On the relationship between perceived service quality, service loyalty and switching costs

Ko de Ruyter and Martin Wetzels
Maastricht University, Maastricht, The Netherlands, and
Josée Bloemer
Department of Marketing, Limburg University Centre, Diepenbeek, Belgium

Introduction

In the literature on services marketing relatively little attention has been paid to the concept of service loyalty. A limited number of attempts have been made to conceptualise service loyalty and to investigate its antecedents (Gremler and Brown, 1996). However, despite these attempts and despite its perceived importance in marketing theory and practice (Jones and Sasser, 1995; Reichfeld and Sasser, 1990), customer loyalty still "presents an enigma to researchers" (Oliver, 1996, p. 389). Implicitly, service loyalty is often incorporated as an ultimate dependent variable in service quality models (Fornell *et al.,* 1996), yet the precise nature of the service quality-service loyalty connection has remained fuzzy as the result of limited conceptualisations and contradictory empirical results (Boulding *et al.,* 1993; Cronin and Taylor, 1992). Most studies that have examined the service quality-service loyalty relationship focused on one specific industry only, limiting the generalisability of results (e.g. Crosby and Stephens, 1987; Kelley *et al.,* 1993; Rust and Zahorik, 1993). Furthermore, Cronin and Taylor (1992) and Zeithaml *et al.* (1996) report differences between various service providers, but they both do not specifically address explanations for these differences. Dick and Basu (1994) suggest that the level of switching costs in a given industry might very well influence customers' disposition towards different services. In this article we examine the relationship between service quality, service loyalty and switching costs across five different service industries. It is structured as follows. First, we will offer a brief synthesis of the extant literature on key conceptual issues. We subsequently discuss the results of a study designed to provide a multi-sector insight on the relationship between service quality, service loyalty and switching costs. We conclude with a discussion of a number of theoretical and managerial implications of our results.

Service loyalty
In consumer research conducted in the 1960s and 1970s, customer loyalty was approached predominantly from a behavioural perspective. Jacoby and Chestnut (1978) observe that in these studies the focus was on interpreting patterns of repeat purchasing in primarily panel data as a manifestation of loyalty. As Day (1969) criticised the behavioural approach for a lack of a conceptual basis and Bass (1974) pointed out that stochastic components (i.e. randomness that could not be explained) occur in repeat purchasing patterns, researchers began to question the adequacy of using behaviour as a measure of loyalty. It became clear that the consumer's disposition to rebuy is an essential element of loyalty (Gremler and Brown,1996). Jones and Sasser (1995, p. 94) state that customer loyalty is "a feeling of attachment to or affection for a company's people, products, or services". Therefore, Dick and Basu (1994) supplemented the behavioural approach with the concept of relative attitude which reflects the degree to which the consumer's evaluation of one service dominates that of another. They posit that true loyalty only exists when repeat patronage coexists with a high relative attitude. Hence, customer loyalty is approached as an attitudinal construct. Attitude denotes the degree to which a consumer's disposition towards a service is favourably inclined (Azjen and Fishbein, 1980). This is reflected, for instance, in the willingness to recommend a service provider to other consumers or the commitment to repatronise a preferred service provider (Gremler and Brown, 1996; Jain *et al.,* 1987; Pritchard, 1991). Based on a favourable attitude towards a service provider, customers may develop preference loyalty.

In addition to attitude, it has been argued that loyalty may also be based on cognition (Lee and Zeiss, 1980; Oliver, 1996). Berger and Mitchell (1989), for instance, show that the degree to which consumers are exposed to advertising increases the ability and confidence to process information, providing more opportunity for product-related elaboration resulting in product commitment. Furthermore, in the case of services, direct experience through the service encounter (as opposed to brand advertising) increases information acceptance and use in repurchase decisions (Smith and Swinyard, 1988). In its cognitive sense, customer loyalty is frequently operationalised as a conscious evaluation of the price/quality ratio or the willingness to pay a premium price, or alternatively price indifference (Fornell, 1992; Olson and Jacoby, 1971; Pessemier, 1959; Raju *et al.,* 1990; Zeithaml *et al.,* 1996). In other words, customers will make an explicit comparison between what they give and get.

Finally, we should also examine the impact of dissatisfying service episodes in terms of service loyalty, or rather dissatisfaction response. As early as 1970, Hirschman argued that a dissatisfied customer has basically two options to a negative (service) experience: discontinue the relationship (exit) or communicate dissatisfaction (voice). Customers who voice dissatisfaction may complain to the service provider (e.g. via a toll free number), its employees or external agencies such as consumer organizations. Hence, we posit service loyalty as a

multi-dimensional construct consisting of the following three dimensions: preference loyalty, price indifference loyalty and dissatisfaction response.

In the literature on services, perceived service quality is often viewed as a prerequisite for service loyalty and frequently loyalty is included in models as an outcome variable (Boulding *et al.,* 1993; Cronin and Taylor, 1992; Gremler and Brown, 1996). However, previous studies provide mixed results with respect to the relationship between service quality and service loyalty. Therefore, we will examine this relationship more closely in the next section.

