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Joint impact of quality and environmental practices on firm performance in small service businesses: an empirical study of restaurants

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ABSTRACT

This study explores the joint impact on firm performance of the decision to adopt quality and environmental practices in small service companies. In the literature existing to date insufficient attention has been given to small service companies in general, and to the restaurant sector in particular. Most of the studies conducted into environmental practices have thus focused on the industrial sector and on larger companies. This work is based on 374 surveys involving the managers of restaurants, using structural equation modeling to study the links between the dimensions studied. The findings of this study state that Quality Management Practices have a significant direct impact on market success factors but not on companies' profit and loss statements. On the other hand, the study shows a significant relationship between Environment Management Practices and financial performance. The article suggests that being proactive on quality and environmental issues can bring small service companies a great number of benefits that improve their competitiveness.

1. Introduction

Quality and environment management practices are two of the key drivers for achieving market success and financial performance in service industries (Karim et al., 2007; Singh et al., 2008; Alonso-Almeida et al., 2012).

Most small companies, however, have not adopted a quality or environmental management system due to various barriers to doing so, such as cost, lack of training personnel or non-inclusion in the firm's management strategy (Chan, 2011). Nevertheless, some quality and environmental practices have been adopted by numerous small companies. Such management practices take on particular importance when they are used as strategies to differentiate small service companies from their competitors (Rubio-Andrada et al., 2011; Alonso-Almeida and Rodriguez-Anton, 2011; Rodriguez-Antón et al., 2011), in a context in which economies of scale do not apply and operational costs can have a suffocating effect on the company concerned.

Prior research into service companies has mainly focused, separately, on either the positive impact of Quality Management Practices (QMPs) on performance (e.g. Kaynak, 2003; Corbett et al., 2005; Terlaak and King, 2006; Nair, 2006; Claver-Cortes et al., 2008; Climent-Serrano, 2010; Ruiz-Molina et al., 2011; Rubio-Andrada et al., 2011; Rodriguez-Anton et al., 2011; Alonso-Almeida et al., 2012) or the profitable impact of environmental management practices (EMPs) on performance (e.g. Enz and Siquaw, 1999; Goodman, 2000; Alvarez et al., 2001; Kassinis and Soteriou, 2003; Carmona-Moreno et al., 2004; Molina-Azorín et al., 2009; Alonso-Almeida and Rodriguez-Anton, 2011). Little research has, however, been undertaken to examine the combined impact of QMPs and EMPs on service industries. This is the general situation throughout the service sector with the exception of the hospitality industry, where some such studies have nevertheless been conducted (Alonso-Almeida et al., 2011, 2012; Pereira-Moliner et al., 2012). This lack of research becomes even more pronounced when the specific case of small service companies is examined in any sector apart from hospitality. Each industry develops different types of QMPs and EMPs and to different degrees of adoption, which will therefore result in different effects and results. For these reasons, in order to identify specific organizational behavior patterns, Lee (2009) pointed to the needed for quantitative research into a specific industry in relation to SMEs. In keeping with the

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recommendations made by a number of authors (e.g. Kassinis and Soteriou, 2003; Hillary, 2004), the present study focuses on another specific branch of the tourist service industry in which there is a predominance of small or micro-companies, i.e. the restaurant sector. Moreover, the activities of companies operating in the restaurant sector revolve around two components, food production and service delivery, for which the adoption of both quality and environmental practices could be crucial for competitiveness. Thus, in relation to food production, the adoption of QMPs helps to save time and money by standardizing certain actions (Molina-Azorín et al., 2009; Alonso-Almeida et al., 2012), and EMPs reduce waste and water and energy consumption (Alonso-Almeida, 2012). In the case of service delivery, service quality is a key driver to achieving customer satisfaction and loyalty (Ribeiro, 2003; Ladhari et al., 2008; Hyun, 2010), while EMPs could attract new market segments (Hu et al., 2010; Jang et al., 2011).

Moreover, another reason for restricting the survey to this subsector is that, according to Eurostat (2012), the food and beverages subsector accounted in 2011 for 85.4% of all companies in the EU-27's accommodation and food services sector, and for 76.1% of the persons employed and 65.6% of the value added within it.

This paper thus adds to previous research in a number of ways. First, it sheds light on the main QMPs adopted and the impact of such decisions on firm performance both directly and as modified by environmental management practices. Second, it increases the understanding of the environmental behavior of the service sector. Third, it provides an analysis of the effect of QMPs and EMPs on firm performance. In this study, firm performance is measured in terms of two aspects: companies' market success factors (e.g., their image, their levels of customer and employee satisfaction), and their financial performance. Fourth, it focuses on a service industry which has not previously been studied in this respect, thus providing useful empirical evidence for managerial practice in this industry. Finally, it provides new evidence about the importance of environmental practices to the service sector and their impact on companies' organization and performance.

