

PERFORMANCE APPRAISAL AND REWARD SYSTEM AS MODERATORS IN A QUALITY MANAGEMENT CONTEXT. ARE RESULTS IMPROVED? EMPIRICAL EVIDENCE FROM THE SPANISH SERVICE SECTOR

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Abstract:

A company that is in the process of introducing Quality Management (QM) must pay particular attention to the design of its Human Resource Management (HRM) practices to ensure they are appropriate for use within a context of QM and help to improve results in the organisation. The aim of this study is to contribute to the debate on the advisability of carrying out performance management practices within the context of QM by analysing the extent to which performance appraisal and compensation act as moderators in the influence of QM on results. The hypotheses proposed here are examined in an empirical study conducted on a sample of Spanish service firms. Findings show that performance appraisal positively influences the moderating effect of QM on people results and financial results. The reward system, however, does not seem to have such an effect.

1. INTRODUCTION

In today's business environment, where firms must struggle against a great deal of competition and adapt to frequent changes in their surroundings, many organisations introduce different kinds of changes and try to incorporate new organisational practices to enhance their viability. Quality Management has been recognised in many studies as a means to improve the organisation's results and business competitiveness (Hendricks and Singhal, 2001; García and Ramírez, 2010).

In the literature most scholars appear to agree that for Quality Management to be successful it must be accompanied by human resource practices. The link between Quality Management (QM) and Human Resource Management (HRM) has been a matter of interest in research within the field of business administration for several decades. This interest arises from the importance of HRM in the introduction of a QM initiative, given that through human resource practices it becomes possible to exert an influence on employees' attitudes and their commitment to work, as well as the knowledge and skills needed in such initiatives (Boon et al., 2007). In this sense, High Performance Work Systems (HPWS) are noted by authors such as Wilkinson et al. (1998) or Bayo and Merino (2001) as being useful tools to enhance the success of QM. The HRM practices included in these systems allow certain characteristics to be fostered within the workers which can facilitate the introduction of QM initiatives (Bowen and Lawler, 1992; Simmons et al., 1995). Although there seems to be widespread agreement among these authors on the majority of HRM practices that are most closely related to QM, there is still some controversy regarding one of the practices related to performance management. That is to say, although the HPWS include appraisal practices and compensation based on performance at work, part of the QM literature sees them as counter-productive.

Thus, there is an open debate in the literature on whether the appraisal of workers according to results and compensation based on performance is suitable or not within a QM context as a way to foster the attitudes and behaviours that are desired of employees. Critics take the teachings of Deming (1986) as the basis of their arguments. According to this author, performance management practices should be rejected because performance depends on the working systems rather than individuals, and evaluating workers in terms of goals that do not depend directly on them creates a feeling of helplessness in the workforce and can only end up demoralising them. The opposing standpoint argues that workers expect the efforts they make in their job and the contribution they make to the fulfilment of goals to be acknowledged and are grateful for such recognition. However, if this does not happen, then the workforce will become demotivated and lacking in commitment (Levine and Shaw, 2000). This second stance is also defended by authors like Allen and Kilmann (2001) or Chandler and McEvoy (2000), who showed that extrinsic retributions, skill-based pay and group-based compensation act as moderating variables between QM and certain forms of organisational results. Further still, Soltani et al. (2004,

2006) considered the definition of the characteristics that a performance appraisal system should have as an issue that has still to be solved in the quality management literature.

The aim of this work is to contribute to this debate by analysing the extent to which performance appraisal and compensation have a synergistic effect with quality management in order to improve people results and financial results. The study will take into account the moderating effect of the two human resource practices (appraisal and compensation), a topic that has not been considered in the literature to date. In this context, the purpose of this project is to contribute to the open debate on the advisability, as regards the implementation of QM, of performance appraisal and reward systems by attempting to analyse the effects that these kinds of practices have on people results and financial results. More specifically, in this analysis our aim is to address the true role played by appraisal and compensation practices, together with the possible synergistic effects they may have with QM.

2. LITERATURE REVIEW

The successful introduction of a QM initiative and being able to sustain it over time require the use of certain HRM practices in the organisation (for example, Dale et al., 1994; Wilkinson et al., 1998). Consequently, many of the studies that analyse the relationship between HRM and QM have focused on the HRM practices that make it possible to improve the organisational results derived from the QM initiatives (Soltani et al., 2004). If employees are given the opportunity to become involved in the quality initiative and are given training, assistance and recognition, they will understand the importance of their role in the implementation of QM and will be capable of making a contribution to the organisation's goals (Mandal et al., 1998). According to Wilkinson (1992), the aims of the social dimension of QM are to extend the responsibility for outcomes to all the employees in the company and to foster individual motivation in order to achieve quality.