Service quality and service loyalty

The relationship between service quality and customer preference loyalty has been examined, among others, by Boulding *et al.* (1993) and Cronin and Taylor (1992). Cronin and Taylor (1992) focused solely on repurchase intentions, whereas Boulding *et al.* (1993) focused on the elements of repurchasing and willingness to recommend. In the study by Cronin and Taylor service quality did not appear to have a significant (positive) effect on repurchase intentions (in contrast to the significant positive relation between satisfaction and repurchase intention), while Boulding *et al.* (1993) found positive relationships between service quality and repurchase intentions and willingness to recommend. Similarly, Dabholkar and Thorpe (1994) report that customer satisfaction with a store has a positive influence on intentions to recommend the store to others. Price indifferent loyalty (e.g. willingness to pay a premium price) has not received much attention in the services literature. Zeithaml *et al.* (1990) reported a positive relationship between service quality and the willingness to pay a higher price and the intention to remain loyal in case of a price increase. Finally, with regards to dissatisfaction response, it has been suggested that the majority of customers simply remain inactive and do not undertake any action following a negative service experience (Day, 1984). Furthermore, it has been argued that actually responding to dissatisfaction (e.g. complaining directly to the company or complaining to a third party) is negatively related to the level of service quality (Beardon *et al.,* 1979; Yi, 1990).

So far, our discussion of the relationship between service quality, satisfaction (which are two closely related concepts) and behavioural intentions has remained limited to the level of the individual customer. Indeed, most of the studies linking service quality, satisfaction and behavioural intentions have been conducted in one specific service setting. For instance, Rust and Zahorik (1993) related service quality perceptions to consumer loyalty in banking, Crosby and Stephens (1987) investigated loyalty in the insurance industry and with regard to retailing, customer patronage was investigated in relation to service encounter failures by Kelley *et al.* (1993). Conceptually, the idiosyncratic nature of each service setting limits the generalisability of previous research findings with regard to behavioural intentions. Therefore, to gain further insight into the development of service loyalty a cross-sectional perspective should be taken. Cronin and Taylor (1992) report considerable differences with regards to the relationship between satisfaction and repurchase intentions

between the four service industries of banking, pest control, dry cleaning and fast food. Likewise, Parasuraman *et al.* (1994) found industry differences with regards to the service quality-behavioural intentions link. With regard to customer satisfaction, Fornell (1992) reports differences in what he terms "elasticity" per industry, i.e., the consequences of service quality in terms of loyalty differ per industry. Jones and Sasser (1995, p. 92) conclude that the relationship between customer evaluations and loyalty across industries is "neither linear nor simple". Little explanation of cross sectional variation regarding the relationship between service quality and service loyalty has been offered by prior research. It has been suggested that the degree of switching costs may have an influence on customer loyalty in a given industry (Anderson and Fornell, 1994; Dick and Basu, 1994; Fornell, 1992; Gremler and Brown, 1996). Therefore, we will focus on this variable in the next section.

Switching costs
Switching costs can be defined as the costs involved in changing from one service provider to another (Porter, 1980). In addition to objectively measurable monetary costs, switching costs may also pertain to time and psychological effort involved in facing the uncertainty of dealing with a new service provider (e.g. learning the lay-out of a new office (Dick and Basu, 1994; Guiltinan, 1989)). It has been argued that the costs of switching providers tend to be higher for services than for goods (Gremler and Brown, 1996). Furthermore, switching costs are sometimes used as a proxy for market structure or the level of customer perceived uncertainty. For instance, Quinlan (1991) argues that for some services (e.g. fast food restaurants, retailers) switching costs are low for the mass of "anonymous" customers, for instance as a result of the fact that there are ample suppliers and "the inherent inability to differentiate on some valuation criterion" (Barnes and Cumby, 1995, p. 184). In contrast, switching costs for services that are intrinsically difficult to evaluate, or for which there is only a limited number of suppliers (legal services, management consulting and medical services), are high (Brown and Swartz, 1989; Patterson and Johnson, 1993). For instance, Andreasen (1982; 1985) who investigated the influence of market structure on consumer switching behaviour characterises the medical services market as a "loose monopoly", a term coined by Hirschman (1970). A loose monopoly is a market in which a near-monopoly concentration of sellers coincides with a minor amount of competition. There is limited information about the type of service and the number of suppliers (e.g., medical institutions) is comparatively small. Moreover, many patients exhibit psychological inhibitions against changing doctors; i.e. switching costs are perceived to be high (Jones and Sasser, 1995). This leads to a state of what Landon (1980) calls "monopolistic indifference" in which behavioural intentions and actual behaviour of consumers remain underdeveloped. Andreasen (1982; 1985) found empirical support for the effect of high switching costs on customer loyalty in relation to medical services. In addition to customer uncertainty and structure of the market, the level of competition and loyalty programmes (e.g. membership programmes, customer clubs, seasonal tickets in theatres and opera houses) may

increase the perceived and actual cost of switching (Gruen and Fergusson, 1994; Gummesson, 1995). In conclusion, it appears that there is a positive relationship between the level of switching costs and customer loyalty in services. In the next section we will develop hypotheses on the complex relationship between service quality, switching costs and service loyalty.

Development of hypotheses

Although prior research has not comprehensively examined the impact of service quality on service loyalty dimensions, we expect, in accordance with Zeithaml *et al.* (1996), positive relationships between service quality and preference loyalty and service quality and price indifference loyalty. On the basis of previous findings in the complaining behaviour literature, we hypothesise a negative relationship between service quality and dissatifaction response. We expect that both service quality and the type of industry will determine the various forms of loyalty. Furthermore, we expect cross-sectional variation with regard to the relationship between perceived service quality and service loyalty for different types of service industries on the basis of relative switching costs involved for service customers. We assume that the degree of switching costs will have a positive moderating effect on the relationship between perceived service quality and preference and price indifference loyalty and a negative moderating effect on the relationship between perceived service quality and dissatisfaction response. This leads to the following hypotheses:

H1a: There will be a positive relationship between perceived service quality and preference loyalty.

