

MANAGING SERVICE RECOVERY PROCESSES: THE ROLE OF CUSTOMERS' AGE

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Abstract. Research and practice show that effective management of service recovery processes boosts customer satisfaction. Under this assumption, the purpose of this paper is to analyze a set of factors which may determine satisfaction with recovery processes and loyalty. We also analyze the role of age as potential moderating. Segmenting customers' samples by age may potentially contribute to more effective service recovery process management. Older customers seem to be more loyal when dealing with service providers than younger customers, while younger customers are more demanding in terms of companies' efforts. Implications for both literature and practice are included at the front-end of the paper.

Keywords: Service recovery, customer satisfaction, loyalty, age, PLS.

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1. Introduction

In the current highly competitive environment, consumers become more demanding and expect the excellence of any service provider (Tsai, Su 2009). The existence of multiple options becoming available to the consumer raises consumer's expectations and sometimes customers perceive a low quality service.

As a result, more and more companies are focusing on improving the service itself as well as establishing the channels to successfully handle any service failure that may happen with the objective of enhancing customer service (Salavou 2010). Additionally, market research is becoming an important tool for identifying and assessing both existing and potential consumer needs and expectations, with the objective of designing better services and enhancing personnel training methods.

However, even when very carefully designing any service, mistakes are unavoidable and even the best companies have to deal with them (Chang, Hsiao 2008; DeWitt *et al.* 2008; Huang 2008; Michel, Meuter 2008; Varela *et al.* 2008a). Such mistakes have a negative impact on consumer perception and consequently, they can affect customer's satisfaction levels (Michel, Meuter 2008). Several authors, Bitner *et al.* (1990), McCollough and Bharadwaj (1992), Zeithaml *et al.* (1996) and Varela *et al.* (2008a), have pointed out that an effective service failure management and sometimes a timely solution can successfully restore customer satisfaction (*service recovery paradox*). This phenomenon has been widely studied in the service marketing area and has become of great interest for both academia and business, due to the enormous pressure most industries are facing (Maxham, Netemeyer 2002). However, literature still suggests a gap related with some consequences of service recovery processes, not about satisfaction, but about loyalty and customer-firm relationships.

As previously mentioned, several authors (e.g., Michel, Meuter 2008; Varela *et al.* 2008a) have studied the impact of service recovery processes on customer satisfaction levels. In particular, Tsai and Su (2009) and Varela *et al.* (2009) among others, find that good service recovery processes decrease the likelihood of customer switching to the competence. Additionally, those processes are considered antecedents to customer loyalty and the relational approach (e.g., DeWitt *et al.* 2008; Chang, Hsiao 2008; Ok *et al.* 2007). In fact, they show that the effective management of service related complaints stimulates good long term relationships with customers and provides valuable feedback for those companies that wish to improve their service. On the other hand, poor service recovery processes may lead to even higher levels of dissatisfaction. Even though there has been an increasing interest on this area, several gaps in the literature still exist (DeWitt *et al.* 2008). Some of the main questions that still need to be addressed are i) how *justice* is perceived and its impact on loyalty, and ii) individual and joint consideration of attitudinal and behavioral loyalty, which would contribute to a fuller understanding of service recovery measure effectiveness.

Huang (2008) explores the concept of *customer satisfaction* but does not present any empirical proof on the direct link between satisfaction and loyalty. He postulates that the scope of the failure, the client perception of staff efforts, and the expectations with respect to recovery are antecedents to the level of satisfaction of recovery when the service is eventually restored. He concludes the paper suggesting the interest on a wider study of the behavioral ramifications of such satisfaction. In the same line of research, Michel and Meuter (2008) focus their research on satisfaction levels after the service recovery process. They admit that working with different scales derived from one item has its limitations and the study should be repeated using multi-item scales.

Some studies (e.g., Verhoef 2003; Homburg, Giering 2001; Mittal, Kamakura 2001) point out that consumers' age tends to display divergent behavior patterns and therefore consumers perceive satisfaction differently. Yet, literature specifically analyzing the role of age in satisfaction models is hard to come by in services marketing research. Shanin and Chan (2006) and Pai-Lin *et al.* (2001) are rare exceptions. In the case of service recovery research, we were not able to find explicit evidence of previous research on this

area. Therefore the work presented in this paper tries to fill in this gap in the literature. In such a context, this study aims to contribute to both, academia and business, segments by analyzing some consequences of service recovery processes, not only about satisfaction – as prior studies do but more importantly, about loyalty and customer-firm interactions and relationships. Therefore, this paper complements the existing literature and reach the following specific objectives: i) identifying and exploring the impact of perceived satisfaction antecedents on service recovery, ii) analyzing the link between satisfaction with service recovery processes and loyalty, iii) studying the potential moderating role of the age variable in service recovery processes, and iv) reflecting on implications for both business practice and the literature. To the extent that we achieve these goals we will be contributing to filling in the gaps mentioned above.

The paper is structured as follows. Section 2 presents the literature review taking as key reference the service recovery processes literature. Section 3 presents the model of reference based on a set of hypothesis. Section 4 justifies the sector of reference for the empirical study. Sections 5 and 6 are related with the empirical study and results. The final section of the paper discusses our contribution to literature and practice as well as presents the main conclusions of this research.

2. Literature review

Michel and Meuter (2008) and Maxham (2001) define *service failure* as a real or perceived setback or problem that occurs during customer-company interaction. Similarly, *service recovery* is defined as the post-failure measures taken by the service provider aimed at resolving the service failure (Bitner *et al.* 1990; Grönroos 1998). Both Chang and Hsiao (2008) and Smith *et al.* (1999) make a distinction between *complaint management* and *service recovery*. These authors agree that in both cases, we are dealing with a reaction to a service related problem on the company's side; however, while complaint management is reactive in nature, service recovery is proactive; that is, the aim is not only to successfully deal with the complaint but also to provide a satisfactory, client oriented solution as quickly as possible.

We now introduce the *service recovery paradox* (SRP) that refers to a seemingly illogical situation where – following a failure / recovery process – higher levels of customer satisfaction are achieved than in the case of customers who have not experienced any service failure (Varela *et al.* 2008a; Michel, Mauter 2008; McCollough, Bharadwaj 1992). Therefore, a successful service recovery process becomes a catalyst for customer satisfaction which may lead to positive word-of-mouth boosting long term relationships with clients and enhancing company-client relationships (Tsai, Su 2009). This idea has been widely studied in De Matos *et al.* (2007), Magnini *et al.* (2007), Maxham (2001), Smith and Bolton (1998), and Zeithaml *et al.* (1996), among others.

However, we find, after an exhaustive review of the literature, that findings are not conclusive with respect to service recovery satisfaction levels. In recent years, authors such as Magnini *et al.* (2007), Hocutt *et al.* (2006), and Maxham and Netemeyer (2002) have aligned themselves with previous research in recognizing the positive impact of

recovery procedures; on the opposite side we find scholars such as Ok *et al.* (2007), Andreassen (2001), McCollough (2000), and Hocutt *et al.* (1997) that do not recognize such effect.

Michel and Meunter (2008) point out the existence of two factors that might explain these two opposite lines of research. On one hand, the lack of consensus with respect to the *recovery* definition: some studies compare clients who have experienced service failure with those who have not experienced it, while other studies compare the same client before and after a failure is experienced. In the present study we assume that clients who complain do so because their expectations have not been met. On the other hand, recovery processes are somehow scarce because only a small number of dissatisfied clients actually register a complaint, making it difficult to find a significant sample of clients that have received satisfactory recovery. In order to overcome this potential problem we decided to use a specialized company to obtain the empirical data for our research (see the empirical research section).

The conceptual basis for this study falls under the larger theoretical framework of SRP. However, we suppose that customers make complaints when expectations are not achieved and therefore we only analyze the perceived satisfaction with service recovery processes. The next step is to identify factors which might pave the way for satisfactory recovery.

2.1. Antecedents

In our literature research we have found key articles that consider critical variables to analyze service recovery processes. These factors that have already been analyzed in the literature are the following: intent to complain (Hocutt *et al.* 1997), company's image (Bontis *et al.* 2007; Andreassen 2001), trust (Kau, Loh 2006), service quality (McCollough 1995), and switching intentions (Varela *et al.* 2009; Zeithaml *et al.* 1996). Huang (2008) and De Matos *et al.* (2007) consider service failure severity, recovery expectations, company responsibility, and perceived interest/effort when it comes to resolving service related problems, which is the approach we follow in our research (definitions of variables and their impact on satisfaction with service recovery processes are provided in section 3).

