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## **Justice and emotions in service recovery: a complaint in B2C e-commerce**

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Alberto Urueña\* and Antonio Hidalgo

Department of Business Administration,  
Universidad Politécnica de Madrid,  
C/José Gutiérrez Abascal 2,  
Madrid 28006, Spain  
Email: alberto.urueña@upm.es  
Email: antonio.hidalgo@upm.es  
\*Corresponding author

**Abstract:** This study proposes a marketing approach to service recovery (SR) models to explain what factors affect cumulative satisfaction, loyalty and word-of-mouth (WOM) following complaint behaviour. The model has its base on the definition of perceived justice and its influence on satisfaction with service recovery (SSR) and on emotions (positive and negative). Trust acts as a central construct in the model, receiving influence from the affective and cognitive aspect. The sample for this study consists of 303 Spanish business-to-consumer e-commerce (B2C-EC) users who made a complaint after an electronic transaction. Results from the analysis show the influence of perceived justice – mainly interactional justice and procedural justice – on SSR and the relevance of positive emotions as a key factor in SSR processes, in contrast to the major role that negative emotions have traditionally played in these models.

**Keywords:** complaint; service recovery; e-commerce; emotions; justice.

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**Biographical notes:** Alberto Urueña is Deputy Assistant Director of the National Observatory of Telecommunications and the Information Society in and Professor of Economics at Universidad Politécnica de Madrid (UPM). He received a PhD in Industrial Engineering from the UPM in the program of Economics and Management of Innovation. He earned an executive MBA from IE Business School and Masters in Economics of Telecommunications from Universidad Nacional de Educación a Distancia (UNED). His research interests in the innovation, industrial property and technology policy (INNOPRO) research group is the study of information society and its impact on citizens and businesses.

Antonio Hidalgo is Professor of Technology Strategy and Head of the Department of Business Administration in Universidad Politecnica de Madrid, Spain (UPM). He is currently Director of the Research Group of Innovation, IPR and Technology Policy (INNOPRO) and Director of the Master and Doctorate Programme in Economics and Innovation Management at UPM. He is author of several books and articles about technological innovation management, knowledge transfer and R&D policy. His works have appeared in *R&D Management*, *Production, Planning and Control Journal*, *Journal of*

*Intelligent Manufacturing, Journal of Technology Transfer, International Journal of Product Development, and International Journal of Technology Management.*

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## 1 Introduction

Despite the big efforts from companies to provide high-quality services, providing an error-free service is impossible. Errors may frequently cause dissatisfaction in customers, which in turn may lead to complaint behaviours. Therefore, the actions that a service provider takes to respond to service failures and the process by which the company attempts to rectify the failure, known as service recovery (SR), become a critical moment for the interaction between consumer and companies, a chance to lower dissatisfaction occurs and reinforcing the somehow damaged relationship with the customer is beneficial (Kelley and Davis, 1994). Several studies demonstrate that lower perceived satisfaction occurs from customers when they receive a service than when they receive a product (Gustafsson, 2009). One of the main reasons behind this fact is the co-participation, in many cases, of the customer in the providing of a service, a situation that offers a greater possibility of error introduction owing to the intervention of the human element.

Historically, early research studies dealing with the characterisation of SR after a complaint behaviour have focused on applying the theory of justice to SR. Maxham and Netemeyer (2002) analyse, in one of these early studies, the effects of distributive justice, procedural justice and interactional justice over SSR. Then, other authors (Menon and Dubé, 2004; Schoefer and Ennew, 2005; Smith and Bolton, 2002) claim the relevance of affective and emotional factors – and not only of cognitive components – after a complaint behaviour. Nevertheless, the research on the influence of emotions in SR is scarce at the present time (Río-Lanza et al., 2009). Chebat and Slusarczyk (2005) study the effects of justice in emotions and loyalty. DeWitt et al. (2008) study the effects of perceived justice on emotions – both positive and negative – and trust, and how these impact in attitude and loyalty behaviour.

Recently, Río Lanza et al. (2009) make a relevant contribution with their analysis of the effects of justice in SSR, including the indirect effects from negative emotions. DeWitt et al. (2008) warn that omitting positive emotions may be a problematic issue, since a service provider with a good SR may also generate positive emotions – pleasure, happiness, etc. – and not only diminish the intensity of negative emotions. A customer who experiences a good SR tends to perceive a high level of justice, which, together with positive emotions, will induce more loyalty, both in his or her attitude and behaviour (Gustafsson, 2009). In this context, Río-Lanza et al. (2009) propose a model that looks for the measurement of a process (SSR) as a result of a concrete action, but it is not possible from their research to obtain any information from the attitudinal and behavioural changes (such as loyalty, WOM and cumulative satisfaction), which will happen when there is a positive management of complaint behaviour and SR. These

changes are a very important input for companies, since they are relevant indicators of their mid- and long-term customer relationship knowledge base.

The research focuses on B2C-EC customers who issued a complaint after their purchase, but it is also of interest for other sectors in which the relationship between customers takes place with low face-to-face interaction – for instance, computer-mediated interaction. The study seeks to explore in greater depth the factors that have an impact on service recovery, including constructs such as perceived justice, emotional response (positive and negative), SSR and the consequent changes that arise in behaviour (cumulative satisfaction, trust, WOM and loyalty).

The paper is organised as follows. Section 2 is dedicated to characterise the model based on the definition of different hypotheses from the literature review. Section 3 describes the research methodology and Section 4 analyses and discusses the results of empirical research. Finally, Section 5 concludes by outlining the conclusions of the research.

