

THE GLANCE OF AN OBSERVER ON THE WAR OF BRANDS OF FOOD PRODUCTS

Authors: Carlos Alberto Gonçalves, Daniela F. de Oliveira, Karina A. P. Garcia Coleta, Eder L. M. Balbino, Renata F. Ferreira

Abstract

The present work proposes a model to compare means of many constructs that evaluate competitiveness of brands of the Brazilian chilled and frozen food industry. Such a model is based on a nomological network, which was built over the concepts pointed by Fornell (1992), Morgan and Hunt (1994), Gosling (2001), and Gonçalves et al (2002), by the NUME – Marketing and Strategy Research Center of the Federal University of Minas Gerais - research group.

Besides the validation of the new research instrument for gauging and generalization, it will be made an evaluation of brands - the ones well-positioned at the market - using the comparison of the indexes and averages of the nomological networks built for the companies, in relation to the following concepts: Tangibility (perception of packings, flavors and smells); Reliability in the Brand; Satisfaction; Loyalty; Image of the Brand; Perceived Value and Functional Conflict.

1. Introduction

In reason of the elevated deregulation, the Brazilian food industry is highly competitive. This deregulation is a characteristic of the 'basic consuming goods', along with the short life cycle, maturity and oldness of the sector.

The food industry received, in the last years, a demand increment originated from the middle class population strata. And, with the productivity increase, the food could arrive to the final consumer with smaller costs¹. Therefore, the emphasis doesn't just sets on the costs of the food, but it also covers the purchase services, storage, cleaning, preparation and commercialization.

In Brazil, there is a great number of companies with an assorted mix of products, which harshly dispute the customers' preference in the supermarkets' shelves.

The companies included in this research represent the leadership of the Brazilian market, they are the enterprises whose Brands names are: *Perdigão*, *Sadia* and *Seara*. The items appraised in these brands are the chilled and frozen meat products.

2. The Companies Involved

Perdigão², founded in 1934, is a great manufacturer of poultry and pork byproducts. In 1954, thank to the entrepreneurial spirit of the company founders, the firm invested in poultry

¹ Source: <http://www.investshop.com.br>

² Source: <http://www.perdigao.com.br>

raising. Along the years, the company has implemented a poultry and pork productive system, the so called vertical integration. Currently, the total number of integrated partners is of 6,810, and Perdigão has carried out a significant industrial expansion over these last 64 years. It crossed the borders of Santa Catarina State, over to the states of Rio Grande do Sul, Paraná, São Paulo and Minas Gerais, where the company took over or set up plants and productive units with a work force of 14 thousand employees. All in all. the industrial complex comprises 12 meat and 2 soybean processing units, 6 animal-feed factories, 12 incubator units and 27 company-owned poultry and pork farms.

Sadia³ has been taking the leadership in several activities related to the food industry. It is among the largest food processing companies of Latin America, being one of Brazil's largest exporter. As a research - conducted by the English consulting firm Interbrand in 2001 - realizes, the brand Sadia was acclaimed as the most valuable company of the Brazilian food industry. Besides, according to the operational profile traced by the brokerage company Pilla Corretora de Valores Mobiliários e Câmbio Ltda in the third quarter of 2002, Sadia was pointed as the national leader in the production and sale of frozen and chilled food products of poultry and pork meats, besides counting with the largest distribution network of frozen and chilled food products in the country.

Seara⁴, founded in 1956, represents one of the largest national companies in the segment of poultry and processed meats (hams, sausages and salamis). Besides, it exports poultry cuts and pork meat. João Augusto Salles, responsible analyst for the sectors of banks and food products of the Brazilian consulting firm Lopes Filho e Associados, affirms that Seara is the largest exporter of pork of the country. It exports more pork meats than the Sadia and Perdigão. Seara is a company of great stature and has its own seaport, in Santa Catarina, to export its production.

3. Problem of the Research

The main question of this research is:

Are there meaningful differences between the averages of the brands? Does the one the brands occupy prominence position at all the constructs of clients perceptions?

4. Objectives of the Research

With this research, the goal is to build a tool that could measure differences between competitive brands and prepare a new measure tool to the **commodity behavior sector**.

