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Pharmacies Customer Satisfaction and Loyalty – A Framework Analysis

José Augusto Rosa Bastos
Instituto Politécnico de Viseu
Pablo de Muñoz Gallego
Universidad de Salamanca

Abstract: We develop a model to demonstrate that loyalty is a consequence of service quality and customer satisfaction. A specific scale has been developed and applied to a survey at a two level of Portuguese pharmacies: rural (with no competition) and urban pharmacies (with some competition). Using a structural equation modelling methodology we demonstrate that the more competition (urban pharmacies) less loyalty, the more dependent with the service (high consume in product pharmacies) the more loyal.

Keywords: pharmacies customer satisfaction, loyalty, structural equation modelling.

Departamento de Administración y Economía de la Empresa
Campus "Miguel de Unamuno"
37007 Salamanca (España)
Telef. +34 923 294500
Fax: +34 923 294715
bastos66@gmail.com
pmunoz@usal.es

1. INTRODUCTION

The retail pharmacy sector across the European Union remains one of the last bastions of tight government regulations and widespread resale price maintenance (Ploch and Schmidt, 2001).

The customer loyalty is crucial in much business. In the Portuguese pharmacies there is no free competition between pharmacies. That is an additional problem to develop a model of loyalty. Thus, this is an opportunity to develop a study in a non-competitive market (the road to liberalization on the market is irreversible) and in the future reply the study to a competitive one and compare each other.

In this moment, Portugal is one of the rare developed countries where the medical drugs are exclusively sold in pharmaceutical establishments. But, this is the turn on moment. The Govern has announced the partial liberalisation to this industry. The medical drugs without medical prescription, in a short future, could be sold in the hypermarkets. Thus, this is the moment to capture the grade of loyalty with no liberalisation and, in the future, compare with the post liberalisation loyalty.

Our working paper is structured as follows. **First** of all, we will differentiate, conceptually, between service quality and customer satisfaction. Based on a review of the literature, we will offer an outline of the construct of service quality, customer satisfaction, and behavioural intentions. **Second**, we will focus on the relationship between service quality, customer satisfaction, and behavioural intentions. **Third**, we will discuss the results of an empirical study that was undertaken to test our research hypotheses. We develop a model to demonstrate that loyalty is a consequence of service quality, and customer satisfaction. Specific scales has been developed and applied to a survey at a two kind of Portuguese pharmacies: rural (with no competition) and urban pharmacies (with low competition). We demonstrate, with a structural equation model, that loyalty results directly from customer satisfaction, and indirectly from service quality. **Finally** we construct a matrix of loyalty and dependence in a 2x2 design. To obtain the coefficients for that matrix we divide de sample with a multi-group analysis[1]. That result matrix is a framework with high competition-low competition and high dependency-low dependency.

The **results** confirm that the more competition (urban pharmacies) less loyalty, the more dependent with the service (high consume in product pharmacies) the more loyal.

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[1] Some researchers (Yang and Peterson, 2004; Bell, Auh and Smalley, 2005) tests the moderating effects of switching costs in customer loyalty. We don't put variables competition and dependency as moderating variables in the model, but as sample breaking variables to the multi-group analysis.

2. REVIEW OF CONCEPTUAL ISSUES IN PHARMACIES SERVICE QUALITY, CUSTOMER SATISFACTION, AND LOYALTY

The investigation about service quality and customer satisfaction has different conceptualizations and aspects (Dabholkar, Shepherd, and Thorpe, 2000): the service quality is captured with the perceptions model (Cronin and Taylor, 1992, 1994) or captured with the disconfirmation model (Parasuraman, Zeithaml and Berry, 1994; Teas, 1993, 1994); with longitudinal studies or cross-sectional ones; with factors as components or as antecedents of service quality; service quality being the same constructs or different from customer satisfaction.

2.1 Service Quality

We know that, in the case of services, the criteria that customers use to evaluate service quality is complex and difficult to determine precisely due to the fact that services are intangibles, heterogeneous, cannot be placed in time, and production and consumption are simultaneous (Athanassopoulos, 2001).

The **identification of service quality** dimensions was of **primary interes**t to researchers (Parasuraman et al, 1985, 1991a). The **development of measurement instruments** of service quality was the focus of subsequent research efforts (Parasuraman et al, 1988, 1991b, 1993; Cronin and Taylor, 1992, 1994; Buttle, 1996; Athanassopoulos 1998, 1999). The first big operational debate has been focused on whether service quality should be measured as perceptions or as disconfirmation (Cronin and Taylor, 1992, 1994; Parasuraman, Zeithaml, and Berry, 1994; Teas, 1993, 1994). Those who favour the former approach (Cronin and Taylor, 1992) suggest that perceptions of service quality more closely match customer evaluations of the service provided. Those who favour disconfirmation paradigm, such of Parasuraman et al., (1994) counter that measuring service quality, as disconfirmation is valid and further, it allows service providers to identify gaps in the service provided.

In the **disconfirmation model**, Service Quality is conceptualised as the comparison of service expectations with actual performance perceptions (Zeithaml et al., 1996). The operationalization of it is the SERVQUAL instrument. The main idea is that service quality is a function of the difference scores or gaps between expectations and perceptions. Thus, Service quality is a multidimensional concept. They find five dimensions of service quality: *reliability* (ability to deliver the promised service dependably and accurately); *responsiveness* (willingness to help customers and provide prompt service); *assurance* (ability to inspire trust and confidence); *empathy* (customers are individuals); and *tangibles* (elements that represent the service physically.

But this construct is criticised for theoretical and operational issues. It seems that this construct is industry specific and country specific. The validity and the reliability (Brown et al., 1993) of the difference between expectations and performance have questioned and several authors have suggested that perceptions scores alone offer a better indication of service quality (Cronin and Taylor, 1992; Teas, 1993), and application of SERVQUAL is not possible in new services, but only for existing ones.

However, SERVQUAL seems to be a useful scale to use in measuring service quality by making appropriate adjustments for industry and country contextual effects. It has been proven the validity and reliability across a large range of service contexts. Tyre Shop (Carman, 1990), discount and department stores (Finn and Lamb, 1991; Teas, 1993), medical services (Brown and Swartz, 1989), hospitals (Babakus and Mangold, 1992), higher education (Boulding et al., 1993), are some of the services where SERVQUAL was applied. Dabholkar et al., (1996) reported that in many services the SERVQUAL must be adapted with more or less items, with different group of factors.

The **perceived performance model** deviates from the above model in that expectations play a less significant role in satisfaction formation. The model performs especiallly well in situations where a product/service performs so positively that the customer's expectations get discounted in her/his post-consumption reaction to the product/service.

Increasingly, researchers (Mittal and Lassar, 1996; Olsen, 2002) are simply measuring perceptions (SERVPERF) as indicators of service quality (ignoring expectations completely) and are finding good predictive power in their studies. Some researchers (Babakus and Botler, 1992; Cronin and Taylor, 1992) have compared computed difference scores with perceptions to conclude that perceptions are a better predictor of service quality than disconfirmation.

A study by Churchill and Suprenant (1982) also partially supports the efficacy of using only performance perceptions to measure service quality.

Below, we report, some studies that we investigated and uses the SERVPERF or modified scales that seem to be according to SERVQUAL.

Has we see in table 1, the diversity of studies applied to many different service industries, results on a great acceptability of this constructs. Many other studies are made but those seem to us the more approachable with the study on pharmacies satisfaction. Only a few numbers of studies are made with the focalization on health industry and a smaller number (almost rare) of those on pharmacies. The study reported in pharmacy industry is only about the

pharmacist service, not on the pharmacy as a store (Schommer and Wiederholt, 1994).

