



Quality management, strategic priorities and performance: the role of quality leadership

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QM: the role
of quality
leadership

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Abstract

Purpose – The purpose of this paper is to clarify whether there are differences in the implementation of quality management (QM) and the results achieved, based on the position of the person responsible for QM and his/her strategic priorities.

Design/methodology/approach – Data from 256 firms that have implemented QM are collected. A multigroup analysis with LISREL is employed to contrast the hypotheses using a sample of general managers on the one hand and of quality managers on the other.

Findings – This study shows that QM is stronger implemented when it is headed by the general manager than by the quality manager. The authors also find that in both samples of general managers and quality managers, only one of the three strategic priorities analyzed, cost orientation, shows a positive effect on financial results. When the influence of QM on financial results is considered, the relationship is significant just in the case of the sample of quality directors.

Research limitations/implications – The limitations of the analysis performed suggest lines of research that can substantially enrich the analysis of the role of management in the implementation of QM systems. A first step would be to expand the study sample, since the subsample for general managers was not very large. Gathering more recent data could contribute to strengthening the results obtained and to identifying additional explanatory variables. For example, information on functional experience or training could clarify the strategic focus adopted by managers.

Practical implications – This study highlights that the general manager's commitment to quality confers greater credibility in the rest of the organization. Although the general managers impose greater implementation of QM, they do not perceive that this influences the financial results achieved directly. The incorporation of strategic priorities in this study also shows that the perception of differentiation in marketing in firms that have implemented QM is similar both for quality managers and for general managers. However, the former (quality managers) also show that differentiation in innovation has a positive effect on QM.

Originality/value – Literature has shown an indisputable consensus on the relevance of leadership and the commitment of top management to the success of QM, but few studies provide more in-depth specific knowledge of the characteristics and actions developed by the person who leads the commitment to quality. This study tackles the role of the manager responsible for QM in the firm, based on his or her functional position, whether general manager or quality manager. It contributes by investigating how a manager's strategic priorities condition the level of QM implementation, as well as the financial performance achieved.

Keywords Quality management, Management commitment, Leadership, Strategic orientation, Financial performance

Paper type Research paper



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1. Introduction

After several decades of firms adopting quality management (QM) and significant advances in the discipline from an academic point of view, QM still raises numerous study questions that need clarification. One is the role of the manager who drives and leads the change toward QM, as well as the factors that condition him/her (Chih and Lin, 2009; Dale *et al.*, 2001; Dean and Bowen, 1994, Hendricks and Singhall, 1997; Schroeder *et al.*, 2005).

In the many publications on the principles and factors critical for QM implementation, the literature has shown an indisputable consensus on the relevance of leadership and the commitment of management to the success of these systems (Anderson *et al.*, 1995; Flynn *et al.*, 1994; Flynn and Saladin, 2001; Kaynak, 2003). Top management plays an important role in firms' achieving an orientation to quality (Pannirselvam and Ferguson, 2001; Wilson and Collier, 2000), creating values and establishing objectives and systems to satisfy customers' expectations and improve performance in the organization (Ebrahimpour, 1988; Kaluarachchi, 2010). In fact, management's commitment is considered a condition *sine qua non* for achieving the transformations that QM requires (Bhat and Rajashekhar, 2009; Beer, 2003; Talib *et al.*, 2011).

Despite the clear importance of this topic, few studies provide more in-depth specific knowledge of the characteristics and actions developed by the person who leads the commitment to quality (Chen *et al.*, 1997; Lakshman, 2006; Nwabueze, 2011; Puffer and McCarthy, 1996; Rago, 1996; Savoilanen, 2000; Wageman, 2001; Yen *et al.*, 2002). Nor are there many studies of this person's influence on the implementation and results achieved (Das *et al.*, 2011; Idris and Zairi, 2006; Reed *et al.*, 2000; Escrig-Tena *et al.*, 2001). Our study tackles the role of the manager responsible for QM in the firm, based on his or her functional position, whether general manager or quality manager. Our goal is to explore whether the manager's strategic priorities condition the level of QM implementation, as well as the financial performance achieved.

