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Does intensive social network management lead to positive effects in quality practices?

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Does intensive social network management lead to positive effects in quality practices?

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There are many studies that have analysed the effects of quality use on financial improvement. Nevertheless, the bibliography examining the incidence of the combined use of intensive social network strategies and practices of quality management in business is limited. This gap is even more evident when we focus on the service sector and, specifically, on the subsectors in which small, highly competitive, often changing, and high-failure-rate businesses predominate. By analysing 211 surveys administered to travel agency managers in Spain and using structural equation modelling, it is concluded that quality management practices have a direct and significant impact on business performance and on the financial performance of these organisations, in accordance with the existing literature. Nevertheless, significant differences are observed when the sample is segmented by businesses that use social networks intensively and those that do not. This article suggests that betting on strategies of intense social network use enhances the positive results of quality management policies and may lead small service companies to obtain the competitive advantage that means the difference between failure and survival in sectors with high rates of competition that evolve very rapidly.

Keywords: quality management; social media; firm performance; small service companies; travel agencies

1. Introduction

Innovation and quality policies have become key factors for gaining competitive advantages in the service sector, especially when the economic environment in which the business operates is increasingly dynamic, complex, and unpredictable, as is the case with travel agencies (Bagur-Femenías, Perramon, & Amat, 2015). In this sense, both the economic crisis and the consolidation in Internet sales have forced these small businesses (which predominate in this sector) either to evolve with their environment or to disappear (Casielles, del Río Lanza, & Álvarez, 2009). In a few short years, there has been a shift from a model of local business, based on client trust, to a model of global business, where the client has a great deal of information available for comparison and where quality pricing is the key variable in the final purchasing decision. Organisations need to better know the needs of their current and potential clients and to remain in continual contact with their environment to detect opportunities, innovate, and gain competitive advantages (Wamba & Carter, 2013). These areas are precisely where the role of social networks should be developed. Today, social networks have a high impact and influence not only on individuals or groups but also on businesses.

If the concept of social networks as an engine for generating innovation, competitiveness, and performance in service-sector businesses has been previously studied and

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contrasted, then the increasing popularity of the use of social media and its extremely rapid evolution has made room not only for benefitting those businesses that have learned to manage social media but also for significant concerns for their managers due to the velocity with which these organisations must react to changes in the competitive environment and the narrow margin of error involved in adapting to this new dynamism (Kong & Lien, 2014). In this sense, one may assert that quality management practices (QMPs) and the management of social networks share common objectives: to bring supply and demand together, to detect business opportunities, and to facilitate the adaptation of organisations to changes in their environment.

Despite what has been claimed to date, Miller (2014) has demonstrated the lack of studies that analyse the impact of social networks on businesses, including not only websites and blogs but also a more complex set of tools, including many forms of interacting with clients and with the environment (such as Twitter, Facebook, YouTube, networking or bookmarking platforms, and mobile apps).

The rapid evolution of social networks has meant that being current is somewhat complicated, and sometimes costly (Despotovic & Aberer, 2006), due to its high level of diversity. This factor worsens when one analyses small businesses with limited available resources, as travel agencies tend to be. This is precisely where this article will focus its attention and where it will offer its small contribution to the current literature.

This study attempts to shed light on whether it is profitable for subject matter experts (SMEs), despite their limited available resources, to invest in intensive social network management strategies; this study also attempts to analyse whether these strategies improve and enhance the positive effects of QMPs in organisations.

This study makes different contributions to the research in the field. First, it demonstrates the quality principles adopted by travel agencies and their effects on the competitiveness and financial improvement of the businesses. Second, it analyses the difference in results between businesses that adopt both intensive social network management strategies and QMPs and those that opt for more conservative policies in managing social networks. Third, it focuses on a sector dominated by small businesses, understood here as those with fewer than 50 workers (EUROSTAT, 2008). Fourth, because the study is focused on the tourism industry, a highly competitive sector, analysing the management practices of these businesses can shed light on whether investing in quality and in social networks is a good strategy for achieving differentiation and surviving in complex sectors.

The rest of the article is structured as follows. Section 2 makes theoretical arguments about the adoption of QMPs and social media and their relationship with business performance. Section 3 describes the methodology followed in the empirical study. Section 4 presents the quantitative analysis. This article concludes with section 5, which analyses the results obtained and draws conclusions derived from the study, offering proposals for both researchers and professionals.

2.   Literature review

2.1.   *Adopting QMPs, internal improvements, and financial performance*

The increases in competition and globalisation have led to the adoption of quality practices as a key requirement for the survival of service-sector businesses (Singh, Garg, & Deshmukh, 2008). In this sense, there is a great deal of literature that rigorously studies the positive effects of quality, demonstrating that the implementation of QMPs offers considerable benefits to a service business at both the internal and external levels (Yang, 2006; Lee, To, & Yu, 2009; del Alonso-Almeida, Bagur-Femenías, & Llach, 2015).