5. Constructs of the Research

In the present research there are constructs of different models. Of the Model SERVQUAL of Berry and Parasuraman (1992), the constructs Tangible Aspects and Reliability were used. From the ACSIndex - American Consumer Satisfaction Index, - proposed by Fornell (1992), the constructs Loyalty, Satisfaction and Perceived Value were taken. The construct Image was retrieved of the conceptualization of Barich and Kotler (1991), while the Functional Conflict came from the Morgan and Hunt (1994) Relationship Model.

³ Source: <http://www.sadia.com.br>

⁴ Source: <http://www.seara.com.br>

5.1. Tangible Aspects and Reliability: The SERVQUAL Model

The first studies about quality of services were of authorship of Parasuraman et al (1985) and had as objective to search for an integrative model in that area. Therefore, the managers and customers of four North American companies were questioned on the fundamental attributes of the service quality, being also brought up the existence of divergences between the two opinions. The following companies participated in the research: retail banks, credit card administrators, property brokers, and repair and maintenance of goods firms.

In a second phase of the research, Parasuraman et al. (1988) focused their studies in the measurement of Gap 5 (gap between the perceived and the expected service), appearing the famous equation $Q = P - E$, in other words, Quality = Perception - Expectations. Initially 97 items, referring to the external dimensions of the service quality, were generated. Later, the scale was refined and it came to a scale of 22 items. The grid of items contained in the research instrument reflected the following dimensions: Tangible Aspects, Reliability, Promptness, Guaranty and Empathy. Such dimensions are:

- Tangible Aspects: physical facilities, equipments and appearance of the company's personnel. When the consumer enters in contact with the atmosphere of a supplying company.
- Reliability: capacity and ability to implement the promised service in a safe and reliable way.
- Promptness: good will to aid the consumer and to provide ready attendance - to solve problems on time.
- Guaranty: employees' knowledge and courtesy and their ability to inspire credibility and trust - to assert that the service is safe and guaranteed.
- Empathy: individualized consideration and attention that the company renders to its consumers - fine-tuning of sympathy and understanding between supplier and customer.

In this study, only the Tangible and the Reliability Aspects were explored.

5.2. Loyalty, Satisfaction and Perceived Value: ACSIndex

The Model of the ACSIndex - American Consumer Satisfaction Index - is proposed by Fornell et al (1996). That model intends to offer a base of uniform and comparable measurement for the customer's global satisfaction, besides pointing relationships of such construct with its main antecedents and consequents. Implicit in the model is the recognition that the customer's global satisfaction cannot be directly measured, being a latent variable requesting multiples indicators in its measurement. The most immediate and tangible result of the operationalization of that model is a score of the latent variable of the customer's global satisfaction, in terms, generic enough, for a comparison among supplying organizations, branches of activities, sectors and nations.

5.2.1. Loyalty

The final relationship of the model is between the customer's complaints and their loyalty. The direction and the indication of that relationship depends on the service systems rendered

to the customer and on the solution – by the supplier – of the clients complaints (FORNELL, 1992). When the relationship is positive, the implication is that the supplier succeeded in transforming a customer that complains into a loyal customer. When the relationship is negative, the supplier worked with the situation in such a way that the negative situation became even worse, contributing to the loss of the customer's loyalty.

5.2.2. Satisfaction

The customer's global satisfaction, as the central construct of the model is placed inside of a relationship chain that goes from its antecedents (expectations, quality and value perceived by the customer) to its consequences (complaints and the customer's loyalty). Of special interest in the model, beyond its own global satisfaction, is the explanation of the customer's loyalty, as very probable indicator of profitability (REICHHELD & SASSER, 1990). With that structure, the model allows the ACSIndex to be tested under the nomological point of view. Nomological validity is the degree in that a construct behaves as predicted inside of a system of related constructs, the so-called nomological network (CRONBACH & MEEHL, 1955).

5.2.3. Perceived value

A second determinant of the customer's global satisfaction is the perceived value. This is the product perceived level of quality of the product in relation to its price. The factor price is incorporated to the perceived value, reinforcing the comparability of results among suppliers, branches of activities and sectors. It is supposed to be a positive association between the product's perceived value and the customer's global satisfaction.

