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Assessing Customer Satisfaction and Loyalty in the Retail Sector

Introduction

The importance of client satisfaction and loyalty for the sustainability of organizations has been widely discussed by the academic community. Over the last decades, authors such as Reichheld (1996) and Oliver (1999) have dedicated their research to the topic of loyalty and its degree of importance to organizations, relegating the topic of satisfaction to a status of less importance and giving precedence to the phenomenon of loyalty. In general terms, satisfaction is understood to have a positive impact on loyalty, even though this impact is subject to differing factors and influences, such as, for example, the type and setup of the industry under analysis.

The current study aims to discuss the possible relationship between satisfaction and loyalty in the specific context of a large retail store. Differently from most marketing literature, this potential relationship is investigated using the European Customer Satisfaction Index (ECSI) model. Using the PLS estimation technique, this model simultaneously provides a satisfaction and a loyalty index in an interconnected way, looking at potential drivers, such as quality and perceived value, image, expectations and complaints.

The sophistication of consumer demand, together with increasing exposure to global competition brought about by continuous technological evolution, the rapid spread of information and knowledge, and the successive opening of economic markets, put managers in a quandary, since they have to simultaneously strive for sustained growth of the business as well as maximising its worth. As a result, the focus is evermore on the “satisfaction” and “loyalty” of clients, principally in businesses where interaction with them is rare and/or temporary.

The particular relevance of analysing the issue with reference to the retail industry is clear, since retail chains are the most competitive industry (Collins, 1992), which is characterised by the most diverse buying habits (Dowling and Uncles, 1997). The challenges faced by this sector are evident, both at a global (chain) level and at a local level (store), which leads to a focus on the maximization of the range of goods on sale, as it is this which influences consumer choice (Kotler and Armstrong, 2006). In this industry there are a series of common practices designed to maximize client satisfaction, whether they be price cuts and the implementation of a discount system, or whether it be by means of improvements in the quality of goods and, more importantly, of customer service. But are these having the desired effect? Are these contributing to building up a satisfied client-base and potentially more loyal clients, thus enabling the survival of companies in an ever increasingly competitive and global world? The study presented in this paper analyses these questions in the specific context of a large retail store. This sector presents significant challenges in terms of competitiveness, which in turn, is evidenced by the need to develop efforts to increase client satisfaction and loyalty.

The remainder of the paper begins by reviewing the concepts of customer satisfaction and loyalty, as discussed in the literature. Then, the simultaneous measurement of customer satisfaction and loyalty, as proposed by the European Customer Satisfaction model, is analysed by pointing to their main antecedents and outcomes. Next, the research methodology is presented in some detail. It follows the discussion of the main findings. The paper concludes by stressing some theoretical and managerial implications, limitations and areas for future research.

Customer satisfaction and loyalty: concepts, links and measurement tools

Defining client satisfaction and client loyalty

Satisfaction is usually associated with the consumer response to a retailer's offering and the difference between a product's actual and expected performance (Yoo and Park, 2016). More specifically, service satisfaction is an outcome deriving from a specific service experience (Oliver, 1984; Tsitskari et al., 2014). As Oliver (1980 p. 464) puts it, satisfaction is "*a cognitive and affective reaction to a service incident*".

Marketing literature points out to the existence of two main conceptualisations of satisfaction: need-satisfaction and appraisal satisfaction (Manell, 1999, cited in Theodorakis et al., 2004). Need-satisfaction, as the designation indicates, is associated with the idea of motivation and regards satisfaction as a result of meeting or satisfying corresponding needs. It follows from this perspective that satisfaction is evaluated against the expected outcome. On the other hand, appraisal satisfaction is closer to the service quality construct. According to Parasuraman et al. (1988), perceived service quality is "a global judgment or attitude relating to the superiority of a service" and is usually assessed by confronting expectations and perceptions of how well the service has performed.

When the need-satisfaction approach is adopted, the main purpose is to identify the factors that drive behaviour. As Oliver (1999) points out, satisfaction can be conceptualised at two levels: micro (as a response to a transaction-specific experience) and global (as a result of the customer's cumulative experiences with a specific service). As a matter of fact, satisfaction tends to result from a global evaluation of all the aspects that make up the customer relationship rather than solely an outcome of a specific transaction with the provider (Thakur, 2016).

To sum up, customer satisfaction in the retail sector can be defined as a “*post-consumption evaluation of how well a store or a product meets or exceeds customer expectations*” (Levy and Weitz, 2009, p. 111, cited in Vesel and Zabkar, 2009).

In turn, the concept of customer loyalty has been discussed by many authors over the last years. Reichheld (2003) defined loyalty as “*the willingness of someone - a customer, an employee, a friend - to make an investment or personal sacrifice in order to strengthen a relationship*”. Oliver (1999) describes it as a deep commitment by the customer to continue to consistently repurchase the same product or service, despite circumstantial influences and marketing strategies of competitors, which have the potential to cause a change in buying behaviour.

Two main dimensions of loyalty are usually identified (Dick and Basu, 1994; Kyle et al, 2010): the attitudinal dimension (corresponding to psychological commitment and represented by two major indicators of customer retention: customers’ intention to repurchase and their willingness to recommend the service to other prospective customers (Howat and Crilley, 2007)) and the behavioural dimension (measured using indicators of the way the service is consumed, such as actual purchase or use frequency, duration and consistency). Both are important in that, for true loyalty to exist, the second interpretation should follow on from the realization of the first. This is because repetitive purchase behaviour does not necessarily depend on consumer preference, but may arise from constraints such as the high cost of switching, inertia or convenience (Lovelock and Wirtz, 2011; Reichheld, 2003; Reinartz and Kumar, 2002).