With respect to the internal level, there are many factors recommending the use of quality practices that affect company finances. Basically, the internal controls that activate QMPs are based on the improvement of internal processes and of workers, including those variable levers such as the improvement of efficiency, service, or operations quality (Tarí, Heras-Saizarbitoria, & Dick, 2014). In this sense, most of the prior empirical literature finds that quality has positive effects on businesses' internal processes (Flynn, Schroeder, & Sakakibara, 1994; Kaynak, 2003; del Alonso-Almeida et al., 2015), on efficiency (Viada-Stenger, Balbastre-Benavent, & Redondo-Cano, 2010; del Alonso-Almeida et al., 2015), on decision-making processes, on reducing errors (Beheshti & Lollar, 2003), and on improving worker performance (del Alonso-Almeida et al., 2015).

It is also worth noting that the effect of QMPs on a company's financial variables has two causes. First, quality improves the execution of certain internal processes that lead to costs for the organisation. In improving efficiency in these processes, there is a significant reduction in costs. Second, quality helps detect processes that generate costs but that do not create value added for the company. The elimination of these tasks creates a second route for reducing costs (Terlaak & King, 2006; Rodriguez-Antón, Alonso-Almeida, & Rubio-Andrada, 2011; Rubio-Andrada, Alonso-Almeida, & Rodriguez-Antón, 2011; Alonso-Almeida, Rodríguez-Antón, & Rubio-Andrada, 2012; Duran, Bikfalvi, & Llach, 2014).

Despite what has been argued to date, there is one study that does not arrive at conclusive results regarding the effects of implementing QMPs in organisations. That study argues that the reduction in costs from QMPs is cancelled out by not only the investment necessary for implementation but also the costs arising from follow-up and quality control (Nair, 2006).

Based on the literature analysed and the conclusions of a majority of these studies, the following hypotheses are proposed:

H1: The adoption of QMPs is likely to have a direct positive impact on Internal Performance (IP).
H2: QMPs have a positive impact on Financial Performance (FP) mediated by IP.

2.2. *Adoption of QMPs and external improvements in the organisation*

There are few studies that use internal improvement as the primary motivation for organisations to adopt quality strategies (e.g. Casadesús, Marimon, & Alonso, 2010). According to the majority of the literature, external improvements to the company resulting from QMP implementation constitute the primary motivation for performing such implementation (Tarí et al., 2014). In this sense, the primary external levers activated by quality are improved company image and improved client satisfaction. According to the literature reviewed, such external levers include variables that have a positive effect on both the company's competitiveness and its ability to remain in the market (Bagur Femenías et al., 2014). To provide concrete examples, the improvement in client satisfaction in light of the service received (Chen & Kao, 2010) and the ability to attract new clients or improve the business's image (Yee, Yeung, & Cheng, 2008, 2010) are positive quality-related consequences that help a business survive during times of crisis.

Other lines of research focus on the fact that quality may not have an immediate effect on a business's bottom line but does so in the long term. QMP implementation can act as a positive signal for the market when the QMP is considered as a strategic bet on continuity and differentiation, thus creating competitive advantages and barriers to entry for potential consumers (Alonso-Almeida et al., 2012; Bagur-Femenías, Martí, & Rocafort, 2015).

Despite what has been claimed, it is worth noting that there is no clear consensus on quality's different effects on a company's FP through improving external variables. Nevertheless, there are many studies that demonstrate the positive indirect effects of quality on a company's financial results. The principal mediators of these indirect effects are as follows: first, client satisfaction (Das, Handfield, Calantone, & Ghosh, 2000; Kaynak, 2003 or Alonso Almeida, Rodríguez-Antón, et al., 2012; del Alonso-Almeida et al. 2015) and, second, competitiveness. Additional variables include image and the ability to remain in the market (Fotopoulos & Psomas, 2009 or del Alonso Almeida et al., 2015).

Based on what has been explained in this section and following the bibliographic analysis, the following hypotheses are proposed:

H3: The adoption of QMPs is likely to have a direct positive impact on External Performance (EP).
H4: QMPs have a positive impact on FP mediated by EP.

2.3.   *Social networks, QMPs, FP, and social media strategies*

As noted above, social networks and quality practices share common objectives from a business perspective. Sharing information and opinions with clients can be very important for offering good service and can serve as a source of suggestions for businesses that have started a continual improvement system (Harrison & Waite, 2006; Mangold & Faulds, 2009). Additionally, direct and continuous contact with the client can generate an increase in consumer satisfaction, making him or her feel more valued by the company and indirectly leading to an improvement in company image (Busscher & Von Raesfeld-Meijer, 2013). Another aspect that provides the results of quality practices with value and power is the provision of 'online' information about changes in the market that allows managers to make faster and better decisions (Chung, Animesh, Han, & Pinsonneault, 2014).

To date, the literature has been used to analyse the external benefits of social networks to a business. While fewer in number, there are also studies that analyse the internal benefit of the intensive use of social networks. There are a number of internal levers that may be activated using social networks. First, the improvement of processes based on the flow of external information provided by social networks facilitates internal innovation and the subsequent reduction in costs. Second, a better understanding of demand can make it easier to develop tools that facilitate controlling stocks (Urban, 2005). Third, many benefits are related to workers, such as better circulation in the flow of information within the organisation (Constantinides, Alarcón del Amo, & Lorenzo Romero, 2010), the provision of useful information to human resources on the process of selection, capture, and management of talent (Johnson, Scholes, & Whittington, 2008), and a better adaptation of the worker to demand via training in those areas or abilities required by the client (Johnson et al., 2008).

