profile was flat.

“We found that depth is a significant driver of inventory costs,” said Waller. “Increasing one product per linear foot of display required an added inventory investment of $37. This indicates opportunities for improved profitability in managing the logistics of assortment.”

The second study looked at six packaged goods categories at 27 supermarkets in a midwestern urban area. The supermarkets comprised nine independent grocers and five supermarket chains, three local and two regional. Five chain stores were warehouse-type and four were neighborhood-market type, with the rest being conventional supermarkets. The six categories of goods studied were ready-to-eat cereal, cake and brownie mix, liquid salad dressings, shelf-stable juices, pancake/waffle syrups and spaghetti sauces.

Their results indicate substantial supplier involvement in determining product depth. For ten of the brands, retailers could improve the performance of the brand and the category with better depth management.

“The high degree of reproducibility found across the brands is significant because it indicates that the retailers are either following the advice of their suppliers,” Waller said. “This indicates a practice of assortment by brand, which results in predictable assortments found across competitors and a high degree of duplication.”