It is a given fact, accepted by most organizations, that the effort to acquire a new customer is much higher than that needed to maintain the relationship with a current customer (Fornell and Wernerfelt, 1987). Moreover, there is evidence of a positive

relationship between loyal behaviour and long-term financial performance (Reichheld, 1996). Dick and Basu (1994) point out as consequences of loyalty: a decrease in searching for alternatives, resistance to the persuasion of the competition and positive “word-of-mouth” recommendations. Similarly, Reichheld and Sasser (1990) confirm that the profit margin of customers increases according to their longevity as clients. Increases in profits are due to four different reasons:

- loyal customers make ever-increasing purchases over time;
- operating costs decrease because of the involvement of loyal customers, who contribute positively to the productivity of a company (for example, by not repeating certain procedures);
- recommendations made by loyal customers as part of their personal relationship with the company, are an effective advertising tool; and
- price sensitivity decreases with years of loyalty as a customer, leading to achieving profits through increased margins.

Nevertheless, and despite the efforts made by organizations with regards to this issue, Lovelock e Wirtz (2011) stress that many of them are not successful in creating true loyalty. It is from the embodiment of this idea that relational marketing points to the central role, albeit not sufficient, that relationships have in fostering customer loyalty (Grönroos, 2007). This type of mentality has consequences regarding the way that companies see, treat and manage their clients.

Interestingly, as Yoo and Park (2016) stress, loyalty benefits not only the product/service provider, but also the consumer who spends less time in searching for product information and evaluating products from competitor brands.

The relationship between client satisfaction and client loyalty

It is possible to find references in the academic literature that defend the positive relationship that satisfaction has on loyalty. In Johnston *et al.* (2012) one can read that: *“Satisfied customers who perceive value from the service are more likely to return and also more likely to provide positive word-of-mouth and recommend the organization and its services to others”* (p.15). Similarly, Howat and Crilley (2007) point out that satisfied customers are more likely to increase their usage of a service and to recommend the service to others, making customer retention ‘highly profitable’ and effective in helping gaining new customers. Lovelock e Wirtz (2011) argue that the basis for true loyalty lies in customer satisfaction. In the same line of thought, Kotler and Armstrong (2006) argue that highly satisfied customers repeat buying and share their experience with others, as shown by empirical studies such as those of Johnson and Hart (1999).

Oliver (1999), in turn, distinguishes six types of representations of the satisfaction-loyalty relationship (Figure 1).

Figure 1. Possible types of satisfaction-loyalty relationships (from Oliver, 1999)

Diagram (1) reinforces the notion that customer satisfaction and loyalty are different manifestations of the same concept. Diagram (2) places satisfaction as the core concept for loyalty, without which it cannot exist. In Diagram (3), satisfaction ceases to have a central role, but remains a necessary condition, albeit not sufficient, for achieving loyalty. Diagram (4) admits the existence of “Ultimate Loyalty”, comprised of customer satisfaction and loyalty, which occurs when a customer goes against all circumstances and constraints to faithfully continue to purchase a certain brand. Diagram (5) illustrates the existence of a fraction of satisfaction in the concept of loyalty, even though this is not

pivotal to its existence. Finally, Diagram (6) illustrates satisfaction as being the first of several transient states, which culminate in a state separate from the first, that of loyalty. This means that, once this state is reached, a change in satisfaction does not imply a change in customer loyalty. From the point of view of the author, this is the best interpretation, taking into account that there are other factors, of a social and psychological nature, that lead to the transitional states that lead to loyalty. Without these ingredients, a satisfied customer does not evolve beyond this primary state of satisfaction (Oliver, 1999).

Measuring customer satisfaction and loyalty

From what has been mentioned above, it can be concluded that customer satisfaction is subject to constraints of a multiple nature, as it has an idiosyncratic side and a dynamic one.

Over the years, several tools have been developed to measure it, amongst which the most important are:

- Questionnaires and interviews, which are the tools most commonly used by businesses. An example is SERVQUAL (Parasuraman *et al.*, 1988), which is a questionnaire which aims to measure the level of client satisfaction through detecting the “gaps” between expectations and perceptions of levels of service. Another type of questionnaire which is often used is the basis for the ECSI model – European Customer Satisfaction Index (inspired by the SCSi model – Swedish Customer Satisfaction Index, which was developed by Claes Fornell, in Sweden, in 1989 and which will be described in greater detail in the next section).

- Critical incident method. First referenced by Flanagan (1954), it is based on obtaining relevant information from customers about incidents that occurred when using the products or services provided.
- Complaints analysis. A complaint is an opportunity to create and retain customer satisfaction (Michel *et al.*, 2009). This is because, dissatisfied customers who complain, can be managed so as not to switch suppliers, whilst those who are apparently satisfied and never complain, may end up making the switch (Edvardsson and Roos, 2003).

Despite the importance of these tools, Reichheld et al. (2000) warn of the dangers of the “satisfaction trap”, which is the blind pursuit of customer satisfaction as a guarantee for sustaining an organization, whereas studies indicate that approximately 60-80% of ex-clients of a company claim that, although they are no longer customers, they are satisfied with the company. It is this dilemma that gave rise to research on loyalty, which defends that the right relationship with the right customer is a key factor for the success of an organization (Kotler and Armstrong, 2006).

In terms of measuring loyalty, the literature lists several possible indicators, the following being among the most used (Vilares and Coelho, 2005):

- The intention to remain a client for a certain period of time;
- The intention to recommend an organisation (or its products);
- The intention to end up becoming a client of the competition, at a certain time;
- The intention to change the level of business (turnover) with an organisation;
- Sensitivity to the organization’s price, in comparison to the competition.

One of the most popularly used tools is the “Net Promoter Score”, whose result is calculated based on the difference between the percentage of “promoters” and the

percentage of “detractors” of the organization. Reichheld (2003) stresses its importance, advocating the existence of promoters as a necessary requirement for profit improvement, especially in mature industries. Another instrument is the already mentioned ECSI questionnaire, which seeks to measure loyalty, considering it to be a consequence of satisfaction.