The remainder of this paper is structured as follows. Section 2 discusses the theoretical arguments concerning the adoption of QMPs and EMPs and the relationship with firm performance. Section 3 describes the empirical design of this study. Section 4 presents a quantitative analysis, followed by Section 5, which presents the study's findings. Section 6 concludes this paper with several conclusions drawn both from the research and from observed business practice.

2. Literature review

2.1. Impact of quality management on firm performance

Previous research has also pointed to a certain number of critical drivers of quality management, such as management commitment, quality planning, quality improvement and quality control (Saraph et al., 1989). However, Zhao et al. (2004) stated that not all QMPs are equally effective in all organizations, especially in the case of small service firms, where QMPs such as management support, customer focus and process management, seemed to be more effective than detailed processes and complex systems. Given that QMPs could be considered as being unique to each company (Sousa and Aspinwall, 2010), small companies could choose certain QMPs and improve their performance even without adopting a specific standard management system or complex management practices (such as the examples shown in Appendix A).

A debate exists about the extent of the impact of QMPs on firm performance as measured in financial terms. Most research has pointed to a positive effect on financial performance, due to operational improvements in the form of more effective control of processes and products that lead to savings by reducing repetitive tasks and reducing waste. This has beneficial effects on the service provided, and can lead to improvements in the company's financial performance (Callan, 1992; Samson and Terziovski, 1999; Nield and Kozak, 1999; Forza and Flippini, 1998; Ahire and Dreyfus, 2000; Kaynak, 2003; Corbett et al., 2005; Terlaak and King, 2006; Rubio-Andrada et al., 2011; Rodriguez-Antón et al., 2011; Alonso-Almeida et al., 2012). However, some studies have asserted that this positive effect is limited in scope (Nair, 2006), mainly because the implementation of QMPs inevitably involves specific costs in terms of training, planning and control management. Given that most previous research nevertheless concluded that QMPs may make companies more profitable thanks to cost reductions and improved income due to an increasing number of customers and of repurchases, this hypothesis is proposed:

H1a. Quality Management Practices (QMPs) are likely to have a direct positive impact on financial performance in restaurants.

In relation to restaurants, prior research has shown that the main market success factors are quality of service, customer satisfaction and strong image (Ribeiro, 2003; Chow et al., 2007; Noone et al., 2007; Ladhari et al., 2008; Azar, 2009; Hyun, 2010; Susskind, 2010; Black, 2012).

Thus, Yong and Wilkinson (2003) found in relation to a restaurant chain that they studied that key drivers in Quality Management Practices are strong management support, employee and supplier involvement, a culture of continuous improvement and control management. These QM practices contribute to maintaining competitiveness in both internal and external respects.

With regard to the internal dimension, training in service quality and rewarding employees for suggestions made in the framework of continuous improvement schemes have the effect of increasing employee satisfaction (Yong and Wilkinson, 2003). Indeed, a positive atmosphere in which workers derive satisfaction from doing a good job (Azar, 2009) may produce a "virtuous cycle" effect that can encourage them to provide a better service (Walker and Salameh, 1996; Nield and Kozak, 1999; Testa and Sipe, 2006).

In terms of the external dimension, good quality of service was found to have a strong relationship with customer satisfaction with the restaurants (Ribeiro, 2003; Chow et al., 2007; Ladhari et al., 2008; Hyun, 2010), with improved corporate image thanks to positive word-of-mouth, and with confidence in the company (Hyun, 2010; Hyun and Kim, 2011). In accordance with the findings of prior research, the following hypothesis is proposed:

H1b. Quality Management Practices (QMPs) are likely to have a direct positive impact on market success factors in restaurants.

2.2. Impact of environmental management on firm performance

According to Blanco et al. (2009), a reduction in the consumption of resources or in the generation of waste is the first incentive to implement environmental practices in the service sector. Companies usually adopt this type of environmental practice in order to achieve savings in their consumption costs, since they do not require significant investment but may provide an immediate financial benefit (Zeng et al., 2010).

The adoption of environmental practices also has an indirect impact on financial performance. The reason for this is that the company concerned may have achieved savings in its consumption, reduced the cost of its operations and improved its overall operating conditions (Vazquez et al., 2001; Fernandez-Viñé et al., 2010; Bagur et al., in press). Thus, Aragon-Correa et al. (2008), found a positive and direct relationship between the adoption of eco-efficient practices and financial performance in small industrial

firms. In relation to services, some authors (e.g. Alvarez et al., 2001; Molina-Azorín et al., 2009) showed that hotels that were more environmentally proactive achieved a better financial performance. There may well be a direct logical reason for this, given that Trung and Kumar (2005) found that in the Vietnamese hotel industry the highest consumption of water and energy was for guests' rooms and for the kitchens, with the kitchens representing the greatest cause of waste. Therefore, when measures of control are taken and practiced this could have an immediate effect on invoices. Hence, the following hypothesis is proposed:

H2a. Environmental management practices (EMPs) are likely to have a direct positive impact on financial performance in restaurants.