Different studies have shown that top management plays an essential role in achieving strategic changes in organizations (Arendt *et al.*, 2005; Boone and Hendriks, 2009; Bourgeois and Eisenhardt, 1988; Carmeli and Halevi, 2009; Ling *et al.*, 2008). Managers who drive the adoption of QM systems are also the crafters of the change that can occur in their firms. Leadership involves changes in human resources management, customer relations, and strategic planning (Black and Porter, 1996; Sila and Ebrahimpour, 2005). The literature by the gurus argues that top management should be responsible for leading the change (Anderson *et al.*, 1994; Crosby, 1990; Dean and Bowen, 1994; Deming, 1989; Juran, 1990; Repenning and Sterman, 2002). In many cases, however, implementation has meant that firms designate one person in charge, a quality manager, who reports directly to top management. The strategic literature suggests that quality managers' functional experience can lead them to perceive certain strategic priorities for the firm from a different perspective than that shown by the general management. The general manager is expected to identify with several functional areas and to be less susceptible to functionally grounded biases and stereotypes (Bunderson and Sutcliffe, 2002). For example, according to Buyl *et al.* (2011), a generalist CEO will be able to retrieve knowledge residing in the team faster and to evaluate the value of unique pieces of information better. This in turn facilitates the pooling and integration of complex information, enhancing decision-making quality and firm performance.

Additionally, studies like those by Hitt *et al.* (1982), Snow and Hrebiniak (1980) and, more recently, Chaganti and Sambharya (1987), Chattopadhyay *et al.* (1999) and Buyl *et al.* (2011) have proposed that the functional orientation of the management team is directly related to the strategies that firms follow. If, as the literature indicates (Dansky and Brannon, 1996; Powell, 1995; Prajogo and Sohal, 2006; Pruett and Thomas, 1996; Reed *et al.*, 2000; Schonberger, 1992; Srinidhi, 1998; Wilcox *et al.*, 1996), QM should be integrated into strategy, there are indications for proposing some different strategic priorities based on the function performed by the manager who implements QM.

The research questions that this article proposes are thus the following:

- RQ1.* Are there differences in the relationship of QM, strategic priorities and results based on the position held by the person who heads the change?
- RQ2.* To what extent do managers who implement QM perceive that both QM and the strategic priorities determine the financial result achieved?

To answer these questions, the article is structured as follows: in Section 1, we review the literature on the position of the manager and strategic priorities and their connection to QM and performance. From this exploration of the literature, we determine the study hypotheses. Section 2, we present the methodology and design of the sample analyzed to contrast the hypotheses. In Sections 3 and 4, we present the results of the research and the discussion and main conclusions, respectively.

2. Literature review and presentation of hypotheses

There is little literature analyzing the different roles that a general manager, as opposed to a quality manager, can play in the degree of implementation and the results achieved with QM (Taylor, 1997; Taylor and Wright, 2003; Terziovski *et al.*, 1999; Sohal and Terziovski, 2000). Researchers agree that top management's commitment is a key issue. For example, Puffer and McCarthy (1996) provide a model of leadership in the context of total quality management (TQM) and argue that top management's ability to create a vision and promote the change is central to the success of implementing TQM. Also, Lakshman (2006) develops a theory of leadership for quality, focusing on leader traits, values, and behaviors based on underlying TQM principles. But top management must also understand clearly the principles of TQM so that the initiative does not end in failure (Terziovski *et al.*, 1999). If the general manager has a genuine understanding of the significance of QM and intervenes directly in its implementation, it is likely that the results achieved will be greater than if the general manager delegates to a quality manager. Further, the general manager is in the highest position responsible for the firm's strategic configuration, based on a global, long-term vision of the firm. From this perspective, the general manager can treat QM as a question of strategy for the firm and not as something merely operational. As Moreno-Luzón (1993) indicates, one problem with the implementation of TQM is its lack of strategic perspective. In the following sections, we establish the role of the managers who implement QM and their relationship to the strategic priorities and financial performance.

Strategic priorities, QM and results

As the individuals in charge of strategic decision making, managers should analyze the environment and the set of strategic actions for the firm (Hambrick and Mason, 1984; Marcel, 2009). Senior managers play many roles, but their imperative as the individuals

in charge of strategy and decision making is the most critical to the success of the organization (Certo *et al.*, 2006; Finkelstein and Hambrick, 1996; Papadakis and Barwise, 2002). Top management should integrate QM implementation into entrepreneurial strategy (Jung *et al.*, 2009; Prajogo and Sohal, 2006). This implies clarifying the quality objectives and treating quality as a priority and strategic issue (Ahire *et al.*, 1996). In fact, the study by Taylor and Wright (2003) shows that including quality objectives in the strategic planning process and having more experienced managers take responsibility for QM implementation are factors that condition its success.

Regarding implementation driven by the quality manager, the question proposed is whether his or her functional experience influences performance achieved, taking into account his or her perceived strategic priorities. Chaganti and Sambharya (1987), for example, find a significant relationship between competitive strategies and the functional experience of top management. Walsh (1988), however, does not find evidence that functional bias influences the definition of the problems or that this affects cognitive structure. Waller *et al.* (1995) also observe that functional experience does not affect perception of the environment but does influence the various dimensions of organizational effectiveness. Beyer *et al.* (1997) find that managers do not limit their attention to questions related to their functional area, although they do support the effects associated with their functional experience.

