SATISFACTION AND QUALITY OF SERVICE PROVIDED BY SUPPLIERS TO MID-SIZED SUPERMARKETS

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ABSTRACT: This article analyzes the quality of service provided by suppliers to supermarkets in a medium sized city in the northeast of Brazil. A survey was performed with valid responses from forty mid-sized supermarkets. The results provided the data for ranking the importance of the main distribution service features and for assessing the retailer's satisfaction level in relation to the ten major suppliers in the region.

KEYWORDS: distribution service, supply chain management, supermarket, Brazil.

INTRODUCTION

Organizations need to develop skills and strategies to deal with ever increasing challenges in the marketplace, and distinguish themselves from their competitors. Logistics is an essential factor that should be listed among the company's strategies. The development of logistical competence must be coordinated with the clients' needs and the company's internal objective conditions. Logistic development is vitally linked to marketing; the effort to satisfy the clients' needs involves logistic attributes as well as market attributes. According to traditional notions of marketing (4Ps), the place is, by definition, the meeting point of marketing and logistics. In it, the suppliers' logistics launch necessary efforts to achieve suitable service levels to attend to clients' needs, and being compatible with its own internal possibilities.

Each of the suppliers should establish its strategy on a consistent knowledge base, which reveals essential elements of intended service, and perceptions that clients have about several features associated with the distribution service in the supply chain. Assessing the clients' needs, and auditing the external service, are essential components for constructing competitive advantages, and ultimately for the success of an organization. This process involves some questions related to the assessment of services provided. What are the essential service indicators? What is the contribution of each one with relation to the competitive positioning of the company in the

market? What level of importance clients attribute to each indicator? What is the perception about service currently provided? Which practices are recognized as being most effective? Answers to these questions are complex, and are difficult and expensive to obtain and interpretate because they are provided by clients.

In the last decade, studies conducted in Brazil have demonstrated a growth in the importance of logistics services with regard to supermarket distribution services, when they are compared to the other marketing Ps. Along with this, to identify within the literature a set of important variables in the distribution service, this work intends to offer answers to the following questions: (1) What importance do mid-sized supermarkets attach to the principal distribution service features? (2) How do supermarket clients assess the services provided by their suppliers in relation to each feature?

This article presents the results of exploratory research about distribution services to mid-sized supermarkets in a medium sized Brazilian city. The survey obtained valid responses from 40 active supermarkets in an urban area of 800 thousand inhabitants. The ten most important wholesalers, providing distribution services to mid-sized supermarkets in that region, were identified and evaluated.

LITERATURE REVIEW

Supply chain management is defined as a systemic and strategic coordination of traditional business functions and the tactics that permeate each particular company, and inter-enterprise business, with the aim of improving performance, in the long term, of the companies involved and the supply chain as a whole. To Mentzed, Dewitt, Keeble et al (2001), supply chain management aims to improve efficiency, effectiveness and client services, reducing costs, creating values and client satisfaction, and helping to secure competitive advantage and profitability. The competitive environment puts an even greater emphasis on the level of client service, and it becomes critical to synchronize service offers with the client's expectations.

Bowersox and Closs (2001) use the term logistic competence as an essential strategic resource for the planning of client services, affirming that companies that develop superior logistic competence are strategically placed to enjoy a competitive advantage hard to be equaled in service performance and cost. According to Innis and La Londe (1994), the client's satisfaction is one of the key objectives of the marketing function in most companies. Further more, the inter-functional coordination must be encouraged so that marketing and logistics may work together, to provide an optimal combination for the ultimate client service.

Lambert and Stock (2001) define service as a process that takes place between client, supplier and a third party, resulting in the addition of value to operation, bringing, at an appropriate cost, benefits to the whole chain. Delivering a product free from defects, more quickly and more securely than the competition is no longer seen as a competitive advantage, but simply a requirement to be in the market (MENTZER; FLINT; HULT, 2001). The client's perception in relation to service, that is more visible at the moment of physical distribution, should consider features related to availability, performance and reliability (BOWERSOX; CLOSS, 2001). If the client's perception in relation to these three factors achieves levels of excellence, the company can create a sustainable competitive advantage.