H1b: There will be a positive relationship between perceived service quality and price indifference loyalty.

H1c: There will be a negative relationship between perceived service quality and dissatisfaction response.

H2: The level of preference loyalty, price indifference loyalty and dissatisfaction response is a function of service quality and type of industry.

H3a: In service industries with relatively low switching costs, there will be a weaker relationship between perceived service quality and preference loyalty than in service industries with relatively high switching costs.

H3b: In service industries with relatively low switching costs, there will be a weaker relationship between perceived service quality and price indifference loyalty than in service industries with relatively high switching costs.

H3c: In service industries with relatively low switching costs, there will be a stronger relationship between perceived service quality and dissatisfaction response than in service industries with relatively high switching costs.

An empirical study

Research setting

Respondents were interviewed on service quality, service loyalty dimensions and switching costs with regard to five different service industries. On the one hand, health centres (hospitals, physiotherapy and chiropractic clinics) and city theatres (including opera houses) were chosen as examples of service industries with relatively high switching costs on the basis of arguments above. The markets for these industries can be characterised as a "loose monopolies" in which only a limited number of suppliers operates. Furthermore, perceived uncertainty and customer loyalty programmes (seasonal tickets) cause switching costs to be relatively high. On the other hand three service industries with relatively low switching costs were selected: fast food, supermarkets and amusement parks.

Loyalty dimensions were operationalised on the basis of 13 items of the behavioural intentions scale developed recently by Zeithaml *et al.* (1996) (see Table I). Each of the items was accompanied by a nine-point scale ranging from 1 = not at all likely to 9 = extremely likely. The items were translated via a procedure of double-back translation. Moreover, the items were adapted for the general research setting and according to specific characteristics of the industries investigated. For reasons of data collection efficiency, a uni-dimensional measure of perceived service quality relating to an evaluation of the core service was used (instead of the 22-item SERVQUAL instrument) with a nine-point scale ranging from 1 = completely disagree to 9 = completely agree (Strandvik and Liljander, 1994). Finally, three types of switching costs (effort, time and money) were measured in relation to the service industries. Switching costs items were accompanied by a nine-point scale ranging from 1 = completely disagree to 9 = completely agree.

Data were gathered by means of personal interviews on the basis of a structured questionnaire in a mid-sized city in Belgium. A total of 612 usable questionnaires (i.e. all questions answered) were gathered randomly by trained interviewers. Every tenth customer leaving the premises of a particular service provider was invited to participate in our study. Interviewers were instructed to screen respondents as to whether they had used the particular service within the last two months to ensure an up-to-date evaluation of service quality and service loyalty. The sample size for each service provider was: health centres 101, city theatres 100, fast food restaurants 200, supermarkets 108 and amusement parks 103.

Descriptive analysis

With regard to perceived core service quality, the following mean scores were obtained: health centres; 8.13 (s.d. 1.55), city theatres; 7.72 (s.d. 1.44), fast food; 7.10 (s.d. 1.55), supermarkets; 7.99 (s.d. 1.40), amusement parks; 6.26 (s.d. 1.79). Results revealed that significant differences between mean service quality scores occur (F = 36.20; p < 0.001). In addition, the following mean scores for switching costs were obtained: health centres; 7.84 (s.d. 1.66), city theatres; 7.43

(s.d. 1.92), fast food; 1.94 (s.d. 1.45), supermarkets; 2.34 (s.d. 1.61), amusement parks; 3.25 (s.d. 1.80). These scores are indicative of significant differences in switching costs (F = 33.63; p < 0.001) across service industries.

Next, we factor-analysed the items pertaining to service loyalty in order to find out whether a three dimensional pattern as derived on the basis of theory could be justified on the basis of empirical analysis. Our analysis indicates that a three dimensional structure could be identified, as is shown in Table I.

Reliability analysis of the three factors yielded the following results: the coefficient alpha for the preference loyalty dimension is 0.90, for the price indifference dimension 0.71 and for the dissatisfaction response dimension 0.69.

Hypotheses testing

In order to test hypotheses 1 and 2 we conducted regression analyses with perceived service quality as a predictor variable and each of the three loyalty dimensions as a dependent variable. The bivariate regression equation is rendered as model 1 in the tables below. Subsequently, in order to differentiate for industry, we used a set of multiple dummy variables. In our analyses, health centres is used as a reference group or intercept for the other service industries on the basis of the fact that the highest mean service quality score was obtained

No.	Description	Factor loadings[b]
	Preference (Cronbach's alpha = 0.90)	
1	Recommend to someone who seeks your advice	0.85897
2	Encourage friends and relatives to do business with	0.85079
3	Do more business with in the next few years	0.77734
4	Say positive things about to other people	0.71537
5	Consider your first choice to buy … services	0.70758
6	Do less business with in the next few years (–)	0.61261
	Price indifference (Cronbach's alpha = 0.71)	
7	Pay a higher price than competitors charge for the benefits you currently receive	0.81895
8	Continue to do business with if its prices increase somewhat	0.78421
9	Take some of your business to a competitor that offers more attractive prices (–)	0.73703
	Dissatisfaction response (Cronbach's alpha = 0.69)	
10	Complain to other consumers if you experience a problem with …'s service	0.65239
11	Complain to external agencies, such as consumer organizations, if you experience a problem with …'s service	0.51852
12	Complain to employees if you experience a problem with …'s service	0.40473
13	Switch to a competitor if you experience a problem with …'s service	–
	Total explained variance	50.1%

Table I.
Service loyalty dimensions[a]

Notes:
[a] Using principal axis factoring and varimax rotation
[b] Factor loadings > 0.4

for this service industry. The value of the regression coefficient for the intercept reports the effect on the particular loyalty factor for health centres. Remaining regression coefficients estimate the effect of type of service industry compared with the reference industry. The incremental F-test for change examines whether the set of dummy variables representing industry settings contributes significantly to the model by comparing the values of R^2 for models 1 and 2. Table II renders the results of multiple regression on preference loyalty.