## **2 Literature review and hypothesis**

### *2.1 Perceived justice*

Adams' (1963) theory of perceived justice has become a highly effective tool to study individuals' reactions in complaint behaviour (Rio-Lanza et al., 2009). According to this theory, a person perceives what a work situation gives him/her in relation to what he or she contributes to it, and he or she then compares the ratio between the effort made and the result obtained compared with another person who performed the same activity. Some studies make no distinction between the different dimensions of perceived justice or do not analyse the three components of it: distributive, procedural and interactional (Oliver and Swan, 1989). However, other researchers (Smith et al., 1999) recommend including all three components in research on SR. All the constructs in the research are reflective except justice: reflective measures are caused by the latent construct, whereas formative measures cause the latent construct.

In this study, justice is a second-order formative construct, composed of distributive justice (DJ), procedural justice (PJ) and interactional justice (IJ):

- Distributive justice are the tangible resources, which the company devotes to correct and compensate for a service failure, including monetary compensation, exchanging the item or service, discounts for future purchases and discount coupons (Smith et al., 1999).
- Procedural justice includes the processes and methods required to address an SR (Mattila, 2001), including the choice of the most suitable process to solve a problem (Kim et al., 2009).
- Interactional justice refers to the way in which customers have experienced justice in their interaction with company employees during the service recovery process (McColl-Kennedy and Smith, 2006). This concept includes customers' perception of employees' empathy, respect, politeness, courtesy, sensitivity in the way they treat customers, the way in which they apologise and the efforts they make to resolve the problem.

According to these claims, the following hypothesis can be established:

- Justice has a positive influence on SSR (H1).

However, few studies analyse the reactions of the emotional effects to justice. Chebat and Slusarczyk (2005) asserted that individuals experience emotions and become involved in behaviours that are in line with the impressions and feelings they experience with the SR depending on the level of perceived justice. These authors declare that all three dimensions of perceived justice have a significant effect on negative emotions and that IJ and DJ affect positive emotions. In this context, Schoefer and Ennew (2005) found that all three dimensions of justice have a significant effect. In later years, DeWitt et al. (2008) studied the influence of perceived justice (without differentiating between IJ, PJ and DJ) on positive and negative emotions and found that there is greater influence on positive emotions and Río-Lanza et al. (2009) reported that distributive and interactional dimensions of justice do not have a significant influence on negative emotions.

Therefore, the following hypotheses are proposed:

- Justice has a negative effect on negative emotions (H2).
- Justice has a positive influence on positive emotions (H3).

## 2.2 *Satisfaction*

Satisfaction occurs when the services received when using a product or service surpass the expectations held prior to use, i.e., when there is a confirmation of the expectations (Oliver, 1980; Oliver et al., 1997). When the provision of services satisfies the consumers, they have a motivation to transmit their experience to others via WOM communication (Mangold et al., 1999). There is experimental and empirical proof of this relationship between satisfaction and WOM (Hutchinson et al., 2009).

Bhattacharjee (2001) argued that satisfaction is the most important determining factor on repurchase intentions in B2C e-commerce. The more satisfied purchasers are the more they will buy. Cumulative satisfaction is a better predictor of post-purchase behaviour and of the subsequent economic results from the purchaser. However, it is essential to take cumulative satisfaction into account in an SSR model whose purpose is to provide information about consumer attitudes and behaviours, since although the result of a specific transaction (for example, a service recovery) may not be satisfactory, the cumulative transactions taken as a whole could entail an increase in overall satisfaction and, furthermore, provide with a broader perspective on consumer behaviour (Maxham and Netemeyer, 2002).

Therefore, the following hypothesis is proposed:

- Cumulative satisfaction has a positive effect on WOM (H4).

## 2.3 *Trust and loyalty*

Trust is as a set of beliefs in the benevolence, competence and integrity of the other party (Doney and Cannon, 1997), and it is an essential ingredient for creating satisfied and loyal customers in e-commerce (Ratnasingham, 1998). The establishment and maintenance of relationships between customers and providers are, to a large degree, determined by trust. Satisfactory experiences with service providers go on to create

greater levels of trust, which will exert an influence on long-term relationships (Genesan, 1994). Trust is built over time as the customer perceives that his or her provider is reliable and behaves in an upright and honest manner.

In an SSR context, customer trust reflects how willing the customers are to accept their vulnerability, expecting a positive solution in case of service failure (Dunn and Schweitzer, 2005). In the event that a customer receives an unwanted response to his or her complaint, he or she will lose trust in the organisation (DeWitt et al., 2008). In addition, trust has a positive influence on the purchaser-vendor relationship even if trust is already beneficial. In SR, if there is satisfaction, trust means that the customer can generate positive WOM towards the company, thus providing good references (Kim et al., 2009). Previous studies confirm the positive relationship between SSR and trust (Kim et al., 2009) and find that trust is a strong predictor of satisfaction in online environments (Gummerus et al., 2004; Harris and Goode, 2004).

Loyalty is the intention to have repeated dealings with a provider over a period of time, with a favourable attitude on the part of the purchaser (Keller, 1993). Loyalty entails a reluctance to change provider and a willingness to pay more (Shankar et al., 2003). Trust plays a fundamental role in developing loyalty and this is also true in online environments (Kim et al., 2004; Pitta et al., 2006). If you want to gain consumers' loyalty, you must first gain their trust (Reichheld et al., 2000). Trust has not only a direct impact on loyalty but also an indirect influence through cumulative satisfaction. Trust is a critical antecedent of building relationships between buyer and seller (Sirdeshmukh et al., 2002; Verhoef et al., 2002). In any relationship of this kind, consumers' trust evaluations before a specific transaction have a direct influence on their post-purchase satisfaction (Singh and Sirdeshmukh, 2000).

