Segmentation Policies Using the Customer Equity Model and the Identification of Criteria for its Prioritization: A Study in a Brazilian Hypermarket

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Abstract:

The objective of this study was to analyze the priority criteria for adopting marketing strategies of quality, price, convenience, brand and relationship, and its adequacy to the perceived values by the customers' segments of a retailer, using the Customer Equity Model. The methodological procedures consisted of a survey directed to the consumers and an application of the Analytic Hierarchy Process (AHP), which was carried out with the hypermarkets' managers. The priority criteria to adopt marketing policies were based on the value equity, brand equity and retention equity constructs. The results have shown that these policies do not meet the expectations of most consumers, who value the brand first, followed by retention and finally the value equity. In contrast, the managers interviewed still focus on the price as the main strategic action for customers' satisfaction, followed by brand and retention.

Keywords: analytic hierarchy process; customer equity model; marketing strategies; cluster; hypermarket

1. Introduction

Companies need lasting relationships with good customers. Strengthening loyalty and retention, promote cross selling of related products and services, expanding their offers in order to better meet their customers' needs are, all of them, manners to increase the customer equity (Rust, Zeithaml, Lemon, 2004) .

The equity's value, brand and relationships are factors that influence the customer equity. The equity's value is formed by the perceptions of quality, price and convenience. The brand equity is formed by subjective, irrational and emotional perceptions. The retention equity is centered on the customer-company relationships. Customer equity is the value of the company's relationship with its customers (Customer Equity); in other words it is the total of the customer's consumption values throughout his consumption life in a certain company.

According to Rust, Zeithaml and Lemon (2004), such values must be perceived not only based in terms of current profitability that a customer provides, but also in relation to the net flow contribution discount that the company

will receive from this customer over his/hers entire useful consumption life. This sum gives the total value of the company's customers.

Anderson and Vincze (2000) believe that the strategic planning process and the marketing process should be highly related. Therefore, the objective of this paper is to identify in an organization of the retailing segment, which are its marketing strategies and which segments do they value the most: the "value equity", "brand" or "relationship". It is expected that the data's analysis may identifying the reasons of prioritizing marketing policies and their suitability to the values of the analyzed segments which will allow a greater understanding of the consumer's behavior and the conception processes of these policies.

2. Literature Review

The literature shows several authors that have different definitions and methodologies for the Customer Equity Model. The models that will be analyzed in this study were developed by: Blatterg, Getz and Thomas (2001), Rust, Zeithaml and Lemon (2001), Gupta and Lehman (2005).

2.1 The Customer Equity - Blatterg, Getz and Thomas (2001)

The authors stress the customer's importance and point out the focus on the customer as the main differential. According to Blattberg, Getz and Thomas (2001), customer equity management is a marketing system that uses financial valuation techniques and the customer's data to improve acquisition, retention and additional products sale for the company's customers and also to maximize the value of the company's relationship with the customer throughout his/hers lifecycle.

The Customer Equity value is equal to the profit of those who are first time customers (the possible number of customers multiplied by the acquisition probability and sales minus profit margins), minus the cost of customer acquisition (the number of potential customers times the acquisition cost per probable customer) more profits from future sales to newly acquired customers (retention rate in each future period times the profit) divided by the discount rate, added to all the customers' segments.

Thus, structuring marketing strategy in terms of the parameters used in the customer equity fundamental equation, companies will be able to evaluate how sustainable are their strategies and which points are vulnerable. The question to be asked is: If the costs of acquisition double with the arrival of new competitors can a company sustain positive customer equity? The fundamental customer equity equation is used as a structural device to make marketing strategy less qualitative and more rigorous.

2.2 The Customer Equity - Rust, Zeithaml and Lemon (2000)

The company's long term value is strongly determined by the company's relationship value with its customers, which is called Customer Equity (Rust, Zeithaml and Lemon, 2000).

According to Rust, Zeithaml and Lemon (2000), the increasing emphasis on customer relationship management coincides with a decreasing emphasis on products. Not that these are no longer important, but are secondary to satisfy customers. Thus, the continuous change towards an economy in services leads inexorably to a change of the emphasis on the Brand Equity to the Customer Equity.

Rust, Zeithaml and Lemon (2004) also complement that organizations should focus their work on the concept of segment managers and not on brand managers. The first step of this segment manager is to understand what drives customer equity and until which point does the brand value has influence on the customer buying decisions. The further emphasize that the brand is only the mean to an end, and that the end is the following: to create and cultivate a long term profitable customers' relationship.