2.2. Consequences

The literature identifies *perceived satisfaction* and *repurchase intent* as key variables for the study of the recovery process (e.g., DeWitt *et al.* 2008; Michel, Meuter 2008; De Matos *et al.* 2007). However, up to date, both variables have been studied in isolation and only a small percentage of studies, in our opinion, have grounded findings in empirical evidence-despite implicitly recognizing the link between customer satisfaction and service loyalty/intent to repurchase.

In this line, the work carried out by DeWitt *et al.* (2008) revolves around the notions of justice, and loyalty-both attitudinal and behavioral (definitions and interactions are also provided in section 3).

2.3. Moderators

Additionally, the vast majority of the studies cited recognize the potential impact of moderating factors such as type of service / industry or the demographic profile of the sample. Key studies for understanding notions such as *perceived satisfaction* and *customer retention strategy* (e.g., Shanin, Chan 2006; Verhoef 2003; Homburg, Giering 2001; Mittal, Kamakura 2001) point out that certain variables – including gender, age, education and income level – can alter projected behavior patterns. Such research suggests that older customers are more responsible, conscientious and have more stable preferences than younger consumers and that is the reason why their loyalty and repurchase probability is higher. Meanwhile, younger customers tend to be more emotional, energetic and do not rely that strongly on their satisfaction with pure objective parameters but with more subjective evaluations than older customers. Therefore, younger customers may be more demanding in terms of effort and expectations than older customers, while the effect of justice on satisfaction and the probability of loyalty may be higher in the segment of older people than in the younger people. Moreover, reasons for different patterns of behaviour between ages may be related with psychological, cultural and other contextual factors (e.g., Shahin, Chan 2006, Bravo *et al.* 2008).

The value of such findings has been corroborated in marketing circles by Homburg and Giering (2001), Jones *et al.* (2001), Mittal and Kamakura (2001) and Bolton (1998), among others. However literature calls for renewed research efforts taking into account this variable in service recovery models.

A review of the literature, then, reveals research gaps which substantiate the present study. It follows – as authors such as DeWitt *et al.* (2008) – have recently suggested, that more empirical evidence of the nexus linking perceived justice, service recovery related satisfaction and customer loyalty is needed. Our study also acquires added value by looking at a specific industry and context which has yet to be analyzed – despite its economic impact: the mobile phone sector in Spain.

3. Hypotheses

Based on the ideas and arguments presented in the previous sections we submit that customer satisfaction is a key factor in understanding the customer's perspective following a service recovery episode. The literature suggests, moreover, that the happier customers are, the more likely they are to maintain a long lasting relationship with the company and therefore we can integrate our approach in the relationship marketing paradigm. We would venture, then, that customer perception of company effort, expectations for recovery, the severity of the service failure, and perceived justice underlie and explain the level of customer satisfaction following service recovery measures. Client loyalty – both attitudinal and behavioral – can be understood as a function of the level of customer satisfaction. Our reference model can be found in Figure 1, followed by justification of our hypotheses. We also consider the moderating effect of age in the set of hypothesis.

The literature defines *perceived effort* as customer perception of the energy and resources that the company has dedicated to solving the problem (Huang 2008; De Matos *et al.*

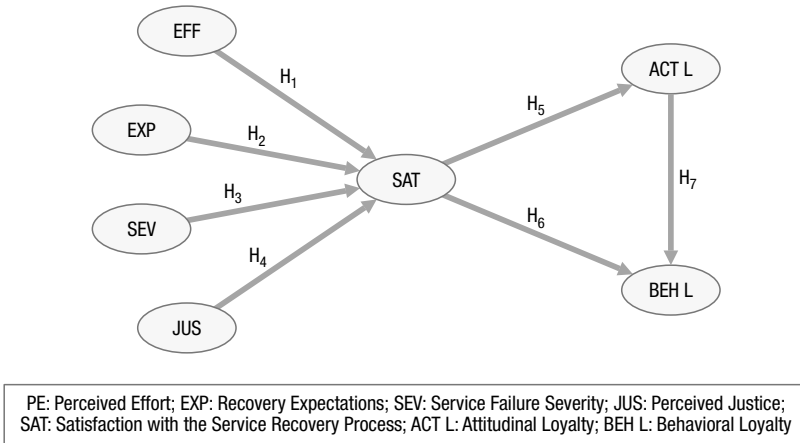


Fig. 1. Causal mode

2007; Guenzi, Pelloni 2004). It would be logical, therefore, to assume that customer appraisal following a service recovery encounter (perceived satisfaction) is a function of perceived effort. However, we have to assume that differences between customers and employees viewpoints happened (Asghar, Rostamy 2009). A case in point is the client who, having perceived sincere concern and effort on the part of the company, – despite the lack of a satisfactory solution – demonstrates something close to what can be termed as *satisfaction* (Mohr, Bitner 1995). Our first hypothesis, then, is:

H1: *The greater the perceived effort, the greater the perceived satisfaction following the service recovery process.*

However, Mittal and Kamakura (2001), Homburg and Giering (2001) and Jones *et al.* (2001) seem to suggest that older clients tend to be less demanding in this regard, which suggests that perceived effort is a more relevant factor among younger customers:

H1_A: *Younger customers are more susceptible than older customers to perceived effort and its impact on post-recovery customer satisfaction levels.*

The notion of *expectations* is paramount in the world of marketing, explaining the wealth of literature on the subject (e.g., Armstrong *et al.* 2009; Grönroos 1998). The general consensus is that expectations are an a priori assessment on the part of the customer of what he / she aims to obtain (Zafiroopoulos, Vrana 2008; Pai-Lin *et al.* 2001). As the term applies to service recovery contexts, authors such as Ok *et al.* (2007), Hess *et al.* (2003), and Swanson and Kelley (2001) point out that recovery expectations are linked to customers' hopes of obtaining an appropriate, satisfactory solution to a given problem. Logically, higher expectations make for more demanding clients; in other words, both direct and inverse expectations-satisfaction relationships are to be expected (Huang 2008; Wirtz, Mattila 2004). This brings us to our second hypothesis:

H2: *The higher the client's expectations are with regard to service recovery, the lower the level of perceived satisfaction.*

In this regard, Verhoef (2003) and Mittal and Kamakura (2001) suggest that younger clients are, for the main part, more demanding than older clients and therefore tend to have lower expectations for recovery. If this is the case, we can accept that old customers have lower recovery expectations than the young ones:

H2_A: *Younger customers are more susceptible than older customers to the impact service recovery related expectations have on post recovery perceived satisfaction levels.*

Service failure severity is defined as the magnitude of the loss suffered by consumers due to a negative episode (Huang 2008). Loss of this nature can be triggered by tangible factors such as monetary damage, or by intangible aspects like anger or frustration. The literature suggests that the greater the magnitude of the service failure, the more difficult it is to satisfy the client via service recovery strategies (Magnini *et al.* 2007; Mattila 1999; Smith, Bolton 1998; McCollough 1995). Thus, both the service recovery process and the perception of the final result are conditioned by the magnitude of the failure to the extent that the greater the severity, the lower the level of satisfaction perceived by the client (Hoffman *et al.* 1995). This phenomenon is due to the fact that customers tend to perceive less justice in recovery strategies and final outcomes as the magnitude of the failure augments (Huang 2008). In short, a severe service failure can deal a fatal blow to customer satisfaction levels.

H3: *The greater the magnitude of the service failure, the lower the level of customer satisfaction with regard to service recovery.*

Additionally, the greater objectivity of the older segment respect to younger customers (e.g., Homburg, Giering 2001; Pai-Lin *et al.* 2001) may reinforce the effect of this link. Therefore we propose the following:

H3_A: *Older customers are more susceptible than their younger counterparts to the impact of service failure severity – with respect to service recovery – on perceived satisfaction levels with regard to service recovery processes.*

From the perspective of justice theory, customers are asked to evaluate solutions obtained via the service recovery process in terms of *fair* or *unfair* (DeWitt *et al.* 2008; Chang, Hsiao 2008). In this sense, justice can be linked both to the customer-company interaction phase and to the final outcome of the recovery process itself (Maxham, Netemeyer 2002; Tax *et al.* 1998). In this way when the customer receives satisfactory treatment—and, above all, recovery—high levels of perceived justice and a satisfactory end result are obtained. This idea is present in Chang and Hsiao (2008), and Varela *et al.* (2008a), who explicitly endorse the idea that effective service recovery boosts perceived justice and contributes towards maximizing customer satisfaction.