Therefore, the following hypotheses are proposed:

- SSR influences positively cumulative satisfaction (H5).
- SSR influences positively consumer trust (H6).
- Trust has a positive influence on cumulative satisfaction (H7).
- Trust has a positive influence on WOM (H8).
- Trust has a positive influence on loyalty (H9).

#### *2.4 Emotions*

The emotions experienced by customers as a result of the perceived justice have an effect on loyalty. In the context of a service recovery with a positive result, an individual will remain loyal to the provider. If negative emotions arise, then the customer may become disloyal or may unsubscribe from the service (DeWitt et al., 2008).

There is a growing school of thought in the scientific literature about the role emotions play in establishing and maintaining relationships, although it is only recently (Penz and Hogg, 2011; Dunn and Schweitzer, 2005) that researchers have begun to explore the influence of some emotions on trust in SR contexts (Gaur et al., 2014; Kim et al., 2004). Emotions with highly negative valences (such as anger) can play a significant moderating role in these processes and damage trust. It is very likely that action to mitigate these types of emotions could help to regain trust (Kim et al., 2004). Finally, emotions play an important role in building trust. Positive emotions enable

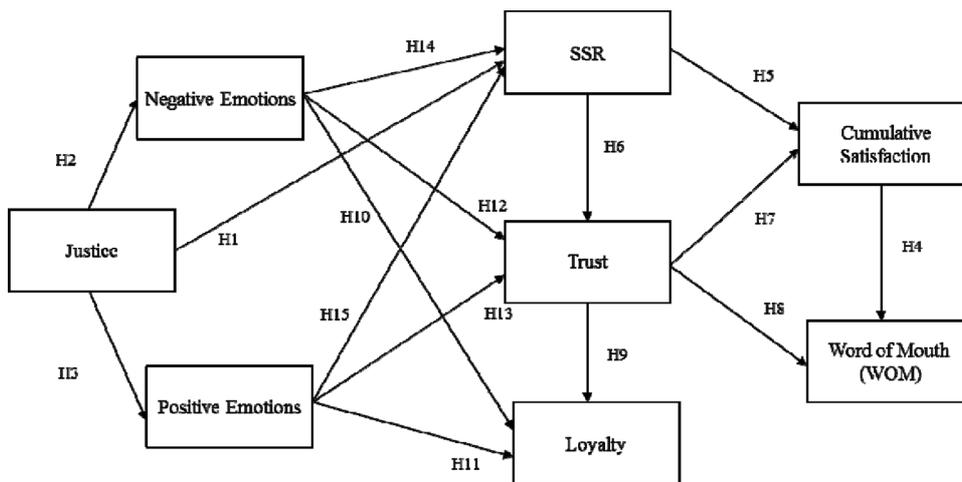
individuals to make the ‘leap of faith’ to move from feelings to beliefs (Andersen and Kumar, 2006).

Therefore, the following hypotheses are proposed:

- Negative emotions have a negative influence on loyalty (H10).
- Positive emotions have a positive influence on loyalty (H11).
- Negative emotions generated in an SR process have a negative influence on trust (H12).
- Positive emotions generated in an SR process have a positive influence on trust (H13).
- Negative emotions generated in an SR process have a negative influence on SSR (H14).
- Positive emotions generated in an SR process have a positive influence on SSR (H15).

The model shown in Figure 1 summarises the research hypotheses.

**Figure 1** Research model



### 3 Research methodology

Partial least squares (PLSs) is a technique that allows to perform analysis of combined reflective and formative indicators in the same model and, therefore, considered as the most appropriate for this research; this type of analysis is not possible with other covariance-based modelling techniques (Esposito et al., 2010). The software PLS-Graph version 3.00 build 1130 has been used to perform the analysis in two steps:

- First, we tested the measurement model for reflective indicators measuring single-item reliability, scale reliability, Cronbach’s alpha measurement, convergent validity, average variance extracted (AVE) and discriminant validity. In the case of formative

indicators, the examination of the weights provides information about how the indicator contributes to the construct and it is necessary to assess multicollinearity, which could lead to unstable results.

- Second, we evaluate the structural model – explained variance of the endogenous variables ( $R^2$ ) and path coefficients or standardised linear regression weights ( $\beta$ ), with their respective levels of significance. Path coefficients – also known as standardised regression coefficients – represent the extent to which each predictor variable contributes to the variance explained by endogenous variables; in other words, they represent the strength of the statistical relationships in the model. Finally, we use Stone Geisser test ( $Q^2$  parameter) to evaluate the predictive relevance of the model.

This sequence of analysis ensured that measurements were valid and reliable before attempts were made to draw conclusions about the relationships between the constructs (Esposito et al., 2010).

### *3.1 Field work*

An online questionnaire on a gross sample of 2100 internet users from the Spanish population who made purchases through B2C-EC tested and validated the proposed model, with 303 valid responses from people who had made a complaint after a B2C-EC transaction. All those surveyed responded to the questionnaire. The socio-demographic characteristics of the sample are as follows:

- *Gender*: 66.7% men and 33.3% women;
- *Age*: 13.9% between 16 and 24, 26.4% between 25 and 34, 49.8% between 35 and 49, 9.2% between 50 and 64 and the remaining 0.7% between 65 and 74.
- *Employment status*: 13.2% self-employed, 60.4% employees, 7.9% unemployed, 3% retired, 10.9% students and 4.7% belong to other categories of unemployed.
- *Education*: 4.3% primary/compulsory studies, 38.3% secondary studies, 46.9% higher education studies and 10.6% postgraduate studies.

