
Research Paper

Organizational service systems: Antecedents and consequences

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Teresa García

received her PhD in Business Administration from the Department of Management Science and Marketing of the University of Santiago de Compostela (Spain). She is currently a lecturer in marketing in the same university and she teaches services marketing. Her research interests are in service orientation and service quality. She has also participated in several European marketing conferences such as EMAC and the International Product Development Management Conference. Her last paper has been published in *International Journal Service Industry Management*. She has been a research visitor in the University of Surrey at Guildford (UK).

José Varela

is professor of marketing in the Economics and Business School at the University of Santiago de Compostela (Spain). He holds a PhD in Business Administration from the same university. Dr Varela's research interests include the management of new product development and launching, marketing mix reactions to new products entry and market orientation. His current research focuses on new product development, international marketing and services marketing. His last papers have been published in *Marketing Intelligence Planning*, *Service Industries Journal*, *Tecnovation*.

Marisa del Río

received her PhD in Business Administration from the Department of Management Science and Marketing of the University of Santiago de Compostela (Spain). Dr del Río research interests include marketing mix reactions to new products entry and international marketing. Her last papers have been published in *Management International*. She has also participated in several European marketing conferences such as EMAC and the International Product Development Management Conference.

ABSTRACT The main objective of this article is to contribute to existing knowledge on how organizational service systems influence customer-contact employee job satisfaction. We examined the relationships using dyadic data provided by hotel managers and receptionists at 149 hotels. Owing to the size of the sample, we used hierarchical moderating regression analysis to test our hypotheses. Our results allowed us to verify the effect of the organizational service standards communication system on the job satisfaction of customer-contact employees, as well as the moderating effect of employee customer orientation on the relationship between the service standards communication system and employee job satisfaction. The results also highlighted the influence of hotel ratings on service standards communication and on service failure prevention and recovery, and the influence of hotel size on service technology and on service failure prevention and recovery.

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Correspondence: Teresa García
Department of Management and Marketing, University of
Santiago de Compostela, avd. Do Burgo s/n, Santiago de
Compostela 15782, Spain

INTRODUCTION

In services firms, the employees in direct contact with customers represent the organization and 'transmit' the service. Rust *et al* (1996, p. 391) note that the 'personal interaction component of services is often a primary determinant of the customer's overall satisfaction'.

Employee personal interaction is influenced by job satisfaction. Yoon and Suh (2003) demonstrated that satisfied employees are more likely to work harder and provide better services via organizational citizenship behaviors. Kattara *et al* (2008) found that all employee behaviors, both positive and negative, are highly correlated to overall customer satisfaction. Likewise, job satisfaction appears to be a key factor in the performance of tourist companies. Yee *et al* (2008) argue that their results suggest that organizational profitability emanates from satisfied employees.

Organizations in high-contact service industries should thus focus their efforts on improving customer-contact employee job satisfaction in order to guarantee service quality and increase the organization's profitability. It is therefore important and 'appears to make economic sense to consider whether and how job satisfaction among hotel employees can be improved' (Gallardo *et al*, 2010, p. 322).

Several researchers (Karatepe *et al*, 2006; Silva, 2006; Matzler and Renzl, 2007; Crawford and Hubbard, 2008; Kim *et al*, 2009a; Nadiri and Tanova, 2010) have recently analyzed the individual and job-related antecedents of job satisfaction. It is also important to focus on the organizational antecedents, as a way of favoring job satisfaction and, in turn, increasing the quality of the service provided to customers (Bitner *et al*, 1990; Podsakoff and Mackenzie, 1994; Hartline and Ferrell, 1996; Kelley and Hoffman, 1997; Barroso *et al*, 2004; Dean, 2004).

We are interested in organizational service systems (OSS) (Lytle *et al*, 1998), a construct that has received little attention until recently. OSS is the set of organizational practices related

to service failure prevention and recovery, service standards communication and service technology.

In relation to the examination of 'organizational service systems', we had three objectives: first, to identify its dimensions; second, to examine its effect on customer-contact employee job satisfaction; and third, to identify those characteristics of the firm which determine OSS, in order to better understand why the systems of certain firms are more oriented towards delivering excellent service than others. We also examined the moderating effect of employee customer orientation on the relationship between OSS dimensions and employee job satisfaction. These relationships had not previously been investigated in the hospitality industry.