Table 1 Related Studies Focused on Service Quality

Studies	Investigated Concept	Focalization	Conceptualization	Operationalization
Bloemer, Ruyter, and Wetzels (1998)	Service Quality and Service Loyalty	Supermarkets, Fast Food, Outpatient Clinics, and Amusement Parks	Perceptions and Service Loyalty	SERVPERF and Zeithaml Scale for Service Loyalty
Cronin and Taylor, (1992)	Service Quality	Banking, Pest Control, Dry Cleaning, and Fast Food	Disconfirmation Theory	SERVPERF
Dabholkar, Shepherd, and Thorpe (2000)	Service Quality	National photographic company's	Perceptions-Expectations; Perceptions	Modified SERVQUAL
Dabholkar, Thorpe, and Rentz (1996)	Service Quality	Shopping Stores	Hierarchical Structure	Modified SERVQUAL
Finn and Lamb (1991)	Service Quality	Retail Stores	Perceptions-Expectations	SERVQUAL
Lehtinen and Lehtinen (1991)	Service Quality	Restaurants	Perceptions	Own Scale
Parasuraman, Zeithaml, and Berry (1985)	Service Quality	Many Services	Perceptions-Expectations	SERVQUAL
Parasuraman, Zeithaml, and Berry (1988)	Service Quality	Bank credit card, repair maintenance, and telephone.	Perceptions-Expectations	SERVQUAL
Parasuraman, Zeithaml, and Berry (1994)	Service Quality	Retail Chain, Auto insurer, life insurer, and computer manufacturer.	Perceptions-Expectations	SERVQUAL
Spreng and Mckoy (1996)	Service Quality	Assessment of Undergraduate Advising	Disconfirmation Theory	Oliver
Swan, J.E. and Trawick, I.F. (1981	Service Quality	Restaurants	Disconfirmation Theory	SERVQUAL
Taylor and Cronin (1994)	Service Quality	Professional Health Care Services; Amusement Services; Airline Services, and Telephone Services.	Perceptions	SERVPERF
Yang et al. (2001)	Service Quality	Internet Pharmacy Services	Perceptions	Own Scale

Another problem is **what attributes does contain a service quality scale**. We know that customers of services observe and evaluate the production process as they experience the service they receive (Parasuraman, Zeithaml, and Berry, 1988). Berry et al., (1985) argued that **service quality attributes** of search, experience, and credence, are used by consumers to evaluate service quality. **Search attributes**, such as physical facilities, appearance of personnel and supplier's image can be considered before consuming the service. **Experience attributes**, like responding quickly to a request and performing a service at the agreed time are assessed on the basis of the actual service experience. **Credence attributes** like financial security of an investment cannot be determined even after repeated use of service.

In our study we have the preoccupation to incorporate these attributes on the construction of the scale.

2.2 Customer Satisfaction

As concluded by the literature review Customer Satisfaction is a summary affective response of varying intensity, with a time-specific point of determinate and limited duration, directed toward focal aspects of product acquisition and/or consumption.

Some researchers (Cronin and Taylor, 1992; Taylor and Baker, 1994) treat **service quality and customer satisfaction as distinct constructs**, in the sense that service quality is an attitude while customer satisfaction is often a transaction-specific measure.

Customer satisfaction has been defined in various ways, but the conceptualization, which appears to have achieved the widest acceptance, is that satisfaction is a post-choice evaluative judgment of a specific transaction. Fornell (1992) suggests that satisfaction can be viewed directly as an overall feeling.

Satisfaction is related closely to, but is not the same as, the customer's general attitude toward the service. The key to distinguishing satisfaction from attitude is that satisfaction assessments relate to individual transactions whereas attitudes are more general (in Bitner, M.J. (1990). Similarly, one interpretation suggests that satisfaction can be distinguished from perceived quality. Parasuraman, Zeithaml, and Berry (1998) define "perceived (service) quality" as the consumer's judgement about a firm's overall excellence or superiority. This definition suggests that perceived quality is similar to an individual's general attitude toward the firm (Zeithaml, 1988).

Another question with customer satisfaction is the study of antecedents and consequences (Anderson and Sullivan, 1993). They had found that customer satisfaction is best specified as a function of perceived quality and disconfirmation and quality has a greater impact on satisfaction and repurchase intentions than quality which exceeds expectations. More important, they had found that elasticity of repurchase intentions with respect to satisfaction is lower for firms that provide high expectations.

In table 2 we resume some studies that we have analysed to achieve a construct that could traduce the best operacionalization. There isn't a so universal acceptable scale to the construct of customer satisfaction than for the construct of service quality. In the operacionalization of the constructs of customer

satisfaction we have adopted the scale of Bloemer and Ruyter (1998) because it seems more adapted to pharmacy services.

Table 2 Related Studies Focused on Customer Satisfaction

Studies	Investigated Concept	Focalization	Conceptualization	Operationalization
Athanassopoulos, Gouranis, and Stathakopoul (2000)	Customer Satisfaction and Behavioral Responses	Commercial Retail Banks	Loyalty and Satisfaction	SERVPERF + Behavioral Scale
Bloemer and Ruyter (1998)	Store Satisfaction, Store Loyalty, and Store Image	Department Stores	Loyalty, Satisfaction, and Image	Many Own Scales
Bloemer and Schroder (2002)	Store Satisfaction and Store Loyalty	Supermarket	Person antecedents, Situation Antecedents, person-within situation antecedents	Many Scales
Brady and Robertson (2001)	Service Quality and Customer Satisfaction	Fast Food	Service quality, Satisfaction and Behavioral Intentions	Gotlieb et. all (1994), Oliver (1991) and Zeithaml (1996)
Hayashi et al. (2005)	Patient Satisfaction	Pharmacy services	Pharmacy Services and Patient Satisfaction/Dis-satisfaction	Own Scale
Kamei et al. (2001)	Customer Satisfaction	Pharmacy services	Pharmacy Service and Customer Satisfaction	Own Scale
Otani, Kurz, Burroughs, and Waterman (2003)	Satisfaction and Behavioral Intentions	Patients Hospital Service	Loyalty and Satisfaction	Own Scale
Schommer, J.C. and Wiederholt, J.B.(1994)	Satisfaction	Pharmacist	Service encounter Evaluation	Bitner Model
Spreng, McKenzie, and Olshavisky (1996)	Determinants of Consumer Satisfaction	Camcorder	Desires, perceptions and expectations	Own Scale
Wirtz, J., Matilla, A.S., and Tan, R.L.P. (2000)	Target-Arousal, Affect and Satisfaction	Video role play in a simulation of a restaurant	Arousal Theory's	Own Scale
Yen and Gwinner (2003)	Customer Satisfaction and Loyalty	Bookstores and travel agencies in internet	Loyalty and Satisfaction	Own Scales

In table 1 and table 2 are focalized in the specificity of Store Image, Store Satisfaction, and Store Loyalty. In present study, it was important to study the particular aspect of certain services, where the concepts linked to the concept of store are important, such as physical evidence, image, localization, and parking. We consider that pharmacies tend to be considered as Stores of Pharmaceutical Products. The attributes and the techniques (merchandizing is one of those) used in the pharmacies are more and more likely as the used in stores. In the particularly case of Portugal, it's not possible to sell drugs in other stores than pharmacies, but the government has announced a law to permit some stores to sell drugs with unnecessary prescription. When this law is applied there will be a change in the merchandizing of drugs.