A number of studies, such as Hendricks and Singhal (2001) or García and Ramírez (2010), acknowledge QM as the way to improve organisational results and the competitiveness of firms. In contrast, other scholars agree that the literature contains contradictory evidence on this issue, as well as acknowledging the fact that it is necessary to insist on research into the effects of QM upon organisational results. In this same line, other authors define QM as a system that fosters an organisational environment based on control and reinforces stability, which is counter-productive in increasingly changeable environments (Victor et al., 2000; Taveira, 2003; Soltani et al., 2008). QM could therefore be understood as an approach that exercises strict control in an attempt to maximise the employees' contribution to the organisation's results (Ramsay et al., 2000). Other researchers, such as Corredor and Goñi (2011), claim that companies with QM systems do not necessarily have better results. In this study our aim is to try to help settle this controversy by providing more empirical evidence obtained from an analysis of the effects of quality management upon both people results and financial results. Apart from these authors, the predominant stream in the literature holds that QM has a positive effect upon organisational results (Hendricks and Singhal, 2001; Shenaway et al., 2007).

Many studies have attempted to integrate HRM and QM (Snape et al., 1995; Simmons et al., 1995; among others). The successful implementation of QM requires a particular approach in the human resources strategy, since HRM practices play an important role in facilitating the implementation of QM and its repercussion on the organisational results (Snape et al., 1995). Thus a set of practices that enhance the effectiveness of QM throughout the whole organisation are fostered. In the selection policies, priority must be given to engaging people who are capable of solving problems, working with statistical tools and working in teams. It is necessary to provide training, not only on how to perform the tasks but on working in teams, on continuous improvement techniques or on time management; promotion should be less hierarchical and more interfunctional (Costigan, 1995; Snape et al., 1995). In this same line Bowen and Lawler (1992) proposed the existence of a set of quality-oriented human resource practices. Many authors (Pfeffer, 1998; Wood and Albanese, 1995) point out that HPWS are the most suitable for supporting QM, as they take such quality-oriented human resource practices into account (Wilkinson et al., 1998; Bayo and Merino, 2001). HPWS characterise a set of human resource practices that are aimed at improving employees' skills and knowledge, their commitment to the organisation and, consequently, labour productivity, whereby employees become a source of competitive advantage for firms. The practices that are contemplated in these kinds of systems foster

stability in employment, broad generalised training, empowerment, equitable compensation systems or communication systems that allow information to be made known to all the employees. Such practices make it possible to achieve the objective of QM-oriented HRM, which is to promote a climate of trust, commitment and involvement among employees that ensures the success of a QM initiative (Bou and Beltrán, 2005).

At the same time, some previous works, such as Simmons et al. (1995), Carter et al. (2000) or Tarí and Sabater (2006), note that the relation between QM and HRM is uncertain, since certain activities that characterise high-performance human resource systems, such as appraising performance and performance-based compensation, are not accepted by some researchers in QM.

Hence, the considerations discussed above suggest an opportunity to go on advancing in the relations between QM and HRM by studying the real effects that performance appraisal and the reward system have upon both people results and financial results.

Authors such as Roche (1999) or Guthrie (2001) consider that performance appraisal practices and performance-based reward are included within HPWS. Human resource management has defended the use of HPWS to improve organisational results. Within this kind of high performance systems, performance appraisal highlights the efforts made by management staff to devote more time to providing employees with feedback and to identifying areas where their performance needs improving (Snell and Dean, 1994). Recognition practices involve basing reward on collective results, on the skills possessed by employees or on the personal improvements that are accomplished. The logic that relates this kind of practices with improved organisational results is based on research conducted by authors like Pfeffer (1998). These researchers used the theory of human capital and resource-based theory as the basis on which to argue that implementing an HPWS helps stimulate a social climate of mutual commitment between organisations and employees, which are factors that are economically valuable, rare and difficult to imitate.

Some approaches to reward and the appraisal of employees may be counter-productive in organisations with QM systems. Several authors, such as Bowen and Snape et al. (1995) or Soltani (2005), have described an approach to performance management that is more in keeping with quality management.

As regards the appraisal of employees, because several individuals are involved in the processes and the results often depend more on the working systems than on individual contributions, this approach, which is consistent with QM, implies a shift away from individual appraisal towards a group-level appraisal system. Within HRM in consonance with QM, appraisal depending on the employees' skills must also be included.

As regards compensation consistent with QM, the literature highlights group-based compensation and skill-based pay rather than individual rewards. These characteristics seem to be in consonance with quality management, since they could foster teamwork and encourage employees to broaden and enhance their skills, thereby improving organisational results.