This article contributes to existing hospitality industry research by demonstrating the following:

- the dimensions of OSS;
- the extent of OSS influence on employee job satisfaction;
- the moderating effect of employee customer orientation on the relationship between OSS dimensions and employee job satisfaction;
- the effect of hotel characteristics on OSS.

In order to achieve the proposed objectives, this article firstly offers a theoretical review of existing research on OSS, employee customer orientation and employee job satisfaction. Hypotheses, which are based on theoretical analysis, are then empirically tested using data obtained from hotel managers and reception employees at 149 hotels. The hotel managers provided data on OSS and hotel characteristics (rating, size and chain affiliation) and the receptionists provided information on employee service orientation and job satisfaction.

The final sections of this article include the results, managerial implications, limitations and suggestions for future research.



ORGANIZATIONAL SERVICE SYSTEMS

Research into services firms has shown that service-oriented organizational practices have an effect on workers' attitudes (Lytle, 1994; Sparrowe, 1994, Hartline and Ferrell, 1996; Kim *et al.*, 2009b).

Organizational service orientation is defined as the set of organizational activities designed to create and deliver an excellent service (Schneider *et al.*, 1992; Lytle *et al.*, 1998; Homburg *et al.*, 2002). An organization's service orientation can be defined as a set of relatively long-lasting organizational practices, which influence the attitudes and behaviors of employees (Hofstede *et al.*, 1990). Management must internally commercialize 'a service mentality' and manage such practices effectively so that their contact personnel portray attitudes and behaviors that provide a quality service (Bowen and Schneider, 1988). Organizations (specifically contact personnel) must be committed to offering an excellent service to customers at all levels.

In their study of OSO (Organizational Service Orientation), Lytle *et al.* (1998) identified 10 practices in this construct, grouped into four basic dimensions: (1) service leadership, (2) service encounter, (3) human resource management and (4) service systems designed to ensure quality customer service.

The delivery of service quality requires an organized and system-wide effort. For Treacy and Wiersema (1993), low quality is often a system problem, not a people problem. OSS include (Lytle *et al.*, 1998): (1) service failure prevention and recovery practices, (2) service standards communication practices, and (3) high levels of service technology adaptation.

The *service failure prevention and recovery* dimension consists of activities carried out to prevent service failures and to adequately respond to customer complaints in this connection.

The *service standards communication* dimension is the degree to which the organization measures, controls and communicates service quality standards. There is evidence to prove that

communication between contact personnel and managers is an important factor in achieving service quality (Parasuraman *et al.*, 1988; O'Connor and Shewchuk, 1995). Employees often feel more included when they fully understand the service, the problems involved in the delivery process and the purpose of interaction with other co-workers.

The *service technology* dimension focuses on how much an organization uses technology to provide its customers with service advantages and assesses the extent to which service quality is enhanced through the use of cutting edge technology. Researchers have only just begun to explore technology's role in service delivery (Mick and Fournier, 1998, Meuter *et al.*, 2000).

OSS AND EMPLOYEE JOB SATISFACTION

In service-orientated firms, it is crucial that managers make every effort to prevent service delivery failure, and when it does occur, establish a means to solving it, thus pleasing customers. Additionally, managers must regularly communicate the importance of the service and provide employees with resources. If contact personnel receive an excellent service from managers, they will most likely feel content and provide an excellent service to their own customers (Church, 1995; Hallowell *et al.*, 1996).

Employee job satisfaction can be defined as a pleasurable emotional state resulting from the assessment of his/her work (Locke, 1976). This definition is very broad, as it includes characteristics relating to the job, wages, promotion and so on. According to Christen *et al.* (2006, p. 5), job satisfaction is, in essence, 'an overall state that is derived from experiencing a work situation'.

Service failure prevention and recovery

Preventing service failure and recovering from it are key determinants of service quality (Parasuraman *et al.*, 1994). If an organization fails to prevent and solve customer problems,

the customer has been failed twice over: once with the initial failure and again with the failure to correct the initial fault. The role of contact personnel throughout the service recovery process is to deal promptly with complaints and this role is extremely important for the customer (Lytle *et al*, 1998; Boshoff and Allen, 2000; Yavas *et al*, 2004; Patterson *et al*, 2006; Rod *et al*, 2008). Bitner *et al* (1990) found that contact personnel's rapid and satisfactory responses to failed services can lead to customer satisfaction.