Based on the above discussion and the lack of prior empirical studies, the synergies between quality and social networks appear to be clear. Nevertheless, despite the growing interest awakened by social networks and their increased use by businesses, it remains unclear how their use affects company finances (Chung et al., 2014) and even less clear which results are obtained from the combined uses of quality practices and social networks with respect to business performance. This issue is the precise focus of this article. In this sense, the literature shows not only the advantages of the use of social networks but also certain barriers to the use of social networks, which are common to other obstacles to quality implementation practices in businesses.

The main obstacle detected in the literature is based on the lack of economic and human resources, along with the lack of knowledge or lack of training on new

technologies. This factor is closely connected to the median age of the staff (Buehrer, Senecal, & Bolman Pullins, 2005; Barnes, 2006; Osimo, 2008; Lee & Kim, 2009; Highley, 2010).

In addition, it has to be said that most travel agencies have chosen to contain expenditures in times of crisis. This fact has entailed the use of 1.0 or 2.0 Web and a limited utilisation of social network tools. Following Munar (2010), these kinds of strategies are called in this article conservative strategies because the interaction with stakeholders is limited or not fully exploited. To be more specific, three aspects should be taken into account. First, Web 1.0 is read-only; the user cannot interact with the content of the page (no comments, responses, appointments, etc.) and the interaction is completely limited to what the Webmaster uploads to it. Second, Web 2.0 enables users to interact with other users or to change website content, in contrast to non-interactive websites where users are limited to the passive viewing of information provided to them. In contrast, this interaction is not transformed in useful information to help managers in the decision process. And third, in this kind of strategy, social network is limited to inform clients, not to really interact with them. Following the previous literature review we define as intensive strategy the use of a 3.0 web to take full advantage of social networks. This includes transforming the network into a database which can improve and facilitate a quick adaptation to the environment (Hendler, 2009; Fuchs et al., 2010; Barassi & Treré, 2012).

Given that the majority of studies point to synergies between quality and the use of social networks, the following hypothesis is proposed (Figure 1).

> *H5*: Companies that combine intensive social network strategies and quality policies obtain better results than those that bet on more conservative strategies.

3.   Methodology

3.1.   *Sample and data collection*

The data used for this article were obtained using a survey administered between February and March 2013 among the leaders of 211 Spanish travel agencies with fewer than 50 employees, with the sample covering approximately 5% of the relevant population. The sample was limited to the travel agency sector for a number of reasons that make studying this type of business interesting. First, travel agencies are typically small businesses. Second, the travel agency business is a highly competitive market (Lin, Lee, & Chen, 2009) in which developing new management practices to increase client loyalty or to attract new buyers is critical. Third, it is a sector in which the appearance of the Internet has significantly modified how business is conducted (Buhalis & Law, 2008) in a relatively short period of time.
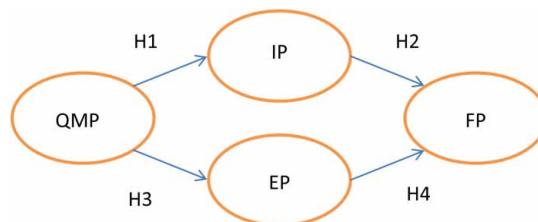

Figure 1. Final model including the hypotheses.

The questionnaire was divided into four main sections: strategy, quality, internal improvements from quality practices, and external improvements based on quality practices. The survey also included a final section asking for descriptive information about the company (including some financial information).

Table 1 shows the profiles of the travel agencies that responded to the survey.

3.2. *Measures*

This article analyses four constructs, based on the literature studied, with the aim of testing the proposed hypotheses.

The first construct was entitled QMPs. The variables used to measure the adoption of quality practices were commitment of senior management, collaboration with the client and provider, service provision, monitoring objectives, and a culture of quality. The second construct, named IP, was measured in terms of three variables: improvement in productivity, reduction in errors and reprocessing, and increase in innovation. The third construct, called EP, was measured in terms of three variables: improved company image, improved client satisfaction, and improvement in the ability of the company to remain in the market.

These first three constructs were evaluated by the surveyed individuals using a seven-point Likert scale, with 1 being 'totally agree' and 7 being 'totally disagree.'

To measure the impact of these practices on business finances, this study uses a performance measurement scale developed by Camisón (1999) and other authors, such as Pereira-Moliner, Claver-Cortés, Molina-Azorín, and Tarí (2012) and Bagur-Femenías, Llach, and Alonso-Almeida (2013). FP includes measures such as increase in benefits, improvement in market share, and increase in sales. The dimensions were evaluated based on five percentage intervals proposed by Camisón (1999).

The variables used to measure the four constructs, their codification, and the bibliographical references used are shown for review in Appendix 1.

In conclusion, the methodology proposed by Munar (2010) was used to segment the sample into two subsamples, which established the existence of different strategies for managing and using social networks. The first strategy was conservative and implied centring interest on the web page and its tools for interacting with the environment, along with

Table 1.   Profile of businesses comprising the sample.