5.3. Image: Lalande / Barich and Kotler

The image concept has been the object of study of several fields of the knowledge, with prominence for the philosophy, as being the one of the oldest studies, having been approached by Plato and Descartes. In this field of the knowledge, the studies went back to the search of the understanding of the image as a generic concept. More recent studies, produced by other fields of the knowledge, have been taking for reference private images, paintings, movies, photographs, etc., and could be analyzed as analogies to the world of the visible objects.

Lalande (1966), mentioning Taine, defines image, as being "the mental repetition, usually weakened, of a sensation (or more exactly of a perception) previously experienced". Image can then, be considered, as being a certain way of appropriation of the reality for a certain subject, in other words, as perception phenomenon. Perception can be understood, according to Lalande (1966), as "an act in which the individual - organizing its present sensations, interpreting them, and complementing them with images and memories – opposes to an object that he/she spontaneously considers as different from itself - real and unknown".

Through the perception happens an internalization process – by the individual - of the received stimuli, that will make possible the formation of the image, through which he/she will recognize such incentives. The perception phenomenon is, according to Lalande (1966), the identification of the reality; happening after the sensation phenomenon, when the individual will learn - through a selective process - some values present stimuli received and

will aggregate to it other subjective values and internal objectives. It from this moment on, that the messages will gain meaning and interpretation. This internal symbolic process of a certain experience, is conceptualized as image.

In that way, image can be considered as being the subjective vision of the objective reality. Taine, mentioned by Lalande (1966), affirms that the reception of the emitted message will be formed, starting from the process of interpretation of that message, being then, modified, and acquiring its own version in the individual's conscience. At the end of the process, content, different from the real, will have been elaborated, as the receiver will aggregate to that content the value element. The attitude taken in front of the received message transpires from the formed image.

Bouding, mentioned by Reis (1991), affirms that the image that the individual has of the real (symbolic and different vision from the reality) unchains an attitude of that individual towards the object - therefore, the image has then, the power to influence the individual's behavior.

5.3.1. The Image in Marketing

The first image focuses linked to marketing appeared in the 1950s. Gardner and Levy (1995) verified that the consumers not only valued the physical, tangible aspect of the productst they buy, but also the symbolic meanings attached to the brand of those products.

Barich and Kotler (1991) synthesize the image concept: “Image is the sum of the faiths, sensations and impressions that a person or a group of people have of an object, of a person, of a place, of a brand, of an organization, of a product or, of a service. The impressions can be true or false, real or imaginary”. Right or wrong, the images guide and shape the behavior.

6. Model of the Research

Once the constructs have already been explicated, the adapted model is in the FIG.1.

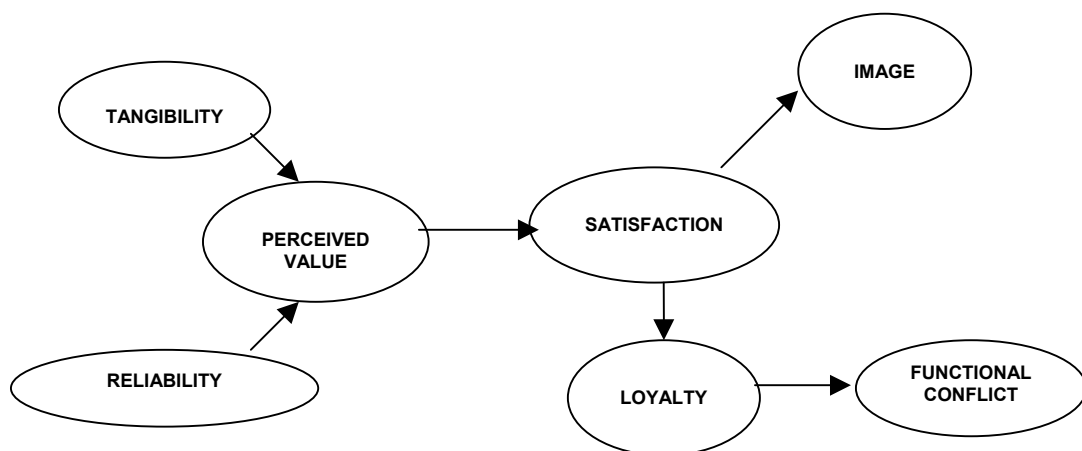


Figure 1 - Adapted Model

7. Analysis Results

7.1. Factor Analysis

In order to analyze interrelationships among a large number of variables, Factor Analysis was chosen as the statistical approach in this work. According to Hair (1998), the aim is to explain these variables in terms of their common dimensions, called factors. Hence, factors are dimensions that try to explicit the existent correlations between a group of variables. This process enables the researcher to lose the minimum of information.