Aspects of customer satisfaction and loyalty in the retail sector

Let us now focus on the critical aspects of the topic in the retail industry, currently one of the most dynamic and competitive areas of business (Collins, 1992), where the pattern of purchases tends to be dispersed (Dowling and Uncles, 1997). These are:

- The quality of customer service. The Heskett *et al.* (2008) model, designated the “Service Profit Chain”, aims to illustrate how the quality of internal service (e.g., employee working conditions) influences customer satisfaction and, ultimately, customer loyalty. In fact, the services deserve a prominent role, since their perceived performance affects satisfaction to a large degree, when satisfaction is mediated by interaction with the public (Bellou and Andronikidis, 2008, Grönroos, 2007; Tsai *et al.*, 2010; Lusch *et al.*, 2007; Yoo and Park, 2007). In this way, increased importance is given to quality management in customer-supplier relationships, be they personal, by telephone or even virtual. Still on this subject, Maxham *et al.* (2008) explain that, in the case of retail, aspects such as feelings of justice and identification with the company by employees who deal directly with the public affects, ultimately, store performance, and hence the quality of service experienced by customers.
- Loyalty programs. Usually in the form of cards, these programs are based on the frequency of use by the consumer and provide immediate benefits, such as

discounts, as a way of fostering customer loyalty. Dowling and Uncles (1997) point out that such investments are inefficient, and, in general appear more as a competitive factor in the industry, rather than as a factor of differentiation.

Other studies, supported by research in the areas of social sciences and psychology, add data to the research on these topics, providing valuable information for managers. Some of these studies focus on the observation of the in-store customer experience, both in terms of the physical layout as well as aspects of human interaction. Puccinelli *et al.* (2009) explain how the layout of the store, i.e.: where items are purchased and services are produced and purchased (“servicescape” in the terminology of Johnston *et al.*, 2012), interacts with the customer perceptions, affecting their behaviour. Mägi (2003) presents the customer characteristics (especially interpersonal interaction or price-related issues) that have an impact on the effects of satisfaction on loyalty.

From the available literature on the subject, it is important to retain the subjective, circumstantial and dynamic nature of these issues, which explain the challenges presented to organizations in their management, and give urgency to combat the apathy regarding these challenges. It is possible to identify common denominators for satisfaction, as well as see the role of satisfaction on loyalty, despite the fact that this relationship is dependent on a variety of factors.

Because of this, the importance of measuring these phenomena has to be mentioned, especially because there is empirical evidence for the existence of a positive impact of the loyal behaviour of customers on organizations' financial performance over time (Reichheld, 1996; Maxham *et al.*, 2008; Morgan and Rego, 2006).

Simultaneous measurement of satisfaction and loyalty: a little more about ECSI

Over the last decades, existing literature have been calling attention to the need of simultaneously investigating the role of various evaluation variables (such as service quality and customer value) on outcome variables (customer satisfaction and customer loyalty, in particular) (Nyadzayo and Khajehzadeh, 2016). Moreover, as the same authors point out, both direct and indirect effects need to be taken into account.

The European Index of Customer Satisfaction (ECSI) started to be developed in 1999 and was launched in 2001, as an initiative of the European Organisation for Quality (EOQ), of the European Foundation for Quality Management (EFQM) and of the Customer Satisfaction Index University Network (CSI). The methodology was inspired by that developed in 1989 for the SCSi: Swedish Customer Satisfaction Index, by Claes Fornell, and later on adopted by the American Customer Satisfaction Index (ACSI), introduced in 1994 (Bruhn and Grund, 2000).

Aware of increasing global competition, a phenomenon that has increased the competitive environment and “pushed” many industries to compete in terms of costs, Fornell saw in the CSB (Customer Satisfaction Barometer – its original name) a supplementary measure to the productivity (and therefore competitiveness) of companies and industries. Instead of measuring the amount of output, this index provides information about the quality of that same output, in the eyes of those who buy it (Fornell, 1992). Thus, in 1989, the first national satisfaction index was developed in Sweden. This is measured in the context of other interrelated variables (antecedents and consequences of satisfaction), which, besides allowing for a greater reliability and validity of results, enables the prediction of behaviour in the light of certain alterations, which was innovative at the time (Fornell, 1992). As this was a study carried out at a national level,

involving various companies and industries in the country where it is applied, it also serves ultimately as an indicator of the competitiveness of nations. The importance of using the ECSI approach to analyse customer satisfaction according to well-established customer behaviour theories was also stressed by Ferreira et al. (2010), who highlight the model's potential to allow for the comparison between the companies within the same sector and/or those that operate in the same country, or even at a macroeconomic level.

To a great extent, the ECSI is similar to the ACSI model (Coelho and Esteves, 2007). It uses the same kind of econometric approach and shares most of its constructs and relationships. Yet, some differences exist between the two models, namely the inclusion of the “image” construct as a possible antecedent of customer satisfaction and loyalty in the ECSI. Thus, according to the ECSI model (see Figure 2), customer *satisfaction* essentially depends on *image*, *expectation*, *perceived quality* and *perceived value*, with *loyalty* being a consequence of *satisfaction*, *image* and *complaints*.

The concepts of satisfaction and loyalty were discussed earlier in the paper. Each of the remaining model dimensions are addressed next.

- *Expectations*: Expectations are probabilities, as defined by the consumer, of positive or negative events occurring, should they carry out a certain type of behaviour. Consumer expectations are subject to various factors. Johnston *et al.* (2012) mention as contributing factors: price, marketing, alternatives, past experiences and even the psychological state of the consumer.
- *Perceived Quality*: The perception of quality has to do with judgements regarding the inherent characteristics of the product being sold, the tangible forum regarding goods (e.g.: reliability), and both the intangible and tangible forum regarding services (e.g.: courtesy, waiting times). The literature has

stressed, in increasing terms, the importance of quality of service in formulating client satisfaction, principally in long-established businesses and independent of the nature of the client-supplier relationship (if this is continuous, or occasional), as any moment is a good moment to increase client satisfaction (Johnston *et al.*, 2012). Within the ECSI model, perceived quality integrates product quality and service quality and corresponds to the evaluation of recent consumption experiences of products and associated services (Ferreira et al, 2010).

- *Perceived Value*: According to Yoo and Park (2016) consumer's perceived value is a complex construct, involving weighting benefits and sacrifices and being comparative (based on the preference for a particular product over another), personal and situational dependent.