	N	*%*
Classification		
Retail	145	68.72
Wholesale	9	4.27
Retail/wholesale	57	27.01
Total	211	100.00
Business type		
Independent	47	22.27
Subsidiary	164	77.73
Total	211	100.00
Years since founding		
<5 years	91	43.13
>5 years	120	56.87
Total	211	100.00

limiting the use of other tools and intensive strategies used beyond the web, including all or a majority of the possibilities offered by social networks. In this sense, through the questionnaire and, specifically, the strategy section, the managers were questioned regarding the type of social network strategy used by the company.

3.3. *Methodology*

To analyse the proposed model using the full sample, the study is divided into two parts. The first part uses a complete factorial analysis (exploratory and confirmatory) to select the variables that comprise the four constructs that form the model. Using a preliminary factorial analysis of the components and a Varimax rotation, the four dimensions included in the model (QMP, IP, EP, and FP) are specified. To constitute part of one of the dimensions, the different items should have a minimum weight of 0.4. Once the exploratory analysis for the purpose of purging dimensions is complete, a confirmatory factorial analysis is performed. For the model to have consistency, the items selected to constitute the different dimensions should have a minimum weight of 0.7.

The following step in the statistical analysis involves a detailed analysis of the dimensions in regard to their consistency and reliability using Cronbach's Alpha and average variance extracted (AVE). Both statistics confirm the reliability and internal consistency of the dimensions because they meet the requirements noted by Malhotra (2004) regarding Cronbach's Alpha (minimum value of 0.7) and Barclay, Thompson, and Higgins (1995) for AVE (minimum of 0.5). Moreover, the discriminant validity between constructs has been analysed, confirming that the correlations are less than the square roots of the AVE values.

Once the dimension reliability and internal consistency are confirmed, the next step is to test the model with the proposed hypotheses using structural equation modelling. Using EQS software and the robust model, statistical principles are analysed to determine the goodness of fit of the model using the Bentler–Bonett non-normed fit index (BBNNFI), comparative fit index (CFI), and root mean-square error of approximation (RMSEA).

Finally, with the aim of analysing the existence of possible differences between subsamples, a multiple group analysis is performed. This analysis compares the multiple group model with a nested model in which the relationships between all of the dimensions are constrained to be equal across groups. Using the chi-squared distribution *p*-value, calculated from the difference between the chi-square of the two models and the degrees of freedom, we are able to determine whether there are different behaviours according to the subsample.

4.   Results

The analysis of the results derived from the statistical analysis is divided into two clearly differentiated parts. The first part analyses results for the entire sample of travel agencies, and the second part analyses the differences between the two subsamples (travel agencies with conservative social network strategies versus travel agencies with conservative strategies in social networks).

4.1. *Travel agencies (complete sample)*

Table 2 shows the variable differences that comprise the constructs after completing the exploratory and confirmatory factorial analyses, along with the primary statistics that validate the internal consistency and reliability of the dimensions that comprise the model.

Table 2. Factor analysis (primary statistics).

Dimension	Code	Confirmatory factor analysis	Internal consistency and reliability statistics
Quality management practices	QMP1	0.753	Cronbach's Alpha: 0.870
	QMP2	0.818	AVE: 0.647
	QMP3	0.840	
	QMP4	0.810	
	QMP5	0.820	
Internal performance	IP1	0.875	Cronbach's Alpha: 0.856
	IP2	0.914	AVE: 0.762
	IP3	0.847	
External performance	EP1	0.796	Cronbach's Alpha: 0.875
	EP2	0.904	AVE: 0.704
	EP3	0.832	
Financial performance	FP1	0.903	Cronbach's Alpha: 0.904
	FP2	0.906	AVE: 0.687
	FP3	0.845	

As observed in Table 3, each construct is more closely related to its own dimensions than to the dimensions of the other constructs, thus confirming the discriminant validity of the constructs.

Finally, Table 4 shows the primary indices used to validate the goodness of fit of the model. For the four selected indices, the model gives values found within the intervals recommended by the literature (Carmines & Zeller, 1979; MacCallum, Browne, & Sugawara, 1996; Hu & Bentler, 1999), thus validating the reliability and robustness of the information produced by the model. In fact, according to Schermelleh-Engel, Moosbrugger, & Müller (2003), obtaining three statistics within their recommended values demonstrates the model's success.

To conclude this section, and as a review, Figure 2 graphically represents the standardised solution of the causal model. Upon examining it, one may observe that all the hypotheses are validated at a 5% degree of significance.

Based on the data observed, one can conclude that, without segmenting the sample, QMPs have a positive impact on results for travel agencies via an improvement in competitiveness (this result is evident as much in the company's internal factors as in its external factors).

4.2. *Differences between subsamples*

As noted at the beginning of this section, to perform a better analysis and to obtain more consistent results, the sample has been segmented to conduct a multiple group analysis. The goal of this analysis is to detect possible differences in behaviour between travel

Table 3. Discriminant validity.

	QMP	IP	EP	FP
QMP	0.804[a]			
IPD	0.184[b]	0.873[a]		
EPD	0.531[b]	0.180[b]	0.839[a]	
FP	0.201[b]	0.218[b]	0.190[b]	0.829[a]

[a]Square root of AVE in the diagonal.
[b]Correlation is significant at the .01 level (bilateral).

Table 4. Goodness of fit of the model.