Performance appraisal and pay based on group performance and skills help generate the workforce commitment that is needed in a QM initiative. At the same time they may have synergistic effects on people results, such as reduced absenteeism, employee turnover or improved work relationships. As pointed out in the literature, a company with committed employees can be expected to have improved financial results. Thus we focus our research on observing how QM can be enhanced by human resource practices of appraisal and compensation in two kinds of results: people and financial.

Ooi et al. (2007) or Farndale et al. (2011) considered that workers expect to be recognised for the efforts they make in their work and for their contribution to the accomplishment of the company's goals. Workers perceive performance appraisal and reward systems as indicators of the organisation's commitment towards its workforce and, consequently, employees act in a reciprocal manner by also displaying their own commitment to the organisation. Authors such as Ooi et al. (2007) argue that reward and appraisal are valued by employees and can therefore motivate workers if carried out in an appropriate way, thereby favouring the overall participation of employees in the organisation. Furthermore, some researchers have considered the information implicit in the performance appraisal process to be an important form of recognition, which helps to increase workers' motivation (for example, Miao and Evans, 2007).

From the line of argument discussed above, the effects of QM on results can be expected to be greater when their application is supported by a performance appraisal approach and a reward system

consistent with QM. The QM literature holds that the acquisition of skills and development are the central axis of the success of a QM initiative. Therefore, appraisal and reward systems based on the groups' results and on the development of skills will be acting in the right direction to improve results when the company is carrying out a quality management initiative. Given the antecedents in the literature outlined above, in this research we aim to test the following hypotheses:

H1: The greater reward based on skills and group results is, the greater the positive effect of quality management on people results will be.

H2: The greater reward based on skills and group results is, the greater the positive effect of quality management on financial results will be.

H3: The greater appraisal based on development is, the greater the positive effect of quality management on people results will be.

H4: The greater appraisal based on development is, the greater the positive effect of quality management on financial results will be.

3. METHODOLOGY

3.1. Sample

The data needed to answer our research question were obtained from a sample of 219 service firms extracted from the information provided by the ARDAN databases. ARDAN is an information service that provides access to a database of over 80,000 firms operating throughout Spain. The research study was conducted in service sectors chosen according to their SIC code (70 catering, 73 commercial services and 89 assorted services, including services such as auditors or technical engineering offices). Services were selected according to the degree of interaction and adaptation to the customer (from a lower to a higher degree). The field work was conducted during the months of January to February 2006.

3.2. Variables

Control variables

Previous literature based on a more conservative approach recommends including as many control variables as possible (Becker and Gerhart, 1996; Huselid, 1995). In this study three control variables were selected:

- *Years QM* considers the years that the firm has been involved in quality initiatives.
- *Size* defines the size of the organisation and is calculated as the logarithm of the number of employees.
- *Sector*. This variable was defined by the SIC classification, in this case, three activity sectors being identified.

Independent variables

In our study we defined three independent variables: quality management (QM), reward (*Compensation*) and performance appraisal (*Appraisal*), of which the last two are moderating variables. These variables were submitted to a reliability analysis, the Cronbach's alpha values in all cases being between 0.712 and 0.939. Likewise, a factorial analysis of principal components was performed by means of varimax rotation. All the dimensions and variables represent one factor.

QM is a seven-dimensional construct in which we used the scale validated by Douglas and Judge (2001). For each of these dimensions of QM a principal components factorial analysis was performed to confirm the existence of those seven factors, each dimension being calculated as the mean of the items it was made up of. QM is calculated as the mean of the seven dimensions that it is composed of.

Dependent variables

In our research we defined two dependent variables: *people results* and *financial results*. These variables were submitted to a reliability analysis, a Cronbach's alpha value of 0.895 being found for *people results* and 0.954 for *financial results*. We also performed a confirmatory factor analysis of principal components by means of varimax rotation to check that the two variables really represent one factor.

3.3. Statistical process

We followed the recommendations of Aiken and West (1991) when carrying out the analysis of the interaction between quality management and compensation, on the one hand, and performance appraisal, on the other. These authors recommend centring the independent variables so as to be able to use these centred values to calculate the interactions or the products between the variables. These researchers also recommend following the hierarchical regression procedure, according to which the

principal effects of the control variables and the independent variables should be introduced first and the second-order or interaction effects must be introduced later. Thus, in our research, Model 1 includes the main effects and Model 2 considers the second-order or interaction effects between quality management and, separately, reward and appraisal.