Arguments in the strategic literature have established that there may be differences between intended strategy and realized strategy (Mintzberg and Waters, 1985). Intended strategy refers to the plans, missions, strategic intention and vision desired for the future of the firm. Realized strategy has to do with the actual strategy, and it is actual strategy that can be linked to performance. According to Bowman and Ambrosini (1997), the strategic priorities that top management perceives at the actual moment should be considered an important step in mobilizing the intentions of management for action. The intended strategy can affect how the manager perceives the organization's priorities and influence his or her managerial behaviour. This, in turn, can affect the realized strategy and, consequently, firm performance. Since the actions, decisions and priorities that functional managers execute should be congruent with the strategy intended by top management, these managers' actions are key in the implementation of the strategy. The study by Wooldridge and Floyd (1990) points to the conclusion that the strategic priorities perceived by top management are closer to the intended strategy, and the perceptions of functional managers really reflect the realized strategy. Implementing QM through the general manager, the highest strategic position in the firm, can lead to a position based more on intended strategy, whereas quality managers carry out actions with a narrower perspective from the focus on firm strategy and would thus work with realized strategy. On the other hand, the functional experience of quality managers can lead them to focus on aspects more connected to a specific activity. Insofar as managers accumulate experience in a particular functional area, they develop more experience in abilities, tools and practices in the discipline. At the same time, their respective points of view and visions gradually become narrower. QM literature has not analyzed specifically the possible differences in the strategic orientation based on the position of managers who implement QM. However, Choi and Behling (1997) find a strong relationship between top management's orientation and the probability of active implementation of QM. These authors define orientation to development as an orientation in which managers are focused on the growth of the firm and oriented toward the future

and consider customers as collaborators. The goal of tactical orientation is to satisfy the needs of customers, its time frame is the present, and customers are considered a need to be satisfied. Finally, a defensive orientation seeks survival in a hostile environment, is based on the past, and sees customers as opponents. QM programmes are more active in the case of managers with an orientation to development, whereas QM is not used much if top management's orientation is defensive. Managers with a tactical orientation occupy an intermediate position. Also, Dansky and Brannon (1996) analyze which strategic orientation of the firm most encourages QM implementation, using the typology of Miles and Snow (1978). Prospector organizations achieve greater emphasis on innovation and flexibility in order to satisfy market demands. Defenders are oriented to controlling operations and maintaining products. Analyzer firms achieve a balance between innovation and cost contention. According to the results of the research, analyzers have the greatest probability of becoming involved in implementing QM, followed by prospectors. Defensive firms show a negative relationship, although a weak one, to TQM. We therefore suggest that:

- H1. General managers perceive different influences of strategic priorities on QM than do quality managers.
- H2. General managers perceive different influences of strategic priorities on financial performance than do quality managers.

Finally, the managers of firms that decide to adopt QM systems are motivated by obtaining better results. In fact, for many authors, one of the key reasons for disseminating QM is the belief that it is the only way to improve organizational effectiveness (Hackman and Wageman, 1995; Hendricks and Singhall, 2001). This idea has led to the use of a great number of studies and focuses to evaluate the impact of QM on performance (see summary in Nair, 2006; Sila and Ebrahimpour, 2003; Sila, 2007; Wayhan and Balderson, 2007a, b). There is some consensus in the literature about the positive relationship between the different kinds of performance. However, some authors, like Wayhan and Balderson (2007a, b), conclude from a review of the main studies and methodologies used, from both theoretical and practical perspectives, that the results achieved are often contradictory and that we must continue to advance in studying the nature of this relationship to financial performance to determine whether the effects are direct or indirect, and especially whether effective implementation of QM is difficult to imitate and thus provides sustainable competitive advantage.

Additionally, integrating QM in the firm's strategy may be one factor explaining why the management system provides better results and improves firms' competitive advantage (Reed *et al.*, 2000). Empirically, there is some evidence for this proposal. Taylor (1997) and Taylor and Wright (2003), for example, find that TQM is more likely to be implemented more successfully if the general manager assumes personal responsibility for TQM than if responsibility is delegated to a quality manager or TQM coordinator. Studies like those by Terziovski *et al.* (1999) and Sohal and Terziovski (2000) analyzing data on the implementation of TQM affirm that performance deteriorates when the responsibility for quality is concentrated in a specialist in the quality department. Therefore:

- H3. General managers perceive a different influence of QM on financial performance than do quality managers.

3. Methodology

Sample

The study population consists of firms that have implemented QM in Spain. Given the absence of a registry from which to determine the firms that have adopted these systems, we chose as the study population all firms that have obtained a series ISO 9000 quality certificate and the firms that belong to the QM Club. This yields a population of over 7,500 firms in September 1999. Many researchers consider certification to be the first step toward QM (Escanciano *et al.*, 2006). To verify this circumstance in this study, we included an item about the years that the firm had been implementing QM in the questionnaire.