Assessment item	Values	Ideal value
χ^{2a}/df (normed chi-squared)	2.235	<3
BB-NNFI (Bentler–Bonett non-normed fit index)	0.931	>0.9
CFI (comparative fit index)	0.943	>0.9
RMSEA (root mean square error of approx.)	0.052	<0.08

[a]Satorra–Bentler scaled chi-squared.

agencies that use intensive social network strategies and those that do not. Table 5 shows the statistics and results from the analysis of the relationship between dimensions. As shown in the table, there are differences in the relationships between QMP and EP and between EP and FP.

To assist in understanding these differences, Table 6 shows the primary statistics and relationships between the dimensions for each subsample.

The results obtained appear to indicate that travel agencies that bet on combining QMPs with intensive social network strategies obtain better results by leveraging the positive external effects derived from quality.

5.   Analysis of results and conclusions

The results obtained validate all of the hypotheses initially proposed and suggest a significant number of conclusions and recommendations for tourism service businesses and, in particular, for travel agencies. Next, the results are broken down hypothesis by hypothesis.

Regarding *H1* and *H2*, this study draws the same conclusion from other results obtained in studies on tourist businesses. As other authors have noted, the implementation of QMPs activates certain internal levers that indirectly improve company FP. Specifically, one could note two primary improvement routes. First, workers improve their performance (del Alonso-Almeida et al., 2015), reducing errors and reprocessing (Beheshti & Lollar, 2003) that would represent significant inefficiency costs reducing financial margins. This cost reduction is very important for travel agencies because they represent a sector that is characterised by a high rate of competition and very tight margins. Minor inefficiencies can mean the difference between benefits and losses. Second, quality practices help detect activities and processes that do not add value but instead actually generate costs for the company. The elimination of these activities (Terlaak & King, 2006; Rodriguez-Antón et al., 2011; Rubio-Andrada et al., 2011; Alonso-Almeida et al., 2012) makes another small contribution to improving the balance of profits and losses.
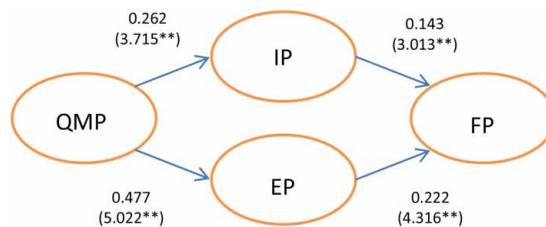

Figure 2. Standardised solution of the causal model.
**p-Value significant at the .05 level.

Table 5.   Invariance test.

	QMP → IP	QMP → EP	IP → FP	EP → IP
$\Delta\chi^2$	2.305	6.017	2.523	5.458
Δdf	1	1	1	1
p-Value	.326	.012	.285	.055

As an initial conclusion, it is clear that, given the particularities of the sector, it is very important to be efficient when applying the few available resources to what is actually necessary. The implementation of QMPs may help meet these objectives.

Although certain prior studies point to the unprofitability of investing in quality (Nair, 2006) because the economic benefits derived from quality are cancelled out by implementation, control, and follow-up costs, this study contradicts those findings. Indeed, it confirms the opposite: quality practices improve financial results. More specifically, QMPs indirectly improve profits when acting as external factors above all else. This finding confirms Tarí et al. (2014) and empirically justifies the perception that the majority of organisations adopt QMPs to activate their external levers. As shown in Figure 2, the most significant impacts of the model are found in the constructs referring to external variables, thus confirming *H3* and *H4*. QMPs have a positive impact on company image (del Alonso-Almeida et al., 2015) and client satisfaction (Chen & Kao, 2010). This fact demonstrates the importance of incorporating quality policies into a company's overall strategy. The impact of travel agencies' QMP implementation on clients and company image allows those agencies to obtain a competitive advantage and to better position themselves in comparison to the competition when confronting adverse conditions. This competitive advantage provides better financial results and better positioning for the company to survive times of crisis. This fact is highly relevant to this study, given the impossibility of forgetting that the travel agency sector has suffered more than almost any other sector in Spain, with 12.53% of businesses in the sector disappearing in a continuous trend during 2012 and 2013 (Bagur-Femenías et al., 2015).

All of the above notwithstanding, perhaps this article's best contribution to the literature involves confirming *H5*, thus demonstrating that travel agencies with intensive social network strategies with quality practices implemented obtained significantly better results than those using more conservative strategies. One can find studies in the literature that corroborate the positive effect on profits from the separate use of social networks (Chung et al., 2014) or the implementation of QMPs, but the authors have been unable to locate articles that join both variables together. It is easy to locate articles in the current literature that justify implementing QMPs based on financial improvement; nevertheless, we have found no studies that analyse the impact of quality on FP after segmenting the sample based on the social network strategies used. This study concludes that travel agencies that invest both human and monetary resources in the development and better use of social networks obtain significantly better results than those using more conservative strategies. However, it is worth clarifying that if QMPs have not already been implemented, then implementing them should always be on the travel agency manager's agenda. It is important to highlight that, independent of a company's social-network strategy, it is always profitable to invest in quality policies that improve the company's FP.

Based on observing the statistics obtained in the separate analysis of both subsamples, we also note that intensive social network strategies appear to produce positive external

Table 6.   Standardised values and statistics by subsample.

