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Organisational profiles: key factors and results from the EFQM model perspective

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The aim of this research is to identify the organisational profiles; that is to say, the key management factors and the results which characterise them. We also analyse if these key factors and results are conditioned by the organisation's size and ownership. The methodology used to identify the organisational profiles is cluster analysis, mean and variance differences analysis, cross tabulation and Chi-squared tests. The data have been obtained from a sample of 205 Spanish companies which have been submitted to self-evaluation and external assessment processes using the EFQM Excellence Model. The results show that the organisational profiles of top scoring companies stand out for their strategic vision, for the effort that they make to fulfil the needs and expectations of their stakeholders, as well as the central role which human resources play in the strategy and their backing of training, learning and knowledge. Furthermore, these organisations are highlighted by the results that they attain related with people and key business results.

Keywords: excellence; management practices; results; EFQM model; profiles; cluster

1. Introduction

The advance of Total Quality Management (TQM) in the last decades is associated with the existence of much evidence in the literature of how the principles and key factors, which are characteristic of this management philosophy, can help to improve organisations' results (Gómez et al., 2017; Gómez-López et al., 2016; Hendricks & Singhal, 1997; Shenaway et al., 2007). These principles and factors come from organisational aspects (strategy, structure, customer and supplier management), managers (leadership, commitment), the way of managing tangible resources (technological, knowledge) or the organisational culture (Sila & Ebrahimpour, 2003).

Moreover, achieving the results planned is conditioned by the framework used when implementing the TQM principles and practices (Corredor Casado & Goñi Legaz, 2010). Thus, Yusof and Aspinwall (2000) differentiate three types of TQM implementation frameworks. On the one hand, those based on quality management experts or gurus (Deming, Juran or Crosby, for example); on the other hand, Models of Excellence; and, finally, those extracted after theoretical and/or empirical research. In the international area, the most widespread Models of Excellence are the Deming Prize in Japan, the Malcolm Baldrige National Quality Award (MBNQA) in the USA and the Model of the European Foundation for Quality Management (EFQM) in Europe. These are very similar models as to the fundamental concepts and the criteria which they use for evaluation. The main differences are found in the weightings granted to the criteria in their evaluation areas or in the

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application framework, given that each model tries to adapt itself to the particularities of its socio-cultural and economic reference context (Zairi & Alsughayir, 2011).

In this respect, studies such as those of Araújo and Sampaio (2014), Calvo-Mora et al. (2014), Gómez et al. (2017), Kim et al. (2010) and Westlund (2001) highlight how Models of Excellence offer the suitable reference framework for the implementation of TQM in an organisation, as it guarantees that the principles and key factors which are the basis of this philosophy are respected in their entirety, are transferred to the daily activity of the firms as a coherent whole and they are developed systematically and in a planned manner. Gómez et al. (2017) point out that although they are not exactly the same, there exists a strong relation between the EFQM Excellence Model (EEM) and the principles and key factors of TQM. This is noted when comparing the fundamental concepts of excellence and the enabler criteria of the EEM (leadership, strategy, people, alliances, and resources and processes) with the key factors of TQM identified in the literature. Thus, the EEM represents a good guide for the organisations which wish to introduce and manage improvement activities following the TQM philosophy.

In this context, the EEM does not explicitly establish the relations between the key management factors (enabler criteria) and the result criteria. However, there does exist recent research which identifies positive relations between both types of criteria (Belvedere et al., 2018; Calvo-Mora et al., 2018; Dubey & Lakhanpal, 2019; Gómez-López et al., 2019; Kafetzopoulos et al., 2019; Para-González et al., 2018). Though, as Gómez-López et al. (2019) indicate, the type of results which are obtained with the implementation of the EEM and their importance continue being pending matters. We accordingly propose the following research question:

RQ1: Can we identify organisational profiles related with the scores in the key management factors (enablers) and the results of the EEM in the organisations which make up the sample?

Unlike the majority of the preceding research which used surveys on the managers' perceptions, this study uses data extracted from the self-evaluation reports and external assessments of a broad sample of organisations to obtain the profile of excellent firms. Also, the identification of the organisational profiles enables us to check to what extent the EFQM 2020 Model reflects the key management factors and the results which characterise excellent organisations among its new assessment criteria; that is to say, those which achieve better scores.

Escrig and de Menezes (2016) note that as well as identifying the key factors and their influence on the results, it is important to analyse the conditions under which these factors function and that can be specific to the context. That is to say, the success in the implementation of an excellent management can be conditioned by factors such as the organisation's size, activity sector, experience or type of ownership of its capital (public or private) (Sila, 2007; Zhang et al., 2012; Zhao et al., 2004; Calvo-Mora et al., 2015).

A priori we consider that the organisation's public or private character could be a relevant internal contingent factor for the implementation and the success of TQM initiatives and excellence (Gómez-López et al., 2017). In any case, it is a variable which has been less considered in the literature than the size or other factors, especially when using business excellence models (Raharjo & Eriksson, 2017). Also, although TQM and business excellence have mainly been developed through experiences in private firms, the public area is also attractive for the application of their principles and practices (Eskildsen et al., 2004; Vinni, 2007). Hence, important objectives, such as the reduction of costs, the increase of efficiency, social responsibility, and the orientation towards the stakeholders are perfectly related with and demandable from public organisations (Boyne, 2002; Boyne &

Walker, 2002; Elg et al., 2017). To facilitate the achievement of these aims, public organisations count on the possibility of using standardised management systems (ISO 9000) and business excellence models, such as the EEM. However, the experiences in their application lead to contradictory results. For instance, Eskildsen et al. (2004) indicate that public and private entities do not attain the same results when applying the EEM. This is due to public organisations placing more emphasis on the management of people, while private organisations pay more attention to aspects such as leadership, and policy and strategy. On the other hand, Al-Majali and Almhira (2018) point out that the public organisations which have implemented the EEM did not obtain a significant improvement in employee results (empowerment and participation), although they achieved improvements in customer satisfaction, corporate image and the key results. We therefore propose the following research question:

RQ2: Do differences exist in the key management factors (EEM enablers), results and organisational profiles according to the organisation's public or private character?

