The impact of private label brands on customer loyalty and product category profitability

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Abstract

Purpose – The purpose of this study is to investigate the influence of private label resources possessed by a supermarket retailer on the shopping behavior of loyal customers. The study examines whether or not private label products can help in the overall enhancement of product category performance.

Design/methodology/approach – The paper examines the performance of a supermarket retailer in the Northeast United States that operates over 100 stores and generates a total yearly sales volume in excess of $3 billion. Data obtained from the Supermarket's point of sale information were used. The paper then developed a research model from the literature review and used structural equation modeling to analyze the data.

Findings – The findings show that overall dollars spent by loyal customers significantly impacted overall profitability.

Research limitations/implications – The data collected pertained to the supermarket's grocery department that is comprised of center store dry grocery products, frozen food products, and refrigerated dairy products. Perishable departments such as deli, seafood, meat, bakery, floral, general merchandise, health and beauty care, etc. were not researched in this study. Also, data obtained were from one individual supermarket chain.

Practical implications – Although private label products may represent increased profitability for retailers, consumers prefer a full assortment of merchandise; an over emphasis on private label brands may result in diminishing category performance.

Originality/value – The paper examines the performance of a supermarket retailer in the Northeast United States that operates over 100 stores and generates a total yearly sales volume in excess of $3 billion. The use of scanner data has value as it measures actual shopping behavior.

Keywords Labelling, Customer loyalty, Retailing, Brands, Profits, United States of America

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this article.

Introduction

There has been research on how private label brands provide leverage to retailers, who buy private label products, and the category and market determinants of private label share (Ailawadi and Keller, 2004). However, in an article summarizing retailing research in the *Journal of Retailing*, Grewal and Levy (2007) called for additional work on private labels and their impact on retail sales and profitability. Private label brands comprised an all time high of 21.3 percent of unit share and 16.4 percent of dollar share in supermarkets in 2006 (PLMA, 2007). Between 1999 and 2003, private label products in supermarkets grew at an annual rate of 17.9 percent compared to national brand product sales growth of 14 percent during the same time period (PLMA, 2004). In addition, recent work shows that there is a necessary coexistence between store and manufacturer brands in the consumer packaged goods sector (Gomez and Benito, 2008). This study examines whether or not private label products can help in the overall enhancement of product category performance and favorably impact loyal customer shopping behavior. The purpose is to investigate the influence of private label resources possessed by a supermarket retailer on the shopping behavior of loyal customers.

Private brands and consumer loyalty

Throughout the USA, retailers use store brands to increase business as well as to win the loyalty of their customers. Whether a store brand carries the retailer's own name or is part of a wholesaler's private label program, store brands give retailers a way to differentiate themselves from the competition. Private brands supplement a retailer's image and strengthen its relationship with consumers. In addition, some store brands are no longer category killers, but are comparable to national brands (De Wulf *et al.*, 2005). Retailers are aware that consumers can purchase national branded items anywhere, but they can only buy their store brand at their stores.

> The central thrust of the marketing activities of a firm is often viewed in terms of development, maintenance, or enhancement of customers' loyalty toward its products or services (Dick and Basu, 1994).

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Store brand loyalty likely results in increased profits for retailers since consumers purchase a higher percentage of merchandise from that retailer (Ailawadi, 2001). Lewison and Wesley (1999) stated:

> Through a store brand program supermarkets might enhance store loyalty and brand loyalty.

The majority of retailers in the past based their store brand strategy primarily on price without adequate attention to quality. However, retailers have recently started to pay more attention to store brand quality. Corstjens and Lal (2000) reported that quality store brands can be a device for retailers to generate store differentiation and store loyalty.

The most important element for a private label brand in establishing loyalty is the brand's ability to fulfill promises to its consumer base. The continued fulfillment of promises usually results in a long-term profitable relationship between the retailer and consumer and is related to the utilitarian benefits offered by the brand (Carpenter, 2003).

The total lifetime profits for a typical retailer can increase by 75 percent by retaining an additional five percent of existing customers as loyal customers refer other shoppers to the retail store thereby building word-of-mouth reputation and potentially expanding the customer base (Huddleston *et al.*, 2004). Loyal customers to a particular store are less likely to patronize a competitor. Commonly used measures of store loyalty in prior research studies have incorporated variables such as percentage of purchases at a particular store, dollars spent, frequency of patronage, and degree of store switching. Food Business News defined customer loyalty as "creating the strongest possible relationship between the retailer and customer, so that people feel they will miss something if they go to another store" (Huddleston *et al.*, 2004).