		QMP → IP	QMP → EP	IP → FP	EP → FP	Fit indices[a]
Conservative social network strategy	β Statistic[a]	0.254 2.380[b]	0.455 3.239[b]	0.133 2.101[b]	0.201 2.239[b]	χ^2/df = 2.336 BB-NNFI = 0.931 CFI = 0.938 RMSEA = 0.059
Intensive social network strategy	x Statistic	0.270 2.189[b]	0.496 4.682[b]	0.142 2.455[b]	0.247 2.957[b]	χ^2/df = 2.014 BB-NNFI = 0.933 CFI = 0.936 RMSEA = 0.06

[a]Robust method.
[b]Statistically significant at the .05 level.

effects deriving from quality and that they do not appear to have significant effects on the external levers activated by quality.

These results can be explained by the fact that social networks and quality share some common objectives and, in some cases, these practices are even complementary. First, social networks are a unique source of information, allowing direct and continuous contact with the environment that, when well monitored and analysed, can increase the efficiency of continual improvement systems (Harrison & Waite, 2006; Mangold & Faulds, 2009). The use of social networks can also channel efforts towards those processes that add value for the client, which are ultimately those that generate profits for the company. Second, the greater the amount of client contact is, the faster the reaction speed to changes in demand trends. This is a key factor in rapidly changing sectors such as travel agencies. Third, the greater the interaction with the environment is, the higher the likelihood of obtaining client loyalty and attracting potential new buyers.

With respect to internal factors, significant differences have not been found in regard to the type of social network strategy used, confirming that the primary levers for improvement that activate and empower social networks are related to the relationship between the business and its environment.

Finally, this study demonstrates that investing in quality is profitable for travel agencies and that social networks can have positive external effects on quality policies. This final conclusion opens the door to future lines of research. Although this section has pointed to possible causes of the activating effect of social networks on quality, these statements require more detailed study. Additionally, given that this study only examines travel agencies and a specific country, it would be helpful to verify whether the model matches other touristic subsectors or other geographical areas.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

del Alonso-Almeida, M. M., Bagur-Femenías, L., & Llach, J. (2015). The adoption of quality management practices and their impact on business performance in small service companies: The case of Spanish travel agencies. *Service Business*, *9*(1), 57–75.

Alonso-Almeida, M. M., Rodríguez-Antón, J. M., & Rubio-Andrada, L. (2012). Reasons for implementing certified quality systems and impact on performance: An analysis of the hotel industry. *The Service Industries Journal*, *32*(5), 919–936.

Bagur-Femenias, L., Llach, J., & Alonso-Almeida, M. M. (2013). Is the adoption of environmental practices a strategic decision for small service companies? An empirical approach. *Management Decision*, *51*(1), 41–62.

Bagur-Femenías, L., Martí, J., & Rocafort, A. (2015). Impact of sustainable management policies on tourism companies' performance: The case of the metropolitan region of Madrid. *Current Issues in Tourism*, *18*(4), 376–390.

Bagur-Femenías, L., Perramon, J., & Amat, O. (2015). Impact of quality and environmental investment on business competitiveness and profitability in small service business: The case of travel agencies. *Total Quality Management & Business Excellence*, *26*(7–8), 840–853.

Barassi, V., & Treré, E. (2012). Does Web 3.0 come after Web 2.0? Deconstructing theoretical assumptions through practice. *New Media & Society*, *14*(8), 1269–1285.

Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least squares (PLS) approach to causal modelling: Personal computer adoption and use as an illustration. *Technology Studies*, *2*(2), 285–309.

Barnes, S. B. (2006). A privacy paradox: Social networking in the United States. *First Monday*, *11*(9), 11–15.

Beheshti, H. M., & Lollar, J. G. (2003). An empirical study of US SMEs using TQM. *TQM and Business Excellence*, *14*(8), 839–847.

Buehrer, R. E., Senecal, S., & Bolman Pullins, E. (2005). Sales force technology usage—Reasons, barriers, and support: An exploratory investigation. *Industrial Marketing Management*, *34*(4), 389–398.

Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet: The state of eTourism research. *Tourism Management*, *29*, 609–623.

Busscher, N., & Von Raesfeld-Meijer, A. M. (2013). *Social media: Their role as marketing tools in B2B marketing*.

Camisón, C. (1999). La medición de los resultados empresariales desde una óptica estratégica: construcción de un instrumento a partir de un estudio Delphi and aplicación a la empresa industrial española en el periodo 1983–96 [Measuring business performance from a strategic perspective: Construction of an instrument from a Delphi study and its application to Spanish industrial businesses during the period 1983–1996]. *Estudios Financieros*, *62*(199), 201–264.

Carmines, E. G., & Zeller, R. A. (1979). *Reliability and validity assessment*. Beverly Hills, CA: Sage.

Casadesús, M., Marimon, F., & Alonso, M. (2010). The future of standardised quality management in tourism: Evidence from the Spanish tourist sector. *The Service Industries Journal*, *30*, 2457–2474.

Casielles, R. V., del Río Lanza, A. B., & Álvarez, L. S. (2009). Las agencias de viaje virtuales: ¿Cómo analizar la calidad de e-servicio y sus efectos sobre la satisfacción del cliente? [Virtual travel agencies: How to analyze e-service quality and its effects on customer satisfaction?]. *Universia Business Review*, *24*, 122–143.