It is difficult to establish a clean boundary between the effects provoked in the client satisfaction by marketing and logistics attributes. In specific cases, it is not possible to distinguish clearly whether the attribute is eminently associated to marketing or lo-

gistics services. In that case, what managers think to be really good for the client does not necessarily match with what is desired by them. Clients and suppliers may diverge in form and content. Marr's study (1994) reveals an interesting assessment between manager's and client's points of view about a set of marketing and logistic features, showing, further more, that these divergences may extend to the managers themselves, depending on their functional area.

Mentzer, Gomes and Krapfel (1989) argue that there are two elements in delivery service: marketing client service and the service performed by physical distribution. They recognize the complementary nature of both elements to satisfy the client and propose an integrative structure for client services. Managers from different functional areas of one supplier have a different view of their client's needs. Clients from distinct segments have different assessments of the service level provided by any one supplier.

The client's satisfaction level is the result of marketing offers and logistic features, but their knowledge and the influence degree of each one are not necessarily clear or known. Hijjar (2001) points out two important reasons for obtaining information starting from the client's perspective: identification of the clients' actual satisfaction levels and minimization of gaps of perception between the company and the client. Mentzer, Flint and Hult (2001) remark that researchers often supply a list of logistic services dimensions on which clients base their perceptions. These operations ignore the temporal ordering of features that are being tested.

Retail Service

Offering adequate service levels plays a key role in the retail market. Ellram, La Londe and Weber (1999) indicated three major challenges to retail logistics in the past years: a) retailers must establish and make viable the idea that client services should expand to the entire supply chain; b) retail logistic managers should be prepared for the effects of the rapid growth of information technology; c) supply chain management should be developed and integrated to explore strategies to improve client services and inventory.

According to Emerson and Grimm (1998), client services are complex and comprehended by multifaceted elements. The effect of each element regarding levels of satisfaction is important information for

managers, so that limited resources may be devoted to the most critical elements of client services. Preferably used features should be important to clients and coordinated with the service policies.

In relation to the use of attributes and dimensions of the service level, Griffis et al (2004) alert to the lack of connection between the need to measure and the choice of the appropriate measures. For these authors, there are three situations that can significantly affect performance: a) when no measure is chosen to evaluate the performance; b) when the measures used are unreliable, inconsistent, or invalid; and, c) when the measures are chosen without consideration to the real needs of the company. For Lambert and Stock (2001), the development of a program directed to client services requires objective and operational measures that reflect the client's point of view, assess service performance and provide indications for corrective actions.

Christopher (1997) indicates key areas for which measure of service performance should be developed, involving: the cycle of the order; inventory availability; information; facilities for placing orders; completeness of the orders; frequency and reliability of deliveries; technical support; and quality of the documentation. He also suggests a composed index of services in which each feature or dimension would have a weight in the composition of the overall performance. Similarly, Lambert and Stock (2001) propose a perfect order achievement measure as the product of three basic indices: percent on-time deliveries, complete deliveries with all the items and deliveries without errors on items and in the invoice.

The scale and form are important in service performance evaluation. Parasuraman, Zeithaml and Berry (1985) proposed a generic scale of service quality evaluation (SERVQUAL), in which the attributes are grouped into five different dimensions: tangibility, reliability, responsiveness, empathy and security. The basic objective of the SERVQUAL is to register client expectations in relation to service and their perceptions about how effectively service was provided. Based on differences between expectations and perceptions, the quality gaps are evaluated comparing the level of service expected with the level of service carried out. Ladhari's paper (2008) presents an evaluation of 30 studies carried out in the last 20 years, in 15 different countries, which used a scale alternative to SERVQUAL. In addition to compiling a series of criticisms that SERVQUAL receives within the literature, the author discusses

conceptual and empirical issues relating to measuring instruments of the group of studies, identifying weaknesses among alternative approaches used and those used by SERVQUAL.

