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Food consumption behavior of socioeconomic groups for private labels and national brands

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Abstract

Knowledge of a high correlation between a consumer's residence and his place of grocery shopping has allowed researchers to use scanner data to assess the relationship between income and shopping behavior. This study addresses the shopping behavior of over 100,000 consumers who patronize six supermarkets weekly. Three of these supermarkets are best characterized as stores that service primarily lower-income shoppers, and three are best characterized as stores that service primarily higher-income shoppers. A key objective of this research is to determine if purchasing patterns differ for the two income groups and, if so, to determine if these differences are consistent with economic theory. The results show that the dominant income group for a given area makes purchase decisions that are so widespread and prominent that the confounding effects of other income shoppers are completely overshadowed. Simply stated, the statistical evidence is so strong that it overcomes all possible deviating effects which may result from data outliers.

Keywords: Private labels; National brands; Lower-income and higher-income consumers; AIDS and LA/AIDS model; Demand; Shopper

1. Introduction

Private labels or store brands are generally brands created for, controlled by, and/or sold to retailers (Sethuraman & Cole, 1999). Over the past two decades, these products have gained a larger and larger share of grocery sales (Sethuraman, 2000). During the early development of private labels (PLs), most retailers and consumers viewed them as low-priced, lower quality and inferior goods (Hoch, Montgomery, & Park, 2002). To address this negative perception of product quality, retailers initiated a quality promotion program, assuring consumers that PLs are of equal or higher quality as national brands (NBs). Retailers have promoted PLs as a way to: generate store loyalty; increase chain profitability; gain control over shelf space; and develop bargaining power over manufacturers (Batra & Sinha, 2000). PLs also have been used strategically to try and decrease shelf space available for NBs (Baltas, 1997), and to pressure manufacturers to compete more vigorously on price and market share control (Garretson, Fisher, & Burton, 2002). Of course, retailers have found that PLs can be quite competitive in food categories where national manufacturers have limited advertising and promotion (Hoch & Banerji, 1993). Some of these categories offer fairly high margins and they also serve to generate store traffic (Pauwels & Srinivasan, 2004).

A distinguishing characteristic of retailers is that they are interested in maximizing profit from product categories that include both PLs and NBs, whereas

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NB manufacturers are focused on maximizing profits from their own products and brands (Hoch & Lodish, 1998; Sayman, Hoch, & Raju, 2001). Given larger margins for store brands, retailers prefer to have store brands which compete favorably with NBs (Sayman et al., 2001). For example, Tyagi and Raju (1998) suggest that retailers prefer to have store brands that have high cross-price sensitivities with NBs in a given category, whereas NB manufacturers prefer to be positioned apart from PLs (Sayman & Raju, 2003).

The most obvious benefit to consumers afforded by PLs is lower prices because, on average, PLs are 10–30% cheaper than NBs in grocery product classes (Baltas, 1997). Indeed data used in this study show PL breakfast cereals to be 44% lower in price than NB cereals. For retailers, PLs not only offer lower prices owing to their lower manufacturing costs, inexpensive packaging, limited advertising, and lower overhead cost, but they also offer an opportunity to increase store traffic and build store loyalty (Dick, Jain, & Richardson, 1997; Pauwels & Srinivasan, 2004).

In the U.S. retail environment, PLs compete vigorously with NBs. For example, the overall market share of PLs in supermarkets reached an all time high of 20.8% in the third quarter of 1997, according to Information Resources Inc. (Putsis & Cotterill, 2000). These products also have a significant presence in most product categories, representing the top three brands in 70% of all categories within supermarkets (IRI, 1998; Quelch & Harding, 1996). Moreover, PLs have higher market shares than NBs in 77 of the total 250 categories in supermarkets (Quelch & Harding, 1996) and higher shares in 71 of 238 grocery product categories (Sethuraman & Cole, 1999). This compares poorly when one considers that store brands enjoy enormous success in Europe. In the UK alone, private brand market share grew from 16% to 35% during the 1975–1998 periods (KPMG, 1999). For Spain, PLs market share increased from 8% in 1994 to 12.4% in 1996 (Guerrero, Colomer, Guardia, Xicola, & Clotet, 2000). Sales of PLs increased 28% during 1993–1998 for all of Europe and the major western European countries achieved even higher growth rates (Steiner, 2002). Substantial growth of private label grocery products is also occurring in the United States and some analysts are predicting a market share of 30–40% by 2010 (Denitto, 1993; Garretson et al., 2002; Schnabel, 1996). Moreover, by this same date, revenues from store brands are expected to grow to an average of 23.9% of total retailer revenues (Pauwels & Srinivasan, 2004).

Private labels have gained market share by focusing on quality improvements. This growth has intensified the competitive interaction between NBs and PLs and it has gained the attention of marketing managers in the food industry (Cotterill, Putsis, & Dhar, 1999). As Shocker, Srivastava, and Ruekert (1994) observed, retailers have effectively gone into direct competition with manufacturers by offering their PL brands. As these products have gained consumer acceptance in supermarkets, manufacturers of some national brands, especially those with brands having large market shares but just adequate product quality, have seen erosion in their brand shares.

Most brand-level studies suggest that successful PL penetration lowers the average price of NBs as PLs gain market share. A few of these studies focused on differences in prices paid by lower-income (LI) and higher-income (HI) consumers for PLs and NBs (e.g. Binkley & Connor, 1996; Kaufman, MacDonald, Lutz, & Smallwood, 1997). A revealing finding was that LI consumers economize their spending by using cost saving techniques, such as purchasing store labels and generic products, large package sizes, lower quality products, and products on price promotion.

Moreover, several studies have focused on the competition between PLs and NBs and on the price and promotion elasticities. For example, Cotterill et al. (1999, 2000) employ a flexible, Linear Approximation of Almost Ideal Demand System model (LA/AIDS) and analyzed market share and price setting behavior for PLs and NBs. They found consumer response to price and promotion decisions of own products and related products to be decidedly asymmetric.

In making decisions with respect to PLs and NBs, manufacturers or retailers must consider all the factors that make PLs and NBs attractive to consumers with various socio-demographic and economic characteristics. Many of these issues have been addressed in previous literature, but there are still unresolved explanations for observed differences in purchase behavior of PL brands, own- and cross-price elasticities for lower and higher-income consumers (e.g. Akbay, 2000; Hoch, 1996; Sethuraman & Cole, 1999). Hoch (1996) found consumers with higher incomes to have lower price sensitivity and thus have a lower likelihood of purchasing PL products. Similarly, as consumers gain higher levels of education, their incomes increase and therefore there is a negative correlation between education and the purchase of PL products. Such negative correlation is confirmed by Sethuraman and Cole (1999) as they found HI and/or more educated shoppers to be less price sensitive and more willing to pay higher prices for NBs. Akbay (2000) focused on healthy and less healthy food products and he found HI and higher-educated consumers to be more inclined to purchase healthier and super premium foods that tended to have higher prices than less healthy foods.

This paper uses supermarket scanner data to analyze and compare demand elasticities of higher- and lower-income consumers for PLs and NBs of food commodities. It is hypothesized that consumers will show less sensitivity toward product prices as their incomes