It is essential that firms develop an effective means of recovery for failed services and provide customers with guarantees in order to accelerate the recovery process (Callan and Moore, 1998). Managers must identify different measures that can be taken by contact personnel in various service failure situations, thus adapting responses to specific incidents.

Boshoff and Allen (2000) found that effective service recovery affects the job satisfaction of contact personnel. Furthermore, if contact personnel are committed to their firm's service recovery objective, they will be more likely to develop organizational citizenship behavior, which will sequentially benefit the firm since the aforementioned personnel will make more of an effort, share solutions with other colleagues and offer suggestions on how the service could be improved (Morrison, 1996). Accordingly, the first hypothesis is as follows:

Hypothesis 1: The greater the service failure recovery and prevention, the greater the job satisfaction of customer-contact employees.

Service standards communication

Managers can achieve improved service and employee job satisfaction through the effective communication of quality standards. In a study by Hinkin and Tracey (1994), transformational leadership had a positive influence on the satisfaction of contact personnel. The employees were satisfied with their leaders because they clarified their mission and role in the firm.

MacKenzie *et al* (2001) indicated that transformational leaders significantly influence the organizational citizenship behavior of contact personnel. The results show that managerial pressure on employees leads to a decrease in trust and in the desire to help others, and to an increase in stress and in negative remarks about the firm. Accordingly, we propose the following hypothesis:

Hypothesis 2: The greater the effort made to communicate service standards, the greater the job satisfaction of customer-contact employees.

Service technology

Technology is seriously changing how services are delivered, and is enabling both customers and employees to receive and provide better, more efficient, customized services (Bitner *et al*, 2002; Khan and Khan, 2009). The use of new technology is vital in the delivery of outstanding service (Zeithaml and Bitner, 1996; Heskett *et al*, 1997). Contact employees can be freed from routine tasks and focus on serving and advising the customer. Many customer expectations can only hope to be met with the assistance of sophisticated technology. Once a mere supporting element, technology has come to play a key role in quality (Domegan, 1996).

Technology, by determining the characteristics of the job (Hackman and Oldham, 1975), can influence employee commitment and satisfaction. Alder (1992) demonstrated that slow, inflexible technology caused employee dissatisfaction. Murrell and Sprinkle (1993) showed that dissatisfaction with technology efficacy was associated with poor performance and employee discontent. In view of the foregoing, we propose the following hypothesis:

Hypothesis 3: The greater the investment made in service technology, the greater the job satisfaction of customer-contact employees.



EXPLORING THE MODERATING EFFECT OF EMPLOYEE CUSTOMER ORIENTATION

Although organizational practices generally tend to influence employee satisfaction, an employee's own disposition or inclination can also influence his or her level of satisfaction. An employee's customer orientation may particularly affect his or her level of job satisfaction.

Employee customer orientation is an individual-level construct that is central to a service organization's ability to be market oriented (Brown *et al.*, 2002). Saxe and Weitz (1982) were the first to measure customer orientation at an individual level. Customer orientation is, for our research purposes, a self-assessment of an employee's tendency to try to meet customer needs, rather than a measure of the service actions of the service worker (Brown *et al.*, 2002).

Donavan *et al.* (2004, p. 130) state that 'In contexts in which the primary task is the serving of customer needs, customer-oriented employees fit the service setting better than employees who have lower customer orientation because they are predisposed to enjoy the work of serving customers'. In accordance with the model, we anticipate that the disposition to serve customers (customer orientation) will moderate the relationships between OSS and customer-contact employee job satisfaction. We argue that customer-contact employees with high customer orientation will be satisfied, by the job itself, regardless of OSS, and therefore customer orientation does not contribute towards increasing the effect of OSS on employee job satisfaction in employees with high customer orientation. Conversely, we argue that when employee service orientation is low, OSS will have a positive effect on job satisfaction. Accordingly, we hypothesize the following:

Hypothesis 4: Customer orientation will moderate the relationships between OSS and employee job satisfaction. Specifically, the less the employee's customer

orientation, the stronger the positive effect on employee job satisfaction of: (4.1) organizational service prevention and recovery, (4.2) service standards communication and (4.3) service technology.