When a company adopts and implements environmental practices, it can improve its image, attract a new category of customer, further satisfy existing customers and thus ensure a better overall position for the company in the market (Hillary, 2004; Molina-Azorín et al., 2009; Alonso-Almeida and Rodriguez-Anton, 2011; Bagur et al., in press). Moreover, the company's employees may experience greater satisfaction, in that its environmental commitment opens up a new channel of communication between staff and management that may well enhance staff morale and the general working atmosphere in the company (Kassinis and Soteriou, 2003; Cote et al., 2006). Employees' commitment to environmental concerns may subsequently become increasingly identified with the company's objectives (Enz and Siquaw, 1999; Kassinis and Soteriou, 2003). In accordance with prior research, the following hypothesis is thus proposed:

H2b. Environmental management practices (EMPs) are likely to have a direct positive impact on market success factors in restaurants.

2.3. Strategies on the adoption of management practices and impact on firm performance

As mentioned above, QMPs and EMPs help companies to be more competitive, which is why prior research found that companies of all sizes adopted first QMPs and then EMPs (Karapetrovic and Willborn, 1998; Zeng et al., 2007; Karapetrovic and Casadesus, 2009; Rodriguez-Antón et al., 2012). In small companies the adoption strategy is the same (Douglas and Glen, 2000). The adoption of both QMPs and EMPs has been a growing concern in the tourism industry in recent years (Casadesus et al., 2010; Rodriguez-Antón et al., 2012). Moreover, Rodriguez-Anton et al. (2012) suggested that these practices add value to the business. Pereira-Moliner et al. (2012) reinforced this idea. These authors suggested that QMPs could provide an improvement in efficiency and effectiveness in the adoption of other organizational practices such as EMPs, because QMPs avoid duplications, reduce waste, simplify procedures, minimize unnecessary activities and improve communication and employee learning (Rodriguez-Antón and Alonso-Almeida, 2011).

This reasoning is in line with previous research into integrated management systems (Karapetrovic and Willborn, 1998; Douglas and Glen, 2000; Zutshi and Sohal, 2005; Zeng et al., 2007; Salomone, 2008; Karapetrovic and Casadesus, 2009), which confirmed that an optimization of resources is thus produced. Thus, QMPs could lead to the adoption of EMPs with less effort and fewer resources due to the competences achieved through the QMPs already developed (Pereira-Moliner et al., 2012).

Therefore this hypothesis is proposed:

H3. Adoption of QMPs impacts positively on the adoption of EMPs in restaurants.

Today companies have to face a range of complex situations including stiff competition, a hostile economic environment, a decline in demand, financial downturns and changes in consumers' behavior (O'Connor and Frew, 2002; Kim et al., 2007; Briggs et al., 2007). So many challenges create a need for companies to develop distinctive features in order to maintain their position in the market (Russo and Fouts, 1997).

Market success entails internal and external factors (Parsa et al., 2005). In the case of restaurants the main drivers are human capital (Yong and Wilkinson, 2003), customer satisfaction (Cohen, 1997; Susskind et al., 2007; Susskind, 2010; Black, 2012) and a strong company image (Susskind, 2002; Noone et al., 2007; Hyun and Kim, 2011).

From an internal viewpoint, human resources are a major key to ensuring customer satisfaction, given that employees are crucial to delivering a high quality service. When customers perceive efforts to provide a quality service, this affects both their level of satisfaction and their purchase intentions (Yong and Wilkinson, 2003; Alonso-Almeida et al., 2012). Therefore, employees impact directly on their company's financial performance.

From an external viewpoint, two factors are relevant. First, customer satisfaction is crucial to producing repurchase intentions, positive word-of-mouth and customer loyalty, and thus an improved financial performance (Susskind et al., 2007: Alonso-Almeida, 2012). The second factor is company image. Consumers usually have confidence in companies with a strong market image (i.e. strong brand references), even when they have never had direct contact with the company. Consumers are therefore more willing to purchase from this kind of company. In this way, both drivers have a direct impact on financial performance.

Thus, the following hypothesis is proposed:

H4. Market success factors impacts positively on financial performance in restaurants.

In Fig. 1 below we present a proposed model based on the hypotheses postulated above.

3. Methodology

3.1. Population and sample

The data used in the empirical section of the paper were obtained from a survey conducted in November and December 2010, in the region of Madrid, Spain, through personal interviews with the managers of 374 establishments in the food and beverage services subsector (division 56, NACE Rev.2). Eurostat (2012) defines the food and beverage services subsector as those firms that "provide complete meals or drinks fit for immediate consumption, regardless of the type of facility providing the service."

The main reason for restricting the survey to this subsector is because, according to Eurostat (2012), the food and beverages subsector accounted in 2011 for 85.4% of all enterprises in the

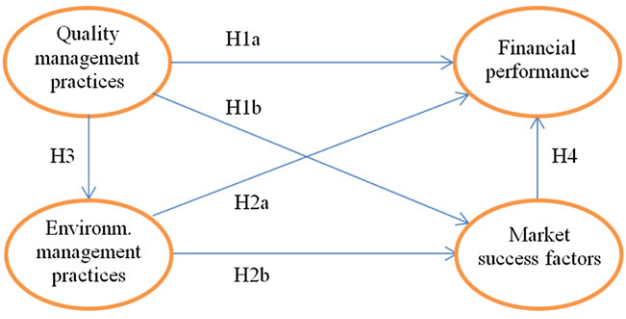

Fig. 1. Final model with hypothesis.