2.3 Behavioural Intentions

Several researchers make the distinction between **offensive and defensive marketing policies**. According to those researchers, offensive marketing actions refer to capturing new customers by investing in service quality, and

defensive marketing actions refer to retaining existing customers. There are compelling arguments of the superiority of the defensive marketing over de offensive one. For example, lowering customer defections can well can have a strong impact on a company's profits (Reichheld and Sasser, 1990) as well as market share (Rust and Zahorik, 1993). Relative retention has been shown to explain profits better than market share, scale, cost position, or any other variables usually associated with competitive advantage (Reichheld, 1996). Similarly Fornell and Wernerfelt (1987) concluded that is better for a company to spend resources to keep existing customers than to attract new ones. Customers who remain loyal to the company are likely to engage in favourable word-of-mouth behavioural responses and are possible to cross-sell to theses customers or even charge them a premium price.

Customer loyalty expresses an intended behaviour related to the product or service. This includes the likelihood of future purchases or renewal of service contracts or, conversely, how likely it is that the customer will switch to another brand or service provider. Customers may be loyal owing to high switching barriers related to technical, economical or psychological factors, witch make it costly or difficult for the customer to change supplier. Customer may also be loyal because they are satisfied with the supplier or product brand, and thus want to continue the relationship. As most barriers appear to be of limited durability, companies tend to approach satisfaction as the only viable strategy in the long run.

For the construction of service loyalty (…a positive behavioural intention) the constructs are more diversified. Meanwhile the investigations of Bloemer et al. (1998), Bloemer (2002), Bloemer and Ruyter (1998), and Zeithaml et al., (1996), are the best contributions to the research. For Behavioural Intentions we have adopted the Scale of Zeithaml et al., (1996)

In table 3, we present studies that analyze the consequences of Customer Satisfaction. The customer transmits their satisfaction with behaviors. Those behaviors could be such of word-of-mouth, complaint, and loyalty.

2.3.1 Favourable Behavioural Intentions

One group of behavioural intentions could be designed as positive behavioural intentions. One of this is loyalty.

Certain behaviours signal that customers are forging bonds with a company. When customers praise the firm, express preference for the company over others, recommend the company of service to others (Parasuraman, Berry, and Zeithaml, (1991a), say positive things about company to others (Boulding et al.

1993), increase the volume of their purchases, or agreeably pay a price premium (Rust and Zahorik, 1993), they are indicating behaviourally that they hare bonding with the company.

Several studies have examined the association between service quality and more specific behavioral intentions. Parasuraman, Berry, and Zeithaml (1991a) find a positive and significant relationship between customers' perceptions of service quality and their willingness to recommend the company. Boulding et al. (1993) find a positive correlation between service quality, and repurchase intentions and willingness to recommend. A list of specific indicators of favourable behavioural intentions can be compiled.

Table 3 Related Studies to Customer Loyalty and Behavioral Intentions

Studies	Investigated Concept	Focalization	Conceptualization	Operationalization
Athanassopoulos, Gounaris and Stathakopoulos (2000)	Behavioral Responses to Customer Satisfaction	Commercial Retail Banks	Customer Satisfaction and Behavioral Responses	SERVPERF + 9 items; Behavioral Scale
Ballester and Aléman (2000)	Brand Trust and Consumer Loyalty	Child Care Product	Loyalty and Brand Trust	Own Scale
Biong, H. (1993)	Marketing Mix elements, Satisfaction and Loyalty	Grocery Business	Customer Satisfaction and Behavioral Responses	Own Scale
Bloemer and Schroder (2002)	Store Satisfaction and Store Loyalty	Supermarket	Person antecedents, Situation Antecedents, person-within situation antecedents	Own Scale
Bloemer and Ruyter (1998)	Store Loyalty, Store Satisfaction, Store Image	Department Stores	Relationship between…	Own Scale
Bloemer, Ruyter, and Wetzels (1998)	Service Quality and Service Loyalty	Supermarkets, Fast Food, Outpatient Clinics and Amusement Parks	Linking Service Quality and Service Loyalty	SERVPERF and Zeithaml Scale for Service Loyalty
Donovan, R.J., Rossiter, J.R., Marcoolyn, G., and Nesdale, A. (1994)	Store Atmosphere and Purchasing Behavior	Retail Shopping	Mehrabian-Russel(M-R) Model	Own Scale
Lewis and Soureli (2006)	Service Loyalty	Retail Banking	Service Quality, customer Satisfaction, Loyalty and Value	Own Scale
Sirohi, N., Mclaughlin, E.W., and Wittink, D.R. (1998)	Consumer Perceptions and Store Loyalty	Supermarket	Perceptions and Loyalty	Own Scale
Zeithaml, Berry, and Parasuraman (1996)	Behavioral Consequences of Service Quality	Computer Manufacturers; Retail chain; Automobile Insurer	Perceptions	SERVQUAL and Behavioral Scale

Increased customer retention has two important effects: (1) it can lead to a gradual increase in the firm's customer base which is vital in an era of low sales growth, and (2) the profits earned from each individual customer grow the longer the customer remains loyal to the firm. Existing customers also tend to purchase more than new customers (Rose, 1990). And costs to retain customers are about 80% lower than the costs to acquire new customers.

A focus on one's current customers, if it results in increased satisfaction, may also generate other benefits, for example, the generation of positive word-of-mouth. And with enhanced loyalty the prevailing practice of offering costly loss leaders to generate store traffic may become less necessary. However, how customers develop loyalty to a particular store and how that loyalty can be maintained are open questions. An understanding of current customer's store loyalty intentions and their determinants is an important basis for the identification of optimal retailer actions.

Loyalty is frequently defined as **observed behaviour** (Liljander and Strandvik, 1995) or actual behaviour that drives the performance of an industry. Repeat purchasing and purchasing sequence are measures of actual behaviour. Loyalty is also an **attitude**, expressed for example, in the willingness to recommend a service provider to other consumers (Selnes, 1993). Loyalty is also **cognitive**, that could be operationalized as a product or service that comes first to mind when making a purchase decision or the product or service that is the first choice among alternatives (Ostrowski et al., 1993), or price tolerance (Anderson, 1996; Fornell et al., 1996).

So, when defining an instrument to measure behavioural intentions (loyalty is a positive behaviour) we must consider behavioural, attitudinal and cognitive aspects.

2.3.2 Unfavourable Behavioural Intentions

Customers perceiving service performance to be inferior are likely to exhibit behaviours signalling they are poised to leave the company or spend less in the company. These behaviours include complaining, which is viewed by many researchers as a combination of negative responses that stem from dissatisfaction and predict or accompany defection.

Complaining behaviour itself is conceptualized as multi-faceted. According to Singh (1988), dissatisfaction leads to consumer-complaining behaviour that is manifested in **voice responses, private responses or third-party responses**. Specific indicators of unfavourable behavioural intentions suggested by the preceding discussion include different types of complaining (complaining to friends or external agencies) and contemplation of **switching to competitors**. Another indicator of eventual defection is a **decrease in the amount of business** a customer does with a company.

3. Relations between the Concepts and Formulation of Hypothesis.

3.1 Service Quality and Customer Satisfaction

The service literature has left confusion as to the **relationship between consumer satisfaction and service quality** (Brady and Robertson, 2001). This distinction is important to managers and researchers alike because their objective should be to have consumers who are satisfied with their performance or to deliver the maximum level of perceived service quality. A major problem in the literature is the hesitancy to call **perceived service quality an attitude** (Parasuraman, Zeithaml, and Berry, 1988). Those who consider it an attitude, considers that he is modified by the level of (dis)satisfaction experienced by the consumer during subsequent encounters with the firm. Oliver's research suggests that service quality and customer satisfaction are distinct constructs, but are related in that satisfaction mediates the effect of prior-period perceptions of service quality to cause a revised service quality perception to be formed. Satisfaction thus rapidly becomes part of the revised perception of service quality.