CHARACTERISTICS OF THE FIRM AND THE OSS

Various studies have examined the direct effects of a hotel's characteristics on service quality. The results obtained by Aguilar (2001) show that, in general, service quality varies on the basis of hotel characteristics such as size or location. He also found that customers staying in international chain hotels perceived the quality of service received as higher.

The influence of a hotel's characteristics on service quality, and the hypothesized relationship between service-orientated practices and service quality (Hartline and Ferrell, 1996; Worsfold, 1999; Jago and Deery, 2002), lead us to consider that hotels serving low-value-added customers will have less developed OSS than hotels serving high-value-added customers. Accordingly, we hypothesize the following:

Hypothesis 5: Deluxe hotels will carry out more (5.1) service failure prevention and recovery, (5.2) service standards communication and (5.3) service technology, than medium hotels.

The expansion of hotel chains is an indication of their capacity to provide customers with service quality. Consequently, we argue that hotels affiliated to chains possess more highly developed OSS and therefore have more organizational practices that stimulate service orientation. Accordingly, we expect corporate affiliation to exert a positive influence on OSS, as follows:

Hypothesis 6: Hotels affiliated to chains will carry out more (6.1) service failure prevention and recovery, (6.2) service standards communication and (6.3) service technology than independent hotels.

Finally, larger hotels have more resources available to set up service systems. We therefore expect that larger hotels will carry out more organizational practices orientated towards providing a service of excellent quality. Accordingly, we hypothesize that organizational size will have a positive influence over OSS:

Hypothesis 7: The larger the size of the hotel, the greater the (7.1) service failure prevention and recovery, (7.2) service standards communication and (7.3) service technology.

METHOD

We tested our hypotheses using service workers in the hospitality industry. Respondents were specifically frontline employees and managers working in hotels located in a small region, and the interviews took place in January and February of 2002. We selected the hospitality industry on account of the important role of contact employees in this type of firm and on account of the recent growth in the number of hotels in our region.

A researcher contacted managers from all 255 hotels in the region in order to request their participation in a study on employee job satisfaction. We eventually received matched employee/supervisor responses from 149 hotels, resulting in a response rate of 58 per cent.

A preliminary analysis of the 149 hotels showed that 24 per cent were deluxe and 15 per cent were affiliated to a chain. The average size of the hotels was 57 rooms. The ratio of rooms to employee was 2.94, approximately one worker for every three rooms.

Employees completed a questionnaire in which customer orientation and job satisfaction were assessed on multi-item scales. In order to maximize privacy and minimize bias, employees were asked to put their completed surveys in sealed envelopes, which were then collected and returned to the researchers. Managers rated the OSS and characteristics of their respective firms. Both the managers and contact employees

of the hotels were relatively young: 65 per cent were aged between 20 and 35 and 72 per cent were women. Regarding length of service, 17 per cent of employees had worked at their relevant hotels for less than a year, 44 per cent between one and three years and 39 per cent for more than three years.

Measures

OSS, employee customer orientation and job satisfaction are latent variables. These constructs were measured by means of Likert-type seven-point multi-item scales, whereby one means 'strongly disagree' and seven means 'strongly agree'. The scales were adapted from studies in which they have demonstrated their reliability and validity.

Organizational service failure prevention and recovery, service standards communication and service technology were measured via the corresponding items on the SERV*OR scale developed by Lytle *et al* (1998). Scales were made up of 7, 5 and 3 items, respectively. An example item used to measure service failure prevention and recovery is: 'We provide follow-up service calls to confirm that our services are being provided properly'; an example item used to measure service standards communication is: 'Service performance measures are communicated openly with all employees regardless of position or function'; and one for the measurement of service technology is: 'We use high levels of technology to support the efforts of men and women on the front line'.

Employee customer orientation: Employee service orientation was measured using a four-item scale, adapted from Bettencourt *et al* (2001) and customer orientation was measured using a five-item scale based on the dimensions described by Hogan *et al* (1984) and Cran (1994).

Employee job satisfaction: Employee job satisfaction was measured using a five-item scale developed by Hackman and Oldham (1975).



This scale offers a general average of job satisfaction.