Thus, the perception of value takes into consideration all the aspects involved in the purchase of goods or services, weighing up costs with benefits. For Grönroos (2007):

$$\text{Perceived Value} = \frac{[\text{Core Solution (what)} + \text{Additional Services (how)}]}{[\text{Price} + \text{Relationship Costs}]}$$

“What” being the technical solution which results from the goods or services acquired, and the “how” the way that it is delivered to the client, which includes billable and non-billable services (e.g., home delivery or faster service). The “price” is the short-term tangible sacrifice for the consumer and the “relationship costs” arise from the perspective of relational marketing. They may be of a direct nature (investments and depreciation); indirect (complaints and long delays); or psychological (lack of confidence, which

obliges contact with the supplier). Put more simply, “perceived value” can also be understood to be:

$$\text{Perceived Value} = \text{Transaction Value} + \text{or} - \text{Relationship Value}$$

In a broader view, consumer’s perceived value involves both utilitarian benefits, as well as social and psychological benefits gained after or while using a product (Yoo and Park, 2016).

- *Image:* Amongst other factors that contribute to the formulation of expectations and perceptions, the roles of trust and organizational image stand out. Within the ECSI model, image embraces the global idea that customers have from the company. Image represents the values that customers, potential customers, lost customers and others relate to the organization (Grönroos, 2007). It exists as much in the local sense (e.g.: establishment; store) as the global sense (e.g.: chain; brand). Its management is important in terms of satisfaction, as image (Grönroos, 2007):
 - i) communicates expectations;
 - ii) is a filter of perceptions;
 - iii) is just as much a function of expectations as experiences; and
 - iv) has an internal impact (amongst employees) as well as an external one (amongst the general public).

Brand image, in particular, has a strong impact on buyers’ decision and can influence their repurchase behaviour, thus being a potential antecedent of customer loyalty (Nyadzayo and Khajehzadeh, 2016).

- *Complaints:* This dimension evaluates the frequency and management of complaints. It is well-known that dissatisfaction might lead to complaints,

although often it is expressed in terms of negative word-of-mouth rather than complaining behaviour. On the other hand, the way complaints are handled and service recovery occurs, if positively assessed by the customer, might have a strong impact on repurchase and the willingness to remain loyal to the same provider.

Each of these dimensions is represented by a set of items in a questionnaire. The answers to the questionnaire, when analysed according to the ECSI model, enable not only the creation of a customer satisfaction index, through the study of simultaneous linear relationships between expectations, perceived value, perceived quality and the organization's image (the determinants of satisfaction considered in the model), but also a loyalty index. Thus, for instance, whilst SERVQUAL only serves as a quality of service indicator, ECSI gives an indication of the overall quality of that being supplied by the organization studied (products and services), whilst allowing for an assessment of overall customer satisfaction, as well as loyalty.

Methodology

To serve the purpose of the study, which refers to the analysis of the relationship between customer satisfaction and loyalty within the retail industry context, a questionnaire based on the ECSI model was given to customers of a store belonging to a chain of sportswear and sports equipment. This questionnaire facilitated the calculation of aggregate indices of satisfaction and loyalty through the simultaneous consideration of their antecedents, as mentioned in the previous section. Since the model considers, customer satisfaction as an antecedent of loyalty, the study focusses, in formal terms, on testing the following study hypothesis:

H1: customer satisfaction for a large retail store has a positive impact on customer loyalty to this store.

A model of multiple equations: the statistics of the ECSI

To simultaneously deal with a set of interrelated variables, the ECSI is converted into a system of multiple equations, making use of SEM methodology (Structural Equation Modelling). According to Hair *et al.* (1992), SEM is a multivariate statistical technique which combines aspects of multiple regression and factor analysis to simultaneously estimate a series of interrelated dependence relationships.

Because it is a simple and direct method of simultaneously dealing with multiple relationships, whilst at the same time guaranteeing statistical efficiency, and as it allows exhaustive assessment of relationships (which permits confirmative research), SEM has been widely used in areas of study such as psychology, marketing or medicine (e.g. Hair *et al.*, 2011). Another feature is the role of theory, without which the design of the structural model (the set of dependency relationships that connect the various dimensions of the model) would have been impossible. Observation, experience and past studies, as well as the very definition of the study objectives are crucial for the specification of the structural model, which distinguishes between the independent and dependent variables and establishes *a priori* causal relationships.

The structural model and the measuring model

In a SEM approach, there are two models: the structural and the measurement one. The structural model (Figure 2) establishes the relationships between latent variables (not directly observable). In the ECSI, the variables of *image*, *expectations*, *perceived quality* and *perceived value* are antecedents to *satisfaction*; *loyalty* and *complaints* are the

consequences. Concurring towards *loyalty* is *image*, either directly or indirectly (through satisfaction), *satisfaction* and *complaints*.

Figure 2. The ECSI structural model

In these models, the direction of causality is read from left to right. The straight lines represent the coefficients of direct impact (the effect of a unit variation of one variable on another), and total impacts can also be calculated. These result from adding direct and indirect impacts.

The basis of the ECSI structural model design lies on the theoretical foundations of the satisfaction and loyalty literature presented earlier in the paper, and according to Figure 2, one can read:

- *Image* has a direct impact on *expectations*, *satisfaction* and *loyalty*;
- *Expectations*, which are influenced by the *image* variable, have a direct impact on *perceived quality*, *perceived value* and *satisfaction*.
- The *perceived quality*, being directly influenced by *expectations* and indirectly influenced by the *image*, has a direct impact on the *perceived value* and *satisfaction*.
- The *perceived value* is a function of the *perceived quality* and *expectations'* influence, while contributing directly to the *satisfaction* index.
- With this said *satisfaction* is both directly and indirectly influenced by the impact of the former variables, while influencing the *loyalty* variable, as well as the *complaints* one.
- *Complaints*, as a function of the *satisfaction* impact, influence the *loyalty index*.

- The *loyalty* variable is the only one that has no direct (thus, no indirect) impact on any variable, being a result of the *image*, *satisfaction* and *complaints* influence.

The measurement model (Table I) relates each latent variable to a set of empirical indicators (or measurement variables) that form the ECSI questionnaire.