Shoemaker and Lewis (1999) define truly loyal customers as customers "who feel so strongly that you (the company) can best meet his or her relevant needs that your (the company's) competition is virtually excluded from the consideration set; these customers buy almost exclusively from you" (Kumar and Shah, 2004). Attitudinal loyalty has been defined in the perspective of a particular brand as it captures the affective and cognitive aspects of brand loyalty, such as brand preference and commitment. Attitudinal loyalty is an important concept since it indicates propensity to show certain behaviors, such as the likelihood of future usage or how likely it is that customers would recommend the company to their friends or a colleague. Therefore, firms need to concurrently focus on building both behavioral and attitudinal loyalty to achieve "true" loyalty (Reichheld, 1996). For any company, customer loyalty becomes more meaningful only when it translates into purchase behavior. Therefore, it is vital for a firm to build behavioral loyalty. Pure attitudinal loyalty of a customer without behavioral loyalty may provide only limited or no tangible returns to the firm. Corstjens and Lal (2000) demonstrated that premium quality store brands play a role in building store loyalty. Guenzi *et al.* (2009) found that customer trust in store branded products has an influence on store patronage, since it positively affects customer trust in the store, perceived value and store loyalty intentions. The use of point of sale (POS) data obtained from the database of retailers provides invaluable knowledge of the transactional behaviors of consumers.

Building strong customer relationships has been suggested as a way to gain a competitive advantage. The underlying assumption of much of the existing research is that long-term customer relationships are preferable to short term relationships because of greater profitability. This assumption has been attributed to bigger exchange efficiencies created by customer retention economics (Sheth and Parvatiyar, 1995). Recent advances in information technology have provided marketing managers with the tools to create a new generation of customer relation tactics. Two primary objectives of customer loyalty are to increase sales revenues by raising purchase/usage levels, and/or increase the range of products bought from the supplier. A second objective is building a closer bond between the brand and current customers to maintain the current customer base. Past research has confirmed that store satisfaction is strongly associated with re-purchase intentions. Berry and Gresham (1986) contend that "relationship retailing" is particularly relevant in today's marketplace because it has the potential to simultaneously increase sales to current customers while reducing the chances of losing those customers to competitors. Interpersonal relationships exist between salespeople and customers in retailing, but customers also establish relationships with the stores themselves and with the brands that stores carry.

Increased customer retention, as a result of increased loyalty, has two important effects for retailers. First, it can lead to a gradual increase in the firm's customer base which is particularly necessary in an era of low sales growth. Second, the longer the customer remains loyal to the firm, the larger the profits earned from each individual customer. With enhanced loyalty, the prevailing practice of offering costly loss leaders to generate store traffic may become less necessary (Rose, 1990).

Without resulting in profitability, customer loyalty holds no significance for a company. Customer loyalty can be a double-edged sword. If mismanaged, it can seriously hurt the company's bottom-line by compromising profitability for loyalty. If customer loyalty is managed wisely and in conjunction with profitability, it could be the most potent weapon against competition in the company's marketing arsenal (Kumar and Shah, 2004). To determine if a customer relationship is profitable, a company needs to be able to quantify this relationship. Dowling and Uncles (1997) cautioned that the contention that loyal customers are always more profitable is a gross oversimplification.

Development of category management in supermarkets

In the early 1990s, US grocery retailers were prepared for an improved way to run their business. Profit margins of about one percent at that time were unacceptable and new products were proliferating, while consumers were becoming more diverse and demanding. Alternative classes of trade such as warehouse clubs were emerging and Wal-Mart was getting ready to roll out its supercenter format that combined the retailer's traditional general merchandise store with a full-line grocery store under one roof (AC Nielsen, 2006). Grocery retailers wanted to ensure that their shelves were stocked with products that consumers wanted to buy given the endless variety of new products pouring into the marketplace.

Predominantly, grocery stores wanted to stay in business (AC Nielsen, 2006).

Traditional retail trade channels have blurred as retailers scramble to offer the convenience of one-stop shopping. Numerous retailers have increased the variety of their merchandise offering to appeal to a broader group of consumers. A retailer offering merchandise not typically associated with that store is called scrambled merchandising that has led to an increase in intertype competition. This intensifying of competition has resulted in making it more difficult for retailers to identify and monitor their competition. Examples of the increasing diversity of retail formats are food stores expanding into mass merchandise, mass merchandisers expanding into food, and drug stores expanding into mass merchandise and food. Attracting customers to stores and brands has become increasingly difficult for retailers as competition has intensified. Due to the vast amount of shopping choices facing them, today's savvy shoppers often view retailers as interchangeable which has made consumer behavior less predictable than ever. To combat this trend, retailers need to identify ways to differentiate themselves from competitors (Levy and Weitz, 2007).