Employee control variables: The demographic characteristics of contact employees (age, gender, education/training and length of service at the firm) were used as control variables. These characteristics were measured through dichotomous variables. In the case of age, taking young employees (under 35 years) as a reference group, we created the variables Age2, which took the value 1 when the employee's age was between 36 and 45 years, and 0 otherwise; and Age3, which took the value 1 when the employee was over 45 years old, and 0 otherwise. In the education/training variable, 1 indicates that the employee was educated to diploma level or above, and 0 indicates a lower level of education. In the length of service variable, 1 indicates more than three years working at the firm and 0 less than three years.

Hotel rating: It was measured using a dichotomous variable: 0 indicates a medium hotel and 1 indicates a deluxe hotel.

Hotel affiliation: It was measured using a dichotomous variable: 0 indicates that the hotel is independent and 1 indicates that the hotel belongs to a chain.

Hotel size: It was measured using the logarithm of the number of employees at the hotel.

Properties of the scales

After gathering the data, Anderson and Gerbing (1988) recommend examining the scales for one-dimensionality, reliability, convergent validity and discriminant validity. The correlations between the items and the item-to-total correlations were calculated for each of the items, taking one scale at a time to obtain one-dimensionality. The items for which these correlations were not significant (0.01) were eliminated. The one-dimensionality of each refined scale was explored by factor analysis

using the auto-value 1.0 and the factor loading 0.25 as threshold points for eliminating items. The reliability of each refined one-dimensional scale was explored by calculating the Cronbach's α coefficient.

This process showed that the scales used were both one-dimensional and reliable. The values obtained are shown in Table 1.

In order to verify the convergent validity of the scales we performed a confirmatory factor analysis using the AMOS 16.0 program. Different models are estimated sequentially, by the maximum likelihood method, until the best fit is obtained. As a result, indicators are iteratively eliminated in the search for a suitable estimate. The results can be seen in Table 1, and indicate that the goodness of fit is satisfactory, obtaining a chi-squared of 93.093 (80 DF) and GFI and AGFI indices of almost 1. Convergent validity is demonstrated by the fact that the items remaining in the model are significant ($t > 1.96$) and load substantially on to their corresponding latent construct.

We used the confidence interval test to assess discriminant validity (Anderson and Gerbing, 1988). This test consists of verifying that the value 1 is not found among the confidence intervals between the correlations of the latent variables. This condition was met since none of the confidence intervals at 95 per cent (plus or minus 1.96 standard error) included 1.0.

The results of the tests of one-dimensionality, reliability, convergent validity and discriminant validity provide sufficient evidence of the validity of the scales used in this study.

RESULTS AND CONSEQUENCES OF OSS

Table 2 shows the mean values, standard deviations, coefficients of reliability and coefficients of correlation of the variables examined. The means of the constructs indicate that the managers of the hotels analyzed believe that fairly intense service practices are carried out in their establishments, while the reception employees are highly service oriented and also experience a high level of satisfaction.

Table 1: Final measurement items

<i>Constructs/items</i>	<i>Factor loading</i>	<i>t-value</i>	<i>Cronbach's α</i>
<i>Service failure recovery</i>			0.71
REC2: We have established problem-solving groups to enhance our ability to resolve service breakdowns	0.679	—	—
REC3: We provide follow-up service calls to confirm that our services are being provided properly	0.688	6.044	—
REC4: We provide every customer with an explicit service guarantee	0.665	5.957	—
<i>Service standards communication</i>			0.73
COM1: Every effort is made to explain the results of customer research to every empl. in understandable terms	0.663	—	—
COM2: Every employee understands all of the service standards that have been instituted by all departments	0.795	6.651	—
COM3: Service performance measures are communicated openly to all employees, regardless of position or function	0.624	6.016	—
<i>Service technology</i>			0.83
TEC1: Technology is used to build and develop higher levels of service quality	0.855	—	—
TEC2: We use high levels of technology to support the efforts of men and women on the front line	0.829	7.101	—
<i>Job satisfaction</i>			0.82
SAT1: Generally speaking, I'm very satisfied with this job	0.795	8.118	—
SAT2: I frequently think of quitting this job	0.711	—	—
SAT3: I'm generally satisfied with the kind of work I do	0.809	8.166	—
<i>Customer orientation</i>			0.86
CUS1: I am interested in knowing the various customer segments in order to offer the correct customer treatment	0.778	9.115	—
CUS2: I care for customers as I would like to be cared for	0.747	—	—
CUS3: It's natural for me to be considerate of others' needs	0.847	9.811	—
CUS4: I pride myself in providing courteous service	0.730	8.549	—

Goodness-of-fit statistics: Chi-squared 93.093 (80 DF); $P=0.150$; GFI=0.929; CFI=0.984; RMSEA=0.033.