The literature has offered a wide range of logistic service level and marketing service level dimensions and attributes. The paper of La Londe and Zinszer (1976), La Londe, Cooper and Noordewier (1988), Mentzer, Gomes and Krapfel (1989), Griffis et al (2004), Innis and La Londe (1994) present an extensive set of these dimensions.

In Brazil, several studies have been developed in the area of food retail, such as those of Fleury and Lavallo (1997), Hijjar (2001) and Lavallo et al (2003). Research on the relations of the industry with the major supermarket chains, carried out annually since 1994, (LAVALLE, 2007), shows that distribution service, in relation to other Ps marketing, has achieved an importance rating of 20% in the decision to purchase supermarkets. At the same time, it indicates that the level of satisfaction with the best practices – in the dimensions of availability, size and regularity of order cycle time – reached its peak in 2006.

In the small retail business of food sector, the studies of Campos (2007,1), Campos (2007, 2), Campos (2007, 3) show several aspects of distribution service provided by suppliers and wholesalers to retailers in the sector. The main attributes of service were identified by the degree of importance and compared to the perceptions of clients and managers. In the area of mid-sized supermarkets one may point to Maia's paper (2006). The author evaluates the logistical service by the perception of mid-sized supermarkets, verifying the attributes that are most valued, and which of these factors determine, or not, the maintenance of partnerships and alliances with suppliers in the supply chain.

METHODOLOGY

The study has an exploratory nature and its main concern is the knowledge of service attributes of distribution that contribute more significantly to the satisfaction level of mid-sized supermarkets. The research converges to what Stock and Lambert (2001) call external audit of the client service, whose objectives are to identify service elements that clients believe to be important when they make the decision to buy and determine how clients perceive the service offered by each of their suppliers.

In the retail supply chain, the flows of the most important goods and services that reach the supermarkets come from the industry itself. They are provided directly to supermarkets or mediated by the action of wholesalers. These flows are shown in Figure 1. The relationship between wholesaler and mid-sized supermarkets represent the link that is the object of this research.

Figure 1 – Material flow in supply chain

The target population consists of mid-sized supermarkets. There is no consensus about the name and the precise limits for the size of supermarkets. In Flud's article (2006) mid-sized supermarkets are those stores that have 4 to 10 checkout counters. In this research, stores in the range of 4 to 10 checkout counters—a classification currently used by local distributors of mid-sized supermarkets. Table 1 shows the market share in the food retail in Brazil, according to the 2007 Census of the Nielsen Company. The magazine Supermercado Moderno (2008) presents the results.

Table 1 – Market share in food retail sales

MARKET SHARE IN THE FOOD RETAIL SECTOR IN BRAZIL		
Number of Checkouts	Number of Stores	% Sales
10 +	2.615	59,5
5 to 9	3.950	14,4
up to 4	58.955	26,1
total	65.520	100

Source: Magazine Supermercado Moderno (2008)

The development of the questionnaire was based on the attributes used in Campos's research (2007, 1). In that study, the distribution service performed is audited in the relationship between wholesalers and small retailers in the food sector. The attributes are by nature logistical or associated with the marketing activity. In most cases, they are linked to the distribution service, but not exclusively by a logistic nature. In other cases, attributes that by hypothesis

would be interesting to clients, were included, but were linked to marketing services, such as payment deadlines and forms of credit and credit limit. For the purposes of comparison, the variable price was included among the attributes to be evaluated.

At another moment, a local wholesaler with distribution in the segment of mid-sized supermarkets was looked for, with the objective of doing brainstorming to discuss and analyze the variables that would compose the questionnaire, and, at the same time, to offer its clients' a database for the study. There was an ethical commitment to maintain secrecy on the identity of the company, and to use the database with the single purpose of carrying out the research. Company's managers from logistic and marketing areas, at different levels, took part in the brainstorming group. The author was responsible for coordinating the sessions.

The auscultation procedure ensures that variables used are relevant in assessing the level of service provided by suppliers. The process is similar to the one applied by Marr (1994), Mentzer, Flint and Hult (2001) and Stank, Daugherty and Ellinger (1997). Table 2 shows the list of attributes that were the object of evaluation in the research.