The total sample was composed of 1,550 firms. The questionnaires were sent and returned from September 1999 to February 2000. The mailings were sent gradually during this time period, and we contacted a second time by phone or fax the firms that had not returned the questionnaire after a reasonable period of time. To control for common method bias (Podsakoff *et al.*, 2003), the questionnaire had instructions that stressed the anonymity and confidentiality of the data sent and the fact that there were no correct or incorrect answers.

The questionnaires were sent in two ways: by ordinary mail and by fax. The mailed questionnaires included a stamped envelope for returning the completed questionnaire. The mailings incorporated a system of identification to determine which firms had responded in order to send a reminder to those that still had not answered. We sent 465 questionnaires by mail. The others were sent by fax, without prior phone contact with the firm. The final number of questionnaires received was 286, of which 273 were valid, giving a response rate of 17.61 percent. Of these, 105 were from the mailing (22.58 percent of the responses) and 168 from the fax (15.48 percent of the responses). The final sample error finally was 7.35 percent (a significance level of 95 percent and $PQ = 0.5$). Of the 273 questionnaires, we considered 256 for this study (44 answered by the general manager and 212 by the quality manager).

The profile of the firms composing the final sample is industrial (68.9 percent) and service (31.1 percent) firms. As to number of employees, the highest percentage of firms had 51-250 workers (29.5 percent) and the lowest percentage 501-1,000 (6.8 percent). Firms with fewer than 250 employees constitute 73.4 percent of the sample and firms with over 250 the remaining 26.6 percent. The sample is relatively homogeneous for years implementing QM; 76.8 percent of the firms had not been implementing QM for more than five years, and only 23.2 percent had been doing so for five years.

Measurement of the variables

Quality management. To measure TQM, we calculated the average of the measurement scale from Grandzol and Gershon (1998), composed of 39 items classified into seven dimensions: leadership (5), external/internal cooperation (8), customer orientation (4), continuous improvement (4), management process (8), worker involvement (5) and learning (5). We asked the respondent to evaluate each item using a seven-point Likert scale ranging from 1 (disagree completely) to 7 (agree completely).

Strategic priorities. We measured strategic priorities with a seven-item scale used in the study by Lee (1989) and Lee and Miller (1996): (2) for emphasis on cost (3) for differentiation in marketing, and (2) for differentiation in innovation. For each item, we asked respondents to evaluate the emphasis on each activity during the years of QM implementation on a scale of 1 (no emphasis at all) to 7 (great emphasis).

Performance. In the category of financial performance, we considered growth in profits and profitability, measured using a scale with values from 1 (extremely poor) to 7 (extremely good) relative to previous levels of QM implementation. This kind of subjective measure permits better comparison between different kinds of industries and situations. To rule out the possibility of common method bias, we obtained objective information on performance from the Amadeus database, specifically, the ROA and profit before tax for 80 percent of the firms in the sample. For each sample, we calculated the difference between these variables for the past five years (1995-1999) and obtained their correlation with the questionnaire items “profit growth” and “benefit growth,” respectively. In both cases, the correlations are positive and statistically significant at 5 percent.

The description of the items that compose the final scales for each construct appears in the Appendix.

4. Analysis and results

Reliability and validity of the scales

To confirm the reliability and validity of the scales used in the study, we performed a confirmatory factor analysis for each construct (QM, strategy and performance). The results of the analysis are shown in Table I, which indicates acceptable levels of global fit (χ^2 , GFI, AGFI, adjusted χ^2). The χ^2 is usually especially sensitive to samples of over 200, indicating significant differences in the matrices and making it advisable to consider other measures of quality of fit (Hair *et al.*, 1999).

The validity of the latent variables analyzed is good, since we confirm that all of the indicators have positive and significant weights ($p < 0.05$) and that the factor weightings are over 0.4. The multiple correlation (R^2) of each indicator is higher than 0.5 in most of the cases. To evaluate reliability, we calculated the Cronbach's α . This indicator ranges from 0 (unreliable scale) to 1 (completely reliable scale), although there is no general agreement on the appropriate minimum value. An alpha of 0.8 or higher is generally considered to be a good indicator of the scale's internal consistency. However, Nunnally (1978) argues that the value can be lower in new scales and considers a minimum of 0.6 to be acceptable. The Cronbach's α is the most common measure of reliability, but it has some limitations. For example, the coefficient assumes wrongly that all of the items contribute equally to the reliability (Bollen, 1989). According to Shook *et al.* (2004), composite reliability is a better choice, since it shows the degree to which the indicators of a concept represent it. Accepting the hypothesis of reliability requires a minimum value of 0.7, although lower values are acceptable for exploratory research (Hair *et al.*, 1999). The variance extracted complements the composite reliability and expresses the amount of total variance of the indicators explained by the latent variable. High values show that the indicators are very representative. In general, the value must exceed 0.5 (Hair *et al.*, 1999). The values of these indicators show an acceptable internal consistency of the scales (Table I). Table II presents the correlations of the constructs.