All the inter-construct correlation coefficients are significant and are in line with our hypotheses. This bivariate result supports the relationship put forward, in the sense that the greater the effort made regarding service systems, the greater the satisfaction of employees.

Set forth below are the results relating to our hypotheses on the impact of OSS on employee job satisfaction and the results regarding the antecedents of OSS.

In view of the small sample size, we used hierarchical moderating regression analysis to



test our hypotheses in relation to the relationship between OSS, employee customer orientation and employee job satisfaction (Sharma and James, 1981). Firstly, we introduced the control variables (demographic characteristics of the contact employees); secondly, the OSS; and lastly, the interaction between OSS and employee customer orientation.

Before testing the models, the variables were standardized to reduce potential multicollinearity problems. We calculated the variance inflation factors (VIFs) to examine the extent to which non-orthogonality among independent variables inflated standard errors. The VIFs were all below 1.0, and therefore below the recommended cutoff point of 5.0. Multicollinearity was unlikely to be a major threat to the conclusions (Neter *et al.*, 1990).

The main effect of OSS on employee job satisfaction

Table 3 reveals that model 3 of employee job satisfaction is significant; the change in F is also significant. This model explains 20 per cent of the variance. The results of the job satisfaction model indicate that the demographic characteristics of contact employees do not significantly influence job satisfaction. Among organizational service practices, only service standards communication ($b = 1.118$; $P < 0.01$) has a significant positive effect on contact-employee satisfaction. This result supports Hypothesis 2.

The moderating effects on the relationship between OSS and employee customer orientation

We used model 3 to test our hypotheses concerning the moderating effects of employee customer orientation on the relationships between the OSS and employee job satisfaction.

The findings, shown in Table 3, reveal that only one moderating effect is significant. The 'service standards communication \times employee customer orientation' interaction was significant ($b = -1.484$; $P < 0.05$).

When significant interaction effects are found to exist, further analysis can subsequently identify monotonicity in the relationship between a predictor variable and a dependent variable over the range of the moderating variable (Hultink and Langerak, 2002). Monotonicity can be determined from a partial derivative of model 3 (Schoonhoven, 1981).

For 'service standards communication \times employee customer orientation' the partial derivative is:

$$\begin{aligned} &DX \text{ (employee job satisfaction)}/ \\ &dZ_1 \text{ (service standard communication)} \\ &= 1.118 - (1.484)Z_2 \text{ (employee customer} \\ &\text{orientation)} = 0 \end{aligned} \quad (1)$$

When employee customer orientation takes the value 0.753, equation (1) equals zero. Therefore, if values of employee customer orientation above 0.753 are substituted in equation (1), the outcome is negative, whereas values below 0.753 yield positive outcomes. Since this inflection point in the moderating effect is in the range of its standardized observed value (from -2.86 to 1.38), it can be concluded that the relationship between service standards communication and employee job satisfaction is non-monotonic; service standards communication is positively linked to employee job satisfaction at low and medium levels of employee customer orientation, and negatively at high levels of employee customer orientation.

The greater the service standards communication, the greater the employee job satisfaction, and the higher the employees' customer orientation, the greater their job satisfaction. However when service standards communication interacts with employee customer orientation, the effect on employee job satisfaction is positive only when the levels of employee customer orientation are low and medium. Thus, when the employees are highly customer oriented, greater service standards

Table 2: Average values (standard deviations), Cronbach's α and correlation coefficients of the constructs

	Average (standard deviation)	1	2	3	4	5
1. Service failure recovery and prevention	4.92 (1.53)	0.71	0.393***	0.389***	0.258***	0.163*
2. Service standards communication	5.15 (1.18)	—	0.73	0.236**	0.421***	0.238**
3. Service technology	5.54 (1.47)	—	—	0.83	0.319***	0.298***
4. Employee customer orientation	5.70 (0.94)	—	—	—	0.86	0.416***
5. Employee job satisfaction	5.18 (1.12)	—	—	—	—	0.82