H4: *The higher the level of perceived justice, the greater the level of satisfaction perceived by the client throughout the service recovery process.*

In this grain, authors like Mittal and Kamakura (2001) and Pai-Lin *et al.* (2001) suggest that older people tend to display a more highly developed sense of justice. Hence H4_A is:

H4_A: *Older customers are more susceptible than younger customers to perceived justice and its impact on post-recovery customer satisfaction levels.*

Relationship marketing postulates that satisfaction is fundamental to effective client retention (Gustafsson *et al.* 2005; Kim *et al.* 2004; Gummensson 1997; Morgan, Hunt 1994; Dwyer *et al.* 1987). A happy client is one whose expectations have been met and who believes, therefore, that the company in question will be able to deliver down the line (Santala, Parvinen 2007). Hence, we can assume that a satisfied client will be a loyal client (Tamosiuniene, Jasilioniene 2007). *Customer loyalty* can be defined, then, as the client's commitment to repurchasing products from the same brand or company in the future, determined by both an attitudinal and a behavioral component (Oliver 1999). *Attitudinal loyalty* is linked to client propensity to commit to a given brand / company and must not—as Shankar *et al.* (2003) point out—be limited exclusively to repurchase behavior. Positive word-of-mouth, for instance, can also be considered an example of this type of customer loyalty (Bontis *et al.* 2007). Varela *et al.* (2009) suggest that the higher the level of perceived satisfaction with regard to service recovery, the lower the chances are that a client will abandon a service provider. In such a context, we can assume that the probability of repurchase/attitudinal loyalty will increase (DeWitt *et al.* 2008). Based on the previous arguments we propose the following set of hypothesis:

H5: *The higher the level of perceived satisfaction, the greater the degree of attitudinal loyalty displayed by the customer.*

H6: *The higher the level of perceived satisfaction, the greater the degree of behavioral loyalty displayed by the customer.*

H7: *Attitudinal loyalty towards a brand/company and behavioral loyalty towards a brand / company are directly proportional.*

However, specific research into consumer behavior (e.g., Capraro *et al.* 2003; Homburg, Giering 2001; Mittal, Kamakura 2001; Pai-Lin *et al.* 2001) leads one to believe that older people are more prone to be loyal while younger customer – though they may also be loyal – are more likely to respond to emotional and short term results. This brings us to our last set of hypotheses:

H5_A: *Older customers are more susceptible than their younger counterparts to the impact of perceived satisfaction with service recovery efforts on attitudinal loyalty.*

H6_A: *Older customers are more susceptible than younger customers to the impact of perceived satisfaction with service recovery efforts on behavioral loyalty.*

H7_A: *The impact of attitudinal loyalty vis-à-vis behavioral loyalty affects older customers more than it does younger customers.*

4. The mobile phone sector in Spain

We test our hypothesis in the Spanish mobile phone sector. This industry will serve as our framework for analyzing the significance of the proposed model. Telecommunications is currently the most aggressively competitive sector in Spain (Polo, Sesé 2009) – and one of the most affected by globalization of services, due to the high rate

of technological development. Moreover, the ever increasing range of choices enhances consumer decision making power (Maícas, Sesé 2008). Up until 2004, as Rivero and Manera (2005) point out in a recent study, mobile operators were still able to find small pockets of potential clients who had not yet been tapped. Market saturation became the reality from that point on up to date, and capturing clients from the competition has become the only route to growth.

Yet another of the strategies of choice, aimed at maintaining activity levels within the mobile phone sector, has been the quest for new applications, models and ‘limited time offers’. The result: a 4% increase in business across the industry in 2009, peaking at 52.9 million counting both company and individual clients – the equivalent of 114.6 lines per one hundred inhabitants (Juste 2010).

Such a competitive framework underscores the importance of a deep understanding of the client – of knowing exactly what customers want and expect in order to effectively position oneself in the market (Maícas *et al.* 2009; Polo, Sesé 2009). Apparently, however, marketing strategies have become much more aggressive, as our pilot study revealed; a whole slew of more attractive, ‘new and improved’ products which, paradoxically, are relatively distant from the original market need and ‘raison d’être’. Pricing strategies and ‘limited time offers’ appear to be aimed more at capturing new clients than fostering real customer loyalty. As a result, in the Spanish mobile phone sector a) there is very little difference between one mobile operator and another in terms of the services they offer; b) new clients are harder and harder to come by; c) the skyrocketing cost of capturing new clients means it takes longer and longer to recuperate the initial investment; d) ambitious sales objectives have driven many mobile companies to come up with strategies to draw clients away from competitors – at any cost; e) it is an industry known for high rotation and quick client turnover. In the authors’ opinion, such findings call for fostering more conservative strategies, perhaps, in order to really guarantee customer satisfaction and loyalty; to this end, strategies linked to relationship marketing and the service recovery paradox might be our best bet. In any case, we should underline that the specific characteristics of the industry (e.g., price, commercial campaigns, accessories, etc.) may play a major role in both company’s choice and service recovery perceptions.

Moreover, despite the research by Hur *et al.* (2010), Polo and Sesé (2009), Wieringa *et al.* (2007), and Lee *et al.* (2006) pointing out the value of the mobile phone industry as a point of reference for empirical research in the context of service marketing, up to date it has not been considered in the light of the service recovery paradox.

5. Empirical study

5.1. Introduction

Our pilot study revealed that, on average, 25% of interviewed customers had experienced some sort of a problem with their mobile operator at one time or another. Only 16%, however, had filed a complaint and a mere 5% of the clients who had complained felt their problem had been resolved satisfactorily. Such findings suggest that i) Spanish

mobile operators have a long way to go when it comes to effective complaint management; and ii) collecting data of this sort is no easy task. With this in mind, the decision was made to engage a data collection service; our inclusion criteria required that survey participants be legal adults who had experienced some sort of service related problem with their mobile provider, filed a formal complaint and received a response from the company in question.

The fieldwork for our study was carried out in November and December, 2009; 202 surveys were compiled. All pertinent technical details can be found in Table 1.

In order to analyse the moderating role of age in service recovery processes, we split the sample in two groups (customers up to 25 years old and customers from 26 years old) following Shahin and Chan (2006), Bravo *et al.* (2008) and Varela *et al.* (2008b). Arguments to defend this split are based on lifestyles changes that happened when people are around 25 years old: different pattern of behaviour may be related with psychological, cultural and other contextual factor such as emancipation and incorporation to the labour market.

Table 1. Technical data of the study

Universe	Adult mobile phone users, who had experienced a problem with their mobile provider, filed a complaint and received a response from the company.
Geographical scope	Nation-wide (Spain)
Sample	202 adults
Participant profile	*Males: 104 (51.5%); Females: 98 (48.5%) *Age 18–25: 73 (31.13%); Age 26–35: 61(30.19%); Age 35–50: 40 (19.80%); Age 50–65: 23 (11.38%); Age 66+: 5 (2.47%) *Students: 78 (38.61%); Employed: 90 (44.55%); Homemakers: 16 (7.92%); Unemployed: 9 (4.45%); Retired: 9 (4.45%)
Data collection period	November-December, 2009
Data analysis	PLS and SPSS

We used the scales proposed by Huang (2008) to gauge *perceived effort*, *service error severity*, *recovery expectations*, and *post-recovery satisfaction*. For our assessment of *perceived justice* and *customer loyalty* (attitudinal and behavioral) we opted in favor of the scales put forth by DeWitt *et al.* (2008). Prior to distributing the final survey we circulated a pretest we had fleshed out in collaboration with colleagues from Marketing departments at several different universities, PhD candidates, and a small sample of potential interviewees. With the context under scrutiny in mind, pertinent reliability and validity tests were run for all proposed scales – even in cases where the scale in question had previously been tested in earlier studies. The scales that were eventually selected have been included in Appendix 1 for easy reference.

We worked with a *Partial Least Squares* (PLS) structural equations analysis technique to evaluate the measurement model and significance of the hypotheses. *PLS-Graph version 03.00 build 1017* (Chin, Frye 2003) was the software of choice.

