

## Executive Summary.

TITLE: Food Choices of SNAP Participants at Convenience and Large Retailers

INVESTIGATOR(S): Grace Melo and Adam N. Rabinowitz

### CONTACT INFORMATION:

Name of principal investigator: Adam N. Rabinowitz

Affiliation: University of Georgia

Address: Department of Agricultural and Applied Economics, 2360 Rainwater Road, Tifton, GA 31793

Phone: 229-386-3512

E-mail: adam.rabinowitz@uga.edu

In an attempt to fight obesity, policymakers have considered taxes on less healthy food (sugar-sweetened beverages) and/or incentives on healthy food (e.g., fruits and vegetables). This debate has gained even greater attention as it applies to the Supplemental Nutrition Assistance Program (SNAP).

Research has investigated the impact of SNAP policies by employing consumption and experimental data and assuming household behavior is similar when shopping at different types of grocery stores. Although it is well documented that food assortment, prices, and store accessibility vary across food retailer categories, previous work has not evaluated the possibility that household responses to price and income changes might vary based on where they shop. While small retailers are convenient places for fill-in shopping trips for the average household, some households in low-income neighborhoods often rely on these retailers for their main shopping trips. However, food variety at small and convenience retailers is limited and often healthy foods are found at higher prices compared to larger store formats.

The goal of this study is to examine household responses to income and price changes of healthy and less healthy foods by food retailer type. Specifically, this study investigates the following questions:

- (1) Are households less sensitive to changes in food prices at small retailers compared with larger stores?
- (2) Is the impact of changes in income larger on purchases at specific retailers?
- (3) How does a decrease in purchasing power (induced by a policy that would cut SNAP benefits) affect the diet of large households on SNAP?

To answer these questions, the censored Exact Affine Stone Index (EASI) demand system model, which allows accounting for price and income endogeneity, was estimated. The model includes nine categories consisting of 7 Food-at-home (FAH) (fruits and vegetables and healthier and less healthy food at convenience, large, and all other retailers), Food Away From Home (FAFH), and a *numéraire* good using data from the USDA's National Household Food Acquisition and Purchase Survey (FoodAPS). Except fruits and vegetables, foods and beverages

were classified as healthy and less healthy items based on the Guiding Stars Program (GSP) algorithm and then assigned to one of the three retailer categories.

Consistent with expectations, households pay more for healthy food than less healthy food at all retailers. Further, they pay more for all food categories at c-stores compared with large retailers. The largest price gap between healthy and less healthy food was found at c-stores, especially among large households on SNAP. This could mitigate the impact of SNAP on improving the diet of low-income households that rely on c-stores or their grocery shopping.

To address questions (1) and (2), prices and expenditure elasticities were calculated by using the demand system estimates. In addition, household-specific expenditure and nutrient elasticity estimates were calculated to answer question (3).

The findings can be summarized as follow:

- (1) Household responses to price changes were different across stores. The results indicate that households were more price sensitive to changes in prices of less healthy food than that of healthy food at c-stores and all other retailers. In contrast, at large retailers, price changes of healthy food had a larger influence on food purchases compared with less healthy food price changes.
- (2) Purchases of healthy food at other stores experienced the largest increase as a result of an increase in income. Furthermore, US households perceive healthy foods purchased at c-stores and other stores as luxury goods and less healthy foods at all retailers as necessities.
- (3) A change in government policy that decreases SNAP benefits resulted in a reduction in purchasing power by ten percent which would decrease total calories of large households on SNAP by about three percent. This calorie decline would significantly affect their food security status considering that this group, compared to smaller households on SNAP, had greater difficulty in meeting their daily calorie intake.

The results suggest that unexpected consequences of price and income policies, targeted to improve foods choices of low-income households, are possible when ignoring the prospect that low-income households might have different levels of responses to them depending on where they shop. The study indicates that while price and income policies might be effective in changing food choices at some retailers, these policy initiatives might have a minimum effect at some stores.

Finally, the expenditure and nutrient elasticities by income and SNAP status estimated in this study can be used by policymakers to simulate the effects of policy proposals that affect food prices and households' income on food and nutrient consumption.