EU-27's accommodation and food services sector, and for 76.1% of the persons employed and 65.6% of the value added within it.

These figures take on particular importance in the Spanish context because, in terms of value added, Spain is the joint leader in the EU (together with Austria) in terms of specialization in these activities. Specifically, in Spain the food and beverage services subsector employed 969,196 persons in 261,320 firms in 2009, representing approximately 6% of the GDP in Spain (Spanish National Statistics Institute, 2012).

The questionnaire was divided into three main sections: quality, environment and society. Moreover, there was a supplementary section asking for information about the company's profile.

The sample is balanced between café-bars and restaurants. By typology, most of the firms were independent firms and, in terms of company history, more than half of the firms had been established for less than 10 years. See Table 1.

3.2. Measures

Based on the above review of the literature and in the light of the hypotheses addressed, four constructs were explored in this study.

The first construct was *Quality Management Practices* (*QMPs*). The variables explored to measure quality management adoption were 'management commitment', 'customer collaboration', 'provider collaboration', 'delivery service', 'objectives monitor' and 'quality culture'. The second factor, *Environmental Management Practices* (*EMPs*), was also measured in terms of six dimensions: 'environmental training', 'environmental initiatives', 'environmental marketing', 'environmental activities', 'long-term environmental strategic focus' and 'environmental savings and costs'.

Finally, in order to measure the impact on firms' performance of the implementation of the above-mentioned practices, the present paper uses a valid and reliable scale developed by Camisón (1999) and used lately by other authors such as Pereira-Moliner et al. (2012). We adapted this scale and divided it into two dimensions: *Market Success Factors* (*MSF*) and *Financial Performance* (*FP*). *MSF* were measured in terms of '*corporate image*', '*customer satisfaction*' and '*employee satisfaction*', while *FP* included measures of 'profits', 'activity' and 'occupation'. The definitions of the variables used to measure the four constructs, the variable codes and the references on which they were based are detailed in Appendix A.

For measuring the dimensions of Quality and Environmental Management Practices and Market Success Factors, respondents were required to choose a value from a 7-point Likert scale (1 meaning "totally disagree" and 7 meaning "totally agree"). On the other hand, the variables used for measuring Financial Performance were five percentage intervals, following the scale proposed by Camisón (1999).

Table 1
Descriptive statistics of the sample.

Classification	Number	%
Casual Restaurant	198	52.94
Restaurant	176	47.06
Total	374	100.00
Typology		
Independent firm	261	69.79
Chain	107	28.61
n/a	6	1.60
Total	374	100.00
Age of firm		
0–5	139	37.17
6–10	79	21.12
>10	139	37.17
n/a	17	4.55
Total	374	100.00

4. Results

4.1. Exploratory and confirmatory factor analysis

To validate the proposed model, a strictly-controlled process was followed in two stages: firstly, an exploratory factor analysis of the four constructs and, secondly, a confirmatory factor analysis. In both stages the proposed model was assessed on the basis of statistical criteria.

The exploratory factor analysis (EFA) was performed for each factor to identify the latent dimensions deriving from the data used in the study. The scales were analyzed in accordance with the recommendations made by Hair et al. (1998) and Ladhari (2010). In all cases the items (i) load at more than .5 on a factor, (ii) do not load at more than .50 in two factors, and (iii) have an item to total correlation of more than .40. According to Table 2 the loads of the variables in the four factors are over .7.

In addition, in order to confirm the existence of linear dependence between the variables, the correlation matrix was subjected to the Bartlett's test of sphericity. Moreover, the Kaiser-Meyer-Olkin (KMO) index also confirmed that factor analysis was likely to generate satisfactory results (Visauta, 1998).

Next, the average variance extracted (AVE) for each factor was compared to the correlation with the other factors. It was thus possible to analyze the existence of discriminant validity (Chin, 1998). Table 3 shows that for the indicators used in the present study, on average, each construct was more closely related to its own dimensions than to the dimensions of other constructs.

Finally, the confirmatory Factor Analysis (CFA) was applied to the model to verify the factor structures that emerged from the EFA. The reliability of the resulting factors was assessed using Cronbach's alpha. All the constructs had an alpha value of over .6, which exceeded Malhotra's (2004) and Nunnaly's (1978) minimum internal consistency criterion. Moreover, internal consistency was tested with the composite reliability indicator. In all cases the results confirmed the adequacy of the constructs because all items exceeded the minimum criterion of .6 for composed reliability coefficient.

Next, within the CFA, structural equation modeling (SEM) was performed using the maximum likelihood method and EQS software to test the model.