Table 2 – List of used attributes.

Definition	Nature
1. Frequency of salesperson checking in with client.	M/ L
2. Salesperson service – quality of service (cordiality, clarity and promptness in information, technical knowledge of the products) offered by the salesperson.	M/L
3. Order cycle time – time for delivery of the goods promised by the supplier after the order has been.	L
4. Delivery on due date –regularity of the delivery period, that is, the client always receiving on the day promised by the supplier.	L
5. Delivery Service (information, attention, cordiality, agility, promptness) carried out by the staff of the supplier.	L
6. Aftersales service (damage, exchanges, returns, complaints) provided by the supplier.	L
7. Complete order – delivery comes complete from supplier, with all the items, without errors of quantity, without changed products, unsuccessful delivery of or damaged commodities.	L

8. Invoice accuracy – accuracy and reliability of invoice data issued by the suppliers, without errors in identification, codes, quantities and taxes.	L
9. Payment deadline – period offered for purchases with installment payments by their suppliers.	M
10. Payment form offered for client purchases (in cash, check, bank notes, ...) by the supplier.	M
11. Prices negotiated with the supplier in purchases.	M
12. Merchandising – storage, cleaning, repositioning shelves, displays, promotional material and other guidelines carried out in its business by promoters of the supplier.	M
13. Accessibility – easy and direct access to the supplier's supervisors and managers of marketing, logistics and financial areas..	M/L
14. Flexibility of the supplier in offering different possibilities of price and term negotiations in anniversaries and promotional campaigns.	M
15. Extra order – delivery, out the days of visitation, of different products and quantities, ensuring the supply when demanded.	M/L
16. Credit limit – maximum value for hire purchase offered by the supplier.	M
(M)arketing / (L)ogistic	

The research questionnaire was structured in three modules. The first included a set of 16 questions that asked the supermarket to register the importance it gave to each attribute. The evaluation of importance was performed using a scale varying from zero (unimportant) to 10 (very important). In this module, the respondent gave a grade from zero to ten, independently, to each attribute, according to his perception of the importance that the item would have on the decision to purchase.

The second module asked for a response about su-

permarket hierarchy in the same 16 attributes taken in the first series of issues. Here, each respondent, in a comparative way, by the degree of importance, did a previous hierarchy of the sixteen attributes and, to the same, gave, gradually, without repetition, a rate from one to sixteen: sixteen (16) for more important items and one (1) for less important item. In this module, the respondent reflected on the importance that one attribute has in relation to the other.

In the third module, the supermarket evaluated the performance of their suppliers with the same list of attributes presented in Table 2. The ten largest distribution companies were related among the largest contributors to the tax on movement of goods (ICMS) in the State of Rio Grande do Norte in 2004. Seven of them are on the list of the 100 largest distributors of Brazil (ABAD, 2005). As basic criterion, the supplier should act regularly within the mid-sized supermarket sector. Performance assessment of each supplier, in each attribute, was carried out using a numerical scale varying from zero (bad) to ten (excellent).

A pre-test involved 5 mid-sized supermarkets. The questionnaire facilitator was oriented to identify and contact the purchasing manager supermarket and schedule each application of the questionnaire. Next, completion of the questionnaire was checked and participants gave feedback about the difficulties, incomprehension of the text or any other problems that could lead to filling out incorrectly the questionnaire. The results revealed the need to make small adjustments.

The interviewer identified the size of each supermarket. Data was collected on four different bases: monthly invoicing, number of employees, number of checkouts and sales area. Statistical treatment was performed using the Statistical Package for the Social Science – SPSS, version 12.0.

RESULTS

The results reflect 40 valid answers from 45 mid-sized supermarkets contacted, representing a rate of return of 88.9 %. Table 3 shows the number of employees and checkouts. Table 4 shows the sale area and the monthly invoicing.

Table 3 – Distribution of the retailers by number of employees and checkouts.