Conca, F. J., Llopis, J., & Tarí, J. J. (2004). Development of a measure to assess quality management in certified firms. *European Journal of Operational Research*, *156*, 683–697.

Chen, C. F., & Kao, Y. L. (2010). Relationships between process quality, outcome quality, satisfaction, and behavioural intentions for online travel agencies–evidence from Taiwan. *The Service Industries Journal*, *30*(12), 2081–2092.

Chung, S., Animesh, A., Han, K., & Pinsonneault, A. (2014). Firms' social media efforts, consumer behavior, and firm performance: Evidence from Facebook. Consumer behavior, and firm performance: Evidence from Facebook (June 10, 2014).

Constantinides, E., Alarcón del Amo, M. C., & Lorenzo Romero, C. (2010). *Profiles of social networking sites users in The Netherlands*. Paper presented at the High Technology-Small Firms Conference, Enschede, The Netherlands.

Das, A., Handfield, R. B., Calantone, R. J., & Ghosh, S. (2000). A contingent view of quality management: The impact of international competition on quality. *Decision Sciences*, *31*, 649–690.

Despotovic, Z., & Aberer, K. (2006). P2P reputation management: Probabilistic estimation vs. social networks. *Computer Networks*, *50*(4), 485–500.

Douglas, T. J., & Judge Jr., W. Q., (2001). Total quality management implementation and competitive advantage: The role of structural control and exploration. *Academy of Management Journal*, *44*, 158–169.

Duran, I., Bikfalvi, A., & Llach, J. (2014). New facets of quality. A multiple case study of Green cosmetic manufacturers. *European Accounting and Management Review*, *1*(1), 44–61.

Enz, C. A., & Siguaw, J. A. (1999). Best hotel environmental practices. *Cornell Hotel and Restaurant Administration Quarterly*, *40*(5), 72–77.

Eurostat. (2008). Enterprises by size class-overview of SMEs in the EU. *Statistics in Focus*, *31*, 1–8.

Flynn, B. B., Schroeder, R. G., & Sakakibara, S. (1994). A framework for quality management research and associated measurement instrument. *Journal of Operations Management*, *11*, 339–366.

Fotopoulos, C. B., & Psomas, E. L. (2009). The impact of soft and hard TQM elements on quality management results. *International Journal of Quality and Reliability Management*, *26*(2), 150–163.

Fuchs, C., Hofkirchner, W., Schafranek, M., Raffl, C., Sandoval, M., & Bichler, R. (2010). Theoretical foundations of the web: Cognition, communication, and co-operation. Towards an understanding of Web 1.0, 2.0, 3.0. *Future Internet*, *2*(1), 41–59.

Harrison, T., & Waite, K. (2006). A time-based assessment of the influences, uses and benefits of intermediary website adoption. *Information & Management*, *43*(8), 1002–1013.

Hendler, J. (2009). Web 3.0 emerging. *Computer*, *42*(1), 111–113.

Highley, A. K. (2010). *The importance of being social. A look at social media marketing with a comparison of the United States versus the European Union*. Northern Illinois University.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55.

Johnson, G., Scholes, K., & Whittington, R. (2008). *Exploring corporate strategy* (8th ed.). London: Prentice Hall.

Kassinis, G. I., & Soteriou, A. C. (2003). Greening the service profit chain: The impact of environmental management practices. *Production and Operations Management*, *12*(3), 386–403.

Kaynak, H. (2003). The relationship between total quality management practices and their effects on firm performance. *Journal of Operations Management*, *21*, 405–435.

Kong, E., & Lien, C. Y. (2014). Impact of social media in service innovations: An empirical study on the Australian hotel industry. In *Quality innovation: Knowledge, theory, and practices. Advances in information quality and management. Information science reference* (pp. 390–405). Hershey, PA: IGI Global.

Lee, P. K. C., To, W. M., & Yu, B. T. W. (2009). The implementation and performance outcomes of ISO 9000 in service organizations. *International Journal of Quality & Reliability Management*, *26*, 646–662.

Lee, S., & Kim, B. G. (2009). Factors affecting the usage of intranet: A confirmatory study. *Computers in Human Behavior*, *25*(1), 191–201.

Lin, C., Lee, C., & Chen, W. (2009). Using fuzzy analytic hierarchy process to evaluate service performance of a travel intermediary. *The Service Industries Journal*, *29*(3): 281–296.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modelling. *Psychological Methods*, *1*(2), 130–149.

Malhotra, N. K. (2004). *Marketing research: An applied orientation* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, *52*(4), 357–365.

Miller, V. (2014). *Current state of online response strategies in literature and its future direction*.

Molina-Azorín, J. F., Claver-Cortes, E., Pereira-Moliner, J., & Tarí, J. J. (2009). Environmental practices and firm performance: An empirical analysis in the Spanish hotel industry. *Journal of Cleaner Production*, *17*, 516–524.

Munar, A. M. (2010). Tourist-created content: Rethinking destination branding. *International Journal of Culture, Tourism and Hospitality Research*, *5*(3), 291–305.

Nair, A. (2006). Meta-analysis of the relationship between quality management practices and firm performance implications for quality management theory development. *Journal of Operations Management*, *24*, 948–975.

