A Discrete Choice and Revealed Preference Analysis of Food Shopping Attributes for Yavapai County Consumers

A Local Food Center (LFC) has the goal of increasing the accessibility of locally produced food to local restaurants and consumers. It is often viewed as a marketplace that can co-exist with farmers markets. A LFC can provide more shopping hours and conveniences than a farmers market and increase the consumer base for local producers. To address the feasibility of a LFC, we consider both supply and demand factors. Our analyses for this poster consider Yavapai County, AZ, an area about 75 miles northwest of Phoenix, AZ. Yavapai County’s geography is mainly rural with the urban centers of Prescott and Prescott Valley, where many retirees reside, making up over 29.2% of the population.

Most existing studies on local foods address large metropolitan areas or national consumer groups (Lee & Capps, 2018; Ver Ploeg, Mancino, Todd & Scharadin, 2015). On the demand side, we designed our experiment to compare questionnaire responses from different consumer groups. Responses were mainly collected through the Prescott Farmers Market Team. We received the following: 149 valid paper questionnaires from individuals located at a farmers market; 617 useable questionnaires from online respondents, likely friendly to farmers markets; and 100 paper questionnaires from individuals located at coffee shops, churches, and other large places in Yavapai County. In the questionnaire, we solicit consumers’ choices among two binary shopping outlets (Choice set A or B) with variation of attributes in product origin and availability, production protocol, sales type, convenience, location and price. Consumers’ responses are analyzed using a bivariate discrete choice model and willingness to pay (WTP) is estimated for each attribute on a basket of good. Furthermore, respondents were asked to select a binary prize drawing choice between two different food shopping outlets as an incentive to fill out our questionnaire. A $150 prize to be redeemed for shopping at a farmers market was presented for every choice while we randomly populated an alternative prize of $125, $100, $75, or $50 at either a supermarket (i.e., Frys) or grocery store (i.e., Trader Joes). Revealed preferences were estimated using respondents’ decisions with their monetary prize selected.

On the supply side, we collect information regarding producer’s willingness and ability to increase their production throughout the year. SWOT analyses and the questionnaire are included to support the decision-making process on building a LFC.

We find that the biggest threat for the success of a LFC is to compete with other existing grocery stores and provide sustainable fresh produces. Therefore, it is critical to understand consumer preferences and customize the LFC with limited resources while capturing a larger share of food-at-home expenditures. We found that consumers are willing to pay up to 51.3% more for a basket of food items that has a mixture of local and non-local U.S. products than only local products. In addition, if a LFC is open 48 hours vs. 8 hours during a week, consumers
are willing to pay $4.58 (23%) more for a basket of goods if the LFC is also a mile closer to a consumer. On the other hand, a 16.67% discount rate was found from the reveal preference analysis which can increase the probability that a consumer chooses to shop at Farmers Markets by 5%. Although a LFC will not be exactly the same as farmers markets, it will possess several attributes of farmers markets. Overall, we find that a LFC needs to increase the variety of products available and enhance visibility to consumers with consideration on competitive pricing that can match consumer value with existing grocery stores and supermarkets.
References