The expected positive relationship between performance quality and customer satisfaction is in the line with the Rational Expectation Theory (Yi, Y. 1990) and well documented in several studies such Fornell, C. (1992) and Cronin and Taylor (1992). Fornell (1992) found a correlation between perceived quality and satisfaction. Cronin and Taylor (1992) found strong and positive causal paths between overall service quality and satisfaction.

Cronin and Taylor (1992), using a single-item purchase intention scale, find that service quality affects customer satisfaction.

Thus, these results suggest the following relationship:

Hypothesis 1: Service quality will have a direct positive effect on satisfaction.

3.2 Customer Satisfaction and Positive Behavioural Intentions

The relationship between satisfaction and loyalty has been observed in several studies. Fornell (1992) have found strong correlations between satisfaction and loyalty. However, the relationship between satisfaction and loyalty is expected to be dependent on the characteristics of the local product or services.
The research examining the effects of customer satisfaction on behavioural responses has received very limited attention in the marketing literature (Athanassopoulos, 2001).

Zeithaml et al, (1996) research has focused on behavioural intentions, Athanassopoulos research concentrates on actual behavioural responses and develops an extensive multiple-item behavioural responses measure.

An interesting and unexplored research is the treatment of customer satisfaction and loyalty judgments with the agency theory and trust research (Singh and Sirdeshmukh, 2000).

Often a high positive correlation between the constructs of satisfaction and product loyalty is reported. Service loyalty is more dependent on the development of interpersonal relationships as opposed to loyalty with tangible products (Macintosh and Lockshin, 1998), and person-to-person interactions graduate the loyalty (Suprenant and Solomon, 1987), perception of risk is greater and this can act as a barrier to customer switching. So, loyalty is more prevalent among service customers than among customers of tangible products.

Hypothesis 2: Customer Satisfaction will have a positive direct effect on positive behavioural intentions (Loyalty).

3.3 Service Quality and Positive Behavioural Intentions

A considerable number of authors have argued that service quality is an important determinant of service loyalty but its exact relationship has remained unclear (Gemler and Brown, 1996). The link between service quality is mediated for customer satisfaction or not (Brady and Robertson, 2001)?

Cronin and Taylor (1992) didn't find a significant effect of service quality in purchase intentions. Taylor and Baker (1994), using a three-item purchase scale, obtain significant effects for service quality, satisfaction and an interaction term on purchase intention. Other researchers (Boulding et al., 1993; Zeithaml et al., 1996), do not distinguish between service quality and customer satisfaction, and treat these as one and the same. Boulding et al., (1996), using five different behavioural intention measures, find a significant relationship between service quality and all five behavioural intention measures.

One area that is not sufficiently explored is the relationship between evaluations of service quality and loyalty of customers (Bloemer et al., 1999). Loyalty is often included in service quality models as an outcome variable (Cronin and Taylor, 1992; Boulding et al., 1993), but there are a number of factors that limit an in-depth understanding of customer loyalty in services. **First**, it has remained unclear whether or not there is a direct relationship (between service quality and loyalty). Some researchers failed to find one (Cronin and Taylor, 1992). **Second**, the operationalization of the construct of service loyalty has still

limited, ignoring the full range of conceivable loyalty (re)actions that may follow the evaluation of a service (Zeithaml et al. (1996). Cronin and Taylor (1992), focused solely on repurchase intentions (measuring this construct as a single item), while Boulding et al. (1993) operationalized repurchase intentions and willingness to recommend. Zeithaml et al (1996) find five dimensions (loyalty to company, propensity to switch, willingness to pay more, external response to problem, and internal response to problem). Bloemer et al. (1999) have found four behavioural intentions (word-of-mouth, purchase intention, price sensitivity and complaining behaviour.

Hypothesis 3: Service Quality will have direct positive effect on positive behavioural intentions (Loyalty).

The theoretical model is as follows. In some other models there are a few more constructs, like sacrifice, service value, or trust as antecedents of customer satisfaction (Cronin, Brady, and Hult, 2000).

Figure 1 The Conceptual Model
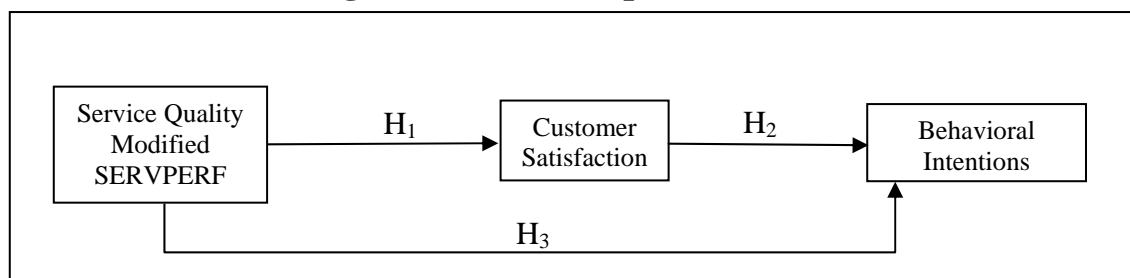
We decide not to put the service value as an antecedent of customer satisfaction accordingly with the results of Cronin et al., (2000) where they find a non-significant relation between service value and customer satisfaction and service value and behavioural intentions in the health care industry.

4. METHODOLOGY
4.1 Pretest

Three interviews were made to pharmacists. They give as a particular view of the industry and services. The present and future of the pharmacy establishments was discussed. Measures of the variables were pretested in one urban pharmacy with ten questionnaires before inclusion in the final data collection forms.

4.2 Sample
Data were collected from a sample of customers of six pharmacies belonging to the Portuguese country. Four of them are related to urban pharmacies and the

other two to rural pharmacies[2]. The reason for that choice is the presence in the same region of those two kinds of pharmacies with particular characteristics that we know, after the interviews, are better to collect the samples. The core characteristics to choice urban pharmacies are the size in terms of number of clients and the small relative distance between the pharmacies selected (all located in the center of the town). We say that they are in spatial competition not in price competition. The total population of Viseu city is about 100000 inhabitants served by 22 pharmacies. In the rural pharmacies, the main characteristic for the selection is the large distance to the next pharmacy (urban or rural). So the rural pharmacies are located relatively far-away from rural centers and are unique in the urban space where they are located. Those pharmacies are neither in spatial competition nor in price competition. The populations that are served by these pharmacies are about 2000 inhabitants/pharmacy.

Customers were randomly asked to fill out a questionnaire in front of the pharmacy where they have pharmaceutical attendance (it isn't necessary that they had bought a product). We expect this method is better for collect the sample method thus the client better records their experience with the pharmacy. One hundred and seventy eight questionnaires correctly filled out were collected (125 in urban pharmacies and 53 in rural pharmacies). The sample was found to be representative for the customers of the Portuguese pharmacies, in terms of age and gender.

The design of the questionnaire was based on multiple-item measurement scales that have been validated and found to be reliable in previous research. To examine the measurement issues, a qualitative study was conduct. Three long interviews were realized to owners of pharmacies: one in the rural context, the two others in an urban context. Three variables are considered crucial in the business: pharmacy proximity to a health center, good place to parking, and inter-personal relations between pharmacists and customers.

After that, we refine our measures and incorporate new items that are considered very important and specific in the pharmacies business (Kamei et al., 2001). All constructs were measured in seven-point Likert scales ranging from completely disagree to completely agree. The measurement items of the different constructs (PHARMAPERF - Service quality, PHARMASAT - Customer Satisfaction, and PHARMALOYAL - Behavioral Intentions) and their origin are shown in table 4.