The factors which make up the Customer Equity, according to Rust, Zeithaml and Lemon (2000), are:

> ➢ Value Equity: perceptions of quality, price and convenience.

> ➢ Brand Equity: customers can have brand perceptions that are not explained by the company's objectives' attributes. Perceptions tend to be relatively emotional, subjective and irrational.

> ➢ Retention Equity: arises from the fact that the customer chooses to do business with the company. Because of retention programs and company's relationship programs with customers (CRM).

Rust, Zeithaml and Lemon (2001) affirm that in a company that is focused on Customer Equity, the levels of customers' profitability and how to manage them has become vital. Companies are becoming aware that not all customers deserve to be treated equally. It is too expensive to work with some of them, for they have little potential in becoming profitable, even in the long term.

As a valid tool to focalize on resources for customer service and on questions that have influence on profitability, Rust, Zeithaml and Lemon (2001) denominate this tool as the Customers' Pyramid. After identifying the ranges of profitability, the company offers services and service levels adjusted to the identified segments.

Regarding the ranges' classification that form the Customers' Pyramid, Rust, Zeithaml and Lemon (2000) present the following definitions:

> ➢ Platinum Layer: describes the company's most profitable customers;

> ➢ Gold Layer: differs from Platinum in the levels of profitability, that are not as high, perhaps because customers want discounts that limit margins or are not as loyal;

> ➢ Iron Layer: is formed by the essential customers, that originate the necessary volume in the utilization of the company's capacity, but their spending levels, loyalty and profitability are not enough to justify special treatment;

> ➢ Lead Layer: consists of customers who are costing money to the company. They require more attention than they deserve for their spending, presenting negative profitability.

2.3 The Customer Equity - Gupta and Lehman (2005)

According to Gupta and Lehman (2005), there is a big difference between the sale orientation and relationship orientation. The sale orientation is centered exclusively on short-term benefits of the transaction. On the contrary, the relationship orientation considers the customer's long-term relationship benefits, which will generate future earnings and profits flows.

The customer lifetime value (CLV) is the value of all current and future profits generated by the customer, throughout his/her business life with the company. This concept incorporates these aspects: the profit importance, not only the current but also future ones; the time value of money; and the possibility that customers may not do business with the company forever.

3. Materials and Methods

The method that was used for the data collection and for the questionnaire formulation was a survey, which can be used advantageously in the social areas (Babbie, 1999), and also that it is suitable for descriptive studies (Gil, 1999).

To check these marketing actions' priorities, the method of Analytic Hierarchy Process (AHP) was used. The AHP was developed by Thomas L. Saaty, in the 70s and widely studied in the literature since then, presenting, over time, numerous applications. Its versatility is shown when compared with other structuring methods, as described by Shimizu (2001), during decision making in the organizations. It is a method in which the variables and elements are related in a pyramid structure, with successive hierarchical levels, and the interaction takes place through the

establishment of the elements' relative weights, which are defined based on both statistical criteria as in specialists choices.

The AHP is used in situations in which more than one criterion is considered, for example: value equity, brand equity and retention equity. Basically, this method works with one main tool, the decision matrix.

The analysis universe of this research is the consumers and managers of a Brazilian hypermarket. The choice for the hypermarket was based on convenience. The initial motivation was the access to the customers' data base for the 2010 period.

In order to collect information about the customers' perceived values by segments, 285 consumers of a hypermarket company in Belo Horizonte, Minas Gerais, Brazil, were interviewed. The questionnaires were applied in three of the chain's units. To collect the information concerning the prioritization of marketing strategies that are adopted by the hypermarkets managers, the hypermarket managers were interviewed.

To evaluate the association between the analyzed variables, the cluster analysis was used. This study's objective is to identify the respondents groups that have similar profiles and motivations based on consumer behavior with relation to the hypermarkets. In other words, which group values more the value equity, brand equity or retention equity.

The cluster analysis' technique, according Mingoti (2005), has wide application when the goal is to identify natural groups of individuals that are formed based on the data. As suggested by Hair et al., (1998), the technique consists of interdependence multivariate group procedures, which seek to identify the relationships between respondents groups.

To be able to define the clusters, a hierarchical clustering procedure was used. As a clustering method, the Ward procedure was chosen in order to minimize the groups' internal variance and to maximize its external variance (Mingoti, 2005). As different respondents may have different ways of using the scale (Hair et al., 1998), a standardization procedure (Z scores) of selected factors was used. The data that were used were the factors averages (rescaled between 1 and 5). The squared Euclidean distance was used, with the objective of maximizing the differences between the individuals of distinct clusters.