### *3.2 Scale measurement*

All of the indicators are reflective except perceived justice, which has a formative nature. There are many reasons to formulate justice as a formative factor: first, the research focuses on emotions, trust and SSR as aspects that have influence over loyalty, SSR and cumulative satisfaction, and not in the influence of the dimensions of justice on SSR and emotions; second, any of the proposed sources of justice may – individually or combined in various ways – cause a perception of justice (Chiu et al., 2010). Therefore, the study proposes a formative construct to accurately capture the multidimensional nature of justice.

The research adapts the scales developed for perceived justice from Río-Lanza et al. (2009), Kim et al. (2009), Maxham and Netemeyer (2002), Chebat and Slusarczyk (2005) and Chiu et al. (2010). The measurement scales for SSR were an adaptation of the ones proposed by Maxham and Netemeyer (2002) and Kim et al. (2009), whereas positive and negative emotional factors are an adaptation of the scales proposed by Río-Lanza et al.

(2009), DeWitt et al. (2008) and Chebat and Slusarczyk (2005). Other scales come from the adaptation of Chiu et al. (2010), DeWitt et al. (2008) and Kim et al. (2009) – trust, DeWitt et al. (2008) and Chebat and Slusarczyk (2005) – loyalty, Kim et al. (2009) and Mattila (2001) – WOM and Bhattacharjee (2001) – cumulative satisfaction.

## **4 Empirical results and discussion**

### *4.1 Reliability and validity of the scales*

To analyse the measurement model, a requirement is to test single-item reliability for reflective indicators measuring the factor loadings of the latent variable indicators, which should present a factor loading greater than 0.707 (Hair et al., 1998), although loadings of 0.5–0.6 may be acceptable in preliminary phases (Chin, 2010). In this case, all the factor loadings exceed 0.90, except one of the loyalty indicators whose value (0.79) exceeds the lower limit by a wide margin (Nunnally, 1978). From these results, all indicators were valid in this stage.

Next, this method requires – for reflective indicators – a composite reliability analysis, a Cronbach's alpha measurement and an analysis of the AVE from the constructs, which should be greater than 0.7, 0.7 and 0.5, respectively, as recommended by several authors (Fornell and Larcker, 1981; Hair et al., 1998). In this case, the values for composite reliability were above 0.92 and the AVE was above 0.8 (Table 1).

Discriminant validity test was obtained from AVE analysis, i.e., the average shared variance between a construct and its measurement scales, which must be greater than the shared variance between the construct and the other constructs in the model (the squared correlation between two constructs). Here, the square root of the AVE is higher than the correlations between the constructs and is greater than 0.7 (Fornell and Larcker, 1981).

Table 2 shows the result of the construct-to-item loadings and cross-loadings of the reflective measures, with all items exceeding at least 0.79, which confirms that every construct measured is dissimilar to the rest of constructs (Kline, 1998). In addition, the loading of the items over their latent variable is much higher than the loading over the rest of the constructs (Chin, 2010). Indicators SOL1–SOL5 reflect construct SSR, EMOC1–EMOC3 reflect negative emotions and so on.

To evaluate formative indicators using SPSS software, the examination of the weights provides information about how the indicator contributes to the construct. Results of the variance inflation factor (VIF) show values far from a multicollinearity problem (Diamantopoulos and Winklhofer, 2001) (Table 3).

As the data on all the variables for this study are self-reported and collected from single respondents, common method bias is possible. A statistical analysis assessed the severity of common method bias in the data. The variances in indicators explained by their principal constructs (average 0.887) are much larger than those explained by the method factor (average 0.002). The ratio of principal variance to method variance is about 443 : 1. The above-mentioned results show that the method did not contribute substantively to the variances in indicators and, therefore, common method bias was unlikely to be a serious concern for this study.

4.2 Structural model results

The structural model analysis considered the relationship between the latent variables. The evaluation of the structural model consisted of a bootstrapping procedure using three indicators: path coefficients ( $\beta$ ),  $t$ -statistics and explained variance ( $R^2$ ).

**Table 1** Descriptive statistics and correlation matrix

	Composite reliability	Cronbach's Alpha	AVE	Mean (STD)	P_Em	N_Em	SSR	WOM	LOY	JUSTICE	TRST	SAT
P_Em	0.96	0.96	0.89	3.64 (1.92)	0.93							
N_Em	0.97	0.95	0.91	3.97 (2.05)	-0.6	0.95						
SSR	0.98	0.97	0.89	4.05 (1.94)	0.79	-0.63	0.94					
WOM	0.97	0.96	0.93	4.89 (1.47)	0.33	-0.28	0.41	0.96				
LOY	0.92	0.87	0.8	4.07 (1.74)	0.62	-0.5	0.7	0.48	0.89			
JUSTICE	-	-	-	4.02 (1.91)	0.68	-0.56	0.8	0.33	0.61	-		
TRST	0.96	0.91	0.92	4.39 (1.6)	0.6	-0.47	0.65	0.53	0.64	0.6	0.96	
SAT	0.98	0.93	0.89	5.10 (1.44)	0.23	-0.25	0.37	0.7	0.47	0.3	0.52	0.94