A multivariate method included in the group of Factor Analysis is the Principal Component Analysis, which “derives factors that contain small proportions of unique variance” (Hair, 1998).

This method is recommended in case the objective is to determine the minimum number of factors (principal components), that answer for the maximum variance on the data for future multivariate analysis uses (Malhotra, 2001).

It is worth to remember that in TAB. 1 and 2, only the factor loadings for each question higher than 0.5 were kept in the table, showing a good correlation with each factor (Hair, 1998).

The TAB.1 shows the Rotated Component Matrix. It shows how many factors were built by the collected data. Six factors were found, and this is a good result, once there are 7 constructs in this research. Only the loadings over 0,5 were maintained in the matrix, according to Hair (1998).

From the TAB.1, it's able to see some well dimensioned factor and others not so much. The first factor grouped several indicators from three different constructs (Tangibility, Reliability, and Loyalty). The second factor is related again with Tangibility and Reliability, both from the SERVQUAL model of Parasuraman et al. (1988). Functional Conflict is totally explained by the third factor. The fourth factor is fragmented among Image and Satisfaction, with the fifth is clearly Perceived Value. The sixth is more related to Tangibility.

In order to reach a better result, a seven-factor rotated component matrix was forced in future factor analysis, as TAB. 2 displays.

Table 1 - Rotated Component Matrix

| | Factors | | | | | |
|-----------------------------------------------------------------------------------------------------------------------|---------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| The products packages are practical and easily handled | | | | | | ,556 |
| The information in the packages correspond to what the products represent | | | | | | ,535 |
| I consider the products of this company flavorful | | ,580 | | | | |
| The ready foods to eat have a pleasant smell | | ,748 | | | | |
| The color of the products of this company is pleasant | | ,783 | | | | |
| I believe in the quality of the products from this company | | ,607 | | | | |
| The products are safely packaged | ,612 | | | | | |
| The company keep their promises in its products | ,586 | | | | | |
| I recommend this company's products to my family and friends | ,741 | | | | | |
| When I come across new products of this company, I do not hesitate in buying and consuming them | | | | ,533 | | |
| I feel comfortable in recommending the products of this company to other people | ,734 | | | | | |
| I defend the products of this company when somebody makes negative commentaries about them | | | | | | |
| If the press releases good news about this company, I am immediately inclined to believe in it | ,514 | | | | | |
| The logo of the company means a serious presentation to me, and of good reputation | | | | ,512 | | |
| When I go shopping, I search in order to identify the products of this company on the shelf | | | | | | |
| For me, this company has a positive image | | | | ,606 | | |
| I am satisfied with the existence of a company like this supplying food | | | | ,732 | | |
| If there aren't any offers of products from this company, I will not hesitate in buying products from another company | | | | | | -,750 |
| If there aren't any offers of products from this company, I will not hesitate in buying products from another company | | | | | | -,750 |
| The products of this company satisfy my expectations | | | | ,722 | | |
| I believe the price charged for the products of this company is fair, considering the quality offered | | | | | ,844 | |
| The price I pay for the products from this company is within my expectations | | | | | ,882 | |
| I believe that, if I detect some problem in a product, the company will solve it promptly | | | ,810 | | | |
| I believe that my suggestions to improve the products will be heard by the company | | | ,823 | | | |
| I believe that the company, in case I complain, will pay attention to me | | | ,918 | | | |