4. Results

The first comparison that was made between the consumers' samples was that there is a slight predominance of women in the sample, which reflects the cultural trend that women are still the majority when shopping in hypermarkets. Secondly, the results have shown that there is a strong predominance of consumers between 31 and 59 years old. The third comparison shows the frequencies of cases by average paid in each acquisition. The results have demonstrated that among the various proposed bands, there is a relative balance in the proportion of cases showing that, in this sample, the variability of expenditures seems to be quite high.

Regarding the distribution of the purchasing frequency, the results show that the most common was the shopping once a week, although purchases every 15 days or monthly are also recurrent.

The majority of the respondents are focused in buying canned products and meat, being that the clothing category is less common. The middle and upper class consumers do not usually buy clothing in hypermarkets. For the lower class, on the other hand, it is common to purchase clothing in hypermarkets, since the prices are very attractive.

In terms of the consumers' participation in the credit card programs, 24% of the samples participate in the hypermarket credit card programs, which is still a low number. The cards usually offer better payment conditions and promotions, but the consumers still prefer to use their bank cards.

4.1 Cluster Analysis

The cluster analysis was processed in order to identify the importance of the constructs (value equity (VE), brand equity (BE) and retention equity (RE)) in each group that was studied. The groups were created as follows: the average was calculated for each of the items that compose the scales of value equity, brand equity and retention equity. For each respondent, it was possible to identify in which of the three variable groups he/she had a higher average, in other words, in which group of variables does he/she have a higher concordance. In this group in which there is a higher concordance, the respondent was classified as the one who "buys due to this factor.

Table 1. Groups and variables averages in cluster analysis

Respondent	VE	BE	RE	GROUP
R1	3.39	3.14	2.2	**VE**
R2	3.78	4.14	3.8	**BE**

Table 1 shows the interpretation of two of the respondents out of 285 respondents. The first respondent (R1) has an average value grater for value equity (VE), being, therefore, classified as part of the value equity group. The second respondent (R2) has a higher average value for the brand equity, so this respondent was classified as part of the brand value (BE) group.

In the consumers' sample, the Value Equity Value Equity represents 19% of consumers that were surveyed, the Brand Equity group 45% and 36% of the Retention Equity group. The results show that the Brand Equity group is the most representative in this study.

4.2 Value Equity Group

In the Value Equity group, it was identified that the majority of the residents live in the south central region and the interior of the state of Minas Gerais, females with the ages between 21 and 45 years old, spending between R$ 1 (US$ 0.51) and R$ 100 (US$51.28) on each purchase and have a family income higher than R$ 2,780 (US$ 1,426). These consumers buy more grocery products (canned and cereals) and perishables items (cheese, meat and vegetables).

Within the Value Equity group, 77% stated that they would return to the hypermarket for next purchase, and 78% consider that the hypermarket's quality is good. Among these consumers, 73% consider the prices very good and 65% believe that prices are better than the competition. As for the products that are sold, 80% of the group found all the products they needed and 82% said that it was easy to find all the products. Regarding the price, 79% think that the prices of products that are on special offers in the hypermarket are better than the competition. Overall, in this group, 70% think that the hypermarket is better than the competition. In terms of location, 86% agree that it is very good.

Regarding the advertisements made by hypermarket, 65% like it very much and 66% think that the information sent to the customers is very good. From this group, 65% think that the hypermarket can be seen as a company that has social responsibility and 52% believe that the hypermarket is not a good sponsor of events. The majority of this group, 66%, believes that the hypermarket always acts with ethical standards and 65% believe that the hypermarket's image suits their respective personalities. As for the image, 76% of the consumers consider the hypermarket that is being studied is nice place to go shopping.

In the group, 19% of the customers use the hypermarket's credit card and, among these, the answer is not clear about the proper care given to the credit card program. About the customers' relations, 54% said that it is important to be given a preferential treatment, 60% believe that the hypermarket has good information about their customers and 42% believe the hypermarket considers them as special customers. Among this group of consumers, 46% would buy at the hypermarket even if products were more expensive and 64% would return to buy in the same hypermarket even if they did not find all the products that they need.

4.3 Brand Equity Group

For the Brand Equity group, it was identified that the majority of the residents lives in the central, south, east and north east region of Belo Horizonte, are females, aged between 31 and 59 years old, with expenditures above R$ 150 (US$ 76.92) for each purchase and with household income greater than R $ 2,780 (US$ 1,426.00). These consumers buy more grocery products (canned and cereals) and perishables goods (cheese, meat and groceries).