From Table II it becomes clear that, first of all, perceived service quality contributes positively to explaining preference loyalty. On the basis of this, hypothesis 1a can be accepted. For the reference industry, health centres, there is a significant positive relation between perceived service quality and preference loyalty. The remaining service industries (amusement parks, city theatres, fast food), with the exception of supermarkets, differ significantly from the reference category. For city theatres the impact of perceived service quality on preference loyalty is stronger as compared to health centres and supermarkets, while for the remaining service industries the impact of perceived service quality on preference loyalty is smaller. This means, for instance, that the same level of service quality results in a relatively higher level of preference loyalty for city theatres than for health centres and supermarkets. The significance of the incremental F-test indicates that incorporating type of industry, in addition to perceived service quality, contributes significantly to explaining preference loyalty.

Table III renders the results of multiple regression on price indifference loyalty.

Table III reveals that perceived service quality contributes positively to explaining price indifference loyalty. On the basis of this, hypothesis 1b can be

Variable	Industry	B	β	t	p
Perceived service quality		0.6818	0.6135	21.546	< 0.0001
	Intercept				
	(Health centres)	1.7761		6.52	< 0.0001
	Amusement parks	−0.6302	−0.1163	−3.839	< 0.001
	City theatres	0.3660	0.6674	2.375	0.0178
	Fast-food	−0.4027	−0.9626	−3.180	0.0015
	Supermarkets	−0.2714	−0.5116	−1.821	0.0690
Model 1					
R^2	0.4425				
Adjusted R^2	0.4418				
F	638.91 (p < 0.0001)				
Model 2					
R^2	0.4681				
Adjusted R^2	0.4635				
F	140.253 (p < 0.0001)				
F (Change)	9.132 (p < 0.0001)				

Table II.
Regression of perceived quality and industry on preference loyalty

Variable	Industry	B	β	t	p
Perceived service quality		0.4014	0.3040	9.413	< 0.0001
	Intercept				
	(Health centres)	3.0934		8.420	< 0.0001
	Amusement parks	−2.0341	−0.3168	−9.196	< 0.0001
	City theatres	−0.8190	−0.1260	−3.944	< 0.001
	Fast-food	−1.5418	−0.3105	−9.023	< 0.0001
	Supermarkets	−1.9152	−0.3043	−9.531	< 0.0001
Model 1					
R^2	0.1847				
Adjusted R^2	0.1836				
F	181.22 (p < 0.0001)				
Model 2					
R^2	0.3184				
Adjusted R^2	0.3142				
F	74.367 (p < 0.0001)				
F (Change)	39.037 (p < 0.0001)				

Table III.
Regression of perceived quality and industry on price indifference loyalty

accepted. The impact of perceived service quality on price indifference loyalty is the strongest for the reference industry. For the remaining industries, with the exception of city theatres, there is a relatively small impact of perceived service quality on price indifference loyalty. The significance of the incremental F-test indicates that incorporating type of industry, in addition to perceived service quality, contributes significantly to explaining price indifference loyalty.

Table IV renders the results of multiple regression on dissatisfaction response.

From Table IV it becomes clear that there is no significant relationship between perceived service quality and dissatisfaction response. On the basis of this, hypothesis 1c has to be rejected, although cross-sectional differences between industries can be observed.

With regard to hypothesis 2 it can be concluded that (significant) differences between service industries were found in relation to all three loyalty dimensions. Therefore, hypothesis 2 can be accepted. Indeed, service loyalty is a function of service quality and industry type.

To investigate cross sectional variation in more detail, the five service industries were assigned to two groups. On the basis of the mean switching costs scores reported above, we classified health centres and city theatres as industries with relatively high switching costs and fast food restaurants, amusement parks and supermarkets as service industries with relatively low switching costs. Hypotheses 3a, 3b and 3c pertain to the influence of switching costs on the service quality-service loyalty relationship. In order to test hypotheses 3a, 3b and 3c moderated regression analysis was carried out. In this technique the moderator variable plays a central role. A moderator variable can be defined as a variable that systematically modifies either the form and/or

Variable	Industry	B	β	t	p
Perceived service quality		−0.0437	−0.0386	−1.015	0.3105
	Intercept				
	(Health centres)	5.1616		13.931	< 0.0001
	Amusement parks	0.3497	0.0638	1.566	0.1077
	City theatres	0.5055	0.9106	2.410	0.0162
	Fast-food	0.9248	0.1725	5.3621	< 0.0001
	Supermarkets	0.4838	0.0900	2.3830	0.0174
Model 1					
R^2	0.0077				
Adjusted R^2	0.0065				
F	6.2007 (p = 0.0130)				
Model 2					
R^2	0.0447				
Adjusted R^2	0.0378				
F	7.299 (p < 0.0001)				
F (Change)	7.523 (p < 0.0001)				

Table IV.
Regression of perceived quality and industry on dissatisfaction response

strength of the relationship between a dependent variable and independent variable (e.g Anderson, 1986; Micheals and Dixon, 1994; Sharma *et al.,* 1981; Zedeck, 1971). Sharma *et al.* (1981) distinguish two methods to identify moderator variables:

(1) moderated regression analysis (MRA); and

(2) subgroup analysis.