Table I. ECSI measurement model

There are three types of measurement models: *reflective*, *formative* and *mixed* ones. In the first case, the indicators are seen as a reflection or manifestation of the phenomenon represented by the latent variables to which they relate. This implies that the indicators are correlated between themselves and that the coefficients of the measurement model are obtained by simple regression. In the second type, the indicators are treated as integral parts of the related latent variable, or in other words, the latent variable is formed by the set of indicators to which it is connected. In this way, the notion of correlation between indicators is no longer applicable, and the correlation coefficients are obtained through multiple regression. In mixed models, it is possible to find the two types of links between indicators and the respective latent variables described.

The reflective model is the most commonly used one for satisfaction studies, such as the ECSI, as the stability of the coefficients of the measurement model is not affected either by the size of the sample, nor multicollinearity problems, as a simple regression method is applied (Fornell & Bookstein, 1982).

Data collection and processing

Data was collected, as is appropriate for a conceptual model, and as is usual for satisfaction studies, by applying a questionnaire to store customers, consisting of 31

questions, each of which is wholly or partly an ECSI indicator. Each indicator was, in turn, associated to one, and only one, latent variable, as shown in Table VII, in the Annex.

In a form analogous to the ECSI questionnaires, respondents replied in a scale of 10 points (Likert, 1932), in accordance with the level of agreement with the submitted statements (1 - strongly disagree, 10 - strongly agree). A response between the values 1 and 5 was deemed to correspond to an unfavourable evaluation, and between 6 and 10, to a favourable review. Only those questions related to price sensitivity were treated differently: the value 1 corresponds to a price change between 1% and 10%, and the value 10 to a range of between 91% and 100%. Demographic data was also collected, in order to characterize the study sample.

Once the questionnaires had been collected, the answers to the different questions were processed. Processing was carried out in two different ways:

- 1) Descriptive Statistics: collection and descriptive analysis of the responses, with information on frequencies, means, medians, modes and standard deviations.
- 2) Application of the ECSI model: estimation of model parameters based on the data collected through PLS methodology (Partial Least Squares).

Sample

The survey was made available via an online platform and its presence was announced through messages sent to the e-mail addresses of customers who had made purchases over the weekend during the first quarter of 2013.

Before its implementation, the questionnaire was tested with 5 employees of the store, who made improvement suggestions, mainly in order to adapt its length and language to the characteristics of the individuals who were planned to be interviewed. In total, 117 responses were successfully collected, with 42% of respondents being female, and 48%

male. 42% of the sample consists of individuals between the age of 36 and 50, 33% having secondary education and 30% having higher education. 86% are employed, 29% in scientific and intellectual activities, 4% are unemployed, 7% are students, 2% are pensioners, and 1% were in housekeepers.

Presentation and discussion of results

Regarding the responses obtained to the questionnaire (Table II), it can be stated that, in general, they were very positive (item means always at least above 6). Furthermore, the dispersion of responses, i.e. their distribution relative to the mean, is, in general, low.

Table II. Descriptive statistics

The low response rate to the question on the price of services offered by the store (Q17, with 42% of non-responses) needs highlighting, which can be explained by the fact that not all customers take advantage of such services. Questions regarding the quality of complaints resolution by the store (Q20.1 and Q20.2) present complementary response rates as they are mutually exclusive questions.

Regarding the value calculated for the mode, the following items stood out as they obtained the maximum value on the response scale (modes of 10): friendliness and availability of staff (Q11), reliability of products (Q13), resolution of complaints (Q20.1) and an innovative and forward-looking image (Q27).

The estimation of the parameters of the proposed conceptual model was made by PLS methodology, using *SmartPLS software*. PLS, or the method of partial least squares, refers to a way of solving SEM problems through using simple linear regressions. The method focuses on the computation of estimators for the latent variables by minimizing the variance of the dependent variables' residues. An estimation of the model is made,

initially, by calculating the value of the latent variables and of the measurement model, and, at a second stage, the values of latent variables are substituted in the structural model, which in turn enables it to be globally estimated (Vilares and Coelho, 2005).

This methodology has the advantage of not having to establish hypotheses about the distribution and independence of the observed data. In addition, it presents low demands regarding sample size requirements. In this case, taking into account that the variable of satisfaction depends directly on four linear relations, only 40 observations (four ratios multiplied by ten observations each) would be needed for PLS to function properly.

Based on the original model suggested by ECSI, the measurement and structural models were designed on *SmartPLS* software, and presented in Figure 3.

Figure 3. The design of measurement and structural models in *Smart PLS* software

Before proceeding to the analysis of the estimated model, some measures of statistical quality provided by *Smart PLS* are presented which are relevant to the evaluation of such models:

- The average extracted variance (AVE) indicates the proportion of all the variances of the indicators used in a given block, which is explained by the latent variable associated with this block (Vilares and Coelho, 2005). It is recommended that the AVE presents values greater than or equal to 0.5, indicating that at least 50% of variance is explained. Furthermore, the model is valid whenever the AVE square root values are higher than the inter-constructs correlation coefficients.
- R^2 represents a measure of quality of fit, as is the case in classical linear regression. According to Vilares and Coelho (2005), only values from 0.35 are

considered, as these represent significant explanatory impact. Nevertheless, Barclay *et al.* (1995) point to 0.25 as the reference value for R^2 .

- The internal consistency of a scale can be estimated by measures such as the composite reliability or the Cronbach alpha (both ranging from 0 to 1). The values for both measures allow for conclusions about the reliability of the latent variable, meaning whether there is inter-correlation between all the indicators included in it. For Nunnally and Bernstein (1994), when the composite reliability values are higher than 0.7, it is possible to say that the construct is reliable; Murphy and Davishofer (1988) consider that Cronbach alpha values lower than 0.6 are unacceptable, while lower than 0.7 mean that the scale has low reliability.