Research shows that certain consumers will buy certain products from specific stores despite the general demand for one-stop shopping. This result portrays the fact that shoppers have been conditioned to look for deals in certain categories and often select their choice of retailers based on the availability of such deals. A common example is finding consumers shopping both high-end and low-end outlets in order to save money on certain items in order to better afford luxury items (AC Nielsen, 1992). This trend has resulted in increasing the pressure on retailers to differentiate their offering from competitors by developing a reputation as the place to shop for certain product categories. If implemented successfully, differentiation can equate a retailer's name with brand equity by establishing a clear connection in consumers' minds between the name and the fulfillment of certain needs (AC Nielsen, 1992). Although category management results in merchandising programs customized to individual stores, its ultimate goal is to unite these programs to support a company's mission, image and strategic objectives (AC Nielsen, 1992).

Theoretical model

Lewison and Wesley (1999) stated:

> Through a store brand program supermarkets might enhance store loyalty and brand loyalty.

Corstjens and Lal (2000) reported that quality store brands can be a device for retailers to generate store differentiation and store loyalty. The most important element for a private label brand in establishing loyalty is the brand's ability to fulfill promises to its consumer base. The continued fulfillment of promises usually results in a long-term profitable relationship between the retailer and consumer and is related to the utilitarian benefits offered by the brand (Carpenter, 2003). Hence, it is hypothesized that:

H1. There is a significant positive relationship between department private label sales penetration and department sales.

Category management processes may be developed and substantiated according to the basic assumption that its credibility relies on higher profitability, increased returns, reduced spoils, higher returns, increased customer traffic and many other typical business oriented benefits. This supports the view of Farris and Kusum (1992) and Johnson (1999) that retailers cannot push store brands too much at the expense of national brands as national brands continue to be major traffic builders and reducing their presence may make the store less attractive to its most profitable shoppers. Yavas and Babakus (2009) stated that national brands are traffic builders, boost sales and a reduction in the portfolio of national brands offered may render a store less attractive to profitable customers. Category management is essentially comprised of determining what shoppers want and providing it better than competition. In this regard, the category management process solves the key issue of shopper erosion. If retailers offer the correct products for target customers and then merchandise and price the products appropriately, the result should be a satisfied consumer who remains loyal to the store (AC Nielsen, 2006). Hence, it is hypothesized that:

H2. There is a significant positive relationship between department private label sales penetration and department customer count.

Private label brands can be used to increase store loyalty and to differentiate a retail chain from other chains. Private labels were originally introduced and positioned as "best-value" products, but retail chains have increasingly improved their private label product quality in order to raise the image of the chain and to encourage consumer loyalty to the chain rather than to national brands (Dekimpe and Steenkamp, 1997). Consumers may benefit from the increasing achievement of private label brands in various ways:

- a wider variety of high-quality products is available from which to choose;
- total dollar expenditure for their shopping basket may be lower; and
- for consumers who have established store loyalty, the presence of a store brand label with a consistently high quality across a wide range of product categories can considerably facilitate the shopping experience (Dekimpe and Steenkamp, 1997).

Corstjens and Lal (2000) found that store loyalty that is supported by a quality store brand can improve retailer profitability even when the store brand does not have a margin advantage over national brands. They also found a positive correlation between store brand use and behavioral store loyalty using purchase data from a scanner panel. Ailawadi *et al.* (2001) found that, after controlling for other psychographic correlates of store brand use, store loyalty has a positive relationship with store brand use.

Private label products for supermarkets impact consumer behavior. If customers consume and are satisfied with a private label product, they must return to the same store to purchase it again. According to Jacoby and Chestnut (1978), the success of a brand in the long term is not based on the number of consumers that buy it once, but on the number of consumers who become regular buyers of the brand. In a study of consumers in Greece, Baltas and Argouslidis (2007) found that consumers who shop more frequently are more store-brand prone. This comment signifies the importance of

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developing consumer loyalty to private label brands. Samli (1989) showed that consumer loyalty can serve as a distinctive advantage for companies in a highly competitive industry such as retailing. Hence, we formulated the following two hypotheses:

H3. There is a significant positive relationship between department private label sales penetration and behavior of loyal customers.

H4. There is a significant positive relationship between department sales and department profitability.

For grocery retailers, not only do loyal shoppers allocate proportionally more of the food budget to their "first choice" store, they also spend more on groceries than other shoppers. This combined effect means that loyal shoppers can spend up to four times as much in their "first choice" store as their switcher counterparts (Knox and Denison, 1999). Hence, it is hypothesized that:

H5. There is a significant positive relationship between department customer count and department profitability.

Loyal customers spend substantially more money in their first choice store than customers that switch stores. Since these loyal customers are likely to be no more expensive to serve, loyal customers are potentially more profitable to retailers (Knox and Denison, 1999). Loyal customers can establish a significant competitive advantage for businesses in many ways. Truly loyal customers form a market share base that is impregnable to the competition.