MRA involves the comparison of three regression models (Zedeck, 1971). The full model contains three terms: the dependent variable, the hypothesised moderator variable and the interaction term of these two. The restricted model omits either the interaction term or the hypothesised moderator. Tests are carried out by comparing the restricted model to the full model. In subgroup analysis the hypothesised moderator variable is used to split the sample. After subdividing the sample, regression analysis is carried out between the dependent and independent variables. A number of authors have recommended the use of MRA, since subgroup analysis is characterised by several shortcomings (e.g. Anderson, 1986; Micheals and Dixon, 1994; Sharma *et al.,* 1981). In fact, MRA can be viewed as an extension of subgroup analysis where the number of groups is equal to the number of subjects (Sharma *et al.,* 1981).

In applying MRA we will need three regression models. In this particular case the following three regression models are relevant to examine the effect of switching costs as moderators (Sharma *et al.,* 1981; Zedeck, 1971):

$$LOY_i = a + b_1 * PSQ \qquad (1)$$

$$LOY_i = a + b_1 * PSQ + b_2 * D_{SC} \qquad (2)$$

$$LOY_i = a + b_1 * PSQ + b_2 * D_{SC} + b_3 * (PSQ * D_{SC}) \tag{3}$$

where:

LOY_i = loyalty dimensions (i = 1 (preference), 2 (price indifference), 3 (dissatisfaction response))

PSQ = perceived service quality

D_{SC} = dummy variable regarding switching costs (low = 0; high = 1)

If models (2) and (3) are not significantly different ($b_2 \neq 0$; $b_3 = 0$), switching costs is not a moderator (D_{SC}). If models (1) and (2) are not significantly different, but they are significantly different from (3), then switching costs (D_{SC})is a pure moderator ($b_2 = 0$; $b_3 \neq 0$). If models (1), (2) and (3) are significantly different from each other ($b_2 \neq b_3 \neq 0$), then switching costs is a quasi moderator (Sharma *et al.*, 1981). The results of our analysis are depicted in Table V.

As can be seen from Table V, switching costs is a moderator variable for the relationship between perceived service quality and price indifference loyalty, as the partial regression coefficient of the interaction term ($PSQ*D_{SC}$) is significantly different from 0. More particularly, switching costs is a quasi moderator for the relationship between perceived service quality and price indifference loyalty, because the three models are significantly different from each other. Consequently, switching costs is both an independent variable and a moderator. Switching costs exhibits a significant positive effect on price indifference loyalty (unstandardised partial regression coefficient: 2.79; standardised partial regression coefficient: 0.77). This signifies that in service industries with relatively low switching costs, price indifference loyalty will be negatively affected, as compared to service industries with relatively high switching costs. However, the interaction between perceived service quality and switching costs shows a negative effect on price indifference loyalty (unstandardised partial regression coefficient: –0.29; standardised partial regression coefficient: –0.61). This means that in service industries with relatively low switching costs there is a weaker relationship between perceived service quality and price indifference loyalty than in industries with relatively high switching costs. On the basis of this we accept hypothesis 3a.

Switching costs is not a moderator variable for both the relationship between perceived service quality and price indifference loyalty, since the partial regression coefficient of the interaction term ($PSQ*D_{SC}$) is not significantly different from zero. However, from model 2 it can be observed that for price indifference loyalty switching costs is also an independent variable (see Table V). A positive effect is found for switching costs (unstandardised partial regression coefficient: 1.53; standardised partial regression coefficient: 0.36). In other words, customers in service industries characterised by relatively low switching costs, will be less loyal in terms of price indifference than customers in service industries with relatively high switching costs. In line with hypothesis 1b, perceived service quality exerts a positive effect on price

Hypotheses	Model 1	Model 2	Model 3
H3a Preference loyalty	$LOY_1 = 1.17 + 0.74*PSQ$ $5.13***25.28***$ $Adj.R^2 = 0.44$ $F = 638.91***$	$LOY_1 = 1.79 + 0.69*PSQ - 0.51*D_{SC}$ $7.04***22.84*** 5.17***$ $Adj.R^2 = 0.46$ $F = 343.01***$	$LOY_i = 3.25 + 0.51*PSQ + 2.79*D_{SC} - 0.29* (PSQ*D_{SC})$ $8.27***10.72*** = 5.78*** - 4.82***$ $Adj.R^2 = 0.47$ $F = 242.76***$
H3b Price indifference loyalty	$LOY_2 = 0.82 + 0.57*PSQ$ $2.51*13.46***$ $Adj.R^2 = 0.18$ $F = 181.23***$	$LOY_2 = 2.71 + 0.42*PSQ + 1.53*D_{SC}$ $7.83***10.30*** 11.46***$ $Adj.R^2 = 0.30$ $F = 171.05***$	$LOY_i = 2.82 + 0.41*PSQ + 1.71*D_{SC} - 0.02*(PSQ*D_{SC})$ $5.20*** 6.21*** 2.57* - 0.28$ $Adj.R^2 = 0.30$ $F = 113.92***$
H3c Dissatisfaction response	$LOY_3 = 5.98 - 0.10*PSQ$ $19.39*** -2.49*$ $Adj.R^2 = 0.01$ $F = 6.20*$	$LOY_3 = 5.33 - 0.05*PSQ - 0.53*D_{SC}$ $15.36*** -1.19 -3.95***$ $Adj.R^2 = 0.02$ $F = 10.95***$	$LOY_i = 5.81 - 0.11*PSQ + 0.21*D_{SC} - 0.10* (PSQ*D_{SC})$ $10.68*** -1.63 0.32 -1.14$ $Adj.R^2 = 0.02$ $F = 7.73***$

Notes: [a] t-values under partial regression coefficients; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table V.
Results of moderated
regression analysis[a]

indifference loyalty (unstandardised partial regression coefficient: 0.42; standardised partial regression coefficient: 0.31). Although the degree of switching costs exerts a direct influence on price indifference loyalty, it does not seem to moderate the service quality-price indifference loyalty relationship. Therefore, we reject hypothesis 3b.