5.2. Measurement model

It should be noted here that one of the constructs – *perceived justice* – is made operable via a molecular approach; this makes it a second-level factor which is the cause of its first-level components or factors (Chin, Gopal 1995). Thus, it was essential to apply the approach in two phases – also referred to as *hierarchical components analysis* (HCA) (Lohmöller 1989; Chin, Gopal 1995). We should note here as well that perceived justice is a second-level construct which is measured using three first-level factors: *distributive justice*, *interactive justice* and *procedural justice*.

With regard to our measurement model, we began by assessing the reliability of individual items. The indicators for all three samples are above the accepted 0.707 benchmark established by Carmines and Zeller (1979), as seen in Table 2. Only one item was below the accepted benchmark: *If another mobile provider offered lower prices or special discounts, I would make the change* (ACT L3); this item was excluded from all three samples.

In the case of construct reliability, the measurement scale of choice was *composite reliability* (ρ_c) (Werts *et al.* 1974). Careful scrutiny of the findings in Appendix 1 shows all constructs in all dimensions to be reliable across the three samples: indicator values above 0.8 (Nunnally 1978).

When it came to assessing *convergent validity*, we turned to the *average variance extracted* (AVE) scale proposed by Fornell and Larcker (1981). Given that the 0.5 benchmark these authors establish is below the AVE for the different constructs/dimensions, we can affirm that convergent validity exists (see Appendix 1).

The presence of *discriminant validity* has been confirmed using AVE (Fornell, Larcker 1981), comparing the square root of this measurement with the correlations among constructs. Discriminant validity is present in all samples, as seen in Appendix 2.

6. Findings

6.1. Structural model

Following this analysis of our measurement model an assessment of the significance of the hypotheses proposed in the structural model is in order. It should be noted that PLS does not require that data derive from normal, or known, distributions – which explains why traditional parameter estimation techniques for testing model significance are considered inappropriate (Chin 1998). Yet another difference between covariance based structural equation models and PLS is that, in the latter, goodness-of-fit measures are not called for (Hulland 1999). As seen in Table 2, the structural model is assessed i) using the variance value from the model (R^2), and ii) considering the size of the standardized path coefficients (β) after observing both the t values and the significance level obtained from the bootstrap test with 500 subsamples.

With respect to the antecedent variables for post recovery satisfaction (see Table 2 for the total sample and subsamples), we should note that neither customer expectations (H_2) nor service failure severity (H_3) have a significant impact on perceived satisfaction

levels. On the other hand, the relationships expressed by hypotheses H_1 and H_4 – links between perceived effort and justice, and customer satisfaction – were established: in the total sample (0.330 ; $p < 0.001$ and 0.530 ; $p < 0.001$); and in both subsamples ($\beta_{YC}^1 = 0.349$; $p < 0.001$ and $\beta_{OC} = 0.328$; $p < 0.001$) and ($\beta_{YC} = 0.486$; $p < 0.001$ and $\beta_{OC} = 0.552$; $p < 0.001$).

Table 2. Results for the structural model
(total sample and younger/older customers subsamples)

Impact on endogenous variables	Total sample (N = 201)	Younger customers (N = 73)	Older customers (N = 128)
	Path coefficients (β) T value (bootstrap)	Path coefficients (β) T value (bootstrap)	Path coefficients (β) T value (bootstrap)
Impact on post-service recovery satisfaction (SAT)	$R^2 = 0.627$	$R^2 = 0.595$	$R^2 = 0.667$
H_1 : EFF→SAT	0.330*** (5.4951)	0.349*** (3.9484)	0.328*** (4.3644)
H_2 : EXP→SAT	-0.078 (1.7237)	-0.018 (0.2480)	-0.142 (1.9825)
H_3 : SEV→SAT	-0.022 (0.5443)	-0.106 (1.2937)	-0.017 (0.3064)
H_4 : JUS→SAT	0.530*** (7.8346)	0.466*** (3.4250)	0.552*** (7.3609)
Impact on attitudinal loyalty (ACT L)	$R^2 = 0.290$	$R^2 = 0.276$	$R^2 = 0.297$
H_5 : SAT→ACT L	0.538*** (10.1509)	0.525*** (6.3833)	0.545*** (8.1039)
Impact on behavioral loyalty (BEH L)	$R^2 = 0.558$	$R^2 = 0.684$	$R^2 = 0.524$
H_6 : SAT→BEH L	0.241*** (3.4312)	0.453*** (5.6192)	0.127 (1.4182)
H_7 : ACT L→BEH L	0.589*** (9.8366)	0.494*** (6.5334)	0.646*** (8.7360)

Notes: *** $p < 0.001$, ** $p < 0.01$ (based on a two-tailed test; $t_{(0.001; 499)} = 3.310124157$, $t_{(0.01; 499)} = 2.585711627$)

The impact of customer satisfaction on attitudinal loyalty has been fully verified. On the one hand the relationship proposed in hypothesis H_5 with respect to the total sample has proven true ($\beta = 0.538$; $p < 0.001$); on the other hand, this relationship has been established for both subsamples ($\beta_{YC} = 0.525$, $p < 0.001$ and $\beta_{OC} = 0.545$; $p < 0.001$).

Differences were detected between samples, however, in the case of behavioral loyalty. The relationship expressed by hypothesis H_6 – the link between customer satisfaction and behavioral loyalty – has been established as true for the total sample ($\beta = 0.241$; $p < 0.001$), as well as for the younger customers subsample ($\beta_{YC} = 0.453$; $p < 0.01$). Satisfaction and behavioral loyalty could not be linked for older customers, however.

¹ From now on: YC = Younger Customers; OC = Older Customers.

Finally, the proposed direct, positive relationship linking attitudinal and behavioral loyalty proved true for all three samples ($\beta = 0.589; p < 0.001$; $\beta_{YC} = 0.494; p < 0.001$ and $\beta_{OC} = 0.646; p < 0.001$).

With regard to the explained variance of the endogenous variables (R^2), our research model proved to be sufficiently predictive; findings were consistent across samples, as seen in Table 4.

6.2. Analysis of the moderating effect of the age variable

In order to contrast the moderating role of age in the model, the *path* coefficients between the variables (see Table 2) must be compared. Yet, questions may arise regarding whether differences among the segments obtained for each variable – reflecting the nature of the relationship – are substantial enough to warrant behavioral differences in function of age. One statistical procedure designed to verify the significance of these comparisons (in which a t-test is run) is the multigroup analysis² put forth by Chin (2000) and employed by Keil *et al.* (2000).

In short, for significant relationships, the identified segments suitably distinguish between different predicting variables and their dependent variables, as seen in Table 3. The intensity of the relationships proposed in hypothesis H_{1A} is greater for younger customers than for older customers ($\beta_{YC} > \beta_{OC}, p < 0.1$); among younger customers, the impact of *perceived effort* on *satisfaction* is greater than among older customers. In the case of hypotheses H_{4A} , H_{5A} and H_{7A} on the contrary, our study demonstrates that *justice* has a greater impact on *satisfaction* among older customers than it does among younger customers ($\beta_{OC} > \beta_{YC}, p < 0.001$). Likewise, we have established that the impact *customer satisfaction* has on *attitudinal loyalty*, and *attitudinal loyalty* on *behavioural loyalty* are more substantial among older customers.

Finally, the link between *satisfaction* and *behavioral loyalty* (H_{6A}) is not significant for the older customers subsample, while the same relationship is clearly significant for the younger customers subsample.