In accordance with Table 4, an overall conclusion about the fit of the model can be obtained by considering these indices simultaneously, as recommended by Schermelleh-Engel et al. (2003), and by obtaining at least three fit statistics indicating an acceptable fit.

In the case of the Chi-square test divided by degrees of freedom, the values are smaller than 3, as Carmines (1981) proposes. Related to the model goodness-of-fit index (GFI) and the adjusted goodness-of-fit (AGFI), both values are greater than .8, which indicates an acceptable model fit (Byrne, 1994; Hu and Bentler, 1999). Moreover, the Root Mean Square Error of Approximation (RMSEA) has a value of .06 or less, which indicates a good fit model, as Hu and Bentler (1999) also indicate. Finally, the comparative fit index (CFI) value is, in all cases, higher than .90, also indicating a better model fit (Hu and Bentler, 1999).

Therefore, because more than three statistics in the model are over the recommended values, we can affirm that these measures of overall fitness reflect the explanatory power of the proposed model.

4.2. Final model

The standardized solution of the causal model is presented in Fig. 2. The initial dimensionality proposal was confirmed after a second-order confirmatory analysis with EQS 6.1 software (Byrne, 1994).

Table 2
Measurement model (reliability and validity of scales)

Construct	Variable code	Exploratory factor analysis		Confirmatory factory analysis
		Standard loadings*	Bartlett's test of sphericity Kaiser-Meyer-Olkin index	Composite reliability tests
Quality management practices (QMP)	QMP1	.754	χ^2 (sig.): 1020.769 (.000)	α^a: .878
	QMP2	.777	gl: 15	Range α^b: .848–.866
	QMP3	.738	KMO: .884	Range correlations[c]: .630–.743
	QMP4	.835	% variance: 62.456	AVE[d]: .625
	QMP5	.813		Composite reliability: .909
	QMP6	.820		
Environmental management practices (EMP)	EMP1	.698	χ^2(sig.): 1090.041 (.000)	α^a: .866
	EMP2	.834	gl: 15	Range α^b: .836–.883
	EMP3	.825	KMO: .874	Range correlations[c]: .344–.717
	EMP4	.837	% variance: 63.931	AVE[d]: .639
	EMP5	.803		Composite reliability: .913
	EMP6	.789		
Market success factors (MSF)	MSF1	.854	χ^2(sig.): 485.915 (.000)	α^a: .852
	MSF2	.896	gl: 3	Range α^b: .765–.834
	MSF3	.887	KMO: .724	Range correlations[c]: .683–.754
			% variance: 77.938	AVE[d]: .773
				Composite reliability: .911
Financial performance (FP)	FP1	.888	χ^2(sig.): 341.591 (.000)	α^a: .791
	FP2	.886	gl: 3	Range α^b: .654–.844
	FP3	.760	KMO: .665	Range correlations[c]: .531–.700
			% variance: 71.797	AVE[d]: .717
				Composite reliability: .883

* *all significant at p-value <.01*
[a] Cronbach's alpha
[b] Range for Cronbach's alpha removing one item
[c] Range for correlations of the items and the sum of the subscale
[d] Average variance extracted

Once the model had been assessed and validated, the analysis was extended to examine the mediator effect of EMP between QMP and firms' performance, in terms of both Financial Performance and Market Success Factors.

4.3. Mediation effect of EMP

The mediation effect was measured using the methodology proposed by Baron and Kenny (1986) and later by other authors in different settings (e.g. Bontis et al., 2007; Petnji et al., 2011; or, more recently, Kong et al., 2012).

Three control variables were included in the model: classification, typology and age, which were described in Table 1. Classification is a dichotomous variable (0 = casual restaurant; 1 = restaurant), typology is another dichotomous variable (0 = independent firm; 1 = subsidiary firm) and age is a continuous variable.

Baron and Kenny's (1986) methodology proposes three regression models:

1. Regressing the mediator on the independent variable
2. Regressing the dependent variable on the independent variable
3. Regressing the dependent variable on both the independent variable and the mediator

Next, two sets of regression analysis were performed (Tables 5a and b) following Baron and Kenny's (1986) methodology to test the mediation effect of EMP between QMP and firms' performance.

In the first set of regression analysis (Table 5a), we studied the mediation role of EMP between QMP and FP. Therefore, we considered QMP to be the independent variable, FP the dependent variable, and EMP the mediator variable.

Table 5a shows that (i) regression 1a confirms that the independent variable affects the mediator, (ii) regression 2a confirms that the independent variable does not affect the dependent variable, and (iii) regression 3a confirms that the mediation variable effects on the dependent variable and the independent variable become insignificant when the mediation variable is introduced in the model. However, the conclusions raised from these results may need to be taken with caution due to the low adjusted R^2 value.

In the second set of regression analysis (Table 5b), we study the mediation role of EMP between QMP and firms' performance, but now in terms of Market Success Factors.

Table 5b shows that (i) regression 1 confirms that the independent variable affects the mediator as it was presented in Table 5a, (ii) regression 2 confirms that the independent variable also affects the dependent variable, and (iii) regression 3 shows that the independent variable remains significant, although its

Table 3
Correlation matrix and discriminant validity.