Table 2 - Rotated Component Matrix – Forcing 7 factors

| | Factors | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------|---------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The products packages are practical and easily handled | | | | | | | ,555 |
| The information in the packages correspond to what the products represent | | | | | | | ,575 |
| The products are safely packaged | ,661 | | | | | | |
| I consider the products of this company flavorful | ,539 | | | | | | |
| The ready foods to eat have a pleasant smell | | | | ,820 | | | |
| The color of the products of this company is pleasant | | | | ,750 | | | |
| I believe in the quality of the products from this company | ,692 | | | | | | |
| The company keep their promises in its products | ,687 | | | | | | |
| I recommend this company's products to my family and friends | ,606 | | | | ,521 | | |
| When I come across new products of this company, I do not hesitate in buying and consuming them | | | | | | | |
| I feel comfortable in recommending the products of this company to other people | ,688 | | | | | | |
| I defend the products of this company when somebody makes negative commentaries about them | | | | | ,712 | | |
| If the press releases good news about this company, I am immediately inclined to believe in it | | | | | ,655 | | |
| The logo of the company means a serious presentation to me, and of good reputation | | | ,512 | | | | |
| When I go shopping, I search in order to identify the products of this company on the shelf | | | | | | | |
| For me, this company has a positive image | | | ,614 | | | | |
| I am satisfied with the existence of a company like this supplying food | | | ,766 | | | | |
| If there aren't any offers of products from this company, I will not hesitate in buying products from another company | | | | | | | -,742 |
| The products of this company satisfy my expectations | | | ,723 | | | | |
| I believe the price charged for the products of this company is fair, considering the quality offered | | | | | | ,856 | |
| The price I pay for the products from this company is within my expectations | | | | | | ,893 | |
| I believe that, if I detect some problem in a product, the company will solve it promptly | | ,812 | | | | | |
| I believe that my suggestions to improve the products will be heard by the company | | ,819 | | | | | |
| I believe that the company, in case I complain, will pay attention to me | | ,917 | | | | | |

7.2 Means comparison

For a means comparison, it was used the Analysis of Variance (ANOVA), a method to test the equality between means from three or more groups (Triola, 1999). The hypothesis tested in ANOVA is related to the means between the different groups. If the calculated P Value is less than 0,05, one concludes, with 95% reliability, that at least one of the groups has the different mean compared to the others.

The ANOVA only verifies if there are significant differences between the groups; so, to point out which of them are different, it was used the Duncan's Multiple-Range Test, that compares all the pairs of involved means in a study of Analysis of Variance (Werkema and Aguiar, 1996).

Table 3 - ANOVA

| | Sadia | Perdigão | Seara | ANOVA (P Value) | Duncan's Method |
|--------|--------------|-----------------|--------------|----------------------------|------------------------------------|
| TANG | 24,8231 | 26,8719 | 28,0839 | | Sadia > Perdigão > Seara |
| RELIAB | 18,3438 | 17,6283 | 15,8081 | 0,000 | Sadia > Perdigão > Seara |
| LOYAL | 12,4431 | 11,8700 | 10,2425 | 0,000 | Sadia = Perdigão > Seara |
| IMAG | 14,5600 | 13,7001 | 12,1394 | 0,000 | Sadia > Perdigão > Seara |
| SATIS | 12,9963 | 12,4318 | 11,4378 | 0,000 | Sadia > Perdigão > Seara |
| PVAL | 6,6775 | 6,6570 | 6,4005 | 0,676 | There isn't significant difference |
| FUNCC | 13,0395 | 12,9455 | 12,1006 | 0,063 | There isn't significant difference |

Key: **Tang** – Tangibility; **Reliab** - Reliability; **Loyal** – Loyalty; **Imag** – Image; **Satis** – Satisfaction; **Pval** – Perceived Value; **Funcc** – Functional Conflict.

TAB. 3 shows that one company holds the best position in the ranking in relation to almost all the constructs, and three are tied up in the constructs Perceived Value and Functional Conflict. This shows that to invert the order it is necessary a significant investment from the company in the second position and even more from the third position, so that the company can enter the battle to be the first option of the customer. An option that the first position still has is to also be hegemonic in the two constructs where they are tied up, once the company looks for investments in this direction.

Through a deep look on the TAB.3, it's easy to see that the leading company in the food sector (Sadia) has an average of perception, in almost all constructs, higher than the other companies. There was no significant difference between the Perceived Value and Functional Conflict among the three companies.

7.3 Multiple Regression Analysis

Multiple Regression Analysis is a statistical tool used to measure the relationship between one dependent variable and several independent variables, called predictors (Hair, 1998). The objective is to analyze the possible strong and weak relations between constructs. The regression equation's adjust quality is verified through R Square, which is the model for coefficient of determination. The method used in this analysis was Stepwise, that takes out the non-significant variables from the model.