Store brand loyalty likely results in increased profit for the retailer due to consumers purchasing a higher percentage of merchandise from the retailer (Corstjens and Lal, 2000; Ailawadi, 2001). The success of a store brand loyalty strategy is dependent upon several factors with the most critical factor being the company's (brand's) ability to fulfill its promises to consumers. This continued fulfillment of promises usually leads to a long-term, profitable relationship between a retailer and consumer. The retailers private label products are related to the benefits (i.e. utilitarian and hedonic) that the brand offers to consumers and these benefits are derived by the consumer with each purchase of the brand (Carpenter, 2003).

Some studies have found a weak correlation between loyalty and profitability. Reinartz and Kumar (2002) found a weak correlation between customer loyalty (behavioral loyalty) and profitability in their research of four companies operating in different industries. The correlation between behavioral loyalty, as measured by the respective firms and profitability, was less than 0.5 for all four companies. Knox and Denison (1999) determined that loyal customers represent the most profitable foundation of shoppers in the UK, a fact that has been recognized already in industry sectors outside retailing. Hence, it is hypothesized that:

H6. There is a significant positive relationship between loyal customer behavior and department profitability.

Figure 1 shows the research model.

Methodology

A supermarket retailer located in the northeast was used for this research. This supermarket has annual sales exceeding \$3.0 billion annually and places a major emphasis on the growth of their private label products. The grocery department consists of center store dry grocery, dairy and frozen foods sections and formed the sample for which secondary data for the research model was collected. The supermarket retail chain has over 100 stores dispersed over New England states and is representative of typical US national grocery markets. Category management is implemented at this supermarket with the grocery department divided into 157 distinct and measurable product categories. The categories are divided based on consumer purchase patterns of similarities among products and the key objectives of each category manager is to increase sales or profits of each category along with private label sales penetration.

Data collection

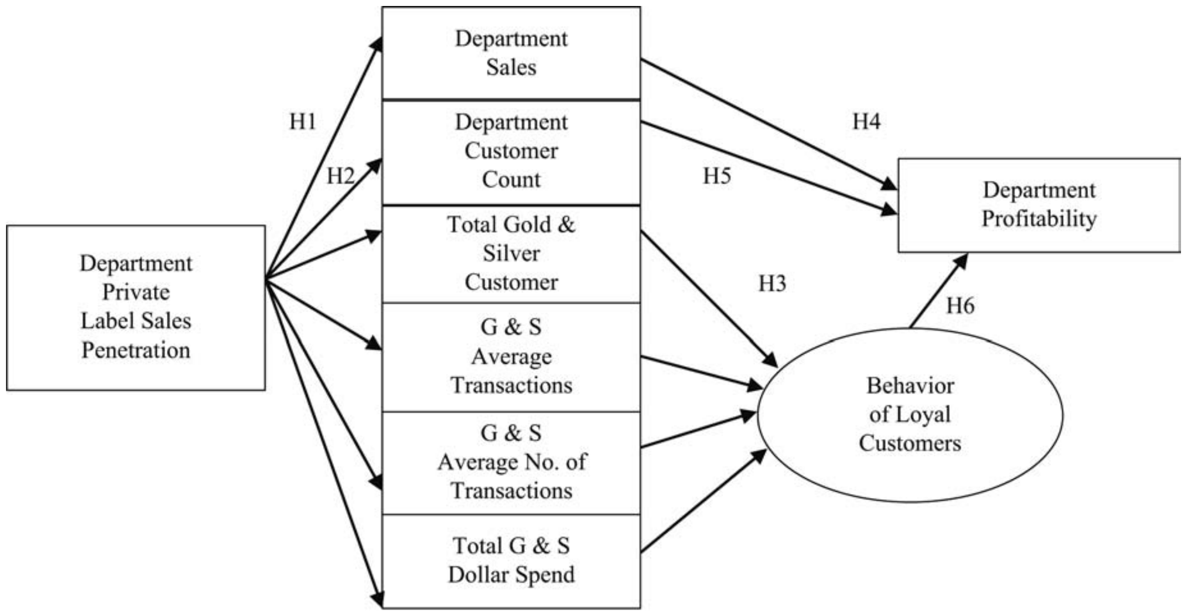
The hypotheses were tested using information from the supermarket's consumer database. In order to personalize this information about 50 percent of grocery store retailers have implemented card-based electronic customer loyalty programs aimed at targeting services toward their best customers (Blair, 1999). The supermarket retailer used in this study segments their customer base into groups based on projected sales, profits, and frequency of visits. This study analyzed the transactions of the top two tiers of consumer segments as these 20 percent of consumers account for approximately 80 percent of chain sales. The top two segments of customers are labeled as gold and silver groups of customers. The top decile is classified as gold customers and the second decile is classified as silver customers.