The Tippins and Sohi (2003) approach was adopted in order to test the moderating impact of *attitudinal loyalty* (ACT L) on *post-recovery satisfaction* (SAT) and *behavioral loyalty* (BEH L). This approach recommends an analysis of competing models in which two substantive models are gauged and evaluated for significant differences. In the first model, the direct relationship linking SAT and BEH L is explored; in the second, the same relationship is examined, this time with the ACT L in a moderating role.

$${}^2 t = \frac{\text{Path}_{\text{Males}} - \text{Path}_{\text{Females}}}{Sp \sqrt{\frac{1}{m} + \frac{1}{n}}} \approx t(m+n-2)$$

Student's t-distribution of a one-tail test and the number

of degrees of freedom stated in the expression $(m+n-2)$, Sp being the separate variance estimate, m the number of cases in Sample 1, n the number of cases in Sample 2, and SE the standard error for the path provided by PLS-Graph (bootstrap technique).

$$Sp = \sqrt{\frac{(m-1)^2}{m+n-2} x SE^2_{\text{Males}} + \frac{(n-1)^2}{m+n-2} x SE^2_{\text{Females}}}$$

Table 3. T test for multigroup analysis

Impact on endogenous variables	SE		Sp	$\beta_{\text{Males}} - \beta_{\text{Females}}$	T value
	Younger customers	older customers			
Impact on post-recovery satisfaction (SAT)					
H _{1A} : EFF → SAT (YOUNGER > OLDER)	0.0884	0.0752	0.082	0.021#	1.808
H _{4A} : JUS → SAT (OLDER > YOUNGER)	0.1361	0.0750	0.111	-0.086***	-5.493
Impact on attitudinal loyalty (ACT L)					
H _{5A} : SAT → ACT L (OLDER > YOUNGER)	0.0822	0.0673	0.075	-0.020	-1.880
Impact on behavioral loyalty (BEH L)					
H _{7A} : ACT L → BEH L (OLDER > YOUNGER)	0.0756	0.0739	0.075	-0.152***	-14.399

Notes: # $p < 0.1$; *** $p < 0.001$ (based on a two-tailed test $t_{(0.001; 132)} = 3.340086547$, SE = Standard error, Sp = Separate variance estimate)

In the case of both, the total sample and the two subsamples, the model which includes ACT L in a moderating role explains more BEH L variance than the other model. There is a positive correlation between SAT and ACT L across all samples. In the case of SAT and BEH L, on the contrary, there is deviation among samples (see Table 4).

In the case of the older customers subsample there is no direct relationship linking these variables – unlike with the total and younger customers subsamples. Finally, attitudinal loyalty (ACT L) displays a direct, positive relation with respect to behavioral loyalty (BEH L) across all three samples.

The significant relationship linking SAT and BEH L in the direct impact model diminishes in importance across all three samples in the mediation model.

In light of these findings, we can affirm that ACT L plays a moderating role for SAT and BEH L. That said, this mediation is only partial for both the total and the young customers subsamples. In the case of the older customers subsample, however, mediation is unmitigated since the SAT-BEH L relationship is insignificant in the model which includes the direct link between SAT and BEH L.

Table 4 presents data corresponding to our calculation of the total impact (direct and indirect) on BEH L. We used the test proposed by Sobel (1982) to calculate the sig-

Table 4. Total impact on behavioral loyalty (BEH L)

Sample	Construct	Direct impact	Indirect impact			Total impact
			Value	z (Sobel)	VAF	
Total	SAT	0.241	0.3168***	6.8235 (p < 0.001)	0.56800	0.5578
	ACT L	0.589	–			0.589
Younger customers	SAT	0.453	0.2593***	3.9972 (p < 0.001)	0.3640	0.7123
	ACT L	0.494	–			0.494
Older customers	SAT	–	0.3520***	5.5849 (p < 0.001)	0.7349	0.352
	ACT L	0.646	–			0.646

nificance of indirect impact, obtaining the statistic *z*. As we can see in Table 4, the moderating impact of ACT L on SAT and BEH L is confirmed by the *z* statistic, with a value of $p < 0.001$ across all three samples. The magnitude of indirect impact on the total is derived from the *variance accounted for* (VAF) put forth by Iacobucci and Duhaček (2003). In the total sample, 56.8% of the total impact of SAT on BEH L is due to indirect impact, climbing to 73.49% in the case of older customers and dropping to approximately 36.4% for younger customers.

7. Discussion

Our research confirms the value of designing and executing effective service recovery strategies given their impact on perceived customer satisfaction levels. This analysis supports some pioneering research by Bitner *et al.* (1990), Zeithaml *et al.* (1996), and more recent studies by authors such as DeWitt *et al.* (2008) and Michel and Meuter (2008), among others. Not even the best companies are immune to making mistakes; this is something that the vast majority of consumers tend to understand. Consequently, complaint management and service recovery strategies clearly must lead to a reasonable solution if the company wishes to restate customer satisfaction and keep its image intact. In this line of thought, successful recovery from a service failure can translate into enhanced customer satisfaction, confidence and loyalty, as long as the company has effectively shown its ability to solve the problem.

Furthermore, in line with authors such as Shanin and Chan (2006), Capraro *et al.* (2003), Verhoef (2003), Homburg and Giering (2001), Jones *et al.* (2001), Mittal and Kamakura (2001), Pai-Lin *et al.* (2001) – our findings demonstrate that age plays a moderating role with regard to the relationships proposed in service recovery models.

Our data suggests that service failure severity and expectations for recovery do not have a significant impact on perceived satisfaction (H_2 and H_3). Such results partially contradict literature. A reasonable explanation could be that the greater the range of choices, the more entitled the customer feels to receive satisfactory service from the get-go; customers expect a satisfactory solution – regardless of the magnitude of the service failure. In other words, the severity of the failure is not important and higher expectations can put a damper on otherwise positive service recovery outcomes.

On the other hand, customer perceptions regarding company efforts to deal with problems (H_1) do have a direct and significant impact on customer satisfaction with service recovery. Existing studies (e.g., Huang 2008; Mohr, Bitner 1995) suggest that customers value the interest and effort companies invest in solving problems. However, we should consider that differences between customers and employees viewpoints may occur (Asghar, Rostamy 2009). It has even been pointed out that if real, sincere desire is perceived, customer satisfaction will exist even if a solution does not. The implications are clear: when service failure occurs or customers express dissatisfaction, the company should make an effort to get to the bottom of the problem and provide a solution, while making sure the client is well aware that the company is taking the corresponding steps in the right direction. Moreover, we have found that higher expectations among younger customers make perceived effort on the part of the company the essence for this segment; such findings are in line with ideas of authors such as Mittal and Kamakura (2001), Homburg and Giering (2001) and Jones *et al.* (2001).

Our fourth hypothesis (H_4) proposes a direct relationship between perceived justice and post service recovery satisfaction. The data suggests that such a link exists, confirming some of the ideas of authors like DeWitt *et al.* (2008), Chang and Hsiao (2008), Maxham and Netemeyer (2002) and Tax *et al.* (1998). Therefore, we can assume that customers should be treated fairly and receive solutions in line with their perception of justice. In this regard, –and given that perceptions with respect to justice can vary notably between companies and clients–it would be a good idea for companies to invest in getting to know what customers expect, and what they consider fair, in order to adapt to their needs or, at the very least, help them understand that the solution provided is the most appropriate for the given problem. Additionally, our research shows that older customers are more likely to perceive justice both in the service recovery process and in the final result than younger customers.

The first recommendation we can make with regard to good management practices is that companies should make efforts to ensure that services are delivered well the first time around. This, as we have indicated throughout, is much easier said than done. Whichever route is eventually taken, the company should react quickly i) to understand underlying factors and ii), to communicate with the customer. This shows the company's desire to find a satisfactory solution to the problem. Moreover, it is essential that firms explain how the error occurred and what is being done to deal with it. For that purpose, the company must have staff capable of attending clients in a friendly, effective way. We have demonstrated that customer-company interaction and perceived effort have a clear impact on satisfaction in service recovery contexts. Hence, investing in selection, training and staff motivation activities is essential – as it is also attention to internal marketing fundamentals.

If companies wish to learn from mistakes and enhance future service they must view client complaints as both vital feedback and a management challenge that must be met. Simplifying the filing process, or even adopting a proactive attitude – in other words, not waiting until a complaint is filed before asking customers whether they are satisfied with service or not–can be interpreted positively as showing interest and investing in

problem solving. In addition, such processes can yield feedback from customers regarding specific aspects of the service(s) provided.

Lastly, this study is set out to find a nexus between Huang's 2008 study, focused on customer satisfaction, and recent research by Michel and Meuter (2008) which takes a closer look at attitudinal and behavioral loyalty. In this regard, – taking the tenets of relationship marketing as a point of reference – our findings for H_5 , H_6 and H_7 show a link between customer satisfaction and loyalty, and suggest that we are looking at a key relational tool with the potential to make switching costly for the client. In this line of thought, Varela *et al.* (2009) suggest that positive service recovery processes decrease the chances of clients jumping ship (switching). Polo and Sesé (2009), though implicitly, corroborate this thesis.

In many cases customer-company interaction could be channeled to cultivate longer lasting relationships. Knowledge gleaned from this type of feedback would equip firms to tailor services more specifically to present needs and future expectations, while affording clients a better grasp on a service provider's actual capacity to react in the face of service failure. If the customer does eventually abandon the relationship, the company should be interested in the motive(s) and try to learn from each and every client that falls by the wayside.

