

*Full Length Research Paper*

# Store brand proneness and maximal customer satisfaction in grocery stores

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**To identify the factors whose perception has the greatest influence on customer satisfaction, the authors analyse a database of 422 Spanish consumers who purchase from different types of self-service grocery stores in a representative Spanish city. The findings reveal that among consumers who exhibit a low propensity to buy store brands, perceptions of the quality image, as well as perceptions of service and convenience, have positive and significant influences on the maximum level of customer satisfaction. However, for those consumers who are not prone to buying store brands, only the perception of services and convenience influence their maximum level of satisfaction. This research outlines which features can help retailers focus their strategies on appropriate consumer targets, according to the retailer's own features, and thus attain a sustainable competitive advantage through their differentiation.**

**Key words:** Grocery retailing, maximum level of customer satisfaction, store brand proneness.

## INTRODUCTION

Across various industries, customer-oriented firms consider customer satisfaction their fundamental strategic focus (e.g., Szymanski and Henard, 2001), though this focus is especially pertinent in the case of services (Bodet, 2008; Cronin et al., 2000). For example, grocery retailers largely recognize the influence of customer satisfaction on the success of their commercial strategies (e.g., Gómez et al., 2004). Therefore, retail managers in the grocery industry look constantly for resources and capacities they might use to design competitive strategies that address customer satisfaction and needs (e.g., Davis-Sramek et al., 2007; González-Benito, 2002).

It is therefore not surprising that researchers in this field have investigated (1) cues that signal service quality to customers (Carman, 1990; Parasuraman et al., 1988, 1991,

1994), (2) measures of the levels of customer satisfaction (Tse and Wilton, 1988; Myers, 1991; Peterson and Wilson, 1992; Tom and Lucey, 1995; Hackl et al., 2000; Taylor and Baker, 1994), and (3) the dynamics of the relationship between service quality and customer satisfaction (Bolton and Drew, 1991; Cronin and Taylor, 1992; Taylor and Baker, 1994).

This relevant literature identifies various store attributes that grocery retailers might employ to differentiate themselves from their competitors (e.g., Ganesh et al., 2007; Gómez et al., 2004). In addition, many researchers work to measure customer satisfaction and its relationship with service quality. However, few studies consider the potential effect of consumer perceptions of store attributes on the maximum level of customer satisfaction. The relative lack of investigation into maximal customer satisfaction seems surprising; a priori, it should be the objective of any retailer in the industry (Al-Awadi, 2002; Barsky, 1995; Spiller et al., 2006).

In practice, grocery retailers concentrate so keenly on

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**Table 1.** Questionnaire specifications.

Sample universe	52,980 residents of the city of Cuenca (Spain)*
Unit sample	40,075 consumers older than 18 years
Geographic scope	Cuenca, capital
Method of information collection	Personal survey
Site for conducting the survey	Retail grocery store establishments located in the selected metropolitan area.
Sample size	422
Sample procedure	Nonprobabilistic, convenience
Date of field work	17- 31 March 2008

\*According to La Caixa (2008).

achieving the maximum level of customer satisfaction that they make some decisions exclusively on the basis of this goal, which may cause them to underestimate some associated costs (e.g., Guerrero et al., 2000; Rubio and Yagüe, 2009). Therefore, it would be interesting for grocery retailers, as service providers, to determine whether the main objective should be satisfying consumers through performance or delivering the maximum level of perceived service quality (Spreng and MacKoy, 1996).

We attempt to identify the factors that underlie these attributes by analysing the relation between customers' perceptions of key factors and their satisfaction with their purchase. This investigation appears especially relevant in response to studies in the services domain that call for a greater understanding of the relationship between perceived service quality and satisfaction (Spreng and MacKoy, 1996).

Moreover, beyond considering the maximum level of customer satisfaction, we add to existing knowledge by considering the differences in consumers' responses according to their proneness to buy store brands. This classification recognizes the growing importance of store brands in the shopping baskets of Spanish consumers in recent years (e.g., Guerrero et al., 2000; Rubio and Yagüe, 2009), as well as the increasing interest in characterizing and profiling store brand consumers among grocery establishments operating in Spain (Gómez and Fernández, 2009; Martínez and Montaner, 2006).