Note: * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

Table 3: Employee job satisfaction models

	Model 1	Model 2	Model 3
B_0	-0.046	-0.021	0.029
Gender	-0.158	-0.157	-0.169
Age2	-0.058	0.010	0.091
Age3	0.073	0.085	0.221
Education	0.105	0.052	-0.022
Tenure	0.267	0.217	0.110
Service technology	—	0.248**	0.548
Service standards communication	—	0.197	1.118**
Service failure prevention and recovery	—	-0.031	-0.780
Customer orientation	—	—	0.864*
Service technology×Customer orientation	—	—	-0.454
Service standards communication×Customer orientation	—	—	-1.484*
Service failure prevention and recovery×Customer orientation	—	—	0.915
R^2	0.025	0.137	0.265
Corrected R^2	-0.010	0.087	0.200
F	0.717	2.760**	4.064***
ΔR^2	0.025	0.112	0.128
ΔF	0.717	6.039***	5.893***

Note: * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

Table 4: Model of the antecedents of the dimensions of the organizational service systems

	<i>Service technology</i>	<i>Service standards communication</i>	<i>Service failure prevention and recovery</i>
Hotel rating (0=Medium; 1=Deluxe)	0.152	0.256**	0.230*
Hotel affiliation	0.004	0.092	0.087
Hotel size	0.222*	-0.025	0.242*
R^2	0.111	0.088	0.224
R^2 corrected	0.093	0.069	0.207
F	6.037***	4.657**	13.916***

Note: * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

communication has a negative effect on employee job satisfaction. This result supports Hypothesis 4.2.

Effect of a firm's characteristics on its OSS

We argue that the characteristics of a hotel influence its OSS. We used regression analysis to test our hypothesis regarding the relationship between a firm's characteristics and its OSS. We calculated the VIFs and verified that all were below the recommended threshold of 5, suggesting that multicollinearity is unlikely to be a substantial threat to the conclusions derived from this study (Neter *et al.*, 1990). In Table 4 we show the standardized coefficients.

Table 4 reveals that the three models, which relate to service technology, standards communication and failure prevention and recovery, are significant. 9.3 per cent of variance is explained by the service technology model; 6.9 per cent by the service standards communication model and 20.7 per cent by the service failure prevention and recovery model. Out of the three, service failure prevention and recovery is that which is best explained by the hotel characteristics considered in this study.

The results of the service failure prevention and recovery model indicate that hotel rating ($b = 0.230$; $P < 0.05$) and hotel size ($b = 0.242$; $P < 0.05$) have significant positive effects, but that hotel affiliation to a chain does not. Hotel

size has slightly more of an influence than hotel rating. These results show the importance of hotel size and hotel rating to service failure recovery and support Hypotheses 5.1 and 7.1, but not hypothesis 6.1.

The results of the service standards communication model indicate that hotel rating ($b = 0.256$; $P < 0.01$) is the only characteristic that has a significant positive effect on service standards communication. This result confirms the importance of hotel rating to service standards communication and supports Hypothesis 5.2., but not Hypotheses 6.2 or 7.2.

The results of the service technology model indicate that hotel size ($b = 0.222$; $P < 0.05$) is the only characteristic that has a significant effect on service systems and that this effect is positive. This result shows, once again, the importance of a hotel's size and supports Hypothesis 7.3, but not Hypotheses 5.3 or 6.3.

Table 5 summarizes the results of our hypotheses.

DISCUSSION AND MANAGERIAL IMPLICATIONS

The environment in the workplace of contact employees strongly influences their attitudes and behaviors. Customer-contact employee satisfaction is a notable determinant of customer satisfaction in hotels. These companies 'cannot survive without satisfied employees because satisfied employees are the ones who provide satisfactory service experience to customers.

Table 5: Hypotheses finding

<i>Hypotheses proposed</i>	<i>Hypotheses supported</i>
H1: The greater the service failure recovery and prevention, the greater the job satisfaction of customer-contact employees.	No
H2: The greater the effort made to communicate service standards, the greater the job satisfaction of customer-contact employees.	Yes
H3: The greater the investment made in service technology, the greater the job satisfaction of customer-contact employees.	No
H4: Customer orientation will moderate the relationships between organizational service systems and employee job satisfaction. Specifically, the less the employee's customer orientation, the stronger the positive effect on the employee's job satisfaction of:	
(4.1) organizational service prevention and recovery	No
(4.2) service standards communication	Yes
(4.3) service technology.	No
H5: Deluxe hotels will carry out more:	
(5.1) service failure prevention and recovery,	Yes
(5.2) service standards communication	Yes
(5.3) service technology than medium hotels	No
H6: Hotels affiliated to chains will carry out more:	
(6.1) service failure prevention and recovery	No
(6.2) service standards communication	No
(6.3) service technology than independent hotels.	No
H7: The larger the size of the hotel, the greater the:	
(7.1) service failure prevention and recovery	Yes
(7.2) service standards communication	No
(7.3) service technology.	Yes