Measurement of variables

A three-year history from fiscal year 2004 through 2006 representing 39 periods was analyzed. This information is total grocery department private label sales penetration aggregated from the volume of the 157 product categories. Department private label sales penetration is calculated as total department private label sales divided by total department sales (comprised of national brand and private label sales). Department sales are comprised of both private label and national brand sales. Total customer count is calculated by the number of transactions at the supermarket retailer during each four-week period. Gold and silver customers represent the top two customer segments for sales, profitability and frequency of shopping trips for the supermarket retailer. Average transaction dollars represents the average dollar transaction per period for the gold and silver customer segments of the supermarket retailer. The average number of transactions is calculated by the average number of transactions for gold and silver customer segments for each time period. This variable is measured by the total amount of gold and silver customer dollars spent in each time period. Customer loyalty behavior is a latent variable and is measured in this study by the following four indicator variables:

1 Total gold and silver customer count.
2 Gold and silver customers average transaction dollars.
3 Gold and silver customers average number of transactions.
4 Total gold and silver customer dollars spend.

Figure 1 Loyal customers and department performance



Note: Gold & silver customers represent the top 2 customer segments in term of profitability for the supermarket

Behavior of loyal customers is aggregated grocery department data from the 157 grocery product categories. This information is total grocery department dollar profits across the 157 grocery product categories.

Model testing and data analyses

The model and hypotheses for this study was tested using structural equation modeling (SEM). Structural equation modeling is a multivariate technique that combines aspects of multiple regression and factor analysis to estimate a series of interrelated dependence relationships simultaneously (Hair *et al.*, 1998). AMOS software was utilized to test if the model fits the data and was valid. Modifications needed to be made to establish a good fitting model to the sample data. Figure 2 portrays the final model that has acceptable goodness-of-fit using standardized estimates. Figure 2 also shows the standardized coefficients.

The results of the model show the fit indicators being above the criterion value of 0.90 with an AGFI amount of 0.934, GFI of 0.975, and NFI of 0.966 indicating that this final model provides an acceptable fit to the data. The SEM output produced a probability value over 0.05 at 0.929 indicating that the model fits the data. The low Chi-square amount of the model is 3.081, close to the degrees of freedom of 8 also indicates that the model fits the observed co-variances well. The SEM output shows that 61 percent of the variance in total department profitability was accounted for by the final model.

Table I indicates the hypothesized relationships. Hair *et al.* (1998) indicated that a *t*-value of 1.96 is equal to a 0.05 significance level and a *t*-value of 2.58 is equal to a 0.01 significance level. Table I contains the maximum likelihood estimates of the regression weights that are the estimated path coefficients for the arrows in the model. Standard errors are also provided for the path coefficients in Table I along with the critical ratios. Critical ratios more than 1.96 are significant at the 0.05 level.

Standardized regression weights indicate the relative contributions of each predictor variable to each outcome variable. The standardized estimates are also contained in Table I. The results indicate that as department private label sales penetration increased, overall department sales and department customer count decreased. As department private label sales penetration increased, the average number of transactions by loyal customers decreased. There was a significant positive influence between the average number of transactions by loyal customers and the total dollar amount spent by loyal customers. There was also a significant positive influence between the average number of transactions by loyal customers and overall department sales.

The results indicate a significant positive relationship between the total dollar amount spent by loyal customers and department profitability. There was a significant negative relationship between the total dollar amount spent by loyal customers and overall department sales.

Tests of the research hypotheses

H1 hypothesized that there is a significant positive relationship between department private label sales penetration and department sales. The results indicate that *H1* is supported with a t-value of -2.194, a standard loading of -0.299, and the *p*-value was significant at the 0.05 level. Therefore, the results indicate that there is a significant negative correlation between department private label sales penetration and department sales. Increasing overall department private label sales penetration negatively impacted overall department sales. The results of this research indicate that as private label sales penetration increased for the grocery department overall department sales decreased. These results indicate that national brands