To achieve these research objectives, we first consider data obtained from a sample of 422 Spanish customers, which we use to establish the factors that underlie the characteristics of store attributes that prior literature notes. In turn, we can establish hypotheses about the influence of these factors on maximal customer satisfaction. We then perform a logistic regression analysis to confirm which factor has the greatest influence; our empirical analysis includes two alternative models and splits the sample according to consumers' propensity to buy store brands. In the last section, we discuss some conclusions and recommendations relative to decision-making processes in grocery stores.

## CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Marketing literature identifies several store attributes that can differentiate retailers and offer positive value to consumers (e.g., Gómez et al., 2004; Hackl et al., 2000; Spiller et al., 2006), including price, sales promotions, quality, commercialized brands (including the store's own brand), proximity, assortment, customer attention, additional services, store atmospherics, and opening times.

We first determine the importance that consumers attribute to these features, then identify the factors that underlie them. On the basis of these underlying factors, we establish hypotheses pertaining to their influence on consumer satisfaction.

To obtain the input for this study, we administered a questionnaire during March 17-31, 2008, through personal interviews with customers in retail grocery establishments that employ diverse formats (e.g., hypermarkets, supermarkets, discount stores, convenience stores) located across the city of Cuenca (Spain). With our convenience sampling approach, we approached potential respondents during both morning and evening hours as they left retail outlets. We gathered 422 valid questionnaires through this method (see the technical specifications in Table 1).

The questionnaire included items designed to gather general information about customer satisfaction, the purchase experience, and store brand proneness (Table 2). Specifically, the first question dealt with overall satisfaction. Because our interest is in the maximum level of customer satisfaction, we obtained, a posteriori, a dichotomous variable from the overall satisfaction measure to determine the maximum level of customer satisfaction. This latter variable equals 1 if the customer is totally satisfied with the purchase and 0 otherwise. Questions 2 - 11 measured perceptions of the main store attribute identified in previous studies (e.g., Gómez et al., 2004; Hackl et al., 2000; Spiller et al., 2006), rated from 1 (poor) to 5 (excellent). Finally, question 13 asked about each respondent's store brand proneness.

Noting the relationships among the explanatory variables in the second group of questions and their high degree of correlation, we follow the methodology proposed by Gómez et al. (2004). By applying a factorial analysis of the main components, we identify a reduced set of uncorrelated factors that explains the greatest degree of variability in the answers. Prior to conducting this analysis, we verified the reliability of the scale according to the Cronbach's alpha coefficient, which reaches 0.713 and thus indicates considerable internal consistency and confirms the trustworthiness of the measurement scale (Nunnally, 1978). In addition, we analyzed the statistical suitability using the Kaiser-Meyer-Olkin (KMO) measurement. In this case, Bartlett's sphericity

**Table 2.** Variable description.

Name	Measurement scale	Type of variable in the model	Definition
Overall satisfaction	Metric	Endogenous	Satisfaction after shopping (5-point scale): Poor (1) to Excellent (5)
Reduced price	Metric	Explanatory	Reduced price perception of the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Sales promotions	Metric	Explanatory	Sales promotion perception regarding the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Quality of the offer	Metric	Explanatory	Quality perception regarding the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Commercialized brands	Metric	Explanatory	Commercialized brands perception regarding the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Proximity	Metric	Explanatory	Proximity perception regarding the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Assortment	Metric	Explanatory	Assortment perception regarding the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Customer attention	Metric	Explanatory	Customer service perception regarding the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Additional services	Metric	Explanatory	Additional services perception regarding the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Store atmospherics	Metric	Explanatory	Store atmospherics perception regarding the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Opening times	Metric	Explanatory	Opening times perception regarding the whole shopping experience (5-point scale): Poor (1) to Excellent (5)
Store brand proneness	Categorical	Classification	Consumer propensity to buy store brands: (1) Low preference for store brands (prefer well-known brands) or (0) High preference for store brands.