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[2] All pharmacies are located at Centre Region of Portugal. Urban pharmacies are localized at Viseu City and rural pharmacies at two small villages: Campo de Besteiros and Canas de Senhorim.

4.3 Instrument Measures

The items for the scale of PHARMAPERF (see table 4) has based on SERVPERF scale (Cronin and Taylor, 1992). We have incorporated new items (B23, B24, B25, B26, B27, and B28) that we call, for instance, "Convenience". In result of the qualitative research we expect that these items can have importance in the Service Quality perception (see appendix 1). In the three interviews is common that are important to the business a good parking, proximity to a hospital, localization, and diversity of products. Those four variables are "competition" variables. But will be those variables important to the perception of service quality, in the actual competitive set?

To make possible the comparison in a future study (when the figure of family pharmacist will be created) we introduce two variables: private attendance and consultation service. In the present study we do not expect that those variables have much importance.

In the construction of the scale PHARMASAT - Customer Satisfaction (see table 5) we adopt part of the scale proposed by Bloemer and De Ruyter (1998). So, we adopt to distinguish the concept of Service Quality and Customer Satisfaction. The variable C3 is more a control variable of response than a variable necessary to the concept of Customer Satisfaction.

To construct of the scale of PHARMALOYAL - Loyalty (as an attitude of positive behavioural intentions – see table 6) we adopt the scales proposed by Zeithaml et al, (1996), and Mittal and Lee, (1989). Those scales maintain the negative behavioural intentions in side of positive behavioural intentions. The question is if negative behavioural intentions are common intentions in the unsatisfied customers.

4.4 Exploratory Factorial Analysis

We must explore the factors formed by the items we adopted, compare the results with the original scales, and adopt the factorial structure has an initial solution for structural equations analysis.

Thus, we realize a Factorial Analysis with the method of Principal Components Factorial Analysis to estimate the factor loadings. The factors were extracted until the eigenvalue is superior of 1. The component matrix of the factors was rotated with Varimax method.

As we see in table 4, four factors were extracted with the 28 items, and the variance explained by the four factors is 0,67 (factor 1, explain 0,48). The structure formed is near the solution of the SERVPERF scale. The factor 1

(items B1 to B4, B10, B11, B13 to B18, B22, and B27) in the SERVPERF is the factors Responsiveness, Assurance and Tangibility with some exceptions (inclusion of B18, B22, and B27; and exclusion of B12). The factor 2 (item B5 to B9) is the factor Reliability. The factor 3 (item B12, B19, B21, B23, and B24) is the factor Empathy with some exceptions (inclusion of the new item B23 and B24; and exclusion of B18 and B20). The factor 4 (item B25, B26, and B28 - with the exclusion of B27) is the "Convenience" (a factor that is present in the services where the store is important).

As we see in the last column of the table 4, some of these items will be eliminated of the structural equation analysis when the depuration of the structure has made.

Table 4 Service Quality – PHARMAPERF - adapted scale from SERVPERF (Cronin and Taylor 1992).

No.	Variable	Composed Reliability	Variance Explained	Loading
Global Scale K.M.O.= 0,923		0,91	0,67	
B1	This pharmacy has **modern equipment**.	0,95	0,48	0,55[a]
B2	The installations of this pharmacy are **visually agreeable**.			0,62[a]
B3	The employees of this pharmacy have an **agreeable aspect**.			0,71[a]
B4	The equipments of this pharmacy are **in view of the service**.			0,55[a]
B10	This pharmacy has a **quickly attendance.**			0,61[a]
B11	The employees of this pharmacy **inform you conveniently.**			0,73[a]
B13	The employees of this pharmacy are **always prepared to help you.**			0,70[a]
B18	This pharmacy priority is the **customer**.			0,74[ab]
B22	The employees of this pharmacy **answer to your more specific needs**.			0,70[ab]
B27	* This pharmacy has good **diversity of products**.			0,69[ab]
B14	The behaviour of the employees of this pharmacy **inspires confidence** to the customers.			0,78
B15	You feel **secure when you buy** this pharmacy.			0,78
B16	The employees of this pharmacy are **always pleasant**.			0,69
B17	The employees of this pharmacy have **sufficient knowledge's to answer** to your …			0,76
B18	This pharmacy priority is the **customer**.			0,74 [ab]
B5	This pharmacy does **what it promises**.	0,87	0,08	0,79
B6	When I have a problem, this pharmacy demonstrates **interest in it resolution**.			0,65[a]
B7	This pharmacy does the **service well at first time.**			0,78
B8	This pharmacy does the **service in the promised time**.			0,76
B9	In this pharmacy does **not commit errors**.			0,60[a]
B12	The employees of this pharmacy **aren't ever occupied to answer to your questions**.	0,86	0,06	0,60[ab]
B19	This pharmacy has **personnel attendance**.			0,66
B21	The employees of this pharmacy **do personal attendance**.			0,68
B23	* In this pharmacy I could have **pharmaceutical consultation service**.			0,57[a]
B24	* The employees of this pharmacy **do private attendance when you ask**.			0,80[a]
B25	* This pharmacy has good **parking**.	0,66	0,05	0,58[a]
B26	* This pharmacy is **near to a hospital**.			0,79[a]
B28	* This pharmacy is well **localized**.			0,68[a]
B20	This pharmacy has a **convenient horary**.	-	-	-[a]

* New variables introduced in the SERVPERF scale.
(a) Variables not included in the structural model due to refinement in exploratory factorial analysis.
(b) Variables in different factor than in the SERVPERF.
(r) Inverted Variable.

We made a reliability scale analysis to all of the factors formed, with the method of alpha the Cronbach. Conclusion is that all factors have a good

internal consistency, except the factor 4. The sample was adequate to the analysis with a K.M.O. of 0,923.

In table 5 we see the results of the E.F.A., of the PHARMASAT. This scale is accordingly with the original scale. The K.M.O. of the scale satisfactory (0,64) and the principal components explain 0,76 of the variance. The reliability of the factor is good (0,84).

Table 5 Customer Satisfaction (PHARMASAT – adapted scale from Bloemer and De Ruyter 1998)

No.	Variable	Composed Reliability	Variance Explained	Loading
Global Scale K.M.O. = 0,64		0,84	0,76	
C1	This pharmacy has **confirmed my expectations.**	0,84	0,76	0,94
C2	I'm really **satisfied with the service quality** of this pharmacy.			0,92
C3	I'm **not satisfied with the service** of this pharmacy. **(r)**			0,76a

(a)) Variables not included in the structural model due to refinement in exploratory factorial analysis.

(r) Inverted Variable.

In table 6 are the results of the E.F.A. applied to the PHARMALOYAL scale. The items E1, E2, E4, E5, and E6 are the original positive loyal scales formed by Word-of-Mouth and Intentions of Purchase. The factor 2 is formed by items E7, E8, and E9 and corresponds to the original Complaint factor (excluded item E3). Items E10 to E13 form the factor 3, and with factor E14, excluded, corresponds to the Commitment original factor. Factor 4 (items E3 and E14) has no consistency and, thus is excluded.