4. RESULTS

In line with Aiken and West (1991), Table 1 shows the results of the hierarchical regression analysis, in our case, for two types of results. In our study, Model 1 takes into account the main effects of the control variables and the independent variables on the people results and the financial results. Model 2 shows the second-order or interaction effects between QM and reward and performance appraisal, that is to say, the extent to which reward based on group results and skills, and appraisal based on development together with QM amplify or enhance the effect of QM upon both people and financial results. This second model therefore considers the moderating effect of reward and appraisal.

Table I. Results of the hierarchical regression analysis

Variables	People results		Financial results	
	Model 1	Model 2	Model 1	Model 2
Years QM	0.040	0.038	0.029	0.027
Size	-0.043	0.017	0.113	0.161*
Sector	-0.074	-0.081	0.169*	0.163*
QM	0.187**	0.224**	0.181**	0.211**
Compensation	-0.048	-0.053	0.195**	0.191**
Appraisal	0.157*	0.229**	-0.010	0.049
QM X Compensation		0.029		0.023
QM X Appraisal		0.224**		0.183*
R ² ; F	0.167; 6.429**	0.211; 5.874**	0.188; 7.297**	0.218; 3.945*

Notes: n=219; * p < 0.05; ** p < 0.01.

The results of Model 2 shown in Table 1 confirm Hypotheses 3 and 4 and reject Hypotheses 1 and 2. The interaction between quality management and appraisal is therefore significant at 99% for people results and significant at 95% for financial results. In other words, it is confirmed and accepted that the greater development-based appraisal is, the greater the positive effect of quality management on people results will be. Similarly, the greater development-based appraisal is, the greater the positive effect of quality management on financial results will be.

In contrast, the interaction between quality management and reward is not significant. We therefore reject the hypotheses that the greater reward is, the greater the positive effect of quality management on people results will be, and that the greater reward is, the greater the positive effect of quality management on financial results will be.

In sum, findings show that the moderation hypotheses are admitted if the beta coefficient of the interaction terms or products is significantly different from zero. Thus we have that only the moderating and amplifying effect of the product between quality management and appraisal is significant for both people results and financial results.

5. CONCLUSIONS

The results of our study provide further empirical evidence in favour of the predominant stream in the literature that argues that quality management helps improve organisational results and competitiveness in firms. Hence, our work seems to run in the opposite direction to the arguments claiming that QM may not be suitable for changing environments as systems that foster an organisational environment based on control (for example, Taveira, 2003; Soltani et al., 2008) or arguments that suggest that firms with QM systems do not necessarily have better results (Corredor and Goñi, 2011).

In our study we have focused on analysing to what extent quality management reinforces the positive effect on people results and on financial results with the use of performance management practices suggested by the quality management literature.

The results of the hierarchical regression analysis have identified performance appraisal as a complementary variable to QM. Nevertheless, practices based on group results and on the skills developed by employees do not appear to improve the relationship between quality management and people or financial results. The effect of quality management on results does not change if firms use this kind of compensation.

The moderating effect of performance appraisal, which we obtain as a result of our research, is in line with the general arguments reported in the quality management literature. Employees are more committed to a system that, in addition, offers them the chance to participate and become involved in a quality management initiative, and to assess their efforts and their behaviour in the process, thus contributing to their development.

In contrast, our results do not support the conclusions reached by earlier researchers which show that reward systems act as moderating variables between QM and organisational results (for example, Chandler and McEvoy, 2000; Allen and Kilmann, 2001). These studies were focused mainly on the effect of interaction on economic and financial results. Our findings suggest that compensation practices can have the effect noted by authors such as Godard (2004) and Ramsay et al. (2000), i.e. they can lead to stress among employees, thus diminishing their commitment to the organisation. Accordingly, our results provide some ideas for the literature that analyses HPWS from a critical point of view.

In the case of compensation, our results seem to support the argument of Deming (1986), who claimed that performance-related pay systems are not consistent with a quality management approach. The characteristics of the reward practices suggested by authors such as Bowen and Lawler (1992) or Snape et al. (1995), although consistent with quality management, do not seem to help to enhance the effectiveness of QM. These findings could be explained because we have only taken into account two human resource practices and this could be a limitation of our study. We believe that performance appraisal practices and reward are linked directly to the organisation through its employees due to their motivating effect, and we have examined their particular influence on the effectiveness of quality management. Taking into consideration other human resource practices, such as training or recruitment, could help enhance the effect of quality management on both people results and financial results. This issue could be addressed in a future line of research.

As regards practical application, our study suggests that the effectiveness of QM is likely to be reinforced by orienting appraisal towards the group results and the appraisal of skills, thus providing employees with feedback with the aim of fostering their development. Our results shed some light on how administrators can use the performance appraisal system to ensure the effectiveness of quality management.

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