	AVE	QMP	EMP	MSF	FP
Quality management practices	.625	*.790*[a]			
Environmental management practices	.639	.253**	*.799*[a]		
Market success factors	.773	.397**	.156**	*.879*[a]	
Financial performance	.717	-.063	.167**	.178**	*.847*[a]

**significant correlation al *p*-value<.01.
[a] italics represents square root of AVE.

Table 4
Indexes tested for the models fit.

Assessment item	Values
χ^2 (chi-square)[a]	210.880
χ^2/df (normed chi-square)	1.634
GFI (goodness of fit index)	.914
AGFI (adjusted goodness of fit index)	.886
BB-NN (Bentler-Bonett non-normed fit index)	.947
CFI (comparative fit index	.955
RMSEA (root mean square error of approx.)	.047

[a] Satorra-Bentler scaled Chi-Square.

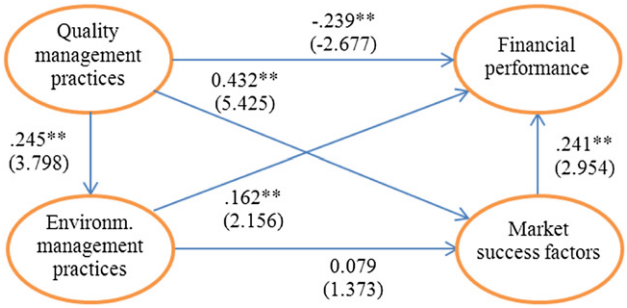

Fig. 2. Structural model.

influence on the dependent variable decreases, and the mediator does not affect the dependent variable. In this second set of regression analysis the models adjust much more than the models presented in Table 5a.

5. Discussion of the results

The results of the statistical analysis validate most of the model proposed in the previous sections. As stated below, hypotheses are contrasted one by one and findings are explained.

As demonstrated by the previous research, the quality of service, customer satisfaction and external image are the most important success factors in restaurants. In this sense, the model confirms a high relationship between these variables and QMPs. It seems clear that customer relationships should be a priority not only for large businesses but also for small ones, whose limited resources make the QMPs a great tool to differentiate themselves from their competitors in the market (Russo and Fouts, 1997; Parsa et al., 2005). Small businesses operating in limited markets with high degrees of competition, as is the case in the sector being studied, may be forced to devise strategies of differentiation which can fit the QMPs. Employees are directly involved in the implementation of QMPs, and for this reason it is essential that they should be committed and motivated to operating internal processes, so that the customer can perceive and value highly the service received, resulting in a positive buzz of the kind that can be considered as the world's cheapest marketing tool (Yong and Wilkinson, 2003). In hospitality, previous authors shown that QMPs have a positive effect on market success and stakeholders satisfaction factors (Alonso-Almeida et al., 2012; Pereira-Moliner et al., 2012). In this regard, Hypothesis H1b is confirmed.

However, as previous authors have highlighted (e.g. Chan, 2011), this then provides proof that there is not always a direct effect between the implementation of quality practices and financial performance. It is clear that the introduction of QMPs into a company impacts positively on its image and other key factors for its survival, although there are significant barriers that often make their implementation expensive. The costs of staff training, and the preparation of the organization to make it capable when implementing quality methodologies, make the profitability of QMPs certainly doubtful in many cases. This fact is confirmed in this present study. Contrary to the study of hospitality conducted by Pereira-Moliner et al. (2012) in which a positive relation was found between QMPs and EMPs, in the analyzed sample, the negative impact of the implementation of QMPs (high costs) is greater than the positive impact represented by the direct increase in income. For this reason, Hypothesis H1a is rejected.

In reference to Environmental Management Practices (EMPs), H2a is confirmed and H2b is rejected. EMPs have direct and positive impact on FP (financial performance) but not on Market Success Factors (MSF). These results are similar in Pereira-Moliner et al. (2012). These authors found that EMPs have a positive effect on financial performance but not on stakeholder satisfaction in hotels. Our findings partially corroborate previous research. On the one hand the adoption of EMPs, even though they were considered "basic" (Alvarez-Gil et al., 2001; Molina-Azorín et al., 2009; Bagur et al., in press), impacts directly and immediately on operational costs. Bagur et al. (in press) pointed to a number of benefits for small service companies. First, EMPs constitute an efficient method of cost reduction, since the company reduces its costs with no impact on sales. The customer does not perceive this cost reduction as a loss of value in terms of the service received. Second, it is a form of cost reduction that reduces the company's fixed costs. This type of reduction not only improves its economic performance but also improves its ability to remain viable in the market during times of crisis. A reduction of fixed costs could result in companies becoming more flexible and less volatile, since they need to sell less to cover their costs. Finally, this finding highlights the importance of environmental policy adoption as a global strategy in addition to marketing that will enable companies to achieve a competitive advantage based on customer focus independently of company size.