Notes: Because our interest is the maximum level of customer satisfaction, we obtained a dichotomous measure of overall satisfaction, equal to 1 if the customer is totally satisfied with the purchase and 0 otherwise.

**Table 3.** Store factors.

Identified factor	Reliability alpha	Survey elements: specific attributes	Factor loading
Customer services and convenience (CSC)	0.75	Assortment variety	0.540
		Proximity to the home	0.564
		Customer attention	0.604
		Additional services	0.661
		Store atmospherics	0.823
		Opening times	0.742
Quality image (QI)	0.65	Quality	0.650
		Brands	0.772
Economic value of the purchase (EV)	0.70	Price	0.849
		Promotion	0.837

test reveals a high value that, with a level of meaning of 0.000, rejects the hypothesis of no significant correlation and ensures that the analysis of the main components applies to the focal variables. The measurement of adjustment (KMO index) is 0.760, greater than the established limit of 0.5 (George and Mallery, 1995).

We provide the factor loadings for a three-factor solution in Table 3. These three factors, which account for 56.45% of the variation in the ten attributes, are customer services and convenience (CSC), which accounts for 24% of the variance and comprises assortment variety, proximity, attention to customer, additional services, store atmospherics, and opening times; quality image (QI), which accounts for 17.8% of the variance and is associated with the per-

ceived quality of the products offered and the brands; and economic value of the purchase (EV), accounting for 14.7% of the variance, which includes prices and sales promotions.

These findings align with those obtained in previous works, which indicate the importance of services offered the quality image, and the monetary value of the purchase. The factors also represent important potential antecedents of customer satisfaction (Al-Awadi, 2002; Berné and Martínez, 2007; Binninger, 2006; Gómez et al., 2004; Mittal et al., 1998). However, the types of products, services, store formats, and business sectors have different effects on the weight of each factor (Grace and O'Cass, 2005; Szymanski and Henard, 2001). Therefore and considering the increasing

**Table 4.** Relation of explicative variables and maximum level of customer satisfaction.

Non-Store Brand–Prone consumers	Estimated parameters
Constant	1.402***
CSC	.495**
QI	.536**
EV	.002
Store Brand–Prone consumers	Estimated parameters
Constant	1.116***
CSC	.828***
QI	.183
EV	.008

\*  $p < .10$ ; \*\*  $p < .05$ ; \*\*\*  $p < .01$ .

consumption of store brands (Guerrero et al., 2000; Rubio and Yagüe, 2009) and the concomitant interest in characterizing store brand consumers in Spain, (Gómez and Fernández, 2009; Martínez and Montaner, 2006) we investigate whether these factors exert the same influence on the maximum level of customer satisfaction across store brand proneness levels. That is, to analyse the potential influence of these factors on the maximum level of customer satisfaction with a purchase, we propose:

**H1:** Customers' superior perceptions of the services and convenience offered by a food retailer enhance their maximum satisfaction.

**H2:** Customers' superior perceptions of the quality image offered by a food retailer enhance their maximum satisfaction.

**H3:** Customers' superior perceptions of the economic value offered by a food retailer enhance their maximum satisfaction.

These hypotheses suggest that the more positive customers' perceptions of the retailer's attributes, the more satisfied they will be with a purchase from that store. The hypothesis testing considers different subsamples of customers, whom we distinguish according to their store brand proneness.

## RESULTS

To test the hypotheses, we conduct a binary logistic regression analysis using our customer database. This technique is suitable when the goal is to explain the behaviour of a dichotomous endogenous variable according to other explanatory variables, as in our study; we hope to predict the dichotomous variable of customer satisfaction using the identified factors of customer services and convenience, quality image, and economic value. To determine the parameters of the model, we rely on the maximum verisimilitude method.