TAB. 4 presents the regression equation with standardized coefficients, having the construct Image as the dependent variable and Tangibility, Reliability, Satisfaction and Quality as the predicting variables. In this context, it is important to observe the emphasis or major weight attributed to the predictors by the companies, in order to build the Image organization in the competitive market.

Table 4 - Regression analysis for the Image of the companies - Standardized coefficients

| Companies | Tangibility Coefficients (P value – T test) | Reliability Coefficients (P value – T test) | Satisfaction Coefficients (P value – T test) | Adjust Quality | ANOVA (P value) |
|------------------|--------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|-----------------------|------------------------|
| Perdigão | 0,241 (0,000) | 0,325 (0,000) | 0,118 (0,044) | 0,987 | 0,000 |
| Sadia | 0,222 (0,000) | 0,318 (0,000) | 0,188 (0,000) | 0,993 | 0,000 |
| Seara | 0,125 (0,013) | 0,317 (0,000) | 0,354 (0,000) | 0,977 | 0,000 |

Through the results in the TAB. 4, we can observe that Seara suggests that builds its Image through its clients's Satisfaction. Besides, it emphasizes the Satisfaction perception with more emphasis than Perdigão and Sadia in building the Image construct, unlike the other companies, that give more importance to Tangibility than Seara does.

TAB. 5 presents the regression equation with standardized coefficients, having the construct Loyalty as the dependent variable and Reliability, Perceived Value and Quality as the predicting variables. In this context, it is important to observe the emphasis or major weight attributed to the predictors by the companies, in order to build the Loyalty organization in the competitive market.

Table 5 - Regression analysis for the Loyalty of the companies - Standardized coefficients

| Companies | Reliability Coefficients (P value – T test) | Perceived Value Coefficients (P value – T test) | Adjust Quality | ANOVA (P value) |
|------------------|--------------------------------------------------------|------------------------------------------------------------|-----------------------|------------------------|
| Perdigão | 0,599 (0,000) | 0,201 (0,013) | 0,965 | 0,000 |
| Sadia | 0,601 (0,000) | 0,216 (0,011) | 0,964 | 0,000 |
| Seara | 0,649 (0,000) | | 0,952 | 0,000 |

As we can see through the results showing in the table 5, the Loyalty to Perdigão and Sadia are based not only on Reliability, but also on Perceived Value, while Loyalty for Seara is directly linked only to Reliability.

Table 6 - Regression analysis for the Satisfaction of the companies

| Companies | Reliability Coefficients (P value – T test) | Tangibility Coefficients (P value – T test) | Adjust Quality | ANOVA (P value) |
|------------------|--------------------------------------------------------|--------------------------------------------------------|-----------------------|------------------------|
| Perdigão | 0,497 (0,000) | 0,132 (0,011) | 0,969 | 0,000 |
| Sadia | 0,703 (0,000) | | 0,971 | 0,000 |
| Seara | 0,470 (0,000) | 0,159 (0,009) | 0,959 | 0,000 |

Clients' Satisfaction for Sadia is more related to Reliability than the other companies, once Satisfaction for the others is also related to Tangibility.

Table 7 - Regression analysis for the Functional Conflict of the companies

| Companies | Tangibility Coefficients (P value – T test) | Perceived Value Coefficients (P value – T test) | Loyalty Coefficients (P value – T test) | Qualidade do Ajuste | ANOVA (P value) |
|------------------|--------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------|----------------------------|------------------------|
| Perdigão | 0,425 (0,000) | 0,216 (0,028) | | 0,956 | 0,000 |
| Sadia | 0,324 (0,000) | 0,196 (0,047) | 0,207 (0,020) | 0,957 | 0,000 |
| Seara | 0,322 (0,000) | 0,624 (0,000) | | 0,944 | 0,000 |

Functional Conflict for Perdigão is more related to Tangibility, and for Seara is linked to Perceived Value. Only Sadia links Loyalty to Functional Conflict.

8. Conclusions

Analyzing all the results, it's clear that the perception of the respondents is equal to reality: Sadia continues to be the leader in the nourishing sector. This consideration is very important, once people aren't always able to differ objectively what is real in the market.