Hypotheses

To obtain an initial approximation of whether the samples of general managers and of quality managers show statistically significant differences in the level of QM implementation, strategic priorities and financial performance, we performed

Dimension	Range of standardized estimations ^a	Range of R ²	Composite reliability	Variance extracted	Cronbach's α
<i>QM</i>					
Leadership	0.84-0.89	0.70-0.79	0.85	0.75	0.62
Teamwork	0.79-0.90	0.62-0.81	0.94	0.72	0.85
Orientation to customer	0.87-0.91	0.76-0.84	0.85	0.66	0.84
Continuous improvement	0.74-0.97	0.55-0.94	0.86	0.68	0.70
Management process	0.86-0.91	0.74-0.83	0.88	0.78	0.74
Worker involvement	0.87-0.97	0.75-0.93	0.95	0.86	0.87
Learning	0.74-0.92	0.55-0.85	0.87	0.69	0.78
QM					0.9
Goodness of fit	$\chi^2 = 99.36$ ($p = 0.000$), $\chi^2/g.l. = 1.94$, GFI = 0.97, RMSEA = 0.059, AGFI = 0.96				
<i>Strategic priorities</i>					
Cost emphasis	0.52-1.00	0.24-1.00	0.76	0.64	0.61
Differentiation in marketing	0.67-0.78	0.45-0.60	0.76	0.51	0.69
Differentiation in innovation	0.80-0.80	0.64-0.64	0.78	0.64	0.76
Goodness of fit	$\chi^2 = 33.71$ ($p = 0.000$), $\chi^2/g.l. = 2.8$; GFI = 0.98; RMSEA = 0.082; AGFI = 0.94				
<i>Financial performance</i>					
Financial performance	0.94-1.00	0.88-1.00	0.97	0.94	0.94
Goodness of fit	$\chi^2 = 20.27$ (0.062), $\chi^2/g.l. = 1.69$, GFI = 0.99, RMSEA = 0.057, AGFI = 0.99				

Table I.
Validity and reliability of scales

	Mean	SD	1	2	3	4
1. QM	5.26	0.96	–			
2. Cost emphasis	3.96	1.46	–0.094	–		
3. Differentiation in marketing	4.94	1.22	0.407*	0.026	–	
4. Differentiation in innovation	4.66	1.64	0.343*	0.200*	0.355*	–
5. Financial performance	4.64	1.14	0.213*	0.223*	0.172*	0.174*

Table II.
Means, standard deviations and correlations

Note: * $p < 0.01$

an ANOVA (Table III). This analysis suggested that there were statistically significant differences of 5 percent for the values of QM between the groups. QM is greater for the sample of general managers (5.67, as opposed to 5.20 for quality managers). There were no statistically significant differences, however, between the levels of financial performance in the two groups. In the case of strategic priorities, there were only significant differences in the orientation to marketing, which was statistically greater at a level of 5 percent for the sample of general managers (5.42), when compared to quality managers (4.88).

The hypotheses were contrasted by performing a path analysis with LISREL 8.7, using the arithmetical means of the corresponding indicators of QM, strategic priorities and financial performance. Following our previous review of the literature, we establish direct effects of strategic priorities on QM and on financial performance. We also establish a direct effect of QM on financial performance (Figure 1).

To determine whether the relationship between strategic priorities, QM and performance had the same pattern in the subgroups of general managers and quality managers, a two-group LISREL analysis to test the equality of path coefficients was conducted. This test involved simultaneously estimating the two path models (for the two subgroups), first without any constraints and then with equality constraints, postulating invariance of the structural coefficients over the two groups. In other words, LISREL allowed us to test whether the two groups met the assumption that they were equal by examining whether different matrices in the model (which represent sets of path coefficients) were “invariant”. Because we were using path modelling, we did not test for the hypothesis that the two groups’ factor loadings are equal, as we had no measurement model. The difference in the χ^2 statistics corresponding to the fit of the two multisample models was used as the basis for determining the appropriateness of the equality constraints. Table IV presents the standardized coefficients of the paths between the different variables in the model proposed for each of the subgroups.