Within the Brand Equity group, 82% stated that they would return to the hypermarket for the next purchase, and 86% consider the hypermarket with good quality products. Among these consumers, 73% consider the prices very good and 65% believe that prices are better than the competition. As for the products that are sold, 82% of the group found all the products they need and 85% said it was easy to find all products. Regarding the price, 57% think that the prices of products on special offer by the hypermarket are better than the competition. Overall, in this group, 73% think that the hypermarket is better than the competition. In terms of location, 82% agree that it is very good.

Regarding the advertisements made by hypermarket, 82% liked it very much and 79% think that the information sent to customers is very good. From this group, 83% think that the hypermarket can be seen as a company that has social responsibility and 72% believe that the hypermarket is not a good sponsor of events. The majority of this group, 81%, believes that the hypermarket always acts with ethical standards and 79% believe that the image of the hypermarket suits well with their respective personalities. As for the image, 90% of the consumers consider that the hypermarket is a nice place to go shopping.

In the Brand Value group, 26% of the customers use the hypermarket's credit card and among them, the answer is not clear over the proper care given to the credit card program. About the customers' relations, 72% said that it is important to be given preferential treatment, 70% believe that the hypermarket has good information about their customers and 61% believe the hypermarket considers them as special customers. Among this group of consumers, 62% would buy at the hypermarket even if the products were more expensive and 76% would return to buy in the same hypermarket even if they did not find all the products that they needed.

4.4 Retention Equity Group

For Retention Equity Group, it was identified that the majority of the residents live in the central, south, and northeast region of Belo Horizonte, are females, aged between 31 and 59 years old, with expenditures above R$ 150 (US$ 76.92) for each purchase and with a household income higher than R $ 2,780 (US$ 1,426). These consumers buy more grocery products (canned and cereals) and perishables goods (cheese, meat and groceries).

Within the Retention Equity Group, 79% stated that they would return to the hypermarket for the next purchase, and 82% consider the hypermarket with good quality products. Among these consumers, 74% consider the prices very good and 64% believe that prices are better than the competition. As for the products that are sold, 79% of the group found all the products that they needed and 85% said it was easy to find all products. Regarding the price, 69% think that the prices of products on special offer by the hypermarket are better than the competition. Overall, in this group, 72% think that the hypermarket is better than the competition. In terms of location, 85% agree that it is very good.

Regarding the advertisements made by hypermarket, 73% liked it very much and 70% think that the information sent to customers is very good. From this group, 72% think that the hypermarket can be seen as a company that has social responsibility and 62% believe that the hypermarket is not a good sponsor of events. The majority of this group, 73%, believes that the hypermarket always acts with ethical standards and 74% believe that the image of the hypermarket suits well with their respective personalities. As for the image, 82% of the consumers consider the hypermarket a nice place to go shopping.

In the Retention Value group, 25% of the customers use the hypermarket credit card and, among them, the answer is not clear about the proper care given to the credit card program. About the customers' relations, 87% said that it is important to be given preferential treatment, 86% believe that the hypermarket has good information about their

customers and 77% believe the hypermarket considers them as special customers. Among this group of consumers, 78% would buy at the hypermarket that is being studied even if products were more expensive and 84% would return to buy in the same hypermarket even if they did not find all the products that they needed.

Among the three groups the most representative is the brand equity, followed by the retention equity and finally, the last value equity. The cluster result analysis suggests that the price is not a major factor in a purchasing decision and that, nowadays, customers highly value the brand equity and the relationship.

4.5 Hierarchical analysis

After the hypermarket's consumer's descriptive and clustering analysis, the next step was to begin the process of interviewing four hypermarkets managers. We identified four experts directly linked to hypermarkets decision-making in Belo Horizonte. The goal was to determine which are the investment managers' priorities and if they meet the consumers' priorities values, such as Value Equity, Brand Equity and Retention Equity. Those managers responded to the questionnaires based on the Analytic Hierarchy Process.

Associated with the Hierarchy Process there is, for each element, a relative value to its weight or its priority (W), which represents the level of importance or influence that this element has on the present elements in the level that is immediately followed. The quantification of these influence levels was through questionnaires answered by the four experts. From there, the AHP calculates the weights that are used to compile the analysis.