Our initial multi-sample analysis – later corroborated by our impact study of moderating effects – establishes that, in service recovery contexts (as in other situations) older customers are more likely to build long term relationships and exhibit a greater degree of attitudinal and behavioral loyalty than younger customers. However, younger customers are more demanding in terms of effort than older customers. Because data suggest different patterns between age segments, we can therefore propose segmenting the customers' database and then adapting specific recovery strategies depending on the customers' age.

All of these findings could be harnessed by mobile companies to enhance customer-company interaction and streamline the use of available resources. Curiously, however, the customers we interviewed in both our pilot and main studies perceived a lack of interest on the part of companies when it came to problem solving and, in many cases, service recovery efforts were unsatisfactory. This situation may allow us to anticipate deficient service evaluations, bad word-of-mouth and a lackluster company image. A common behavior pattern emerges, however, among Spanish mobile providers; nearly identical policies put consumers in a position where, despite a sense of empowerment in their choice of the service provider itself, they feel abandoned and defenseless in the face of real or potential service related problems. This perception fades when consumers are bombarded with a wealth of offers for new services or to migrate to another company. Yet, most wonder why the initial interest in pleasing them disappears once they have signed up for the service. This is the reality of the mobile phone market in Spain. Given the scenario, who will be brave enough to take the first step in this direction? Apparently, inquiring clients want to know and our research suggests that the first company really interested on customers will get the market leadership.

8. Conclusions

This research corroborates the positive impact of service recovery efforts in customers' satisfaction. Our data also suggest that satisfaction with service recovery processes anticipate customers' loyalty towards the firm. This study also analyzes the moderating role of the "age" variable in service recovery scenarios. In this sense, our study contributes to narrowing the gap identified in the first section of the article.

However, despite the inherent interest of the study, it is clearly not without its limitations. For one, only the Spanish mobile phone sector has been analyzed; a sector which is representative but which exhibits significant idiosyncrasies. The literature called for exploring sectors which had yet received little attention from researchers and our data is, for the most part, in line with results reported in previous studies. Even so, one must be cautious when extrapolating findings across sectors: an analysis of potential structural/conjunctural similarities and differences would be in order. In this case we should recognize that specific characteristics of the sector (e.g., price, promotional campaigns, accessories as a present, etc.) could play a major role not only in company choice but also in the service recovery outcomes perceptions.

Secondly, this is a cross-sectional study based on the opinions expressed by customers themselves. It would be interesting to carry out a longitudinal analysis of the entire complaint process, followed by an objective assessment of service provider solutions and final outcomes. From a practical standpoint, however, getting involved in customer-company interaction can be an extremely complex endeavor; and, after all, the key to the service recovery paradox lies in customers' perceptions of how they are treated and to what extent their problems are, or are not, resolved.

Finally, with regard to potential lines for future research, it would be interesting to analyze the moderating effect of other consumer profile variables such as profession, income and education. An international study comparing mobile company behavior patterns and customer perceptions might justify adopting a relational approach – which customers in our pilot study sample showed an interest in – vis-à-vis maintaining the more aggressive approach which, for the moment, seems to prevail in Spain.

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References

- Andreassen, T. 2001. From disgust to delight: Do customers hold a grudge?, *Journal of Service Research* 4: 39–49. doi:10.1177/109467050141004
- Armstrong, G.; Kotler, P.; Harker, M.; Brennan, R. 2009. *Marketing: an introduction*. Prentice-Hall, Essex.

- Asghar, A.; Rostamy, A. 2009. Toward understanding conflicts between customers and employees' perceptions and expectations: evidence of Iranian bank, *Journal of Business Economics and Management* 10(3): 241–254. doi:10.3846/1611-1699.2009.10.241-254
- Bitner, M.; Booms, B.; Tetreault, M. 1990. The service encounter: diagnosing favourable and unfavourable incidents, *Journal of Marketing* 54: 71–84. doi:10.2307/1252174
- Bolton, R. 1998. A dynamic model of duration of the customer's relationship with a continuous service provider: the role of satisfaction, *Marketing Science* 17: 45–65. doi:10.1287/mksc.17.1.45
- Bontis, N.; Booker, L.; Serenko, A. 2007. The mediating effect of organizational reputation on customer loyalty and service recommendation in the banking industry, *Management Decision* 45: 1426–1445. doi:10.1108/00251740710828681
- Bravo, R.; Fraj, E.; Montaner, T. 2008. Family influence on young adult's evaluation. An empirical analysis focused on parent-children influence in three consumer packaged goods, *International Review of Retail, Distribution and Consumer Research* 18: 255–268. doi:10.1080/09593960802113752
- Carmines, E.; Zeller, R. 1979. Reliability and validity assessment, in *Sage University Paper Series on Quantitative Applications in the Social Sciences (07-017)*. Beverly Hills, CA: Sage.
- Capraro, A.; Broniarczyk, S.; Srivastava, R. 2003. Factors influencing the likelihood of customer defection: the role of consumer knowledge, *Journal of the Academy of Marketing Science* 31: 164–175. doi:10.1177/0092070302250900
- Chang, H.; Hsiao, H. 2008. Examining the causal relationship among service recovery, perceived justice, perceived risk and customer value in the hotel industry, *The Service Industries Journal* 28: 513–528. doi:10.1080/02642060801917646
- Chin, W. 1998. Issues and opinion on structural equation modeling, *MIS Quarterly* 22: 7–15.
- Chin, W. 2000. *Frequently Asked Questions – Partial Least Squares and PLS-Graph* [online]. Available from Internet: <<http://disc-nt.cba.uh.edu/chin/plsfaq.htm>>.
- Chin, W.; Frye, T. 2003. *PLS-Graph, Version 3.00 (Build 1017)*. University of Houston.
- Chin, W.; Gopal, A. 1995. Adoption intention in GSS: relative importance of beliefs, *The Data Base for Advances in Information Systems* 26: 42–63.
- De Matos, C. A.; Henrique, J. L.; Vargas, C. A. 2007. Service recovery paradox: a meta-analysis, *Journal of Service Research* 10: 60–77. doi:10.1177/1094670507303012
- Dewitt, T.; Nguyen, D.; Marshall, R. 2008. Exploring customer loyalty following service recovery, *Journal of Service Research* 10: 269–281. doi:10.1177/1094670507310767
- Dwyer, F.; Schurr, P.; Oh, S. 1987. Developing buyer-seller relationships, *Journal of Marketing* 51: 11–27. doi:10.2307/1251126
- Fornell, C.; Larcker, D. F. 1981. Evaluating structural equation models with unobservable variables and measurement error, *Journal of Marketing Research* 18: 39–50. doi:10.2307/3151312
- Grönroos, C. 1998. Marketing services: the case of a missing product, *Journal of Business and Industrial Marketing* 13: 322–335. doi:10.1108/08858629810226645
- Guenzi, P.; Pelloni, O. 2004. The impact of interpersonal relationship on customer satisfaction and loyalty to the service provider, *International Journal of Service Industry Management* 15: 365–384. doi:10.1108/09564230410552059
- Gummesson, E. 1997. Relationship marketing as a paradigm shift: some conclusions from the 30R approach, *Management Decision* 35: 267–272. doi:10.1108/00251749710169648
- Gustafsson, A.; Johnson, M.; Roos, I. 2005. The effects of customer satisfaction, relationship commitment dimensions, and triggers on customer retention, *Journal of Marketing* 69: 210–218. doi:10.1509/jmkg.2005.69.4.210