Number of Employees	Quantity	%	Number of Checkouts	Quantity	%
up to 25	14	35,0	up to 4	12	30,0
26 – 50	15	37,5	5-6	12	30,0
51 – 75	8	20,0	7-8	9	22,5
76 – 100	0	0,0	9-10	3	7,5
100 +	3	7,5	10 +	4	10,0

Table 4 – Distribution of the retailers by sales area and monthly invoicing.

Sales Area (m ²)	Quantity	%	Monthly Invoicing (R\$ 1.000)	Quantity	%
up to 350	9	22,5	up tp 250	13	32,5
351 – 700	22	55,0	251 – 500	17	42,5
701 – 1050	4	10,0	501 – 750	3	7,5
1051 – 1400	1	2,5	751 – 1000	3	7,5
1400 +	4	10,0	1000 +	4	10,0

It can be verified in the presented tables that the mid-sized supermarkets, mostly employing up to 75 persons (92.5 %), operating up to 8 checkouts (82.5 %), make available a sales area up to 1050 m² (87.5%) and have an invoicing up to 750 thousand R\$ per month (82.5%). The overall average of employees per establishment was 43.3. The average number of checkouts per store was 6.9 and the average sales area, 636.0 m². The average monthly invoicing informed, by store, was R\$ 495.250 ,00.

Perception of the importance of the attributes

Tables 5 and 6 show the ranking of the importance of attributes conferred by supermarkets. The first one shows the importance of each attribute conferred independently. Each respondent was asked to assign a value from zero to ten for each variable, in a sequential way and independently, without necessarily carrying out any comparison between the attributes. The second table shows the results obtained by comparison. Each respondent initially chose the attribute that he considered more important among all of them and gave it the maximum value in an ordinal scale, which varied from one to sixteen. Next, the second most important was identified among the fifteen remaining and given a value of 15 (fifteen). The comparisons continue until the final remaining attribute (less important), giving it a value of 1 (one).

Table 5 – Importance degree of the attributes, by independent answers.

Attribute	Average	Confidence Interval $\alpha = 5\%$		Ranking
		Lower	Higher	
Complete order	9,8750	9,7712	9,9788	1
After-sales service	9,6750	9,4600	9,8900	2
Invoice accuracy	9,5750	9,2700	9,8800	3
Frequency	9,5250	9,2924	9,7576	4
Flexibility	9,5250	9,2274	9,8226	5
Order cycle time	9,4750	9,1313	9,8187	6
Prices	9,4500	9,1611	9,7389	7
Salesperson service	9,3750	9,1060	9,6440	8
Deliveries on due date	9,3250	8,9256	9,7244	9
Payment deadline	9,2000	8,8208	9,5792	10
Merchandising	9,1500	8,7257	9,5743	11
Delivery service	9,0750	8,7145	9,4355	12
Credit limit	9,0500	8,5743	9,5257	13
Payment form	9,0000	8,5506	9,4494	14
Extra order	8,9750	8,5453	9,4047	15
Accessibility	8,5250	7,9464	9,1036	16

Table 5 shows that supermarkets considered all attributes submitted to them very important. The nominal average obtained varied from 8.5250 to 9.8750, placing, all of them, on the top fifth of the scale. The overall result is not surprising because the evaluated attributes in the research were extracted among those already considered very important in the literature. According to the statistical error in the verifying of averages ($\alpha = 5\%$), there was the possibility of changes in the planning (ranking) of the six best placed attributes. The attribute price is not part of the group most highly evaluated, although, it figured in the flexibility of the supplier to offer different possibilities of price and term negotiations in times of anniversaries and promotional campaigns.

On the other hand, Table 6, although imprecise in assessing the positioning of attributes in a scale of absolute importance, is effective in revealing the positioning of the attributes. In the most value group, there are seven attributes, letting know by order: salesperson service, after-sales service, salesperson frequency, complete order, deliveries on due date, invoice accuracy and order cycle time. Among these, observing Table 2, five are linked exclusively to the logistical service. Salesperson service and frequency are managed both for marketing as well as logistics.

Table 6 – Importance degree of the attributes, by comparative answers.