Naor, M., Goldstein, S. M., Linderman, K. W., & Schroeder, R.G. (2008). The role of culture as driver of quality management and performance: Infrastructure versus core quality practices. *Decision Sciences*, *39*(4), 671–702.

Osimo, D. (2008). Web 2.0 in government: Why and how. Institute for Prospective Technological Studies (IPTS), JRC, European Commission, EUR, 23358.

Pereira-Moliner, J., Claver-Cortés, E., Molina-Azorín, J. P., & Tarí, J. J. (2012). Quality management, environmental management and firm performance: Direct and mediating effects in the hotel industry. *Journal of Cleaner Production*, *37*, 82–92.

Rodriguez-Antón, J. M., Alonso-Almeida, M. M., & Rubio-Andrada, L. (2011). Shedding more light on the impacts of quality certified systems in small service enterprises. A multidimensional analysis. *African Journal of Business Management*, *5*(19), 7911–7922.

Rubio-Andrada, L., Alonso-Almeida, M. M., & Rodriguez-Antón, J. M. (2011). Motivations and impacts in the firm and stakeholders of quality certification: Evidence from small and medium-sized service enterprises. *Journal of Total Quality Management and Business Excellence*, *22*(8), 833–852.

Sadikoglu, E., & Zehir, C. (2010). Investigating the effects of innovation and employee performance on the relationship between total quality management practices and firm performance: An empirical study of Turkish firms. *International Journal of Production Economics*, *127*(1), 13–26.

Saraph, J. V., Benson, P. G., & Schroeder, R. G. (1989). An instrument for measuring the critical factors of quality management. *Decision Sciences*, *20*, 810–829.

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive Goodness-of-Fit measures. *Psychological Research*, *8*(2), 23–74.

Singh, R. K., Garg, K. S., & Deshmukh, S. G. (2008). Strategy development by SMEs for competitiveness: A review. *Benchmarking: An International Journal*, *15*(5), 525–547.

Tarí, J. J., Heras-Saizarbitoria, I., & Dick, G. (2014). Internal and external drivers for quality certification in the service industry: Do they have different impacts on success? *Service Business*, *8*(2), 337–354.

Terlaak, A., & King, A. A. (2006). The effect of certification with ISO 9000 quality management standard: A signalling approach. *Journal of Economic Behavior and Organization*, *60*(4), 579–602.

Urban, G. L. (2005). Customer advocacy: A new era in marketing? *Journal of Public Policy & Marketing*, *24*(1), 155–159.

Viada-Stenger, M. C., Balbastre-Benavent, F., & Redondo-Cano, A. M. (2010). The implementation of a quality management system based on the Q tourist quality standard. The case of hotel sector. *Service Business*, *4*(3/4), 177–196.

Wamba, S. F., & Carter, L. (2013, January). *Twitter adoption and use by SMEs: An empirical study*. In System Sciences (HICSS), 2013 46th Hawaii International Conference on (pp. 2042–2049). IEEE.

Yang, C. C. (2006). Establishment of a quality-management system for service industries. *Total Quality Management and Business Excellence*, *17*(9), 1129–1154.

Yee, R. W. Y., Yeung, A. C. L., & Cheng, T. C. E. (2008). The impact of employee satisfaction on quality and profitability in high-contact service industries. *Journal of Operations Management*, *26*(5), 651–668.

Yee, R. W. Y., Yeung, A. C. L., & Cheng, T. C. E. (2010). An empirical study of employee loyalty, service quality and firm performance in the service industry. *International Journal of Production Economics*, *124*(1), 109–120.

Appendix 1

Code	Definition
Quality management practices (QMPs): Saraph, Benson, & Schroeder (1989); Flynn et al. (1994); Conca, Llopis, and Tarí (2004); Naor, Goldstein, Linderman, & Schroeder (2008); Molina-Azorín, Claver-Cortes, Pereira-Moliner, and Tarí (2009); Sadikoglu and Zehir (2010)	
QMP1	Upper management is committed to the quality of the product/service provided
QMP2	The company collaborates with clients and/or suppliers to improve quality
QMP3	Improvements in the provision of services are identified
QMP4	The achievement of objectives is monitored, and possible deviations are corrected
QMP5	There is a culture focused on continuous improvement
Internal performance (IP): Flynn et al. (1994); Beheshti and Lollar (2003); Kaynak (2003); Viada-Stenger et al. (2010); del Alonso-Almeida et al. (2015); Tarí et al. (2014)	
IP1	Workers' productivity has increased
IP2	Errors and reprocessing have been reduced
IP3	The business is now more innovative
External performance (EP): Camison (1999); Enz and Siguaw (1999); Kassinis and Soteriou (2003); Molina-Azorín et al. (2009)	
EP1	The company's image has improved
EP2	Client satisfaction has increased
EP3	The business has increased its ability to remain in the market during times of crisis
Financial performance (FP): Das et al. (2000); Douglas and Judge (2001); Kassinis and Soteriou (2003); Molina-Azorin et al. (2009); Rodriguez-Anton et al. (2011); Rubio-Andrada et al. (2011); Bagur-Femenías et al. (2013)	
FP1	Profits have increased in the past two accounting periods
FP2	Market share has increased in the past two years
FP3	Sales have increased in the past two accounting periods