In the case of dissatisfaction response no significant effect of switching costs was found. As was already reported above, there is no association between dissatisfaction response and perceived service quality. Although the F-test indicates that R^2 is significantly different from 0, the explained variance is only 2 per cent. Therefore, we reject hypothesis 3c.

Conclusion
Discussion
This paper has focused on two issues with regards to the perceived service quality-service loyalty relationship. In the first place, we attempted to obtain a better understanding of the relationship between perceived service quality and service loyalty. The results of our study suggest that there are three dimensions of service loyalty that can be identified: preference loyalty, price indifference loyalty and dissatisfaction response. Moreover, we found a positive relationship between perceived service quality and preference loyalty and price indifference loyalty. No significant relationship between perceived service quality and dissatisfaction response was found. This might be explained by the fact that dissatisfaction response is related specifically to an incident or a specific attribute of service (e.g. a complaint handling procedure) instead of an overall evaluation of the quality of the core service.

Second, we investigated the influence of industry type on the perceived service quality-service loyalty relationship. It was found that the influence of service quality on preference loyalty generally varies per industry and that findings from one industry cannot be generalised to other industries. In line with Fornell (1992) there seems to be what might be called a "loyalty-elasticity" across service industries. Furthermore, we established that in industries characterised by relatively low switching costs, customers will be less loyal both in the preference and price indifference sense as compared to service industries with relatively high switching costs. For instance, in a health care setting, Andreasen (1982; 1985) has argued many patients exhibit psychological inhibitions against changing doctors, therefore exit costs are perceived to be high. The structure of many European medical insurance systems limits the effect of monetary costs considerably since every customer of medical services is partly insured against financial cost. As far as city theatres are concerned, many of their service customers have season tickets that require them to visit a set number of performances each year, thereby literally increasing the financial switching costs. Alternatively, in the case of supermarkets, for instance, it has been reported that both price indifference and price indifference loyalty is low (Barnes and Cumby, 1995). Finally, in case of a dissatisfactory experience with a high switching costs service industry, only a small segment of what

Andreasen (1982; 1985) calls "quality conscious and potentially vocal consumers" feel confident enough to turn to another supplier.

Research implications
Our research should be seen as a preliminary attempt at addressing an issue that has important implications for services marketing theory and practice. Any preliminary attempt will involve a number of limitations. However, acknowledgement of these limitations suggests new directions for future studies. In the first place, the scale for measuring service loyalty needs further development and refinement. Specifically, the dissatisfaction response dimension needs additional items that may increase the reliability of this part of the scale. For instance, the incidental nature of service problems may require incident-based measurement (such as the critical incident technique) rather than more global service attitude measurement research methods. Further research should also incorporate multiple measures of the relevant constructs in order to increase the number of items that are used for the individual dimensions. Moreover, our study focused on behavioural intentions only and these intentions are an imperfect proxy for actual behaviour (Keaveny, 1995). Therefore, further research should take actual (re)actions of consumers to perceived service quality into account. Second, the empirical relationships between service quality and service loyalty reported in this paper are tentative in the sense that they are based on cross-sectional data collected at one moment in time. Longitudinal research that focuses on the dynamics of the two constructs over time is needed to define the exact causal nature of the link between the two constructs. Furthermore, the use of multiple time frames allows for an investigation of the reinforcement effect of service loyalty on future service quality perceptions as well as other outcome variables that determine the strength of customer-organization relationships such as commitment, trust and customer value. Finally, additional exploration of the service quality-behavioural intentions link needs to be extended beyond the five industries in our sample, especially in relation to markets in which switching barriers are high such as state monopolies like railroad and postal services.

Managerial implications
Our findings have several managerial implications. The impact of perceived quality on preference loyalty is considerably strong. Perceived service quality has an impact on customer preference and the willingness to recommend the service to other consumers. It leads to a more favourable disposition towards the service provider and the commitment to repatronage increases. Also, the impact of perceived service quality on price indifference loyalty is quite high. In case of higher perceived service quality levels, consumers are less sensitive to price increases in services. Apparently, customers are willing to pay for quality services and will make an explicit comparison between what they give and what they get. There appears to be no relationship between perceived service quality and dissatisfaction response. We suspect that customer complaining is

not so much related to overall evaluations of service quality but rather to specific incidents in which the service quality falls below a customer's expected standards. This means that in case of a negative service experience, the general level of the perceived service quality will not contribute to the willingness of the customer to complain. Other types of strategies, such as service recovery strategies may be the key to dissatisfaction response. These strategies are aimed at stimulating customers to voice their dissatisfaction, restore satisfaction on an individual basis and providing information on how to prevent similar service failures in the future. Nowadays, service recovery strategies are an important part of general perceived service quality. Therefore, while there may not be a direct relation between overall service quality and dissatisfaction response companies should not overlook the importance of this type of loyalty (Jones and Sasser, 1995).

