

Creative Value through Integrated Supply and Demand Management

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Abstract:

Studies have concluded that adopting supply chain management framework for operating an industry with many small farmers enhances their value and profitability. However, there is a major gap in the conventional supply chain management model in that supply decisions maybe made with little or no demand information which limits profitability. This study developed a modified supply-demand chain framework (SDIM) which integrates the supply chain decision making process with market demand and preference information to improve the functioning of an industry. We use this model to analyze how best to make the Hawai'i avocado industry be more competitive. This framework stresses the need for understanding supply and demand information through research. The focus of this study is the local avocado industry which currently only supplies one-third of the market demand and generates 49% of waste due to low prices and uneven seasonal supply not matching market demand. There is definitely an opportunity for import substitution if the farmers in the industry work together. With many small farmers in the industry, there is a definite need for more synchronization between supply and demand. A popular form of collaboration for agriculture is forming a cooperative. This collaborative structure has proven to enhance the efficiency and profitability of fresh produce industry with many small farmers. Using the SDIM model framework to analysis the avocado industry, two weak links along the supply demand chain continuum were identified for the Hawaii avocado industry. The two areas are: understanding customer preferences (specifically focusing on the chefs in this study) for local vs. imported avocados and whether forming a marketing cooperative will enhance profitability. The results of taste testing by the chefs and surveying the farmers indicate the chefs prefer local varieties over imports. But the preferred varieties are different than what are being produced by most farmers, i.e., a mismatch between chef's preferences to what is being produced. Forming a cooperative for marketing vs. selling individually could enhance the profitability of local farmers.