Attribute	Average	Confidence Interval $\alpha = 5\%$		Ranking
		Lower	Higher	
Salesperson service	12,1500	11,1661	13,1339	1
After-sales service	12,1250	11,0742	13,1758	2
Frequency	11,6750	10,5339	12,8161	3
Complete order	11,3500	10,2960	12,4040	4
Deliveries on due date	11,2000	10,3573	12,0427	5
Invoice accuracy	10,9250	9,8101	12,0399	6
Order cycle tTime	10,7000	9,5169	11,8831	7
Delivery service	7,9000	6,7198	9,0802	8
Prices	7,5750	6,2907	8,8593	9
Merchandising	6,8250	5,3431	8,3069	10
Flexibility	6,4750	5,1490	7,8010	11
Payment deadline	6,4500	5,5764	7,3236	12
Payment form	6,0500	5,1597	6,9403	13
Accessibility	5,3250	3,8624	6,7876	14
Extra order	4,8500	3,6153	6,0847	15
Credit limit	4,4250	3,1936	5,6564	16

The salesperson visit frequency is an attribute managed by marketing. However, in practical terms, it is determined by the ability of physical distribution to meet the demands of the client more frequently and by the trade-off between the client satisfaction level – and the consequent increase in sales – and additional costs generated by more frequent service.

The salesperson service feature reflects an immediate applicability of marketing knowledge, but is closely linked to logistical service for dealing with pre-transaction conditions and being directly involved with the order time cycle. It is important to highlight that price was not included among the more well-situated attributes. On the other hand, in two tables of replies, the attributes payment form, accessibility, extra order and credit limit were situated in the four last places. Although the ranking

presented in Tables 5 and 6 may suggest preliminarily that evaluations of the importance of attributes by two methodologies lead to different results, the confidence intervals indicate that changes in the position in the ranking would be absorbed within the statistical error.

The responses presented in Table 6, in theory, by the comparative character used, represent a more reliable ranking. The divergence or convergence – between the rankings – indicates the degree of alignment between the results offered by another methodology. So, the alignment can be verified by the degree of correlation between the two rankings. A correlation coefficient of 1.0 would indicate a degree of 100% alignment, a co-efficient of -1.0 would indicate a complete (mis)alignment.

Table 7 – Degree of alignment between the comparative and independent answers.

	salesperson service		salesperson frequency		delivery due date		on invoice accuracy		cycle delivery service		prices merchandising		flexibility payment deadline		payment form		extra order		accessibility credit limit	
RANKING	↓		↓		↓		↓		↓		↓		↓		↓		↓		↓	
Compared	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
Independent	8	2	4	1	9	3	6	12	7	11	5	10	14	16	15	13				
Spearman's correlation Coefficient = 0,7647, Pvalue = 0,06																				

Cooper and Schindler (2003) indicate that Spearman and Kendall's correlation coefficients are the most widely used for comparison in the ordinal value series. The Spearman's rank correlation test analyzes the residue through the differences between the hierarchical positions of each variable. The Spearman's coefficient would be equivalent to Pearson's, applied to rankings without, however, requiring the normal conditions of the population and the linear relationship between the variables. Table 7 shows the rankings obtained by two methodologies and presents the application result of the Spearman's correlation test. For a significance level of less than 1%, the test points to a significant degree of alignment between the answers.

Perception of the service

The supermarket was requested to appraise the distribution service offered by the ten most important suppliers in the State. The respondents evaluated the service in relation to each attribute listed in Table 2. The values ranged from zero (bad performance) to

ten (excellent performance). Table 8 shows the averages obtained by distributors, on each of the sixteen attributes researched. The attributes were ordered by comparative importance. The evaluations reflect the retailers' perception about the service level offered and measure - in the set of attributes - the clients' satisfaction level in relation to each of their suppliers.

Several inferences could be collected from this set of information. First, it is possible to obtain a ranking of suppliers in relation to the level of perceived service. From a maximum of 160 points, scale of zero to ten, 16 attributes, the assessment of the suppliers' distribution service ranged from a minimum of 87.2 (54.5%) points for distribution company A, to a maximum of 138.8 (86.8%) points obtained by distribution company E. This suggests that the gap between the service provided by each supplier and that which was idealized by clients varied from 21.2 to 72.8 points. The overall assessment of the distribution service of company A represents only 62.8% of the performance of company E. The supermarkets perceived, therefore, a deep gap between the services offered by their suppliers.