On the other hand, unlike previous research (Alvarez-Gil, 2001; Aragon-Correa et al., 2008; Molina-Azorín et al., 2009) this study has not found any direct impacts between EMPs and MSF. One possible explanation could be that, unlike QMPs, which improve the company image, the implementation of EMPs cannot influence the competitiveness of the company by improving its "green image" and enabling it to attract a new category of customers for the restaurant, when most of the practices adopted are internal and, therefore, the costumers could not be aware of their use. In the case of the relationship between QMPs and EMPs, as demonstrated in previous research (Zutshi and Sohal, 2005; Zeng et al., 2007; Salomone, 2008; Karapetrovic and Casadesus, 2009; Rodriguez-Anton et al., 2012; Pereira-Moliner et al., 2012) and corroborated by this study, it seems clear that the adoption of QMPs facilitates

Table 5
a: Regression analysis of QMP and EMP on FP. b: Regression analysis of QMP and EMP on MSF.

	Regression 1a	Regression 2a	Regression 3a
	QMP → EMP	QMP → FP	QMP & EMP → FP
	Beta	Beta	Beta
Control variables			
Classification[a]	.329	−.072	−.107
Typology[a]	−.208**	−.086	−.109
Age	0.008[c]	.010**	0.008[c]
Independent variables			
QMP	.224**	−.059	−.098
EMP	–	–	.145**
Adjusted R^2	.107	.025	.047
	Regression 1b	Regression 2b	Regression 3b
	QMP → EMP	QMP → MSF	QMP & EMP → MSF
	Beta	Beta	Beta
Control variables			
Classification[a]	.329	−.137	−.074
Typology[a]	−.208**	.024	.048
Age	.008*	.001	.003
Independent variables			
QMP	.224**	.412**	.398**
EMP	–	–	.072
Adjusted R^2	.107	.180	.185

**Significant at $p < 0.05$.
*Significant at $p < 0.1$.
[a] value = 0.

the implementation of EMPs. Moreover, this finding also points to the sequence of the implementation process, based first on QMPs and second on EMPs. Service companies prefer to focus on adding value activities for customers with high visibility, and only later optimizing internal operations. Another explanation could be some of the entry barriers to the adoption of either of these management practices. Thus the adoption of EMPs could be made difficult by a lack of training and the cost of implementation. In this sense, the experience of already having established QMPs provides a valuable learning process for the organization facilitating the adoption of EMPs, thus creating synergies between both practices. For this reason Hypothesis H3 is confirmed.

The relationship between MSF and FP is very clearly confirmed. The key factors described as being necessary for organizations to be able to ensure their survival in the long term (i.e. through improving their competitiveness) have a direct and positive impact on FP, as was described in hypotheses H4. The factors mentioned are either internal (operational cost reduction and efficiency improvement) or external (external image enhancement, improved positioning). While it has not shown a direct relationship between QMPs and FP, this study demonstrates that the implementation through mediating factors of quality management techniques is financially positive for the organization.

Finally, the "image enhancement" and "internal process improvement" effects which occur in any organization when the culture of quality is introduced are subjects which have come to be studied in depth. There is virtual unanimity, then, that QMPs improve competitiveness and the ability of a company to survive in times of crisis, as many studies have indicated. However, the issue of whether the improvement of competitiveness and image actually improves the financial performance of the company generates less consensus.

In this regard, this study confirms that improvements in competitiveness which involve the implantation of QMPs have a real impact on the finances of companies, and also facilitate the implementation of EMPs, which also have a direct impact on results. This impact is achieved through positioning the organization externally – in terms of image and customer satisfaction – or by internally improving the competitiveness of the company – in terms of process improvement, human resources and reduced operating costs.

6. Conclusions

Hitherto, business practices related to quality and the environment have already been identified as two key drivers for achieving market success and financial performance in service firms. However, previous studies focused on service companies in general, with the exception of hospitality, and hence, little research has been undertaken in relation to small companies. Therefore, the conclusions drawn from the study of the restaurant industry, where there is predominance of small and micro-enterprises, may be especially relevant both for academics and for practitioners.

With regard to the academic aspect, three conclusions can be drawn from this study. First, it can be stated that Quality Management Practices have a significant direct impact on Market Success Factors. Therefore, developing a culture based on the involvement of managers, working with the client and suppliers to improve the product, identifying improvements in the service delivery process, monitoring compliance with objectives and where appropriate, the correction of any deviation from them, and the implementation of a culture of continuous improvement has a significant direct impact on the corporate image of the business, and on customer satisfaction and employee satisfaction. It is particularly crucial to achieve employee involvement and commitment as a result of a high degree of contact between customers and employees (Yong and Wilkinson, 2003; Rodriguez-Anton and Alonso-Almeida, 2011). In contrast, the study did not show that there is a significant direct relationship between QMPs and FP. Second, following the above argument, the study shows that there is a significant relationship between EMPs and FP but not between EMPs and MSF. Therefore, restaurants that implement an active environmental policy in the form of initiatives such as establishing a long-term environmental strategy and quantifying the savings and costs of their environmental policies, subsequently experience a direct improvement in their operating profits in terms of financial performance. To optimize this strategy externally the small service company may thus adopt an environmentally responsible posture that helps to create a positive public image and turn it into an example for other companies in the sector (Enz and Siquaw, 1999; Hillary, 2004; Fernandez-Viñé et al., 2010).