**Table 2** Reflective constructs: factor loadings and cross-loadings

	<i>SSR</i>	<i>N_Em</i>	<i>P_Em</i>	<i>TRST</i>	<i>LOY</i>	<i>WOM</i>	<i>SAT</i>
SOL1	0.92	-0.54	0.70	0.60	0.62	0.40	0.35
SOL2	0.96	-0.61	0.77	0.61	0.66	0.40	0.35
SOL3	0.96	-0.61	0.75	0.65	0.69	0.40	0.37
SOL4	0.96	-0.63	0.78	0.62	0.67	0.38	0.36
SOL5	0.92	-0.57	0.76	0.58	0.67	0.36	0.31
EMOC1	-0.59	0.97	-0.59	-0.45	-0.48	-0.26	-0.21
EMOC2	-0.56	0.94	-0.52	-0.45	-0.47	-0.32	-0.30
EMOC3	-0.64	0.95	-0.60	-0.43	-0.47	-0.23	-0.20
EMOC4	0.78	-0.60	0.99	0.58	0.62	0.34	0.23
EMOC5	0.73	-0.55	0.93	0.56	0.57	0.28	0.20
EMOC6	0.73	-0.52	0.91	0.55	0.55	0.26	0.19
TRU1	0.61	-0.42	0.57	0.96	0.61	0.50	0.50
TRU2	0.64	-0.47	0.57	0.96	0.62	0.51	0.50
LOY1	0.49	-0.30	0.43	0.47	0.79	0.34	0.37
LOY2	0.67	-0.46	0.61	0.60	0.94	0.45	0.42
LOY3	0.69	-0.54	0.59	0.63	0.93	0.49	0.47
WOM1	0.40	-0.26	0.32	0.50	0.47	0.95	0.66
WOM2	0.37	-0.28	0.30	0.49	0.44	0.96	0.68
WOM3	0.40	-0.28	0.33	0.53	0.47	0.97	0.68
SAT11	0.27	-0.12	0.13	0.46	0.37	0.63	0.91
SAT12	0.42	-0.32	0.29	0.52	0.49	0.65	0.93
SAT13	0.34	-0.25	0.20	0.48	0.46	0.67	0.96

**Table 3** Justice as a formative construct (weights and VIF)

<i>Construct</i>	<i>Code</i>	<i>Weights</i>	<i>VIF</i>
Justice	DJ	0.43	3.7
	PJ	0.93	4.8
	IJ	0.93	3.6

Path coefficients should be  $\geq 0.2$ , and lower values show weaker relations (Chin, 2010). The significance of path coefficients was calculated with a bootstrapping procedure to extract Student's *t*-values. All the paths – except negative emotions-trust and SSR-cumulative satisfaction – were significant, whilst the negative emotions-loyalty, negative emotions-SSR and positive emotions-trust ( $-0.13$ ,  $-0.14$  and  $0.19$ , respectively), and therefore only hypotheses H5 and H12 were rejected (Table 4). Finally, the variance explained should be  $\geq 0.1$  (Chin, 2010).

The  $R^2$  values indicate a good explanation of the model based on the proposed constructs. For the dependent variables, the variance in the explanation of loyalty and WOM is above 50%.  $Q^2$  parameter from the cross-validation test of Stone-Geisser

measures the predictive relevance of the model's constructs with a blindfolding procedure (Chin, 2010) and its values ensure the predictive validity of the model ( $Q^2 > 0$  in all cases) (Table 5).

**Table 4** Supported and non-supported hypotheses: path coefficients ( $\beta$ ) and  $t$ -values

<i>Hypotheses</i>	$\beta$	<i>t value</i>	* $p < 0.05$ ; ** $p < 0.01$ ; *** $p < 0.001$	<i>Supported</i>
H1 Justice $\rightarrow$ SSR	0.35	8.90	***	✓
H2 Justice $\rightarrow$ Negative Emotions	-0.51	13.70	***	✓
H3 Justice $\rightarrow$ Positive Emotions	0.63	20.37	***	✓
H4 Satisfaction $\rightarrow$ WOM	0.58	8.68	***	✓
H5 SSR $\rightarrow$ Satisfaction	0.05	0.8	ns	✗
H6 SSR $\rightarrow$ Trust	0.46	5.28	***	✓
H7 Trust $\rightarrow$ Satisfaction	0.49	7.62	***	✓
H8 Trust $\rightarrow$ WOM	0.22	3.32	***	✓
H9 Trust $\rightarrow$ Loyalty	0.40	6.86	***	✓
H10 Negative Emotions $\rightarrow$ Loyalty	-0.13	2.34	*	✓
H11 Positive Emotions $\rightarrow$ Loyalty	0.30	4.35	***	✓
H12 Negative Emotions $\rightarrow$ Trust	-0.06	1.03	ns	✗
H13 Positive Emotions $\rightarrow$ Trust	0.19	2.29	*	✓
H14 Negative Emotions $\rightarrow$ SSR	-0.14	3.56	***	✓
H15 Positive Emotions $\rightarrow$ SSR	0.42	7.69	***	✓