Table 6 Behavioural Intentions (PHARMALOYAL adapted scale from Zeithaml et al., 1996 and Mittal and Lee, 1989)

No.	Variable	Composed Reliability	Variance Explained	Loading
Global Scale K.M.O. = 0,77		0,72	0,70	
E1	I have only **positive things to transmit** from this pharmacy.	0,87	0,28	0,85
E2	**I recommend** this pharmacy **to someone that needs my advice**.			0,88
E4	**I stimulate my friends and familiars to buy in this pharmacy**.			0,79a
E5	I pretend to **continue to be customer** to this pharmacy.			0,84b
E6	I consider this pharmacy has **my first choice** in pharmaceutical services.			0,71b
E7	I pretend to **transmit my complaint to the employees** wherever there has…	0,84	0,24	0,85a
E8	I pretend to **transmit my complaint to the pharmacist** wherever I haven't well attended.			0,88a
E9	I pretend to **transmit my complaint to external entities** wherever I haven't well attended.			0,70a
E10	* I switch of pharmacy if I had **problems with the service** of this pharmacy.	0,80	0,10	0,69a
E11	* I switch of pharmacy if this **pharmacy serves better other customers than me**.			0,71a
E12	I switch this pharmacy if **other presents more attractive prices**.			0,86a
E13	* I switch this pharmacy if **other presents more attractive services**.			0,79a
E3	I pretend to **transmit to other customers** the problems that I have in this pharmacy.	-	0,08	0,78ab
E14	* I **only choice this pharmacy if no other exists near me**. **(r)**			0,60ab

(a) Variables not included in the structural model due to refinement in exploratory factorial analysis.

(b) Variables in different factor than in the original scale.

(r) Inverted Variable.

K.M.O. of the E.F.A. is =0,77 and the factors 1, 2, and 3 have good consistency.

5. PROPOSED MODEL

With the results of E.F.A. we would to know if we could draw a model consistent with the theory (see figure 1). The factorial structure obtained with the preliminary factorial analysis was been the input for the structural equation analysis.

A depuration of the model was made with attendance of the goodness of fit. Many of the variables reported in table 4, table 5, and table 6 were eliminated from the initial construct.

Figure 2 The Depurated Structural Model
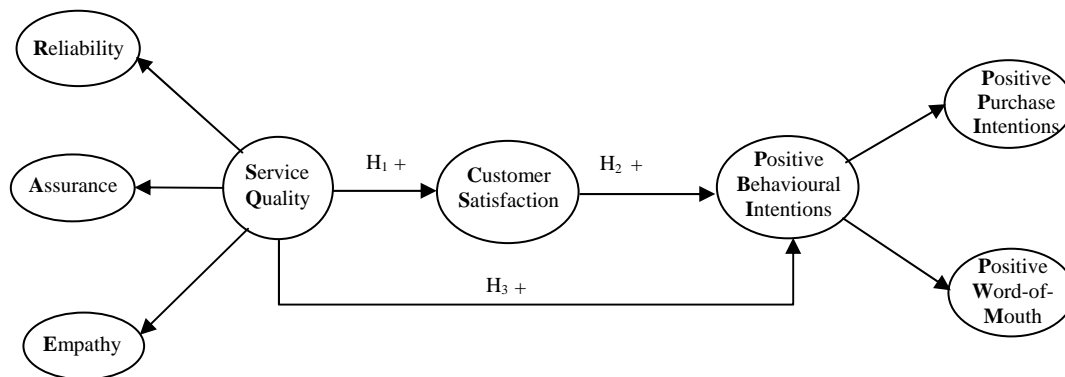
Has we see the model is reduced to three factors as components of service quality and two factors as components of positive behavioural intentions. The factor "convenience" is not considered as a component of service quality (we do not expected that). Others factors than Tangibility and Responsiveness (from SERVPERF scale), are eliminated too. The elements of tangibility are negligibly in the pharmacies services. The factors that compose behavioural intentions (some negatives and others positives), only some of the positives are in the final solution. The practice of complaint and the negative word-of-mouth are not practice in pharmacies.

6. RESULTS

Table 7 resumes the overall evaluation of the global structural model. In the third and four columns are the ranges measures (column 1) of a good and an acceptable fit, respectively, obtained in the model (column 2). The global result of model is a good fit.

Table 7 Overall Model Evaluation of the Structural Equation Model

Fit Measure	Obtained in the Model	Good Fit	Acceptable Fit
χ^2	131,276	$0 \leq \chi^2 \leq 2df$	$2df < \chi^2 \leq 3df$
$\dfrac{\chi^2}{df}$	1,58 (83 df)	$0 \leq \dfrac{\chi^2}{df} \leq 2$	
RMSEA	0,057		$0.05 < RMSEA \leq .08$
p value for close fit	0,248	$.10 < p \leq 1$	
NFI	0,951	$.95 < NFI \leq 1$	
CFI	0,981	$.97 < CFI \leq 1$	
GFI	0,911		$.90 \leq GFI \leq .95$
AGFI	0,871		$.85 \leq AGFI \leq .90$

Adapted from Schermelleh-Engel et al., (2003)

The chi-square test statistic is used for hypothesis testing to evaluate the appropriateness of a structural equation model. For a good model fit, the ratio χ^2/df should be smaller as possible. As there not exist absolute standards, a ratio between 2 and 3 is indicative of a "good" or "acceptable" data-model fit, respectively. In our model we have obtained a ratio of 1,58 (131,276/83), but with significance test of 0,001. The value of RMSEA for a good model should be less than .05. Hu and Bentler (1999) suggested an RMSEA of less than .06 as a cutoff criterion. In our model we have a RMSEA equal to 0.57. The lower boundary (LO90) is .038, so less than the .05 necessary. NFI (Normed Fit Index), usual rule of thumb, for this index is that .95 is indicative of good fit relative to the baseline model. We have a NFI of 0.951. CFI (Comparative Fit Index), usual rule of thumb, for this index, is that .97 is indicative of good fit relative to the independence model, while values greater than .95 may be interpreted as acceptable fit. We have 0.981. GFI (Goodness-of-fit Index), usual role of thumb for this index, is that 0.95 is indicative of good fit relative to the baseline model, while values greater than .90 are usually interpreted as indicating an acceptable fit. We have 0.91. AGFI (Adjusted Goodness-of-fit Index), usual rule of thumb, is that .90 is indicative for a good fit, while values greater than .85 are acceptable. We have .87.

In table 8 we could see the standardized regression weights with the indication of the direct effects and the indirect effects. Only Empathy (0,729) and Reliability (0,777) has coefficients around 0,7. All others range from 0,821 and 0,976. All the relationships are positive and significant.

Table 8 Standardized Regression Weights (Direct Effects and Indirect Effects)

From / To	Reliability	Assurance	Empathy	Service Quality	Customer Satisfaction	Behavioural Intentions	Purchase Intentions	Word-of-Mouth
Reliability				**,777**				
B5	**,897**			(,698)				
B7	**,909**			(,707)				
B8	**,852**			(,662)				
Assurance				**,976**				
B14		**,807**		(,788)				
B15		**,952**		(,929)				
B16		**,823**		(,803)				
B17		**,891**		(,869)				
Empathy				**,729**				
B19			**,907**	(,661)				
B21			**,955**	(,696)				
Customer Satisfaction				**,916**				
C1				(,853)	**,932**			
C2				(,840)	**,917**			
Behavioural Intentions				(,890)	**,972**			
Word-of-Mouth				(,852)	(,930)	**,957**		
E1				(,758)	(,828)	(,852)		**,890**
E2				(,757)	(,827)	(,851)		**,889**
Purchase Intentions				(,731)	(,798)	**,821**		
E5				(,694)	(,758)	(,780)	**,950**	
E6				(,523)	(,572)	(,588)	**,716**	

Note: in parenthesis are the indirect effects

From the analysis of table 9 we can conclude that the new factorial structure formed from the depuration of the model continue to have more high loadings in the items that composes the factor. Thus, the obtained structural model is that in figure 3.