Figure 2 Final SEM model results

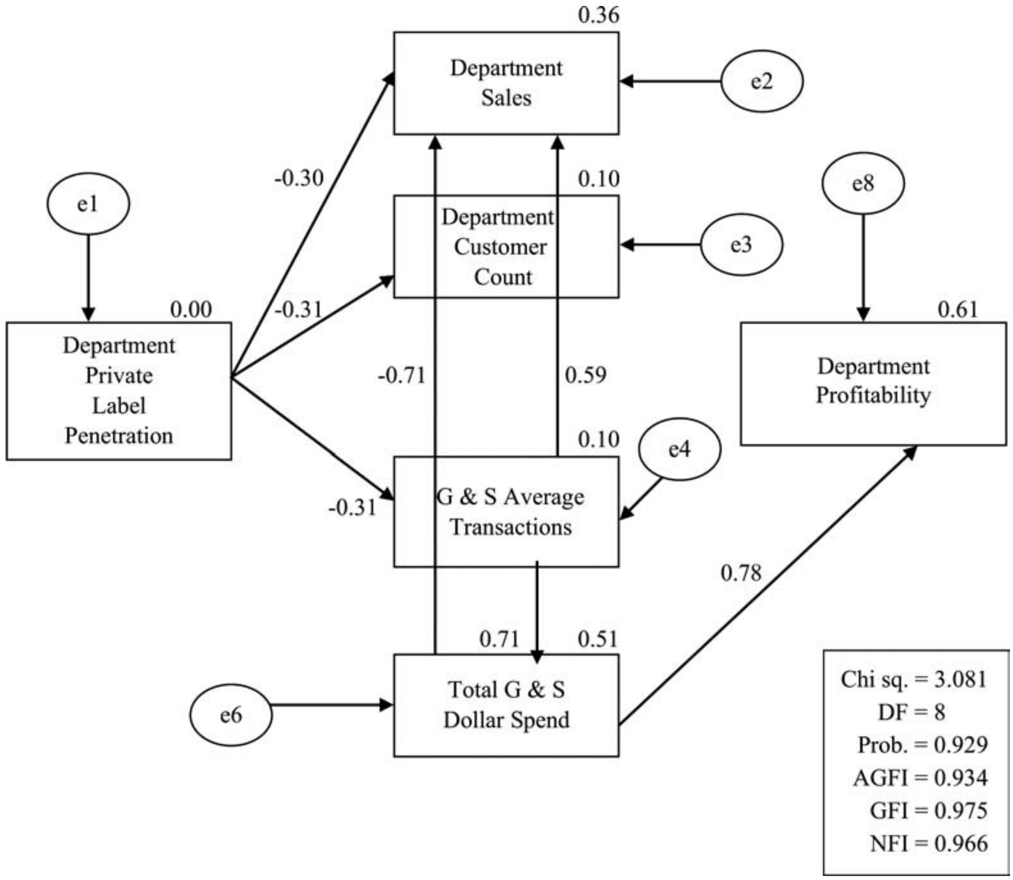


Table I Final SEM model: path results and standardized regression weights

	Estimate	S.E.	C.R.	P
Final path results				
Tran ← PLPEN	−51.943	25.819	−2.012	0.044
Spent ← Tran	520738.542	83300.029	6.251	
DeptSales ← PLPEN	−1502877155.703	685118091.527	−2.194	0.028
CUSTCoun ← PLPEN	−71824354.307	35388293.319	−2.030	0.042
Profit ← Spent	2.377	0.310	7.674	
DeptSales ← Spent	−29.258	7.576	−3.862	
DeptSales ← Tran	17764961.461	5684189.708	3.125	0.002
Standardized regression weights				
Tran ← PLPEN	−0.310			
Spent ← Tran	0.712			
DeptSales ← PLPEN	−0.299			
CUSTCount ← PLPEN	−0.313			
Profit ← Spent	0.780			
DeptSales ← Spent	−0.713			
DeptSales ← Tran	0.592			

are key brands for enhancing overall sales and focusing on increasing private label sales beyond a certain level may result in less overall sales. The reason is that private labels represent lower retail sales prices than national brand items. Switching consumer purchases from national brands to lower priced private brands will result in overall sales volume keeping unit volume constant. Category managers need to be aware of the impact of various brands in their portfolio on overall category sales. By placing too much emphasis on increasing private label sales, a negative impact may result on overall category sales.

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H2 hypothesized that there is a significant positive relationship between department private label sales penetration and department customer count. The results indicate that *H2* is supported with a t-value of −2.030, a standard loading of −0.313, and the *p*-value was significant at the 0.05 level. Therefore, there is a significant negative correlation between department private label sales penetration and department customer count.

Increasing overall department private label sales penetration negatively impacted overall department customer count. The results of this research indicate that as private label sales penetration increased for the grocery department overall department customer count decreased. These results indicate that national brands are key brands for enhancing overall customer traffic into supermarkets and focusing on increasing private label sales beyond a certain level may result in less customer traffic. The reason is that private label brands may not be major brands to entice consumers to visit stores. National brands should be used to attract consumers to stores and, once there, private label products may be used for incremental sales dollars.

H3 hypothesized that there is a significant positive relationship between department private label sales penetration and customer loyalty behavior. The final SEM model only incorporated average transaction dollars spent and total dollars spent by loyal customers. Therefore, the hypothesis is not supported indicating there is not a significant positive relationship between department private label sales penetration and customer loyalty behavior. The results indicate that overall private label sales penetration does have a significant negative impact on the average dollar transaction amount of loyal customers. Similar to the findings in *H1*, the retail price for private label brands is lower than national brand counterparts so consumers switching purchases from national brands to private label brands will have lower average transaction amounts.