- Hess, R.; Ganesan, S.; Klein, N. 2003. Service failure and recovery: the impact of relationship factors on customer satisfaction, *Journal of the Academy of Marketing Science* 31: 127–145. doi:10.1177/0092070302250898
- Hocutt, M.; Bowers, M.; Donovan D. 2006. The art of service recovery: fact or fiction?, *Journal of Services Marketing* 20: 199–207. doi:10.1108/08876040610665652
- Hocutt, M.; Chakraborty, G.; Mowen, J. 1997. The impact of perceived justice on customer satisfaction and intention to complain in a service recovery, *Advances in Consumer Research* 24: 457–463.
- Hoffman, D.; Kelley, S.; Rotalsky, H. 1995. Tracking service failures and employee recovery efforts, *Journal of Services Marketing* 9: 49–61. doi:10.1108/08876049510086017
- Homburg, C.; Giering, A. 2001. Personal characteristics as moderators of the relationships between customer satisfaction and loyalty: an empirical analysis, *Psychology and Marketing* 18: 43–66. doi:10.1002/1520-6793(200101)18:1<43::AID-MAR3>3.0.CO;2-1
- Huang, W. 2008. The impact of other-customer failure on service satisfaction, *International Journal of Service Industry Management* 19: 521–536. doi:10.1108/09564230810891941
- Hulland, J. 1999. Use of Partial Least Squares (PLS) in Strategic Management Research: A review of four recent studies, *Strategic Management Journal* 20(2): 195–204. doi:10.1002/(SICI)1097-0266(199902)20:2<195::AID-SMJ13>3.0.CO;2-7
- Hur, W.-M.; Park, J.; Kim, M. 2010. The role of commitment on the customer benefits-loyalty relationship in mobile service industry, *The Service Industries Journal* 30(14): 2293–2309. doi:10.1080/02642060802629877
- Iacobucci, D.; Duhachelc, A. 2003. *Mediation analysis*, in Presentación en mesa redonda en la Conferencia ACR, Toronto.
- Jones, M.; Mothersbaugh, D.; Beatty, S. 2001. Switching barriers and repurchase intentions in services, *Journal of Retailing* 76: 259–274. doi:10.1016/S0022-4359(00)00024-5
- Juste, M. 2010. La guerra de la telefonía móvil: Orange and Yoigo, las compañías que captan más clients, *Expansión* 3rd February: 41–48.
- Kau, A.-K.; Loh, E. 2006. The effects of service recovery on consumer satisfaction: A comparison between complainants and non-complainants, *Journal of Services Marketing* 20: 101–111. doi:10.1108/08876040610657039
- Keil, M.; Tan, B. C.; Wei, K-K; Saarinen, T.; Tuunainen, V.; Wassenaar, A. 2000. A cross-cultural study on escalation of commitment behavior in software projects, *MIS Quarterly* 24(2): 299–325. doi:10.2307/3250940
- Kim, M.; Park, M.; Jeong, D. 2004. The effects of customer satisfaction and switching barriers on customer loyalty in Korean mobile telecommunications services, *Telecommunications Policy* 28: 145–156. doi:10.1016/j.telpol.2003.12.003
- Lee, J.; Yeonbae, K.; Lee, J.; Park, R. 2006. Estimating the extent of potential competition in the Korean mobile telecommunications market: switching costs and number portability, *International Journal of Industrial Organization* 24: 107–124. doi:10.1016/j.ijindorg.2005.07.003
- Lohmöller, J. 1989. *Latent variables path modelling with Partial Least Squares*. Physica-Verlag, Heideberg.
- Magnini, V.; Ford, J.; Markowski, E.; Honeycutt, E. 2007. The service recovery paradox: justifiable theory of smouldering myth?, *Journal of Services Marketing* 21: 213–225. doi:10.1108/08876040710746561
- Maicas, J.; Polo, Y.; Sesé, J. 2009. The role of personal network effects and switching costs in determining mobile users' choice, *Journal of Information Technology* 24: 160–171. doi:10.1057/jit.2008.35

- Maicas, J.; Sesé, J. 2008. Análisis de la intensidad de los costes de cambio en la industria de la telefonía móvil, *Cuadernos de Economía y Dirección de Empresa* 35: 27–56.
- Mattila, A. S. 1999. An examination of factors affecting service recovery in a restaurant setting, *Journal of Hospitality and Tourism Research* 23: 284–98. doi:10.1177/109634809902300304
- Maxham, J. 2001. Service recovery's influence on consumer satisfaction, positive word-of-mouth, and purchase intentions, *Journal of Business Research* 54: 11–24. doi:10.1016/S0148-2963(00)00114-4
- Maxham, J.; Netemeyer, R. 2002. Modeling customer perceptions of complaint handling over time: the effect of perceived justice on satisfaction and intent, *Journal of Retailing* 78: 239–252. doi:10.1016/S0022-4359(02)00100-8
- Mccollough, M. 1995. *The recovery paradox: a conceptual model and empirical investigation of customer satisfaction and service quality attitudes after service failure and recovery*: Doctoral Dissertation, Texas A&M University, College Station, United States.
- Mccollough, M. 2000. The effect of perceived justice and attributions regarding service failure and recovery on post-recovery customer satisfaction and service quality attitudes, *Journal of Hospitality and Tourism Research* 24: 423–447. doi:10.1177/109634800002400402
- Mccollough, M.; Bharadwaj, S. 1992. The recovery paradox: an examination of consumer satisfaction in relation to disconfirmation, service quality, and attribution based theories, in Allen, C. and Madden, T. (Eds.). *Marketing Theory and Applications*. American Marketing Association, Chicago, IL.
- Michel, S.; Meuter, M. 2008. The service recovery paradox: true but overrated?, *International Journal of Service Industry Management* 19: 441–457. doi:10.1108/09564230810891897
- Mittal, V.; Kamakura, W. 2001. Satisfaction, repurchase intent and repurchase behaviour: investigating the moderating effect of customer characteristics, *Journal of Marketing Research* 38: 131–142. doi:10.1509/jmkr.38.1.131.18832
- Mohr, L.; Bitner, M. 1995. The role of employee effort in satisfaction with service transactions, *Journal of Business Research* 32: 239–252. doi:10.1016/0148-2963(94)00049-K
- Morgan, R.; Hunt, S. 1994. The commitment-trust theory of marketing relationships, *Journal of Marketing* 58: 20–38. doi:10.2307/1252308
- Nunally, J. 1978. *Psychometric Theory*. McGraw-Hill, New York.
- Ok, C; Back, K.; Shanklin, C. 2007. Mixed findings on the service recovery paradox, *The Service Industries Journal* 27: 671–686. doi:10.1080/02642060701453130
- Oliver, R. 1999. Whence consumer loyalty?, *Journal of Marketing* 63: 33–44. doi:10.2307/1252099
- Oliver, R. 1997. *Satisfaction: a behavioral perspective on the consumer*. McGraw-Hill/Irwin, Boston, MA.
- Pai-Lin, N.; Chiu, H.; Hsieh, T. 2001. Investigating the relationship between service providers' personality and customers' perceptions of service quality across gender, *Total Quality Management* 12: 57–67. doi:10.1080/09544120020010093
- Polo, Y.; Sesé, J. 2009. How to make switching costly: the role of marketing and relationship characteristics, *Journal of Service Research* 12: 119–137. doi:10.1177/1094670509335771
- Rivero, L.; Manera, J. 2005. *El comportamiento del usuario de servicios de telecomunicaciones*. Universidad Rey Juan Carlos, (Ed.) Dykin Son, SI Meléndez Valdez.
- Salavou, H. 2010. Strategy types of service firms: evidence from Greece, *Management Decision* 48: 1033–1047. doi:10.1108/00251741011068752
- Santala, M.; Parvinen, P. 2007. From strategic fit to customer fit, *Management Decision* 45: 582–602. doi:10.1108/00251740710745133