Table 8 – Suppliers' appraisal in each attribute and global ranking.

Attribute	Important Degree	Averages of the Assessment of the Suppliers									
		A	B	C	D	E	F	G	H	I	J
Salesperson service	12,15	5,98	6,03	8,55	6,88	9,20	7,38	7,65	7,05	7,95	7,70
After-sales service	12,13	3,70	4,43	6,03	5,88	9,13	3,93	6,75	6,60	7,05	8,10
Salespers frequency	11,68	5,70	5,60	8,25	6,05	9,05	7,33	7,78	7,20	8,40	7,20
Complete order	11,35	6,50	7,20	8,15	6,95	8,45	6,38	7,55	7,33	7,43	8,38
Delivery due date	11,20	3,93	6,83	7,98	6,78	9,15	6,73	7,70	7,13	6,50	7,93
Invoice accuracy	10,93	7,03	7,38	8,30	7,60	8,88	7,70	7,88	7,55	7,98	8,30
Order cycle Time	10,70	4,40	6,58	8,08	6,58	9,10	6,65	7,43	7,23	6,90	8,13
Delivery service	7,90	5,90	6,40	7,78	7,05	8,23	6,90	7,05	6,95	7,03	7,20
Prices	7,58	6,00	6,35	6,68	6,63	7,88	7,45	7,48	7,30	7,35	7,53
Merchandising	6,83	2,20	2,40	7,50	4,85	8,48	2,80	7,53	7,33	7,48	7,58
Flexibility	6,48	3,98	4,78	7,38	6,60	8,78	4,90	7,68	7,73	7,75	7,95
Payment deadline	6,45	7,10	6,93	6,68	7,00	8,60	7,45	7,75	7,25	8,15	8,28
Payment form	6,05	7,95	7,33	8,18	7,95	8,28	7,38	8,05	7,88	7,88	8,05
Accessibility	5,33	4,15	4,33	6,50	5,68	8,15	5,30	6,40	6,10	6,43	6,23
Extra order	4,85	4,85	5,80	7,80	6,90	8,55	6,63	7,33	7,50	7,78	7,50
Credit limit	4,43	7,80	7,48	8,63	7,30	8,90	7,75	7,80	8,15	8,45	8,43
Argument Σ Assessment		87,2	95,8	122,4	106,7	138,8	102,6	119,8	116,3	120,5	124,5
Ranking of the Companies		10	9	3	7	1	8	5	6	4	2

The auditing of the external service allows analysis to analyze performance of each company with respect to each attribute. Company C, in relation to the topic of payment deadline, had the worst performance among all the distribution companies. However, a notable score was presented in the attributes such as salesperson service, complete order and invoice accuracy. On the other hand, company A obtained an assessment above average, not so far from the best practice, in the attribute payment form. However, it only managed to receive poor performance rating in other variables.

Importance x performance

It is possible to establish the best practices (benchmark) as perceived by retailers from the information generated in Table 8. The performance of suppliers in each attribute can be compared with the best practices achieved. The gap in relation to the maximum score does not take into account the conditions of the competition; it must, therefore, deserve more restrictive attention than the gap in relation to best practices. A more specific investigative process could establish the levels of satisfaction desired by customers in each attribute. Even so, the overall average referential (market practice) and the best practices have a very important utility for the suppliers, in the planning of its policies of service to client, marking out managerial actions both in the marketing and logistic areas.

Table 9 – Resume of the indices, including the best practices.