For the saturated multisample model without constraints, the estimated χ^2 statistic was 0 with 0° of freedom (i.e. perfect fit), whereas the model with equality constraints yielded a χ^2 statistic of 14.12 (df = 7; p = 0.049). Since the value of the χ^2 statistic of the difference is 14.12 for 7° of freedom was significant (p < 0.05), the result led to the conclusion that the general managers and the quality managers did not have the same pattern of relationship between QM, strategy priorities and financial performance.

As can be seen in Table IV, differentiation in both marketing and innovation has a positive and significant effect on QM in the group of quality managers. In the group of general managers, only differentiation in marketing influences QM, although with greater weight than in the previous case. This enables us to confirm *H1*. As to the role of QM in achieving financial results, Table IV shows that both samples, that of general

Dependent variables	Position		ANOVA	
	General manager	Quality manager	<i>F</i>	Sig.
QM	5.67	5.20	9.150	0.003
Cost emphasis	3.59	4.02	3.344	0.069
Differentiation in marketing	5.42	4.88	7.655	0.006
Differentiation in innovation	4.77	4.69	0.091	0.764
Financial performance	4.52	4.68	0.673	0.413

Table III.
ANOVA of position held

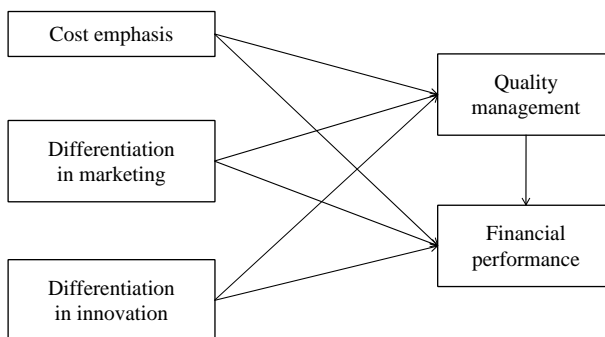


Figure 1.
Theoretical model

Table IV.
Results of multigroup
analysis

Path effects	General managers Standardized path coefficients	Quality managers
Cost emphasis → QM	-0.07	-0.10
Differentiation in marketing → QM	0.37*	0.25***
Differentiation in innovation → QM	0.05	0.34***
QM → financial performance	0.13	0.22**
Cost emphasis → financial performance	0.53***	0.16*
Differentiation in marketing → financial performance	0.21	0.09
Differentiation in innovation → financial performance	-0.17	0.05

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

managers and that of the quality managers, emphasize costs as the only strategic priority influencing financial performance. Neither differentiation in marketing nor differentiation in innovation has an effect on financial performance. We do not therefore find support for *H2*. Finally, although the general managers impose greater implementation of QM (according to ANOVA), they do not believe that this factor influences the financial results achieved directly. In the group of general managers, there is no statistically positive effect of QM on financial performance, while this effect is significant for the sample of quality managers. This leads us to accept *H3*.

5. Discussion and conclusions

Many studies have analyzed the implementation of TQM in the firm, but few have considered explicitly the influence of the person who heads the change. The goal of this study is to clarify whether there are differences in the implementation of QM and the results achieved based on the position of the person responsible for QM and their strategic priorities.

The results for the role of the manager in QM implementation, the strategic priorities and financial performance suggest the need for more in-depth study of many of the topics analyzed. A first result is that QM is stronger implemented when it is headed by the general manager than by the quality manager. This fact shows that the general manager's commitment to quality confers greater credibility in the rest of the organization. It also confirms the different role of each manager in the adoption of this management system, a question that should be studied in greater detail. As to perception of the level of financial results, we do not find differences between these two kinds of managers. If, as the literature shows, QM contributes to achieving better results, and if its implementation is greater when the general manager heads it, then the hypothesis suggested should have been contrasted. The fact that perceptions of financial performance are similar and not very high leads us to think that neither type of manager perceives QM as an essential factor for achieving a high level of financial performance or probably that they believe that other factors determine it (Hackman and Wageman, 1995). The results of this study also suggest that general managers, unlike quality managers, do not perceive QM as directly related to financial performance. Although this last issue is surprising, it is supported by previous results. The study by Ahire and O'Shaughnessy (1998) analyzes the role of commitment

to QM and shows that firms with a higher level of commitment achieve greater levels of QM implementation. However, for this kind of firm, the different elements of implementation do not affect achieving quality of the product. For these authors, the lack of significance of this model does not imply that the quality efforts are not productive, but rather that other factors can explain the results to a greater extent.