- Shahin, A.; Chan, F. 2006. Customer requirements segmentation (CRS). A prerequisite technique for quality function deployment, *Total Quality Management* 17: 567–587. doi:10.1080/14783360600588117
- Shankar, V.; Smith, A.; Rangaswamy, A. 2003. Customer satisfaction and loyalty in online and offline environments, *International Journal of Research in Marketing* 20: 153–175.
- Smith, A.; Bolton, R. 1998. An experimental investigation of service failure and recovery: paradox or peril?, *Journal of Service Research* 1: 65–80. doi:10.1177/109467059800100106
- Smith, A.; Bolton, R.; Wagner, J. 1999. A model of customer satisfaction with service encounters involving failure and recovery, *Journal of Marketing Research* 36: 356–372. doi:10.2307/3152082
- Sobel, M. 1982. Asymptotic confidence intervals for indirect effects on structural equation models, in Leinhardt, S. (Ed.). *Sociological Methodology*, 290–312.
- Swanson, S.; Kelley, S. 2001. Service recovery attributions and worth-of-mouth intentions, *European Journal of Marketing* 35: 194–211. doi:10.1108/03090560110363463
- Tamosiuniene, R.; Jasilioniene, R. 2007. Customer relationship management as business strategy appliance: theoretical and practical dimension, *Journal of Business Economics and Management* 8(1): 69–78.
- Tax, S.; Brown, S.; Chandrashekar, M. 1998. Customer evaluations of service complaint experiences: Implications for relationship marketing, *Journal of Marketing* 62: 60–76. doi:10.2307/1252161
- Tippins, M.; Sohi, R. 2003. IT competency and firm performance: is organizational learning a missing link?, *Strategic Management Journal* 24: 745–761. doi:10.1002/smj.337
- Tsai, C.; Su, C. 2009. Service failures and recovery strategies of chain restaurants in Taiwan, *The Service Industries Journal* 29: 1779–1796. doi:10.1080/02642060902793599
- Varela, C.; Vazquez, R.; Iglesias, V. 2008a. The influence of emotions on customers' cognitive evaluations and satisfaction in a service failure and recovery context, *The Service Industries Journal* 28: 497–512. doi:10.1080/02642060801917612
- Varela, C.; Vazquez, R.; Iglesias, V. 2008b. Justicia percibida y su influencia sobre las intenciones de recompra: el papel moderador de la edad del cliente, *Cuadernos Aragoneses de Economía* 18: 357–376.
- Varela, C.; Vázquez, R.; Iglesias, V. 2009. Comportamiento de abandono de la relación de un cliente con la empresa en un contexto de fallo y recuperación del servicio, *Cuadernos de Economía y Dirección de Empresa* 40: 143–170.
- Verhoef, P. 2003. Understanding the effect of customer relationship management efforts on customers retention and customer share development, *Journal of Marketing* 67: 30–45. doi:10.1509/jmkg.67.4.30.18685
- Werts, C. E.; Linn, R. L.; Jöreskog, K. G. 1974. Interclass reliability estimates: Testing structural assumptions, *Educational and Psychological Measurement* 34: 25–33. doi:10.1177/001316447403400104
- Wieringa, J.; Peter, C.; Verhoef. 2007. Understanding customer switching behavior in a liberalizing service market: An exploratory study, *Journal of Service Research* 10: 174–186. doi:10.1177/1094670507306686
- Wirtz, J.; Mattila, A. 2004. Consumer responses to compensation, speed of recovery and apology after service failure, *International Journal of Service Industry Management* 15: 150–166. doi:10.1108/09564230410532484
- Zafropoulos, C.; Vrana, V. 2008. Service quality assessment in a Greek higher education institute, *Journal of Business Economics and Management* 9: 33–45. doi:10.3846/1611-1699.2008.9.33-45
- Zeithaml, V.; Berry, L.; Parasuraman, A. 1996. The behavioural model of service failure and recovery strategies, *Journal of Marketing* 60: 31–46. doi:10.2307/1251929

APPENDIX 1

Measurement scale items, individual reliability, composite reliability and variance extracted (total sample and subsamples)

Construct / Items	Total sample			Younger customers			Older customers		
	Loading factors	Composite reliability (ρ_c)	AVE	Loading factors	Composite reliability (ρ_c)	AVE	Loading factors	Composite reliability (ρ_c)	AVE
PERCEIVED EFFORT (EFF)									
EFF1: Staff seemed very interested in solving the problem.	0.8799	0.922	0.797	0.8572	0.919	0.790	0.8926	0.925	0.804
EFF2: Staff invested a lot of time in solving the problem.	0.8970			0.9170			0.8894		
EFF3: Staff went out of their way to solve the problem.	0.9010			0.8912			0.9076		
RECOVERY EXPECTATIONS (EXP)									
EXP1: I expected the company to do everything it could to resolve the issue.	0.8715	0.890	0.802	0.8941	0.884	0.793	0.8631	0.893	0.807
EXP2: I expected the company to compensate me in some way.	0.9189			0.8864			0.9321		
SERVICE FAILURE SEVERITY (SEV)									
SEV1: I had a serious problem that needed a serious solution.	1	1	1	1	1	1	1	1	1
PERCEIVED JUSTICE (JUS)									
DIS J1: After filing a complaint, the outcome was fair. DIS J2: The company provided me with what I needed.	0.8878	0.925	0.804	0.8619	0.900	0.750	0.9006	0.938	0.834
PRO J1: The company responded promptly and justly to my needs. PRO J2: The company was flexible enough when dealing with my problem. PRO J3: Company policies and procedures were appropriate for dealing with my concerns.	0.9146			0.8777			0.9356		
INT J1: The company was sufficiently concerned about my problem. INT J2: The company communicated with me appropriately.	0.8873			0.8576			0.9024		

Construct / Items	Total sample			Younger customers			Older customers		
	Loading factors	Composite reliability (ρ_c)	AVE	Loading factors	Composite reliability (ρ_c)	AVE	Loading factors	Composite reliability (ρ_c)	AVE
RECOVERY SATISFACTION (SAT)									
SAT1: On this particular occasion I feel the company provided a satisfactory solution for my problem with my mobile phone.	0.9438	0.945	0.846	0.9064	0.909	0.833	0.9644	0.965	0.933
SAT2: I'm happy with the company (regarding this particular problem with my mobile phone).	0.9498			0.9191			0.9673		
ATTITUDINAL LOYALTY (ACT L)									
ACT L1: I plan to stay on as a client of this company in the future.	0.8744	0.817	0.691	0.8604	0.799	0.666	0.8831	0.828	0.708
ACT L2: If this company raised its prices I would stay on as a client.	0.7860			0.7697			0.7972		
BEHAVIORAL LOYALTY (BEH L)									
BEH L1: I plan to sign up with the competition for my mobile phone needs. (I)	0.8942	0.870	0.770	0.9103	0.887	0.797	0.8848	0.860	0.755
BEH L2: I will never acquire a mobile phone from this company again. (I)	0.8603			0.8750			0.8527		

Note: Scales run from 1 (*totally disagree*) to 7 (*totally agree*). (I) Inverted item

APPENDIX 2

Discriminant validity

Sample	Constructs	EFF	EXP	SEV	JUS	SAT	ACT L	BEH L
Total	EFF	0.8927						
	EXP	-0.011	0.8955					
	SEV	-0.013	0.298	1				
	JUS	0.622	-0.100	-0.123	0.8966			
	SAT	0.661	-0.141	-0.115	0.746	0.9465		
	ACT L	0.359	-0.185	-0.207	0.548	0.538	0.8312	
	BEH L	0.363	-0.246	-0.258	0.522	0.558	0.719	0.8774
Younger customers	EFF	0.8888						
	EXP	-0.090	0.8905					
	SEV	-0.140	0.206	1				
	JUS	0.631	-0.156	-0.331	0.8660			
	SAT	0.657	-0.108	-0.306	0.719	0.9126		
	ACT L	0.469	-0.156	-0.407	0.556	0.525	0.8160	
	BEH L	0.569	-0.123	-0.428	0.653	0.713	0.732	0.8927
Older customers	EFF	0.8966						
	EXP	0.038	0.8983					
	SEV	0.055	0.346	1				
	JUS	0.625	-0.075	0.005	0.9132			
	SAT	0.669	-0.165	-0.011	0.768	0.9659		
	ACT L	0.306	-0.202	-0.089	0.546	0.545	0.8414	
	BEH L	0.248	-0.320	-0.148	0.463	0.479	0.716	0.8689

Notes: ^a The data forming the diagonal line in bold corresponds to the square root of the average variance extracted (AVE) for the construct, while the rest of the numbers represent correlations between constructs, ^b All correlations are significant for $p < 0.01$

VARTOTOJŲ AMŽIAUS ĮTAKA PASLAUGŲ VERTINIMUI

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Santrauka

Tiek moksliniai tyrimai, tiek ir praktika rodo, kad grąžinimo procesų valdymo veiksmingumas skatina klientų pasitenkinimą. Remiantis šia prielaida, straipsnio tikslas yra išanalizuoti veiksnius, turinčius įtakos klientų pasitenkinimo lygiui ir lojalumui. Taip pat analizuojamas ir vartotojų amžiaus rodiklis, jo potencialo kaita. Atsižvelgiant į tai, klientai buvo sugrupuoti pagal amžių ir buvo analizuojama, kaip vieni ar kiti procesai juos veikia. Atliktas tyrimas parodė, kad vyresnio amžiaus klientai yra labiau ištikimi nei jaunesni, o jaunesni klientai yra reiklesni įmonių teikiamoms paslaugoms.

Reikšminiai žodžiai: paslaugos, klientų pasitenkinimas, lojalumas, amžius.

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