H4 hypothesized that there is a significant positive relationship between department sales and department profitability. The final SEM model did not incorporate this relationship. Therefore, the hypothesis is not supported indicating there is not a significant positive relationship between department sales and department profitability.

Periods with high department sales may not have resulted in increased profitability due to lower gross margins from the products sold.

H5 hypothesized that there is a significant positive relationship between department customer count and department profitability. The final SEM model did not incorporate this relationship. Therefore, this hypothesis is not supported indicating there is not a significant positive relationship between department customer count and department profitability. The overall customer count in a specific time period for this supermarket did not significantly impact overall profitability. This may be due to lower overall dollar amounts of transactions and lower gross margins of the purchases.

H6 hypothesized that there is a significant positive relationship between loyal customer behavior and department profitability. The latent variable behavior of loyal customers from the original model was impacted by four indicator variables. The final SEM model only incorporated total dollar amount spent by loyal consumers and average transaction dollars by loyal customers. Therefore, the hypothesis is supported indicating there is a significant positive relationship between loyal customer behavior and department profitability. The original research model used the following four constructs to measure the behavior of loyal customers: customer count, average transaction dollars, average number of transactions and total dollars spent. The results indicated there is a significant relationship between total dollars spent by loyal customers and overall department profitability. The results support the notion of the 80-20 principle as increasing sales by loyal customers' results in increased profitability. Although not hypothesized, the results indicate a positive correlation between average transaction dollars spent by loyal customers and overall department sales. The *t*-value is 3.125 with a standard loading of 0.592. The findings indicate that category managers should seek to find methods to increase average transaction dollars by loyal customers as these methods may result in increasing overall sales volume. The final research model indicated a positive correlation between average transaction dollars spent by loyal customers and total dollars spent by loyal customers. The *t*-value is 6.251 with a standard loading of 0.712. The findings indicate that category managers should seek to find methods to increase average transaction dollars by loyal customers as these methods may result in increasing overall spending amounts of loyal customers. It also indicated a negative correlation between the total amount spent by loyal customers and overall department sales. The *t*-value is −3.862 with a standard loading of −7.13. The results are very surprising as there should be a positive relationship between the total amount spent by loyal customers and overall department sales.

Conclusions

The results indicated there is a significant negative relationship between department private label sales penetration and overall department sales. There also was a significant negative relationship between department private label sales penetration and customer count. There were no significant relationships in the final model between overall department sales and overall customer count on department profitability. Two of the four constructs used in the proposed model (average dollar transaction and overall dollar amount spent by loyal consumers) were incorporated into the final SEM model. The overall dollar amount spent by loyal consumers had a significant positive influence on overall department profitability. The findings indicated that overall dollars spent by loyal consumers significantly impacted overall profitability.

Limitations of the study

The data collected pertained to the supermarket's grocery department that is comprised of center store dry grocery product, frozen food products, and refrigerated dairy products. Perishable departments such as deli, seafood, meat, bakery, floral, general merchandise, health and beauty care, etc. were not researched in this study and these departments represent approximately 45 percent of total store sales. This research was the collection of data from one individual supermarket chain. This supermarket utilizes a promotional pricing strategy (high-low strategy) and the results may differ from a supermarket chain that employs an everyday low price strategy. Also, private label sales penetration and consumer perceptions of private label brands varies between different regions of the USA, limiting the inferences obtained from this study to other supermarket chains throughout the country. The supermarket retailer used in this research has a maturely developed private label program. Also, the private label sales penetration for this retailer is higher than other competitors in their trading area. Conclusions from this study may not be consistent with a supermarket whose private label program has not reached a mature level or is underdeveloped compared to competition.

Managerial implications

Many studies have researched the impact of private label brands on either category performance or consumer loyalty. This study incorporates an analysis of both profitability and loyalty behavior, two major objectives businesses have for enhancing their private label brand programs. Businesses need to assess both overall profitability of private label brands and impact on consumer loyalty to ensure the long-term health of the organization as private label brands, being proprietary to retailers, offer a unique selling proposition to consumers.

Another managerial implication is the importance of data mining used in this research to find hidden or unexpected patterns in data. Due to information technology advances, the amount of information that is provided to managers in an organization is enormous. Data mining techniques can assist managers in uncovering hidden meaning in the piles of data they are presented. Most managers today are confronted with having too much data at their disposal and sifting through this abundance of information can be challenging. Data mining techniques, as used in this research, can assist managers in making "sense" of the information at their disposal leading to more effective decision making. Data mining techniques are used by retailers to uncover insights on consumer shopping behavior generated from POS information. Understanding consumer purchase patterns can assist businesses in structuring personalized marketing messages in order to increase the likelihood of establishing consumer loyalty.