The estimation of the model shown in Figure 3 resulted in values deemed unacceptable for the composite reliability and Cronbach alpha of the *perceived value* and *loyalty* variables. The variables LOY19, QUA10, EXP5 and VAL17 had individual loadings lower than the recommended value of 0.5. A new model was then designed by removing these variables. Figure 4 presents the final measurement and structural model estimated. As a result of these amendments, the statistical quality of the model was improved and it was considered to be an adequate representation of the empirical data collected. Furthermore, and despite the fact that the “three measure rule” (Hair *et al.*, 1992) was not observed (two of the latent variables have less than three indicators), the model was considered to be identified since no identification problems have been detected by the *SmartPLS software* used for the estimation procedure. Additionally, the model is

recursive and observes the “order condition” – the model is over identified (degrees of freedom higher than zero) (Hair *et al.*, 1992).

Figure 4. The structural and measurement model

With regard to the statistical quality of the measurement model all loadings are now higher than 0.5 (Figure 4). Furthermore, the values of AVE are significant (higher than 0.5) for all constructs and composite reliabilities are also higher than the reference value of 0.7 (Table III). Finally, for all constructs the computed square root values of AVE are higher than the correlation coefficients calculated between each latent variable (construct) and the remaining ones (Table IV), which assures the discriminant validity of the measurement model.

Table III. Statistical quality measures

Table IV. Discriminant validity assessment

The statistical quality of the structural model is also acceptable (Figure 4), despite the fact that some of the structural coefficients linking the latent variables are quite small and not statistically significant (

Table V), as it is the case for the relations between *complaints* and *loyalty*, *expectations* and *satisfaction*, and *expectations* and *perceived value*. Nevertheless, these results comply with previous results obtained from studies using the ECSI model (or an adaptation of it) (e.g.: Han and Zhou, 2008; Wallace *et al.*, 1999; Fornell 1992). In terms of R^2 , there is only one value that is lower than 0.25, for the *perceived value* variable (Table III and Figure 4).

Table V. Structural coefficients

The results obtained from the estimation of the model, highlight two important points related to the question under study:

- The structural coefficient estimated for the relation between the latent variables *satisfaction* and *loyalty* is quite significant (0.496);
- The total effect of *satisfaction* on *loyalty* is 0.505 which means that a unit change in the level of satisfaction contributes (directly and indirectly) to an increase in loyalty of roughly half this value.

Thus one can conclude that there is empirical evidence to support the hypothesis of this study, i.e.: that *satisfaction* positively influences consumer *loyalty*. Satisfaction is, incidentally, the dimension that contributes the most to consumer loyalty.

It is worth noticing that *image* also has a very significant impact in loyalty. In this case, it is important to verify that the total effect comes from the effect that *image* has on *loyalty*, via *satisfaction* (which directly exerts the highest value) and *complaints* (whose impact is virtually nil).

To put our results in perspective, we compared them with those obtained in the ECSI run in Portugal in 2012 (available on the website <http://www.ecsiportugal.pt>). The comparison supports the conclusion that our results are in line with the scenario obtained for Portugal, despite the higher average values found for the *loyalty* and *perceived quality* dimensions (

Table VI).

Table VI. Comparison of results with ECSI Portugal 2012

Conclusions

The ECSI has been applied to various industry sectors in different countries, including Portugal. However, it had never been used in the context of Portuguese retail. Moreover, it could well contribute to the discussion on the relationship between satisfaction and loyalty, which is indeed a topic of interest for researchers in marketing and quality management fields (Mehra and Ranganathan, 2008). In particular, the ECSI model overcomes some limitations of the traditional way of analysing the role of customer satisfaction as the single direct driver of customer loyalty. As suggested recently by Nyadzayo and Khajehzadeh, (2016), the model considers other potential antecedents of loyalty, namely image and complaints.

The major objective of this study was to shed some light on the knowledge of the impact of customer satisfaction on loyalty. As the literature review has highlighted, this is a relationship that may not always exist and, when it does, it is subject to not only various theoretical interpretations, but also various constraints of an idiosyncratic and circumstantial nature. The complexity of the matter and the existence of contradictory evidence thus justifies further research in the area. This study partially addresses this gap, looking in particular to a highly relevant and competitive industry: the retail sector.

Regarding the hypothesis tested, in accordance with most previous studies, it was possible to find a positive causal relationship between satisfaction and loyalty. This relationship, in the case studied, is 2:1: if customer satisfaction increases by two units, then an increase in loyalty of one unit is forecast. It was also possible to verify the impact of the antecedents of satisfaction (value, quality, expectations, and image) and of loyalty (complaints, satisfaction). The findings are in line with the literature. Thus, it is possible to reaffirm the importance of promoting satisfaction to achieve loyal customers in large-

scale retail, and ultimately to ensure positive long-term results. Alongside this, it is also important to remember the role of organizational image in achieving this ultimate goal, in the case of the sector studied.

Based on these findings, it is possible to derive some managerial implications:

- First of all, if loyalty is to be enhanced, having satisfied customers is paramount. With a structural coefficient of 0.496, satisfaction was found to be the dimension with the highest contribution to loyalty;
- Moreover, customer satisfaction strongly depends on the firm's image. Therefore, having a reputation of being an innovative firm, that is concerned with its customers and on which people can trust is essential. Companies must then consider that loyalty is the outcome of a long-term strategy that leads to the building up of an image of consistency of action, ethical behaviour and social responsibility;
- Finally, stores should develop considerable efforts to improve customers' perceptions of quality, since this dimension has a significant impact on both value perception and satisfaction, thus having a strong influence on buyers' decisions. In this regard, improving customer information (the item with the lowest score in this dimension), a strategy that does not involve considerable resources and can have a high payoff, is highly recommended.

Despite the interesting results achieved with this empirical study, some limitations must be acknowledged. First of all, the study is based on the single case of a retail company operating in Portugal, which limits its representativeness in terms of this sector. In the future, it would be interesting to roll out the study to a representative sample of the retail sector. Moreover, it was decided to adopt a method of a non-probability sample of

convenience (each respondent is an individual voluntarily willing to participate in the study), which may raise questions regarding the representativeness of the sample. The fact that the questionnaire was self-administered and carried out online prevents, from the outset, the participation of certain groups of individuals (particularly older and less academically qualified people), whose contribution would be important in terms of enhancing sample representativeness.