As we can see, Sadia detaches in the preference of consumers – the reasons are that Sadia has been applying resources in product development and quality in the Brazil market. Nowadays, it's becoming very difficult for the other competitors to obtain the leading position. The competitors keep launching products and innovating in a competitive market, but time has showed a stable position of Sadia in relation to the preference of consumers.

In Regression Analysis, it was confirmed that Sadia continues to be the leader in this food sector, and another information was observed (TAB. 4). This company gives more importance to Reliability to build its Image, although Perdigão, the second in ranking, has the higher coefficient in the analysis.

It was also observed that Loyalty really depends on a good level of Reliability, for all the three companies, an important information to management decisions.

In future studies, an experiment can try to measure possible unbalancing of this positioning order (commodities unbalancing).

Bibliographical references

- BARICH, Howard & KOTLER, Philip. *A framework for marketing image management. Sloan Management review*. V.32,n.2, p. 94-104. winter, 1991.
- BERRY, Leonard L., PARASURAMAN, A. *Serviços de Marketing: competindo através da qualidade*. São Paulo: Maltese-Norma, 1992, 238p.
- CRONBACH, Lee J. & MEEHL, Paul E. Construct Validity in Psychological Tests. *Psychological Bulletin*. vol. 52, n. 4, p. 281-302, 1955.
- FORNELL, Claes. A National Customer Satisfaction Barometer: The Swedish Experience. *Journal of Marketing*, vol. 56, p. 6-21, Jan. 1992.
- FORNELL, C.; JOHNSON, M. D.; ANDERSON, E. W.; CHA, J. & BRYANT, E. The American Customer Satisfaction Index: nature, purpose, and findings. *Journal of Marketing*, v.60, n. , p.7-18, Oct 1996.
- GARDNER, burling. B.E. & LEVY, Sidney j. *The product and the brand. Harvard Business Review*. V. 33, p. 33-9, marc/apr,1995.
- GONÇALVES, C. A., GARCIA, K. A. P., OLIVEIRA, D. F. Avaliação das Relações entre os Construtos Ligados à Satisfação Global do Cliente, ao Relacionamento e à Imagem – Uma Verificação B2C dos Usuários de Telefonia Móvel. Relatório de Pesquisa FAPEMIG: Belo Horizonte, 2002.
- GOSLING, Marlusa. *Estratégias de Relacionamento no Setor Bancário Brasileiro: um Estudo Empírico*. Dissertação de Mestrado. Belo Horizonte: CEPEAD, UFMG, 2001.
- HAIR, Joseph F. et al. *Multivariate Data Analyses*. New Jersey: Prentice Hall, 1998.
- LALANDE, André. *Vocabulário Técnico y Crítico de la Filosofía*. Buenos Aires: El Ateneo, 1966.
- MALHOTRA, Naresh K. *Pesquisa de Marketing: uma orientação aplicada*. Porto Alegre: Bookman, 2001.
- MORGAN, Robert M.; HUNT, Shelby D. The commitment-trust theory of relationship marketing. *Journal of Marketing*, v. 58, p. 20-38, Jul., 1994.
- PARASURAMAN, A , ZEITHAML, V., BERRY, L. A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, vol. 49 (Fall 1985), 41-50.
- PARASURAMAN, A , ZEITHAML, V., BERRY, L. SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, vol. 64, number 1, 12-40, New York University, Spring 1988.
- REICHHELD, Frederick F. & SASSER, W. Earl. Zero Defections: Quality Comes to Services. *Harvard Business Review*. vol. 68. p. 105-11. Sep.-Oct. 1990.

REIS, Maria do Carmo S. *Imagem Corporativa: Produção e Consumo. Belo Horizonte: Faculdade de Ciências Econômicas da UFMG, 1991. (Dissertação, Mestrado em Administração).*

TRIOLA, Mario F. *Introdução à Estatística. Rio de Janeiro: LTC, 1999.*

WERKEMA, Maria C. C., AGUIAR, S. *Planejamento e Análise de Experimentos: como identificar as principais variáveis influentes em um processo. Belo Horizonte: Fundação Cristiano Ottoni, Escola de Engenharia da UFMG, 1998, vol.8.*