Therefore, companies need to make sure that their employees are happy and satisfied with what they do' (Chi and Gursoy, 2009, p. 252). This article has examined the influence of OSS on customer-contact employee job satisfaction.

Following a rigorous evaluation process, which has been used in other sectors and geographical settings, the measurement scales employed in this research emerged as valid and reliable instruments for measuring constructs in the hospitality industry.

One of the important findings of this study was that some hotel characteristics have positive effects on OSS. Hotel rating has a significant effect on service standard communication and on service failure prevention and recovery; hotel size has a significant effect on service technology and on service failure prevention and recovery; but hotel affiliation does not.

The results indicate that luxury hotels can be expected to make a greater effort regarding service standards communication and service failure prevention and recovery. It can also be



expected that larger hotels will make more effort in service failure prevention and recovery and will become more involved in the use of cutting-edge technology.

The efforts made in service failure prevention and recovery are greater in deluxe hotels and are more intense the larger the size of the hotel. Moreover, greater use of the latest technology is influenced only by hotel size and service standards communication is favorably affected only by hotel rating.

A second finding of this study was that service standards communication has a significant effect on customer-contact employee job satisfaction. However, results also suggest that service failure recovery and service technology do not have an impact on job satisfaction. These results clearly indicate that the only OSS dimension that has a significant and positive influence on job satisfaction is service standards communication. This finding suggests that if hotel managers intend to use OSS to increase their employees' satisfaction, they must fully inform employees about service standards. Managers should therefore strive to clarify the hotel's quality standards and the contact personnel's role through open and effective communication. When employees are given clear details about what the organization expects of them in terms of achievement, they develop a positive attitude and feel more satisfied.

Another important finding of this study was that employee customer orientation moderates the relationship between service standards communication and employee job satisfaction. This suggests that the relationship between service standards communication and employee satisfaction is determined by employee customer orientation. If employees are already highly customer orientated, no amount of additional service standards communication will increase their job satisfaction. If employees enjoy interacting and dealing with customers, the very nature of their job will provide them with satisfaction. Moreover, customer-orientated employees always take the time to provide

better service in order to meet and/or exceed customer expectations and, accordingly, they receive better performance appraisals, which also contributes towards their increased job satisfaction.

The aforementioned finding suggests that if employees have low customer orientation, it would be possible to increase their job satisfaction through improved service standards communication. In this case, focus would be placed on customer orientation and the achievement of objectives, which would positively contribute towards job satisfaction. Therefore, if managers communicate service standards to their customer-contact employees, they will increase the satisfaction of these employees, provided that they are not already highly customer orientated.

Limitations and future research

The principal limitations of this article stem from two aspects: the scope of the study and the variables considered in the model. Firstly, the data were taken from a survey carried out in a single region and, consequently, the results could be highly affected by the characteristics of that specific region's environment. Secondly, other organizational variables such as employee behaviors and organizational performance were not analyzed in this study and these could have an influence over customer-contact employee job satisfaction.

The results of this study, together with the aforementioned limitations, offer suggestions for future research. Employee in-role and extra-role behaviors could be selected as variables to be subsequently analyzed and explained. It would also be of interest to incorporate, as antecedents of the variables, new service-oriented organizational practices, which, together with the service systems used, could then be analyzed and explained. The aforementioned organizational practices include employee empowerment, service oriented education/training and service-based rewards.

In order to contribute towards existing research, mediating variables could also be

taken into consideration. Examination of employees' trust of their managers, the existence of functional conflicts or the ambiguity of the role played by contact employees could add to current knowledge on the relationship between organizational practices and the attitudes and behaviors of contact employees.

Finally, it would be very interesting to complete the model by incorporating measures of organizational results, such as the quality of service perceived by customers or the occupation rate.

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