Table 9 Factor Score Weights

	B5	B7	B8	B14	B15	B16	B17	B19	B21	C1	C2	E1	E2	E5	E6
Reliability	**,299**	**,322**	**,194**	,012	,052	,012	,020	,004	,008	,017	,014	,004	,004	,003	,000
Assurance	,014	,015	,009	**,082**	**,354**	**,078**	**,134**	,010	,021	,046	,038	,011	,011	,008	,001
Empathy	,003	,004	,002	,008	,034	,007	,013	**,271**	**,563**	,011	,009	,003	,003	,002	,000
Service Quality	**,025**	**,027**	**,016**	**,061**	**,262**	**,058**	**,099**	,018	**,038**	**,084**	**,070**	,020	,020	,014	,002
Customer Satisfaction	,008	,009	,005	,019	,083	,018	,031	,006	,012	**,322**	**,268**	,079	,075	,055	,006
P. Behav. Intentions	,005	,006	,004	,013	,057	,013	,022	,004	,008	**,221**	**,184**	**,140**	**,134**	**,098**	,011
P. Purchase Intentions	,001	,001	,001	,003	,013	,003	,005	,001	,002	,051	,042	,032	,031	**,714**	**,081**
P. Word-of-Mouth	,003	,004	,002	,008	,036	,008	,014	,003	,005	,141	,118	**,286**	**,274**	,063	,007

The hypothesis H1 (A higher level of service quality leads to a higher level of customer satisfaction) and H2 (A higher level of customer satisfaction leads to a higher level of positive behavioural intentions) are confirmed in the model. But, H3 was not confirmed at a significant level. We could see the figure 3 to view the structural equation model. Despite the fact that there is a strong correlation

between service quality and behavioral intentions (see appendix 2), the structural model doesn't fit very well. That's the reason we adopt the model in figure 3, and H3 is not confirmed.

Figure 3 Obtained Structural Model
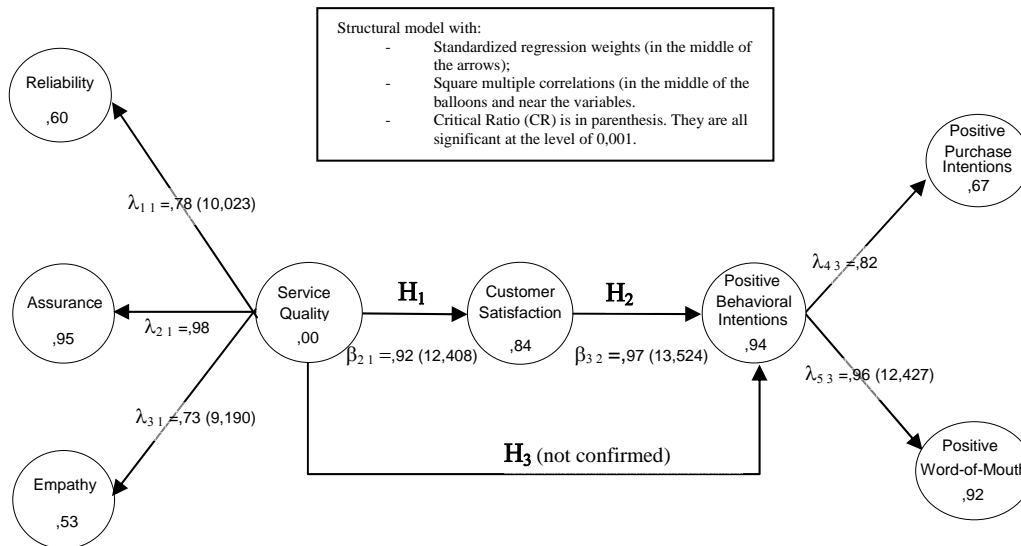
To test if H1 and H2 differ in a competitive set (special competition) or on a non competitive set we divide the sample by a binary variable indicating from where the sample was collected (rural or urban pharmacies). To test if H1 and H2 differs, when a client are more dependent to the pharmacy or not, whe divide the sample by a binary variable (based in the annual value of purchased drugs above or below 200€

We made a multi-group analysis with the two alternative divisions of the sample. The results are expressed in table 10 and confirms that the more competition (urban pharmacies) less loyalty, the more dependent with the service (more consume in product pharmacies) the more loyalty. The differences, however, are not significant at the level of 0,05.

Table 10 Standardized Regression Weights (Direct Effects)

	Global Model	Competitive		Dependency	
		Group 1: Rural	Group 2: Urban	Group 1: Independent	Group 2: Dependent
Customer Satisfaction – Service Quality	0,92	0,87	0,83	0,87	0,93
Behavioural Intentions – Customer Satisfaction	0,97	0,96	0,94	0,88	1,00

Note: Differences from Standardized Regression Weights aren't considered significant at the level of 0,05.

7. CONCLUSIONS

In a competitive world, firms expect to increase the quality and customer satisfaction, and obtain customers more loyalty to the firm. These are keys to lead the market. The understanding of what drives the customer to be more loyal is the crucial element of all. Our objective for this study is to clarify relationships between service quality, customer satisfaction, and loyalty (as a positive behavioural intention).

The customer decision-making process for service products, and especially with services that are linked to health, is modelled as a complex system that incorporates direct and/or indirect effects on behavioural intentions. The presented results, supports this position. Moreover, this is a quasi-beginning study in a service that is not explored in the analysis of quality, satisfaction, and customer loyalty. So, this appears to be a worthy area to pursuit.

We provide evidence that quality direct affect satisfaction and satisfaction direct affect the positive behavioural intentions (H1 and H2). The direct effect of service quality in behavioural intentions (H3) was not confirmed.

Using a structural equation modelling methodology we demonstrate that the more competition (urban pharmacies) less loyal, the more dependent with the service (high consume in product pharmacies) the more loyal. An interesting result is that there are no negative behavioural intentions in the pharmacies customers. This is due, certainly, to the impossibility to the customer to change from one pharmacy to another and to the dependency of must customers to the pharmacy services.

There are many implications from this study to future researches. The replication of this study is one of them. But, more and different variables should be considered in new models. The variables introduced in the exploratory factorial analysis and not confirmed in the structural equations analysis could be more important when the market structure of the pharmacies will be competitive.

8. LIMITATIONS

Present study exhibits limitations that should be considered. First, the model is not complete. There are effects that aren't captured for this model. The importance of these effects could be small or great, dependently from the country or the service analysed. Second, the sample is small (178 customers) and with small geographical amplitude, what can originate different results in different locations. Third, we use the AMOS 5 software to construct the model what is different from the use of an experimental design. An experimental design could be better to evaluate the behavioural responses of the customers.