The Cox-Snell and Nagelkerke statistical pseudo- $R^2$  values attempt to quantify the proportion of variation explained by the model of logistic regression, similar to  $R^2$  in a linear regression model. The pseudo- $R^2$  values for store brand-prone consumers are reasonable and indicate that the factors offer greater predictive ability for

these consumers. They predict between 8.8 and 13.5% of the variability in the maximum level of customer satisfaction for the non-store brand-prone consumers, but these value increase to 11.9% and 17.4% of the variability for store brand prone consumers. However, neither the Cox-Snell nor the Nagelkerke statistics can explain variance in a way analogous to the  $R^2$  coefficient of a linear regression.

We provide the results from our analysis of all customer subsamples in Table 4. When consumers do not tend to buy store brands, the factor that most influences the maximum level of customer satisfaction is quality image, followed by the services and convenience offered by the grocery retailer (confidence levels of 95%). However, among consumers who buy store brands, the only factor that influences their maximum level of customer satisfaction is service and convenience. In neither customer subsample do we find a significant effect of the economic value of the purchase on maximal customer satisfaction. These results offer evidence that among consumers who exhibit a low preference for store brands, perceptions of both the quality of the merchandise and the brands offered by the grocery retailers have the greatest influence on their maximum level of customer satisfaction. To a minor extent, their perception of the services and convenience offered by the retailer also affect their maximum level of customer satisfaction. However, among consumers who prefer store brands, only the perception of services and convenience represent influences on the maximum level of customer satisfaction. In both customer subsamples, perceptions of the economic value factor do not influence the maximum level of customer satisfaction.

Hence, among the sample of consumers who are not prone to buying store brands, we find support for our first and second hypotheses. Only our first hypothesis, regarding the perception of services and economic value, receives support among customers who exhibit a high propensity to buy store brands. Table 5 summarizes these hypotheses testing results.

**Table 5.** Summary of hypotheses testing results.

Models	Sample	Hypotheses
Non-Store Consumers	Brand-Prone 150 consumers	H1 supported H2 supported H3 rejected
Store Brand-Prone Consumers	272 consumers	H1 supported H2 rejected H3 rejected

## DISCUSSION AND MANAGERIAL RECOMMENDATIONS

This research focuses on the influence of perceptions of different store attributes and their underlying factors on customer satisfaction, especially with regard to grocery retailers' ability to differentiate themselves to ensure their competitiveness and survival. We analyse a database of Spanish consumers to assess the influence of their perceptions of different factors on their overall customer satisfaction. Moreover, we consider (1) the maximum level of customer satisfaction, which represents the primary focus of any retailer in this industry, and (2) consumers' propensity to buy store brands. In so doing, we acknowledge the growing importance of store brands in Spanish grocery retailing, as well as increasing practitioner interest in profiling store brand-prone consumers.

Our sample of 422 consumers purchased from different types of self-service grocery stores in a representative Spanish city and represent different store brand proneness levels. The results confirm that consumers who exhibit a low propensity to buy store brands use their perceptions of the store's quality image, followed by their perceptions of service and convenience, to determine their maximum level of customer satisfaction. However, consumers who do not tend to buy store brands include only the service and convenience factor as an influence on their maximum level of customer satisfaction.

These findings indicate interesting patterns of consumer behaviour in grocery stores that grocery operators should take into account in their decision-making processes if they hope to maintain or improve their competitive positioning. We offer several managerial recommendations, guided by these results. If grocery retailers want to attract consumers who are more likely to buy well-know brands, they should improve the elements that constitute their quality image factor, especially the brands they carry and the quality of the merchandise they offer. These consumers care about the brands carried by the grocery retailer, as well as the quality that these offerings represent to them. In addition, it is important that the grocery retailer offer services and convenience to these consumers, because their perceptions of these aspects significantly influence their overall satisfaction.

However, if the target of the grocery retailer is store

brand-prone consumers, it should focus more on offering effective services and convenience to clients. Using these results, grocery retail managers can design and implement better marketing strategies that support the specific attributes and underlying factors that different types of consumers value. Therefore, this study can help retailers focus their strategies on the consumer target that is most desirable for them (taking into account the retailer's own features) and construct a sustainable competitive advantage through differentiation.

Further research should analyse the impact of these detected factors on customer loyalty. We also believe it might be interesting to repeat this study with different product categories (e.g., perishable versus durable) and store formats.

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