As to the strategy priorities, the results show that only the strategy of differentiation influences QM. In the case of quality managers, this occurs not only through marketing efforts but also through innovation. These results are similar and complementary to those obtained in other recent studies of the effects of competitive strategies on QM and performance (Jung *et al.*, 2009; Prajogo, 2007; Prajogo and Sohal, 2006). Jung *et al.* (2009) find that differentiation strategy is positively related to all of the TQM elements, but the influence of cost-leadership strategy on hard TQM elements is weak and not significant. They do not find that either of the two competitive strategies has a direct effect on international project management performance. The results of the study by Prajogo and Sohal (2006) and Prajogo (2007) also show that quality was primarily predicted by differentiation strategy, but the findings do not support the link between quality and cost leadership strategy. This study provides additional evidence complementary to these studies. We find that – in the samples of both general managers and quality managers – only one of the three strategic priorities analyzed, cost orientation, shows a positive effect on financial performance. Thus, when we consider the results mentioned as well as those in this investigation, the data seem to indicate that, in QM firms, cost strategy is relevant to obtaining financial results but not to obtaining other kinds of operating results, whereas differentiation contributes to improving quality and innovation.

Another interesting result of this research is the fact that, when we consider the influence of QM on financial results, the relationship is significant only in the case of the sample of quality directors. This result could be consistent with the findings of Taylor (1997) and Taylor and Wright (2003). These authors study the general managers or CEOs of firms and find that most of them adopt QM for internal reasons. Their results do not show a significant association with the degree of success of QM and support an image that suggests most such initiatives are oriented to issues inside the firm. In fact, only 37 percent give reasons specifically associated with their customers. Most of their respondents associated the reasons for implementation with cost reduction on the operating level. Further, the study by Oakland and Tanner (2007) of factors for change concludes that senior managers identify and choose their priorities for change based mainly on cost and financial consideration, granting little support to improved efficiency in relation to customers and operations. The incorporation of strategic priorities in this study also provides new parameters for the discussion.

In our opinion, the general explanation of all these results can be found in several lines of argumentation. The first relates the debate on covariance vs causality of QM to the positive perception managers have of their current actions and, as a result, to the persistence of strategic options (Hambrick *et al.*, 1993). The study by York and Miree (2004) shows that there is difference between the performance of firms that possess these systems and firms that do not, in different industries. But this study also shows that these differences exist both before the implementation of these systems and after, thus leading one to deduce a relationship of more of covariance than of causality between the two variables. From this proposal, the firms that adopt quality systems are the firms that have already been obtaining good results. That is, the better

the results, the greater the probability of implementing QM systems. If this is the case and managers believe that their firms have greater success over competitors, it is more likely that they will believe that they should not revise their current policies, such that QM implementation could be considered a simple mechanism that enables them to maintain the status quo. Further, could the adoption of QM systems simply be a question of image for organizations? This might explain why the orientation to differentiation in marketing is greater for general managers than for quality managers.

The idea that QM has a double face, suggested by Zbaracki (1998), also provides arguments to explain part of the results achieved. This study suggests that there are two versions of TQM: the technical and the rhetorical. The technical version of QM consists of a series of interventions with clear rules of use and analysis of information. The rhetorical is characterized by an excess of ambiguous terms with unclear organizational implications. Using the assumptions of institutional theory, Zbaracki explains the relationship between the two views and describes the process by which the symbolic value of a thing – for example, QM – supplants its technical value. Thus, QM gains in institutional value over time because it becomes the accepted way of doing things. Using QM can provide an organization few technical benefits, but its use confers legitimacy on the organization. As a result, managers will use QM rhetoric to gain legitimacy without affecting technical activities in the organization.

In spite of the interest of the results obtained, this research has some limitations. Methodologically, the study is based mainly on cross-sectional survey research, which provides limited longitudinal evidence for exactly how strategic priorities induce QM and financial performance, as well how QM leads to financial performance. Another limitation is related to the fact that the data used in our study were obtained in 2000. Although we have contrasted the validity of the results with different experts and individuals in charge of quality in firms and although recent studies like those by Jung *et al.* (2009), Prajogo and Sohal (2006) and Prajogo (2007) confirm the results that we have obtained, future studies should replicate the findings with more recent data. An additional limitation involves the scope of this research, which is limited to study of firms in the EU context.

The limitations of the analysis performed suggest lines of research that could enrich the analysis of the role of management in the implementation of QM systems substantially. It is necessary to keep advancing in this line to achieve more clarifying data. A first step would be to expand the study sample, since the subsample for general managers was not very large. Information on functional experience or training could clarify the strategic focus adopted by managers. For example, Barker and Mueller (2002) examined the relationships between the characteristics of the CEO and investment in R&D and found that younger directors and those with experience in marketing, engineering, and R&D make greater investments.

In addition, another variable of interest that future research should consider is perception of the environment, since managers are an important means through which organizations respond to and manage the threats and uncertainties in the environment (Harrison *et al.*, 1988). That is, organizations' actions are based in part on the perceptions top management has of its environment (Sutcliffe and Huber, 1998). On the other hand, many firms decide to implement quality systems to face changes in the environment. In fact, studies show that greater dynamism and competitiveness of the environment will require greater levels of implementation in some elements to achieve the expected results (Fuentes-Fuentes *et al.*, 2004).