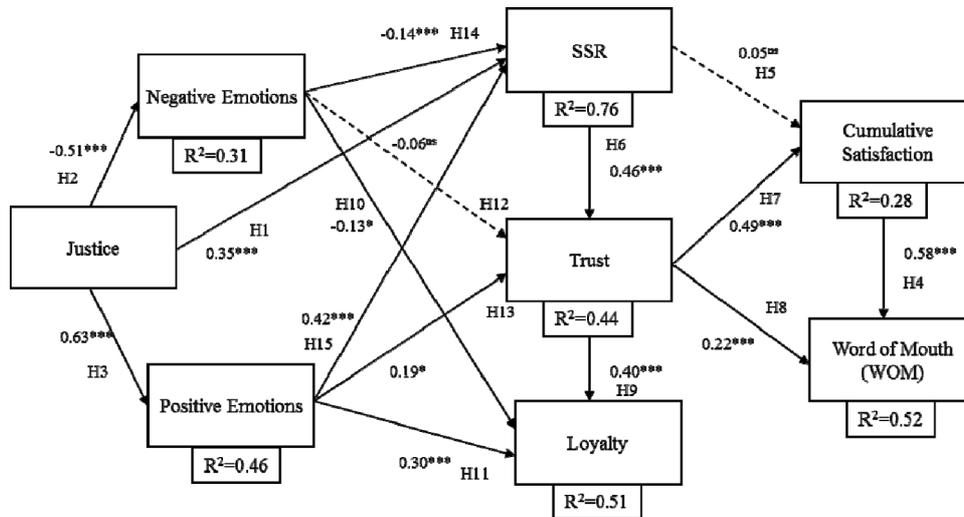
**Table 5** Model summary:  $R^2$  and  $Q^2$

	$R^2$	$Q^2$
<i>P_EMOTIONS</i>	0.46	0.35
<i>N_EMOTIONS</i>	0.31	0.13
<i>SSR</i>	0.76	0.67
<i>WOM</i>	0.52	0.43
<i>LOYALTY</i>	0.51	0.35
<i>TRUST</i>	0.44	0.33
<i>SATISFACTION</i>	0.28	0.07

A summary of the results of the analysis of the model is shown in Figure 2. The lack of significance on the Hypothesis H12 negative emotions-trust and the lower influence of negative emotions in the model regard positive emotions may have its origin in the problems Spanish purchasers' state they have had with their online purchases (Urueña et al., 2011), which subsequently led to the complaint behaviour. Because, in many cases, logistical and payment problems have their origin in provider companies that operate under their own trade name, and not handled directly by the B2C-EC platform, these may be situational and beyond the control of the B2C-EC vendor (McColl-Kennedy and

Smith, 2006). Customers' misunderstandings in ordering the wrong product may be internal, generating emotions of shame or guilt (McCull-Kennedy and Smith, 2006). Other studies (Smith and Ellsworth, 1985) state that emotions are more intense when the perception of SR is under the direct control of the service provider. Therefore, negative emotions generated towards oneself or towards organisations viewed as separate from the B2C-EC platform have no influence on loyalty and trust towards B2C-EC. In addition, another explanation for the lower influence of negative emotions is that no specific company names have been used.

**Figure 2** Results of the model



The rejection of Hypothesis H5, SSR-cumulative satisfaction, well established in the scientific literature, led us to test the possible influence of trust as a mediating variable between SSR and cumulative satisfaction. The procedure described by Tippins and Sohi (2003) to validate mediation effects requires an analysis of competence and differences between direct and the mediated effect models. The results of this analysis supported the hypothesis that trust acted as a mediator, owing to the following reasons: first, comparing the direct and trust-mediated effect of SSR and satisfaction, the mediated effect explained more variance in the satisfaction construct ( $R^2 = 0.36$  vs.  $R^2 = 0.28$ ); second, the relationships between SSR and trust (H6), and between trust and satisfaction (H7), were positive ( $\beta$  of 0.46 and 0.49, respectively); third, the path of the relationship between positive emotion and loyalty diminished abruptly in the mediated model (H10: direct model  $\beta = 0.14$ ; mediated model  $\beta = 0.05$ ).

## 5 Conclusions

This study makes a contribution to the scientific research literature on SSR proposing a model that analyses loyalty and WOM following an SR. The explanation of the variance in overall satisfaction is 28%, which is noteworthy as an  $R^2$  greater than 0.10 is

considered high in the majority of studies (Gustafsson, 2009) and an explanation of loyalty greater than 50%. The explained variance of SSR is over 75%.

One relevant point relates to the implications associated to justice. PJ and IJ have the strongest influence on perceived justice. When a problem appears in a B2C-EC service recovery, it looks like consumers value positively the company's efforts and procedures (PJ) to re-establish the service as soon as possible. The active participation of managers in real complaint cases in customer service centres will help to involve the whole company in defining and managing SR procedures and policies. Although IJ is the 'no-cost action' of the dimensions of justice (DeWitt et al., 2008), a good customer care service is an important investment. If there is a large number of incidents (requests for information, complaints, etc.), it will be difficult to have good IJ when problems arise. Therefore, in the first place it is advisable to get one step ahead of complaints by encouraging customers to give reviews on the products and logistics services, for example. This information, duly processed, can lead to take measures (removing products, providers, etc.) that will help prevent complaint behaviour.

The results emphasise the need of taking into consideration positive emotions in SSR processes, since they have a significant influence on SSR and loyalty. Therefore, one important aspect is training employees on how to manage customer emotions (especially positive emotions) in a complaint situation through role-playing and techniques to detect emotions in telephone conversations or e-mails while being aware of the difficulties this process entails in an online environment owing to the lack of face-to-face interaction with the customer. Providing employees with the technological resources (webcams for videoconferences, for example) that enable them to recognise more accurately customers' emotions and the appropriate training can improve the quality of the interaction.