Regarding the size of the sample (117 observations), it would have been desirable to have had a larger one, especially as it was taken in a large retail store, where the number of weekend shoppers can reach into the thousands. Unfortunately, we could not have access to the e-mail addresses database, so we do not have information on the dimension of the population addressed in the study or its characteristics, which of course limits our understanding about the sample representativeness.

Finally, there is always the possibility that a common method bias has occurred, due to the measurement method used in SEM PLS studies, including this one. The instructions at the top of the questionnaire may have influenced the answers provided by the different respondents in the same general direction; also the implicit social desirability associated with answering questions in a questionnaire in a particularly way may lead to this type of bias.

It is also suggested that other study tools could have been used, complementary to ECSI, especially those that measure customer satisfaction and loyalty through other methodologies, in order to have a more complete view of the problem in question.

To conclude, the current study, apart from its theoretical contribution linked to a better understanding of the antecedents of customer satisfaction and loyalty, is also useful for the specific retail store where it was undertaken, to help it develop better customer

service, in order to increase satisfaction and loyalty. It is also useful for the entire network of stores for that retailer and for other retail chains. Furthermore, the systematic application of a customer survey to whole sectors of the economy would improve competition and customer service, and ultimately contribute to development and economic growth.

Annex

Table VII. Measurement model

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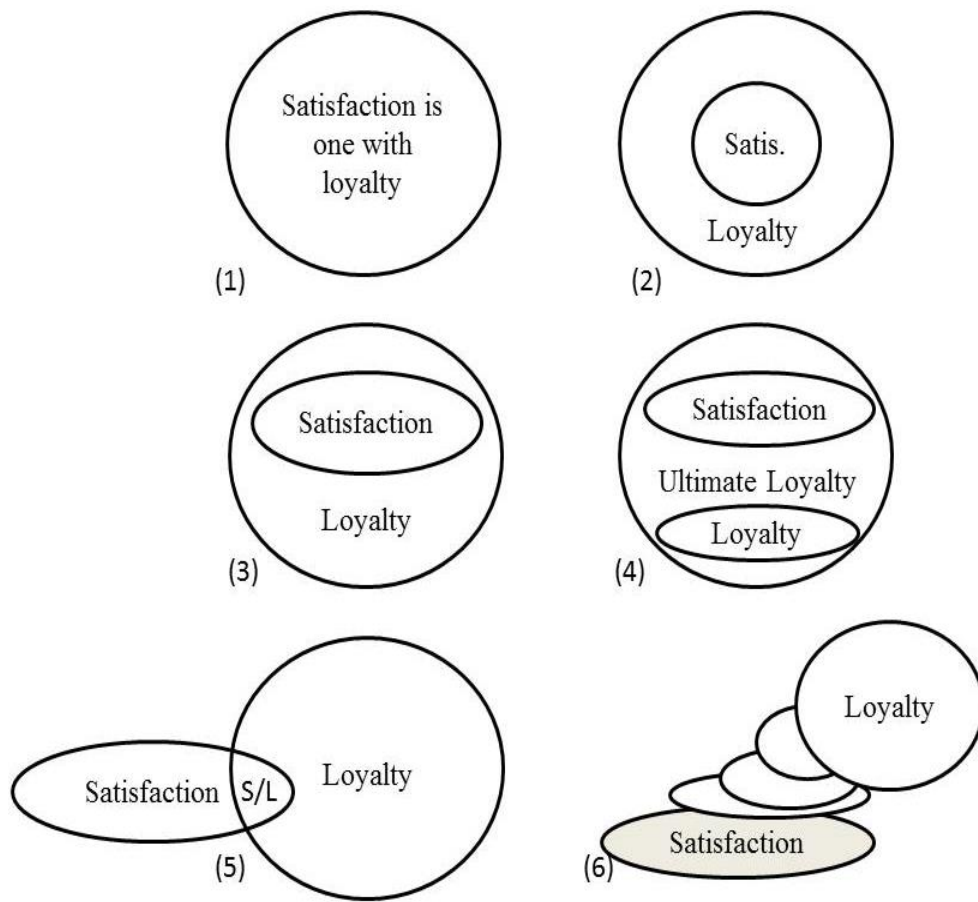


Figure 5. Possible types of satisfaction-loyalty relationships (from Oliver, 1999)