Future research should also focus on determining the contribution of management's commitment and leadership and its strategic priorities in sustaining QM over time. For example, Daft and Weick (1984) conclude that one of the determinants of the creation of the manager's vision is his or her previous experience. Since experience is difficult to codify, some studies have used the perspective of the resource-based view to justify the perspective that managers' vision is inherently tacit in nature and difficult to imitate. Thus, leadership has the potential to create barriers to imitation. The focus of institutional theory (Zbaracki, 1998) or the models proposed in prior studies (Lakshman, 2006; Savoilanen, 2000) should also serve to guide future research.

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Further reading

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Appendix

Items indicated with (–) are reverse scored.

The items with (*) have been deleted in the confirmatory factor analysis.

QM dimensions

(a) Leadership.

- LD1. Senior executives share similar beliefs about the future direction of this organization.
- LD2. Activities and investments that have long-term benefits receive little support from management. (–) (*)
- LD3. Employees have the opportunity to share in and encouraged to help the organization implement change.
- LD4. Managers and supervisors rarely allow employees to take necessary action on their own. (–) (*)
- LD5. Senior executives anticipate change and make plans to accommodate it. (*)

(b) Cooperation.

- T1. Managers emphasize activities that lead to a lack of cooperation between our organization and our suppliers. (–)
- T2. Management encourages use of few suppliers based on quality rather than on price alone. (*)
- T3. Managers, supervisors, and employees from different departments work independently to achieve their own department's goals. (–)
- T4. In this organization, teamwork is commonplace – the expected way of doing business.
- T5. In this organization, everyone participates in improving our products, services, and processes.
- T6. Senior executives look at the “whole picture” when they make decisions.
- T7. Employees are hesitant to voice their opinions, make suggestions, or inquire about any of the activities of the organization. (–) (*)
- T8. Senior executives insist on accuracy and reliability of all information and communications within the organization.

(c) Customer focus.

- CF1. Our processes and activities are centred on satisfying our customers.
- CF2. Managers and supervisors encourage activities that improve customer satisfaction. (*)
- CF3. Satisfying our customers, and meeting their expectations, is the most important thing we do.
- CF4. Senior executives behave in ways that lessen the importance of customers. (–)

(d) Continuous improvement.

- CI1. This organization encourages continual study and improvement of all its products, services and processes.

- CI2. Employees usually do not get an opportunity to suggest changes or modifications to existing processes (-).
- CI3. Many of our products/services have been improved in the recent past.
- CI4. This organization has received recent compliment and recognition for improving its products/services/processes. (*)

(e) Process management.

- PM1. Preventing defective products/services from occurring is a strong attitude in this organization.
- PM2. The process used in this organization does not include in-process measures of quality. (-) (*)
- PM3. The processes for designing new products/services in this organization ensure quality. (*)
- PM4. Employees involved in different processes know how to use statistical process control methods to evaluate their processes. (*)
- PM5. Explaining the variation in process is rarely used as an analysis technique in this organization. (-) (*)
- PM6. In this organization, numerical quotas are not the only, nor the most important, measure of an employee's performance. (*)
- PM7. Managers and supervisors understand how to motivate employees and encourage them to perform at their highest levels.
- PM8. Senior executives look at the total costs of products and services, including indirect an overhead costs. (*)

(f) Employee fulfilment.

- EF1. My work duties and responsibilities contribute little to satisfying my need to create quality products/services. (*)
- EF2. I like my job because I am doing what I want to do.
- EF3. Employees in this organization are dedicated to their jobs.
- EF4. Managers and supervisors sometimes ask employees to compromise their desire for excellence. (*)
- EF5. Managers and supervisors create a work environment that encourages employees to perform to the best of their abilities.

(g) Learning.

- L1. Managers and supervisors ensure that all employees receive training that helps them understand how and why the organization does what it does.
- L2. Many employees in this organization do not possess sufficient knowledge about the basics of our industry. (2)
- L3. Few employees in this organization understand the basic processes used to create our products/services. (-) (3)

- L4. Top management has established an environment that encourages continuous education.
- L5. Managers and supervisors participate in specialized training on how to conduct business, whether dealing with employees or external customers.

Strategic dimensions

(a) Cost leadership.

CL1. Costs-reduction efforts.

CL2. Price-cutting ability.

(b) Marketing differentiation.

MD1. Brand image.

MD2. Advertising investment.

MD3. Marketing channels and service.

(c) Innovation differentiation.

ID1. R&D expenses/sales.

ID2. Number of new products.

Financial performance

FP1. Growth in profits.

FP2. Profitability growth.

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