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Appendix 1 Own Scales and the Corresponding Original Scales

B. Performance - PHARMAPERF - adapted scale from SERVPERF (Cronin and Taylor 1992).

No.	Variable	Factor	Original Factor
B1	This pharmacy has **modern equipment**.	Excluded	TANGIBILITY
B2	The installations of this pharmacy are **visually agreeable**.	Excluded	
B3	The employees of this pharmacy have an **agreeable aspect**.	Excluded	
B4	The equipments of this pharmacy are **in view of the service**.	Excluded	
B5	This pharmacy does **what it promises**.	**RELIABILITY**	RELIABILITY
B6	When I have a problem, this pharmacy demonstrates **interest in it resolution**.	Excluded	
B7	This pharmacy does the **service well at first time.**	**RELIABILITY**	
B8	This pharmacy does the **service in the promised time**.	**RELIABILITY**	
B9	In this pharmacy does **not commit errors**.	Excluded	
B10	This pharmacy has a **quickly attendance.**	Excluded	RESPONSIVENESS
B11	The employees of this pharmacy **inform you conveniently.**	Excluded	
B12	The employees of this pharmacy **aren't ever occupied to answer to your questions.**	Excluded	
B13	The employees of this pharmacy are **always prepared to help you.**	Excluded	
B14	The behaviour of the employees of this pharmacy **inspires confidence** to the customers.	**ASSURANCE**	ASSURANCE
B15	You feel **secure when you buy** this pharmacy.		
B16	The employees of this pharmacy are **always pleasant**.		
B17	The employees of this pharmacy have **sufficient knowledge's to answer** to your questions.		
B18	This pharmacy priority is the **customer**.	Excluded	EMPATHY
B19	This pharmacy has **personnel attendance**.	**EMPATHY**	
B20	This pharmacy has a **convenient horary**.	Excluded	
B21	The employees of this pharmacy **do personal attendance**.	**EMPATHY**	
B22	The employees of this pharmacy **answer to your more specific needs**.	Excluded	
B23	* In this pharmacy I could have **pharmaceutical consultation service**.	Excluded	-
B24	* The employees of this pharmacy **do private attendance when you ask**.	Excluded	-
B25	* This pharmacy has good **parking**.	Excluded	-
B26	* This pharmacy is **near to a hospital**.	Excluded	
B27	* This pharmacy has good **diversity of products**.	Excluded	
B28	* This pharmacy is well **localized**.	Excluded	

* New variables introduced in the SERVPERF scale.

C. Customer Satisfaction (PHARMASAT – adapted scale from Bloemer and De Ruyter 1998).

No.	Variable	Factor	Original Factor
C1	This pharmacy has **confirmed my expectations.**	Customer Satisfaction	Customer Satisfaction
C2	I'm really **satisfied with the service quality** of this pharmacy.		
C3	I'm **not satisfied with the service** of this pharmacy. **(r)**	Excluded	

(r) Inverted variable.

E. Behavioral Intentions (PHARMALOYAL adapted scale from Zeithaml 1996, Mittal and Lee 1989)

No.	Variable	Factor	Original Factor
E1	I have only **positive things to transmit** from this pharmacy.	**Word-of-mouth**	Positive Word-of-mouth
E2	**I recommend** this pharmacy **to someone that needs my advice**.		
E4	**I stimulate my friends and familiars to buy in this pharmacy**.	Excluded	
E5	I pretend to **continue to be customer** to this pharmacy.	**Purchase Intentions**	Positive Purchase Intentions
E6	I consider this pharmacy has **my first choice** in pharmaceutical services.		
E7	I pretend to **transmit my complaint to the employees** wherever there has a problem with the pharmacy.	Excluded	Complaint
E8	I pretend to **transmit my complaint to the pharmacist** wherever I haven't well attended.	Excluded	
E9	I pretend to **transmit my complaint to external entities** wherever I haven't well attended.	Excluded	
E3	I pretend to **transmit to other customers** the problems that I have in this pharmacy.	Excluded	
E10	I switch of pharmacy if I had **problems with the service** of this pharmacy.	Excluded	Commitment
E11	I switch of pharmacy if this **pharmacy serves better other customers than me**.	Excluded	
E12	I switch this pharmacy if **other presents more attractive prices**.	Excluded	
E13	* I switch this pharmacy if **other presents more attractive services**.	Excluded	
E14	* I **only choice** this pharmacy **if no other exists near me**. **(r)**	Excluded	

* New variables introduced in the original scale.
(r) Inverted variable.

Appendix 2 Matrix Correlations Between Latent Variables

Correlations

		Assurance	Reliability	Empathy	Customer Satisfaction	Purchase Intentions	Worth-of-Mouth	Service Quality	Behavioral Intentions
Assurance	Pearson Correlation	1	,000	,000	,654**	,593**	,327**	,577**	,651**
	Sig. (2-tailed)		1,000	1,000	,000	,000	,000	,000	,000
	N	178	178	178	178	178	178	178	178
Reliability	Pearson Correlation	,000	1	,000	,435**	,293**	,249**	,577**	,383**
	Sig. (2-tailed)	1,000		1,000	,000	,000	,001	,000	,000
	N	178	178	178	178	178	178	178	178
Empathy	Pearson Correlation	,000	,000	1	,265**	,227**	,064	,577**	,206**
	Sig. (2-tailed)	1,000	1,000		,000	,002	,399	,000	,006
	N	178	178	178	178	178	178	178	178
Customer Satisfaction	Pearson Correlation	,654**	,435**	,265**	1	,754**	,405**	,782**	,820**
	Sig. (2-tailed)	,000	,000	,000		,000	,000	,000	,000
	N	178	178	178	178	178	178	178	178
Purchase Intentions	Pearson Correlation	,593**	,293**	,227**	,754**	1	,000	,643**	,707**
	Sig. (2-tailed)	,000	,000	,002	,000		1,000	,000	,000
	N	178	178	178	178	178	178	178	178
Worth-of-Mouth	Pearson Correlation	,327**	,249**	,064	,405**	,000	1	,369**	,707**
	Sig. (2-tailed)	,000	,001	,399	,000	1,000		,000	,000
	N	178	178	178	178	178	178	178	178
Service Quality	Pearson Correlation	,577**	,577**	,577**	,782**	,643**	,369**	1	,715**
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000		,000
	N	178	178	178	178	178	178	178	178
Behavioral Intentions	Pearson Correlation	,651**	,383**	,206**	,820**	,707**	,707**	,715**	1
	Sig. (2-tailed)	,000	,000	,006	,000	,000	,000	,000	
	N	178	178	178	178	178	178	178	178

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 3 Complete Obtained Structural Model

Structural model with:
- Standardized regression weights (in the middle of the arrows);
- Square multiple correlations (in the middle of the balloons and near the variables.
- Critical Ratio (CR) is in parenthesis. They are all significant at the level of 0,001.

,81 B5 $\lambda_{5\,1}$ =,90

$\lambda_{7\,1}$ =,91 (17,697)

,83 B7

$\lambda_{8\,1}$ =,85 (15,677)

,73 B8

Reliability ,60

E5 ,90

$\lambda_{5\,4}$ =,95

Purchase Intentions ,67

$\lambda_{6\,4}$ =,72 (10,210)

E6 ,51

$\lambda_{1\,1}$ =,78 (10,023)

,65 B14

$\lambda_{14\,2}$ =,81

,91 B15

$\lambda_{15\,2}$ =,95 (16,043)

Assurance ,95

$\lambda_{2\,1}$ =,98

Service Quality ,00

$\beta_{2\,1}$ =,92 (12,408)

Customer Satisfaction ,84

$\beta_{3\,2}$ =,97 (13,524)

Behavioral Intentions ,94

$\lambda_{4\,3}$ =,82

$\lambda_{16\,2}$ =,82 (12,871)

,68 B16

$\lambda_{17\,2}$ =,89 (14,506)

$\lambda_{5\,3}$ =,96 (12,427)

,79 B17

$\lambda_{1\,2}$ =,93 $\lambda_{2\,2}$ =,92 (21,439)

E1 ,79

$\lambda_{1\,5}$ =,89

Word-of-Mouth ,92

$\lambda_{2\,5}$ =,89 (16,690)

$\lambda_{3\,1}$ =,73 (9,190)

C1   C2

,87   ,84

E2 ,79

,82 B19 $\lambda_{19\,3}$ =,91

Empathy ,53

,91 B21 $\lambda_{21\,3}$ =,96 (16,773)