The introduction of trust into the model represents a contribution to the understanding of the mechanisms of service recovery processes. The results from the empirical study show that a single successful service recovery does not predict global satisfaction with the firm, but that cumulative satisfaction is driven by trust: a successful service recovery might not contribute to overall satisfaction if trust is damaged, and thus ensuring that trust is never broken in service recovery processes, which is essential for high long-term and stable customer satisfaction.

The study has also some limitations. On the one hand, there is a need to study emotions in a more specific manner, incorporating a larger battery of emotional responses and studying their influence on trust and loyalty. This study covers a specific service (B2C-EC) for Spanish users. These results would need to be generalised in other cultural contexts, as well as analogous services. Longitudinal studies in panel samples would be of great interest for studying the emotional and cognitive variations that occur over the course of an SR process.

## References

- Adams, J.S. (1963) 'Toward an understanding of inequity', *Journal of Abnormal and Social Psychology*, Vol. 67, No. 5, pp.422–436.
- Andersen, P.H. and Kumar, R. (2006) 'Emotions, trust and relationship development in business relationships: a conceptual model for buyer–seller dyads', *Industrial Marketing Management*, Vol. 35, No. 4, pp.522–535.
- Bhattacharjee, A. (2001) 'Understanding information systems continuance: an expectation-confirmation model', *MIS Quarterly*, Vol. 25, No. 3, pp.351–337.

- Chebat, J.C. and Slusarczyk, W. (2005) 'How emotions mediate the effect of perceived justice on loyalty in service recovery situations: an empirical study', *Journal of Business Research*, Vol. 58, No. 5, pp.664–673.
- Chin, W.W. (2010) 'How to write up and report PLS analyses', in Esposito Vinzi, V., Chin, W., Henseler, J. and Wang, H. (Eds.): *Handbook of Partial Least Squares: Concepts, Methods and Applications in Marketing and Related Fields*, Springer, Berlin.
- Chiu, C.M., Huang, H.Y. and Yen, C.H. (2010) 'Antecedents of trust in online auctions', *Electronic Commerce Research and Applications*, Vol. 9, No. 2, pp.148–159.
- DeWitt, T., Nguyen, D.T. and Marshall, R. (2008) 'Exploring customer loyalty following service recovery', *Journal of Service Research*, Vol. 10, No. 3, pp.269–281.
- Diamantopoulos, A. and Winklhofer, H. (2001) 'Index construction with formative indicators: an alternative to scale development', *Journal of Marketing Research*, Vol. 38, No. 2, pp.269–277.
- Doney, P.M. and Cannon, J.P. (1997) 'An examination of the nature of trust in buyer–seller relationships', *Journal of Marketing*, Vol. 61, No. 2, pp.35–51.
- Dunn, J.R. and Schweitzer, M.E. (2005) 'Feeling and believing: the influence of emotion on trust', *Journal of Personality and Social Psychology*, Vol. 88, No. 5, pp.736–748.
- Esposito, V.V., Chin, W.W., Henseler, J. and Wang, H. (2010) *Handbook of Partial Least Squares. Concepts, Methods and Applications*, Springer, New York.
- Fornell, C. and Larcker, D.F. (1981) 'Evaluating structural equation models with unobservable variables and measurement error', *Journal of Marketing Research*, Vol. 18, No.1, pp.39–50.
- Gaur, S., Herjantol, H. and Makkar, M. (2014) 'Review of emotions research in marketing, 2002–2013', *Journal of Retailing and Consumer Services*, Vol. 21, No. 6, pp.917–923.
- Genesan, S. (1994) 'Determinants for long-term orientation in buyer-seller relationships', *Journal of Marketing*, Vol. 58, No. 2, pp.1–19.
- Gummerus, J., Liljander, V., Pura, M. and van Riel, A. (2004) 'Customer loyalty to content-based websites: the case of an online health-care service', *Journal of Service Marketing*, Vol. 18, No. 3, pp.175–186.
- Gustafsson, A. (2009) 'Customer satisfaction with service recovery', *Journal of Business Research*, Vol. 62, No. 11, pp.1220–1222.
- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998) *Multivariate Data Analysis*, 5th ed., Prentice Hall, New York.
- Harris, L.C. and Goode, M.M. (2004) 'The four levels of loyalty and the pivotal role of trust: a study of online service dynamics', *Journal of Retailing*, Vol. 80, No. 2, pp.139–158.
- Hutchinson, J., Lay, F. and Wang, Y. (2009) 'Understanding the relationship of quality, value, equity, satisfaction and behavioural intentions among golf travellers', *Tourism Management*, Vol. 30, No. 2, pp.298–308.
- Keller, K.L. (1993) 'Conceptualizing, measuring, and managing customer-based brand equity', *Journal of Marketing*, Vol. 57, No. 1, pp.1–22.
- Kelley, S.W. and Davis, M.A. (1994) 'Antecedents to customer expectations for service recovery', *Journal of the Academy of Marketing Science*, Vol. 22, No. 1, pp.52–61.
- Kim, P.H., Ferrin, D.L., Cooper, C.D. and Dirk, K. (2004) 'Removing the shadow of suspicion: the effects of apology versus denial for repairing competence – versus integrity–based trust violations', *Journal of Applied Psychology*, Vol. 89, No. 1, pp.104–118.
- Kim, T., Kim, W.G. and Kim, H. (2009) 'The effects of perceived justice on recovery satisfaction, trust, word-of-mouth, and revisit intention in upscale hotels', *Tourism Management*, Vol. 30, No. 1, pp.51–62.
- Kline, R.B. (1998) *Principles and Practice of Structural Equation Modeling*, Guilford Press, New York.
- Mangold, W.G., Miller, F. and Brockway, G.R. (1999) 'Word-of-mouth communications in the service marketplace', *Journal of Services Marketing*, Vol. 13, No. 1, pp.73–89.