Attribute	Importance Degree	Overall Average	Worst Practices	Best Practices	Maximum Points
Salesperson service	12,15	7,44	5,98	9,20	10
After-sales service	12,13	6,16	3,70	9,13	10
Salesperson frequency	11,68	7,26	5,60	9,05	10
Complete order	11,35	7,43	6,38	8,45	10
Deliveries on due date	11,20	7,06	3,93	9,15	10
Invoice accuracy	10,93	7,86	7,03	8,88	10
Order cycle Time	10,70	7,11	4,40	9,10	10
Delivery service	7,90	7,05	5,90	8,23	10
Prices	7,58	7,06	6,00	7,88	10
Merchandising	6,83	5,81	2,20	8,48	10
Flexibility	6,48	6,75	3,98	8,78	10
Payment deadline	6,45	7,52	6,68	8,60	10
Payment form	6,05	7,89	7,33	8,28	10
Accessibility	5,33	5,93	4,15	8,15	10
Extra order	4,85	7,06	4,85	8,55	10
Credit limit	4,43	8,07	7,30	8,90	10

Table 9 summarizes the degree of importance for each attribute, market practices – given by the overall average of evaluation performance of all the suppliers –, the worst and best practices of the market and the maximum score. The comparison of the indices obtained by a supplier with the presented results indicates its positioning in the market and serves as

a basis for the restructuring of policies and actions focused on the level of its clients' satisfaction.

The verification of the gaps of perception between the service provided by a company and the best practices can significantly contribute to a company identifying good opportunities for improvement of its strategy of service. Figure 2 shows the com-

parison of service levels perceived by clients of the distributor C, with the best and worst market practices and with the average service in each attribute. The attributes are placed in rank of importance. The chart shows an important gap in the attribute after-sales service. This gap is the largest in company C; therefore, in this topic, the service of the company is below the average practiced on the market. Furthermore, it is the second attribute with greater weight in the purchase decisions by clients. The analysis suggests that the improvement of the after-sales service constitutes a strategic opportunity for the company C.

Figure 2 – Comparative graph of perceptions.

The intersection between the degree of importance of the attribute and the relative performance of each supplier can offer very helpful information. The conjunction of the information offers suppliers a suitable marking for their investments in a strategy focused on client service. A matrix can be obtained by the intersection of the degree of the importance of the attribute with the existing gap in relation to best practices. In the perception of supermarkets, company C received an excellent evaluation in the attribute extra order (third best value) and a poor assessment, second worst rating, in the topic deliveries on due date. Both attributes are linked to logistic service and compete for the same internal resources. For clients, the order cycle time regularity is a much more important attribute than extra order. Company I would be, inappropriately, reversing the application of a scarce resource. It would be up to Company I to strengthen logistical resources to improve their performance in the regularity of deliveries, maintaining the current performance in extra orders or, in the worst rating, redirecting the resources.

CONCLUSIONS

In many situations, the marketing and logistics managers fail by electing inadequate measures for marking out their decision process. In others words, they simply fail for not electing any measure. A lot of them believe in their feeling, caught by many years of experience in the market. This research fills in a gap and sheds light on descriptive aspects of the market, and on the service level of suppliers to mid-sized supermarkets. The information obtained about physical distribution, measured levels of importance, and perceptions concerning the dimensions of the service to supermarkets, constitutes a relevant material for a study of the logistic distribution.

The results answer two important issues within the scope of this study. They suggest that both attributes of marketing and logistical service are decisive for the supermarkets' satisfaction level, and that the logistical dimensions assume a greater importance degree when placed side by side. They show, furthermore, there is a large field for improvement so that distributors could work the gaps in service perceived by supermarkets, attribute by attribute, in distribution services.

Understanding and identifying the attributes of service, which the retailers perceive as more important, help the managers focus on the improvement of the levels of service of these particular attributes, and work to maintain acceptable service levels in less important attributes, while reducing overall cost. It provides, furthermore, the use of appropriate measures for the monitoring of planned actions. The results are important for managers—both marketing and logistic to develop their opportunity matrices, seeking to reduce the existing gaps between their current practices and the benchmark established by the best practices.

Even though a significant number of logistic and marketing variables have been used in this study, future research could not only expand the number of variables, but also investigate how they relate and what is the degree of dependence between them. Besides this, managers may then develop qualitative procedures to listen to clients so that they may also improve the quality of service offered, without limiting themselves to contact only by scheduled, formal visits.

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