Warehouse Club Shopping and the Nutritional Quality of Our Grocery Baskets

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Abstract

The easy availability, low price, and heavy marketing of calorie dense processed foods and sugar-laden beverages are often implicated in rising rates of obesity and obesity-linked diseases. Increasingly, therefore, packaged food marketers and big box retailers are confronted with questions about the public health impact of their products. Some economists have examined the impact of aggregate supercenter market share on consumers’ BMI and the healthfulness of their grocery purchases. However, warehouse clubs differ from supercenters in important ways that suggest their impact may be different. Lower prices and larger sized or bundled SKUs should increase purchases, stockpiling, and stockpiling induced consumption. But this format charges significant membership fees and the larger SKUs require greater cash outlays so warehouse club clientele skews towards higher income, and likely education, levels. Shopping in this format is also more likely to be planned. It may reduce total shopping trips and therefore impulse buying, and possibly generate budget slack to buy healthier food which is usually more expensive. Overall, therefore, it is not clear whether shopping in this format has the same effect on the nutritional quality of households’ food purchases, in magnitude or even in direction, as shopping in supercenters does.

In this paper, we quantify the impact of shopping at warehouse clubs on the total food serving, calorie, sugar, and fat intake of households across all packaged food categories sold in the US and tracked by SymphonyIRI. Using a unique combination of households’ longitudinal grocery purchase information and rich survey data on their health related behaviors, we compare the per-capita monthly intake for warehouse club shoppers and non-shoppers. The major econometric challenge is the self-selection bias that occurs because households with greater needs are more likely to shop at a warehouse club store. We control for this selection in several ways and find that a statistically significant and managerially substantial increase in intake can be attributed to shopping at this format. The magnitude of the effect is robust across the different methods we use to control for selection bias. Our analysis of the variation in the effect across product categories and households provides several insights about the type of food categories and the type of households that are more or less prone to increased purchasing and consumption.