- Mattila, A. (2001) 'The effectiveness of service recovery in a multi-industry setting', *Journal of Services Marketing*, Vol. 15, No. 7, pp.583–596.
- Maxham, J.G. and Netemeyer, R.G. (2002) 'Modeling customer perceptions of complaint handling over time: the effects of perceived justice on satisfaction and intent', *Journal of Retailing*, Vol. 78, No. 4, pp.239–252.
- McColl-Kennedy, J.R. and Smith, A.K. (2006) 'Customer emotions in service failure and recovery encounters', in Zerbe, W., Ashkanasy, N. and Härtel, C. (Eds.): *Individual and Organizational Perspectives on Emotion Management and Display Volume 2: Research on Emotions in Organizations*, Emerald Group: UK, pp.237–268.
- Menon, K. and Dubé, L. (2004) 'Service provider responses to anxious and angry customers: different challenges, different payoffs', *Journal of Retailing*, Vol. 80, No. 3, pp.229–237.
- Nunnally, J. (1978) *Psychometric Theory*, 2nd ed., McGraw-Hill, New York.
- Oliver, R.L. (1980) 'A cognitive model of the antecedents and consequences of satisfaction decisions', *Journal of Marketing Research*, Vol. 17, No. 4, pp.460–469.
- Oliver, R.L. and Swan, J.E. (1989) 'Equity and disconfirmation perceptions as influences on merchant and product satisfaction', *Journal of Consumer Research*, Vol. 16, No. 3, pp.72–83.
- Oliver, R.L., Rust, R.T. and Varki, S. (1997) 'Customer delight: Foundations, findings, and managerial insight', *Journal of Retailing*, Vol. 73, No. 3, pp.311–336.
- Penz, E. and Hogg, M.K. (2011) 'The role of mixed emotions in consumer behavior. Investigating ambivalence in consumers experiences of approach-avoidance conflicts in online and offline settings', *European Journal of Marketing*, Vol. 45, Nos. 1–2, pp.104–132.
- Pitta, D., Franzak, F. and Fowler, D. (2006) 'A strategic approach to building online customer loyalty', *Journal of Consumer Marketing*, Vol. 23, No. 7, pp.421–429.
- Ratnasingham, P. (1998) 'Trust in web-based electronic commerce security', *Information Management & Computer Security*, Vol. 6, No. 4, pp.162–166.
- Reichheld, F.F., Markey, R.G. and Hopton, C.E. (2000) 'Customer loyalty – applying the traditional rules of business for online success', *European Business Journal*, Vol. 12, No. 4, pp.173–179.
- Río-Lanza, A.B., Vázquez-Casielles, R. and Díaz-Martín, A.M. (2009) 'Satisfaction with service recovery: perceived justice and emotional responses', *Journal of Business Research*, Vol. 62, No. 8, pp.775–781.
- Schoefer, K. and Ennew, C. (2005) 'The impact of perceived justice on consumer emotional responses to service complaints experiences', *Journal of Services Marketing*, Vol. 19, No. 5, pp.261–270.
- Shankar, V., Smith, A.K. and Rangaswamy, A. (2003) 'Customer satisfaction and loyalty in online and offline environments', *International Journal of Research in Marketing*, Vol. 20, No. 2, pp.153–175.
- Singh, J. and Sirdeshmukh, D. (2000) 'Agency and trust mechanisms in consumer satisfaction and loyalty judgments', *Journal of the Academy of Marketing Science*, Vol. 28, No. 1, pp.150–167.
- Sirdeshmukh, D, Singh, J. and Sabol, B. (2002) 'Consumer trust, value and loyalty in relational exchanges', *Journal of Marketing*, Vol. 66, No. 1, pp.15–37.
- Smith, A.K. and Bolton, R.N. (2002) 'The effects of customers, emotional responses to service failures on their recovery effort evaluations and satisfaction judgments', *Journal of the Academy of Marketing Science*, Vol. 30, No. 1, pp.5–23.
- Smith, A.K., Bolton, R.N. and Wagner, J. (1999) 'A model of customer satisfaction with services encounters involving failure and recovery', *Journal of Marketing Research*, Vol. 36, No. 3, pp.356–372.
- Smith, C.A. and Ellsworth, P.C. (1985) 'Patterns of cognitive appraisal in emotion', *Journal of Personality and Social Psychology*, Vol. 48, No. 4, pp.813–838.

- Tippins, M.J. and Sohi, S.R. (2003) 'IT competency and firm performance: is organizational learning a missing link?', *Strategical Management Journal*, Vol. 24, No. 8, pp.745–761.
- Urueña López, A., Ferrari, A., Valdecasa, E., Ballester, M.P., Castro, R. and Cadenas, S. (2011) *Comercio Electrónico B2C 2011*, [online] [http://www.ontsi.red.es/ontsi/sites/default/files/informe\\_ecomm\\_2012.pdf](http://www.ontsi.red.es/ontsi/sites/default/files/informe_ecomm_2012.pdf) [Accessed 1/9/2014].
- Verhoef, P.C., Franses, P.H. and Hoekstra, J.C. (2002) 'The effect of relational constructs on customer referrals and number of services purchased from multiservice provider: does age of relationship matter?', *Journal of the Academy of Marketing Science*, Vol. 3, No. 3, pp.202–216.