Third, the study shows that although it is only environmental practices that have a direct effect on profits, economic activity and occupation, any quality practices that a restaurant implements may actually have an indirect effect on these variables. In this regard, it is shown from the results that, although it was only EMPs that had a direct significant effect on FP, EMPs were significantly influenced by QMPs. Thus, according to these findings, it can be concluded that QMPs are still important for achieving FP, but that this importance is exercised in an indirect way, mediated by the implementation of EMPs. Restaurants could achieve the best performance by jointly adopting QMPs and EMPs in a proactive manner.

Three conclusions can be drawn from the study that may be of direct interest to professional practitioners working in the sector. First, it can be concluded that the significant positive relationship between QMPs and MSF should lead restaurant managers to consider implementing quality policies. If these businesses could manage to train their employees to apply quality practices at an organizational level, they would experience an improvement in their operational processes leading to customer satisfaction with the product they offer in their establishment. However, such practices, in the case of restaurants, do not have a direct positive effect on operational profits in this type of micro-company. The limited degree of mutual influence between these two variables is explained by the fact that implementing quality policies can be expensive, especially in micro-enterprises with very limited resources. An increase in costs due to staff training or the introduction of a continuous improvement policy in the organization could thus have a negative effect on the business's profitability.

Second, the fact that the study shows a direct relationship between EMPs and FP should raise awareness among restaurant managers of the importance of implementing an environmental policy in their businesses in order to improve their profits. In any case, since the environmental practices are likely to be implemented as an internal process, they are less visible to external customers. Their impact on the MSF is less significant than their impact on competitiveness due to the implementation of quality practices.

Third, the direct mutual inter-effects operating between QMPs and EMPs should lead restaurant managers to focus on the implementation of such practices in order to take full advantage of their benefits. The study shows that environmental practices in restaurants are influenced by the implementation of quality practices, and that environmental practices have a direct influence on profitability. Additionally, the relationship with MSF shows the restaurant's potential, and its financial results will be improved by the indirect relation referred to above, since it is clear that, ultimately, the balance sheet will be positively influenced by factors such as customer satisfaction and enhanced brand image.

This study opens the door to other issues to consider in future research, such as, for example, whether these results are valid in other sectors, other small businesses or other regions; and the

practical viability of developing corporate social responsibility practices within the variables that have been studied during the research.

Finally, this study is subject to certain limitations, one of which is related to most surveys of this type: the field work was performed in a specific geographical region, and the study results may be difficult to extrapolate to other countries. Additionally, as only restaurants have been surveyed, the conclusions may be difficult to apply in other sectors. Nevertheless, as the survey can justifiably be considered as being representative of the region analyzed, this may be indicative of the status of this sub-industry in the whole of Spain.

Appendix A

Variable code	Definition
Quality Management Practices – QMP: e.g. Saraph et al. (1989); Flynn et al. (1994); Conca et al. (2004); Naor et al. (2008); Molina-Azorín et al. (2009); Sadikoglu and Zehir (2010).	
QMP1	The management is committed to product and service quality
QMP2	The firm collaborates with customers for the improvement of the product/service
QMP3	The firm collaborates with providers for the improvement of the product/service
QMP4	Improvements in service delivery process are identified
QMP5	Compliance with the objectives is monitored and deviations are corrected
QMP6	There is a quality culture based on continuous improvement
Environmental Management Practices – EMP: Alvarez et al. (2001); Carmona-Moreno et al. (2004); Coté et al. (2006); Molina-Azorin et al. (2009); Bagur et al. (in press)	
EMP1	The firm provides training to employees about environmental issues
EMP2	Employees with environmental initiatives are compensated
EMP3	The firm uses ecological arguments in the marketing campaigns
EMP4	The firm organizes environmental activities
EMP5	The firms has a long-term environmental strategic focus
EMP6	The firm quantifies environmental savings and costs
Market Success Factors – MSF: Camisón 1999; Enz and Siquaw (1999); Kassinis and Soteriou (2003); Hillary (2004); Molina-Azorín et al. (2009)	
MSF1	Company's image has been improved
MSF2	Customer satisfaction level has increased
MSF3	Employee satisfaction level has increased
Financial Performance: Das et al. (2000); Douglas and Judge (2001); Arawati (2005); Kassinis and Soteriou (2003); Molina-Azorín et al. (2009); Zeng et al. (2010); Rodriguez-Anton et al. (2011); Rubio-Andrada et al. (2011); Bagur et al. (in press).	
PER1	Profits have increased over the last two years
PER2	Market share has increased in the last two years
PER3	Occupation rate has increased in the last two years

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