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Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of this article. Those with a particular interest in the topic covered may then read the article in toto *to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefits of the material present.*

In the last decade or so, the USA has experienced strong growth in the volume and sales of private brands. And within certain periods during this time, sales of such products have expanded at a significantly faster rate than sales of national brand alternatives.

Supermarkets in the USA consider own label brands key to their aims of increasing business and the number of loyal customers. Private brands help reinforce a retailer's identity and differentiate the store from its competitors. The inclination for retailers to diversify into other product areas in order to provide greater convenience for the shopper has intensified competition and made differentiation more difficult yet more important to achieve. Despite this general trend, some consumers do still prefer to buy certain products from certain stores. What retailers must do is make sure their store is the one that can best fulfill these needs. The importance of this is illustrated by research in the grocery sector showing that loyal customers spend a high percentage of their food budget in their preferred store. It additionally claims that their overall spending on groceries is higher than other shoppers.

Analysts have found that greater loyalty to both brand and store is a feasible outcome for supermarkets that focus on own label products. It is equally possible that consumers who are loyal to store brands buy additional merchandise from the retailer and generate extra profits as a result.

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The potential for private brands to positively influence customer loyalty has increased since retailers began to pay greater attention to the quality of many own label goods. In the main, the focus beforehand was on price. But the relevance of quality is now widely acknowledged, as different studies have noted. Evidence suggests that providing consumers with superior own label products can increase their trust in both brand and store. There are also positive implications for store patronage and, in the longer term, loyalty when consumers perceive value to be high.

Securing loyalty is acknowledged as important as such relationships are more profitable than those that endure over the short term. Various scholars have identified attitudinal and behavioral components of loyalty. Most agree that the attitudinal form can be more valuable as it often leads to consumer recommendation or engagement in other activities to support the firm. Others argue that loyalty in the shape of purchase behavior is at least equally important as this dimension has a greater direct effect on profitability. In this context, retailers with more loyal customers can earn higher profits while reducing the need to offer "costly loss leaders" in order to increase store traffic.

Extant literature illustrates the importance of effective management of product categories. This basically involves identifying and meeting customer needs more effectively than rivals can manage. Different authors have pointed out the significance of category management to the supply of private brands. In their view, retailers should be cautious about promoting store brands to the extent that national brands are ignored or even removed from the product portfolio. The justification for this view is that national brands entice many consumers to the store in the first place and their absence might make it a less appealing place to visit.

Notwithstanding this scenario, a well-managed private brand program can prove attractive to the consumer because of its potential to:

- offer a expanding range of first-rate products;
- lower the total cost of their shopping; and
- simplify the shopping experience once the own label brand is associated with consistent high-quality that spans various product categories.

Given that brand success is determined more by the number of customers who make regular purchases, these benefits can have significant implications for loyalty. One study even suggests the possibility of a virtuous circle based on its findings that consumers display a greater inclination towards store brands if they shop more frequently.

Pepe *et al.* explore the issues raised in a study using a US supermarket chain that strongly focuses on its own label products. The supermarket has a grocery department incorporating 157 "distinct and measurable" product categories whose division is determined by consumer purchase patterns. Research data was acquired from the supermarket's consumer database containing personalized consumer information generated by loyalty schemes. Sales, profits and purchase frequency are used by the retailer to segment its customer base. The study focused on the top two tiers as this 20 percent of consumers are responsible for around 80 percent of sales. The transactions analyzed covered the three-year period from 2004 to 2006.

The findings suggested that increasing private brand sales above a certain level:

- may result in lower overall sales;
- can lead to a lower number of visitors to the store; and
- has a markedly negative impact on how much loyal consumers spend.

The authors attribute this to the lower retail price of own label products compared to national brand alternatives.

It was additionally indicated that high department sales and high customer numbers would not necessarily increase profit levels. However, profitability was significantly influenced by the purchase behavior of loyal customers.

In the opinion of Pepe *et al.* supermarkets must recognize the impact of national brands on both sales and visitor numbers. Retailers are therefore urged to use national brands to as a means to entice shoppers to their stores and private brands for attaining "incremental sales" once they are there. The impact of loyal customers on profitability demands that managers devise strategies for increasing the average spend of these consumers. Appropriate initiatives can help increase the total spending of such consumers and boost total sales as a result. The authors also note the significance of data mining in the study and assert that store managers should use similar techniques in order to better understand complex consumer information.

That the present study excluded data from many departments in the supermarket is acknowledged as limiting the findings, as does confining research to a single retail chain. Future investigation of these issues may also consider supermarkets that employ different pricing strategies, while examining varying levels of own label sales penetration is another avenue to explore.

(A précis of the article "The impact of private label brands on customer loyalty and product category profitability". Supplied by Marketing Consultants for Emerald.)