In addition, the results of our research enable managers to nuance the intuitive positive relationship between service quality on the one hand and price indifference loyalty on the other hand. For instance, as compared to the other industries, the relationship between service quality and price indifference loyalty is the strongest for high switching cost industries (city theatres and health centres), while the effect of perceived service quality on the same type of loyalty is lower for low switching cost industries (amusement parks, fast food and supermarkets). This implies that the same increase in perceived service quality as a result of quality improvement efforts has more effect in some industries than in others. Alternatively, companies operating in service industries with high switching costs in which the impact of quality on loyalty is relatively strong are also more vulnerable to decreases in perceived quality levels. Hence, service quality levels should be monitored carefully in these type of industries. Furthermore, the direct positive relationship between switching costs and preference loyalty and price indifference loyalty as such implies that service providers are advised to undertake actions that increase switching costs for their customers such as establishing preferred customer programmes. These programmes are directed at identifying and maintaining relationships with customers through long-term value-added relationships whereby the goal is to build competitive immunity by means monetary and non-monetary advantages (Gruen and Ferguson, 1994). Customers that take part in these programmes will have to elaborate to a lesser extent on the choice of service supplier. This increases switching costs in terms of time, effort and also money in considering another services supplier.

Also, the role of perceived service quality in investment decisions should be more prominent. Therefore, it seems relevant to determine the nature and strength of the relationship between perceived service quality and service loyalty for a firm and/or different industry levels. Firm- and industry-level assessment of the service quality-service loyalty link provides useful information to shareholders on the viability of performance in the future. Indices based on the behavioural loyalty intentions may supplement measures of financial performance and market share with crucial information of the

future health of a firm or industry. Especially when tracked over time, changes in service loyalty signal changes in the value of customer assets. Finally, information on the service quality-service loyalty can provide benchmarks that individual firms may use to guide their service policies.

References

Anderson, C.H. (1986), "Hierarchical moderated regression analysis: a useful tool for retail management decisions", *Journal of Retailing,* Vol. 62, pp. 186-203.

Anderson, E.W. and Fornell, C. (1994), "A framework for comparing customer satisfaction across individuals and product categories", *Journal of Economic Psychology,* Vol. 12, pp. 267-86.

Andreasen, A.R. (1982), "Consumer satisfaction in loose monopolies: the case of medical care", *Journal of Public Policy and Marketing,* Vol. 2, pp. 122-35.

Andreasen, A.R. (1985), "Consumer responses to dissatisfaction in loose monopolies", *Journal of Consumer Research,* Vol. 12, pp. 135-41.

Azjen, I. and Fishbein, M. (1980), *Understanding Attitudes and Predicting Social Behavior,* Prentice Hall, Englewood Cliffs, NJ.

Barnes, J.G. and Cumby, J.A. (1995), "The cost of service: extending the boundaries of accounting systems to enhance customer value", in Glynn, W. and Barnes, J.G. (Eds), *Understanding Services Management,* pp. 178-202.

Bass, F. (1974), "The theory of stochastic preference and brand switching", *Journal of Marketing Research,* Vol. 11, pp. 1-20.

Bearden, W.O., Crockett, M. and Teel, J.E. (1979), "Alternative framework for predicting consumer complaining", in Beckwith N. *et al.* (Eds), *Educator's Conference Proceedings,* pp. 239-43.

Berger, I.E. and Mitchell, A.A. (1989), "The effect of advertising on attitude accessibility, attitude confidence, and attitude behavior relationship", *Journal of Consumer Research,* Vol. 16, December, pp. 269-79.

Boulding, W., Kalra, A., Staelin, R. and Zeithaml, V. (1993), "A dynamic process model of service quality: form expectations to behavioral intentions", *Journal of Marketing Research,* Vol. 30, pp. 7-27.

Brown, S.W. and Swartz, T.A. (1989), "A gap analysis of professional service quality", *Journal of Marketing,* Vol. 53, pp. 92-8.

Cronin, J.J. and Taylor, S.A. (1992), "Measuring service quality: a reexamination and extension", *Journal of Marketing,* Vol. 56, pp. 55-68.

Crosby, L.A. and Stephens, N. (1987), "Effects of relationship marketing on satisfaction, retention and prices in the life insurance industry", *Journal of Marketing Research,* Vol. 24, pp. 404-11.

Dabholkar, P.A. and Thorpe, D.I. (1994), "Does customer satisfaction predict shopper intentions", *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior,* Vol. 7, pp. 161-71.

Day, G.S. (1969), "A two-dimensional concept of brand loyalty", *Journal of Advertising Research,* Vol. 9, September, pp. 29-35.

Day, R.L. (1984), "Modelling choices among alternative responses to dissatisfaction", in Kinnear, T.C. (Ed.), *Advances in Consumer Research,* Vol. 11, pp. 496-9.

Dick, A.S. and Basu, K. (1994), "Customer loyalty: toward an integrated conceptual framework", *Journal of the Academy of Marketing Science,* Vol. 22, pp. 99-113.

Fornell, C. (1992), "A national customer satisfaction barometer: the Swedish experience", *Journal of Marketing,* Vol. 56, pp. 6-21.

Fornell, C. and Wernerfelt, B. (1988), "A model for customer complaint management", *Marketing Science,* Vol. 7, pp. 287-98.

Fornell, C., Johnson, M.D., Anderson, E.W., Cha, J. and Bryant, B.E. (1996), "The American customer satisfaction index: nature, purpose and findings", *Journal of Marketing,* Vol. 60, October, pp. 7-18.