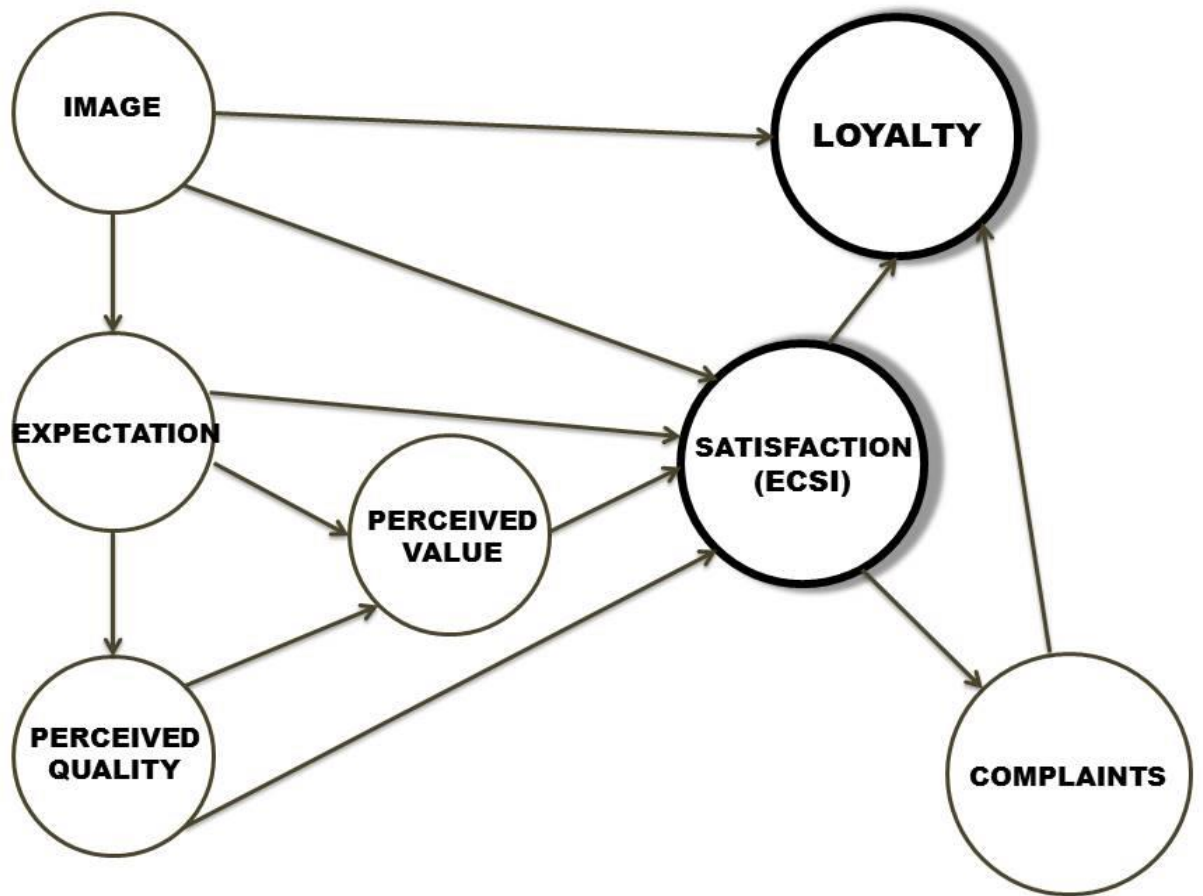


Figure 6. The ECSI structural model

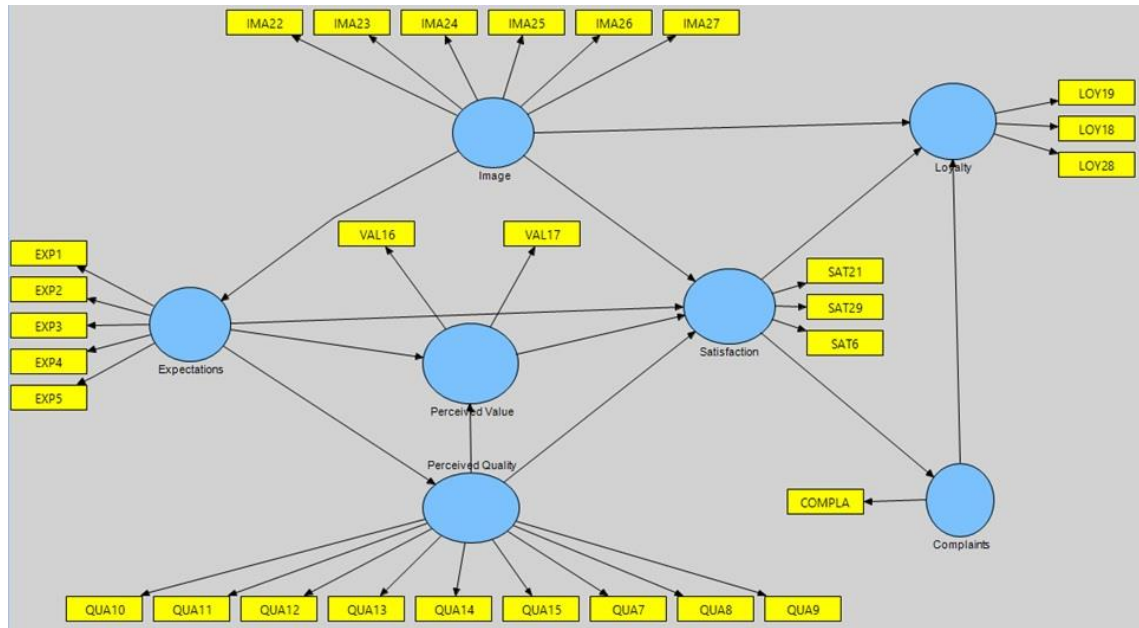


Figure 7. The design of measurement and structural models in PLS software

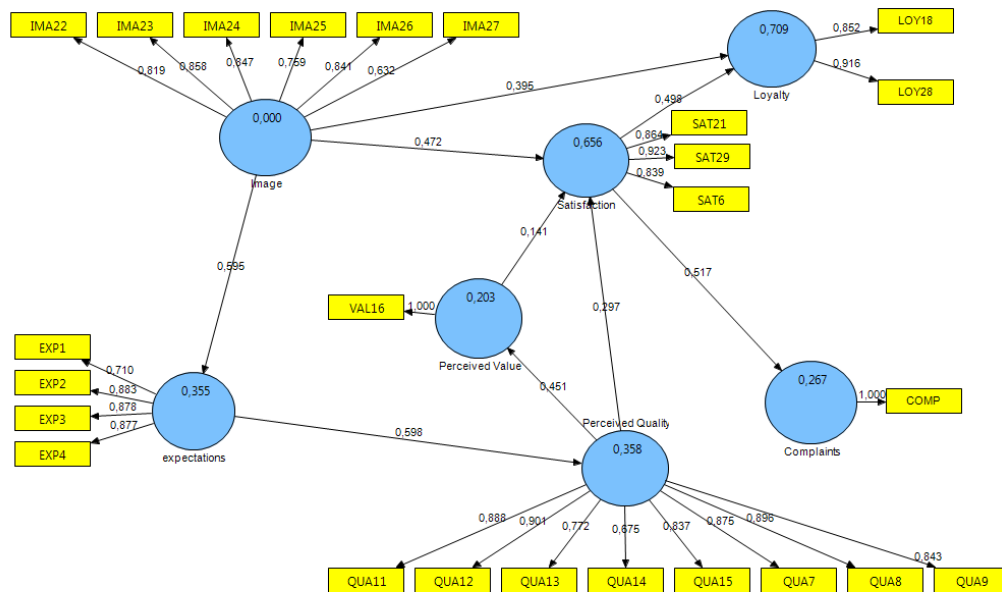


Figure 8. The structural and measurement model