Table 2: Hierarchy structure and weights

Consumer Maximization ($W_t = 1$)			
Specialists	Value Equity	Brand Equity	Retention Equity
E1	0.789	0.156	0.055
E2	0.779	0.147	0.074
E3	0.752	0.159	0.089
E4	0.701	0.202	0.097

The hierarchical structure presented in Table 2 shows that for the first specialist, among the three suggested constructs, the most important value is the value equity with the weight of 0.789, followed by Brand Equity with value 0.156 and, finally, the Retention Equity, with the weight of 0.055. The second expert indicates that among the three suggested constructs, the most important is the Value Equity, with the weight of 0.779, followed by Brand Equity with the value of 0.147, and, last, the value of Retention Equity, with the weight of 0.074. As for the third expert, among the three suggested constructs, the most important is the value equity, with the weight of 0.752, followed by the Brand Equity with the value of 0.159 and, finally, the Retention Equity, with the weight of 0.089. For the fourth specialist, among the three suggested constructs, the most important is the Value Equity, weighing 0.701, followed by the Brand Equity with the value of 0.202 and, finally, the Retention Equity, weighing 0.097.

Considering the three constructs, all the experts said that the Value Equity is the most important followed by the Brand Equity and Retention Equity. The initial analysis suggests dismembering the Value Equity in price, quality and convenience. Table 3 shows the following results.

Tabela 3: Hierarchy structure and weights

Consumer Maximization ($W_t = 1$)			
Specialists	Price	Quality	Convenience
E1	0.602	0.310	0.088
E2	0.632	0.307	0.061
E3	0.598	0.380	0.022
E4	0.671	0.220	0.109

The hierarchical structure presented in Table 3 indicates, for the first specialist, that the Price is the most important construct with a value of 0.602, followed by quality with 0.310 and, finally, the convenience with a weight of 0.088. For the second expert, the most important is Price with value of 0.632, followed by quality with 0.307 and, finally, the convenience with a weight of 0.061. As for the third expert the results indicates that Price is the most important construct with value of 0.598, followed by quality with 0.380 and, finally, the convenience with a weight of 0.022. For the fourth expert, the most important is Price with value of 0.671, followed by quality with 0.220 and, finally, the convenience with a weight of 0.109. Therefore, Table 3 shows that Price is the most important among all constructs, followed by Quality and lastly Convenience.

5. Conclusion

According to the questionnaires that were applied with the hypermarket customers and experts that was studied, the priority criteria for adopting policies regarding the analyzed marketing constructs, Value Equity, Brand equity and Retention Equity does not meet the expectations of most consumers who value the Brand first, followed by Retention and ultimately the Value Equity. It is relevant on how the Brand Equity groups values the hypermarket and are satisfied with the price, quality and convenience. They seem loyal and identify themselves with the hypermarket's brand. It is possible that this result reflects that the hypermarket's brand reflects a price below the competition. The identification with the brand and not the price, at first, does not mean that the brand is in fact more important than price and quality. The brand may be aggregating to all the customers' expectations regarding quality and price as a result of an image that has already been built.

The Value Equity group does not value only the current price, quality and convenience, but are concerned with the brand, that show status, attitudes and feelings, and the retention which refers to the relationship and the service they receive. The Brand Equity group is the most representative and it was revealed that consumers are already convinced that hypermarket's prices are better than the competition. According to Rust (2000), Brand Equity is more important in purchases of low involvement with simple decision making processes. Therefore, it is possible to explain the relevance that the brand has in hypermarkets.

In contrast, the interviewed managers still focus on the price as the main strategic action for customers' satisfaction, followed by Brand and Retention. When it dismembers the Value Equity in price, quality and convenience, the price had a higher weight. Consumers are more demanding and that requires the more attention of the managers towards their customers.

The study that was carried out allowed the possibility of verifying the applicability of the Customer Equity Model in the implementation of marketing strategies. The analysis of the constructs, price, quality, brand and relationship, the Customer Equity and of the factors that have influence on them, may give the company a guide to an effective strategy. In assessing the criteria for priority adoption of marketing strategies of quality, price, convenience, and brand relationship and their suitability to the values perceived by customer segments, it is possible to identify that the marketing policies that will have a greater impact on profitability in a long period term, on their customers' base, which should be the companies' main concern.

This work does not intend in exhausting this theme. It is recommended that researches should be carried out in other hypermarkets and with a greater number of experts and that the obtained results should be compared. It is also suggested that the evaluation should be continuous, since the customer changes his/hers mind with regard to the time that the evaluation took place.

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