Gremler, D.D. and Brown, S.W. (1996), "Service loyalty; its nature, importance and implications", in Edvardsson B., Brown, S.W., Johnston, R. and Scheuing, E. (Eds), *QUIS V: Advancing Service Quality: A Global Perspective,* ISQA, New York, NY, pp. 171-81.

Gruen, T.W. and Ferguson, J.M. (1994), "Using membership as a marketing tool: issues and applications", in Sheth, J.N. and Parvatiyar, A. (Eds), *Research Conference Proceedings Relationship Marketing: Theory, Methods and Applications,* Emory University, Atlanta, GA

Guiltinan, J.P. (1989), "A classification of switching costs with implications for relationship marketing", in Childers, T.L., Bagozzi, R.P. *et al.* (Eds), *AMA Winter Educators' Conference: Marketing Theory and Practice,* Chicago, IL, pp. 216-20.

Gummesson, E. (1995), "Relationship marketing; its role in the service economy", in Glynn W. and Barnes, J.G. (Eds), *Understanding Services Management,* pp. 244-68.

Hirschman, A.O. (1970), *Exit, Voice and Loyalty,* Harvard University Press, Cambridge, MA.

Jacoby, J. and Chestnut, R.W. (1978), *Brand Loyalty Measurement and Management,* Wiley, New York, NY.

Jain, A.K., Pinson, C. and Malhotra, N.K. (1987), "Customer loyalty as a construct in the marketing of banking services", *International Journal of Bank Marketing,* Vol. 5, pp. 49-72.

Jones, T.O. and Earl Sasser, W. (1995), "Why satisfied customers defect", *Harvard Business Review,* Vol. 73 No. 6, pp. 88-99.

Keaveney, S.M. (1995), "Customer switching behavior in service industries: an exploratory study", *Journal of Marketing,* Vol. 59, pp. 71-82.

Kelley, S.W., Hoffman, K.D. and Davis, M.A. (1993), "A typology of retail failures and recoveries", *Journal of Retailing,* Vol. 69, pp. 429-52.

Landon, E.L. (1980), "The direction of consumer complaint research", in Olson (Ed.), *Advances in Consumer Research,* Vol. 7, pp. 335-8.

Lee, B.A. and Zeiss, C.A. (1980), "Behavioral commitment to the role of sport consumer: an exploratory analysis", *Sociology and Social Research,* Vol. 64, April, pp. 405-19.

Micheals, R.E. and Dixon, A.L. (1994), "Sellers and buyers on the boundary: potential moderators of role stress – job outcome relationships", *Journal of the Academy of Marketing Science,* Vol. 22 No. 1, pp. 62-73.

Oliver, R.L. (1996), *Satisfaction. A Behavioral Perspective on the Consumer,* McGraw Hill, New York, NY.

Olson, J.C. and Jacoby, J. (1971), "A construct validations study of brand loyalty", *Proceedings of the American Psychological Association,* Vol. 6, pp. 657-8.

Patterson, P.G. and Johnson, L.W. (1993), "Disconfirmation of expectations and the gap model of service quality: an integrated paradigm", *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior,* Vol. 6, pp. 90-9.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1994), "Reassessment of expectations as a comparison standard in measuring service quality: implications for further research", *Journal of Marketing,* Vol. 58, pp. 111-24.

Pessemier, E.A. (1959), "A new way to determine buying decisions", *Journal of Marketing,* Vol. 24, pp. 41-6.

Porter, M.E. (1980), *Competitive Strategy; Techniques for Analyzing Industries and Competitors,* Macmillan, New York, NY.

Pritchard, M.P. (1991), "Development of the psychological commitment instrument (PCI) for measuring travel service loyalty", unpublished doctoral dissertation, University of Oregon.

Quinlan, M.R. (1991), "How does service drive the service company", *Harvard Business Review,* pp. 146-50.

Raju, J., Srinivasan, S.V. and Lal, R. (1990), "The effects of brand loyalty on competitive price promotional strategies", *Management Science,* Vol. 36, pp. 276-304.

Reichfeld, F.W. and Sasser, W.E. (1990), "Zero defections: quality comes to services", *Harvard Business Review,* Vol. 68 No. 5, pp. 105-11.

Rust, R.T. and Zahorik, A.J. (1993), "Customer satisfaction, customer retention, and market share", *Journal of Retailing,* Vol. 69, pp. 193-215.

Sharma, S., Durand, R.M. and Gur-Arie, O. (1981), "Identification and analysis of moderator variables", *Journal of Marketing Research,* Vol. 18, August, pp. 291-300.

Smith, R.E. and Swinyard, W.R. (1988), "Cognitive response to advertising and trial: belief strength, belief confidence and product curiosity", *Journal of Advertising,* Vol. 17, September, pp. 3-14.

Strandvik, T. and Liljander, V. (1994), "A comparison of episode performance and relationship performance for a discrete service", paper presented at the 3rd Service Marketing Workshop, Berlin, Germany, 25-26 February.

Yi, Y. (1990), "A critical review of consumer satisfaction", in Zeithaml V. (Ed.), *Review of Marketing,* American Marketing Association, Chicago, IL, pp. 68-123.

Zedeck, S. (1971), "Problems with the use of moderator variables", *Psychological Bulletin,* Vol. 76, October, pp. 295-310.

Zeithaml, V.A., Parasuraman, A. and Berry, L.L. *et al.* (1990), *Delivering Quality Service: Balancing Customer Perceptions and Expectations,* The Free Press, New York, NY.

Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", *Journal of Marketing,* Vol. 60, pp. 31-46.

453