On the other hand, one of the most studied internal contextual factors, but which still sparks debate, is organisational size (Calvo-Mora et al., 2015; Escrig & de Menezes, 2016; Sternad et al., 2019). In fact, for many authors it is one of the most important factors for the success of the implementation of a quality system or model (Hendricks & Singhal, 2001; Terziovski & Samson, 2000; Calvo-Mora et al., 2015). Proof of this is that until the appearance of the 2010 version of the EEM, there was a specific model for small and medium enterprises. However, it continues being a controversial topic, as there is research which does not find significant evidence that size affects quality implementation (Ahire & Golhar, 1996; Sila, 2007; Tari' & Sabater, 2004; Taylor & Wright, 2003), and even Powell (1995) goes as far as to declare that it is an impediment. That is why we propose the following research question:

RQ3: Do differences exist in the key management factors (EEM enablers), results and organisational profiles according to the organisation's size?

To try to achieve the aims previously pointed out, the work reviews prior studies on TQM critical factors, empirical quality and excellence management taxonomies. Next, the research's methodological aspects are shown and, finally, the results, conclusions, implications, limitations and future research lines are presented.

2. Theoretical framework

2.1. *TQM key factors and results*

The factors which determine success in the design, implementation, development and improvement of TQM are called key or critical factors (Jabnoun & Sedrani, 2005). The identification of these key factors has been addressed from different perspectives (Claver et al., 2003). Hence, we reckon with the contributions of quality gurus such as W.E. Deming, J.M. Juran and P.B. Crosby. We can also take as a reference the key factors which stem from theoretical and empirical works. In this case, the research has been abundant, a series of works standing out that are considered as pioneers, such as those of Saraph et al. (1989), Porter and Parker (1993), Flynn et al. (1994), Anderson et al. (1994) and Ahire and Golhar (1996). Finally, there are works which use the evaluation criteria present in the business excellence models as the key factors (Bou-Llusar et al., 2009). The management principles and factors which are most repeated in the studies are related with a culture oriented towards prevention and continuous improvement, the leadership and commitment of the management, training and learning, teamwork, the involvement of the workers,

customer and supplier orientation, a data-based management, strategic planning and the management and improvement of processes. In this sense, the key factors of TQM are included in the fundamental concepts of excellence and the criteria and sub-criteria which make up the EEM's structure (Calvo-Mora et al., 2014; Gómez et al., 2017).

Moreover, there is evidence in the literature which shows that the effective implementation of TQM enables organisations to improve their results (Shafiq et al., 2019). More specifically, positive effects of TQM on the results are identified, related with the improvement of the quality of products and services (Feng et al., 2006; Psomas & Jaca, 2016), the operational results of the processes (García-Bernal & Ramírez-Alesón, 2015; Psomas & Jaca, 2016; Tan, 2013; Tari et al., 2007), those which are economic-financial (Calvo-Mora et al., 2014; Dubey & Gunasekaran, 2015; O'Neill et al., 2016; Psomas & Jaca, 2016) or those related with the satisfaction of the internal and external stakeholders (Anil & Satish, 2019; Feng et al., 2006; Macinati, 2008; Mehralian et al., 2016). This complete typology of results is explicitly considered and analysed in the criteria resulting from the EEM (Bou-Llusar et al., 2009).

2.2. *The size and type of ownership as contingent factors*

In principle, larger organisations face a more complex management than small and medium enterprises (SMEs). Thus, SMEs have more flexible structures, are closer to their customers, have less bureaucracy and a smaller degree of formalisation of the processes. These aspects favour the effective implementation of TQM and business excellence (Jayaram et al., 2010; Terziovski & Samson, 2000; Calvo-Mora et al., 2015). On the other hand, SMEs tend to have strategic restrictions, a short-term view, trouble taking advantage of scale and scope economies, limitations as to their power of negotiation with suppliers and customers, and have a more difficult access to important resources, such as those that are financial or intangible (Ghobadian & Galleary, 1997; Sila, 2007; Zhao et al., 2004).

To sum up, size continues being a controversial topic as there are arguments both to think that it positively affects the implementation and success of TQM and business excellence initiatives and the opposite. For example, as Hendricks and Singhal (2001) point out, in SMEs there is the perception that business excellence models are more appropriate for large firms. Yet, SMEs which are winners of excellence awards obtain better results related with operational revenues, sales or net margin. Terziovski and Samson (2000), for their part, observe that larger firms obtain better results than smaller firms. A similar conclusion to that which Calvo-Mora et al. (2015) reach in a study using the EEM. Sila (2007), in turn, does not find arguments which support the existence of differences in performance based on the organisation's size.

Regarding the type of ownership, the administrative and bureaucratic management limitations which public entities face differ from those which private entities have to adopt (Boyne, 2002). For Swiss (1992), the management of quality should be modified to be successfully applied and to achieve the aims desired in the public area. This is due to the difficulties associated with the definition of the customers in the public area or with the fact that political motivations, beyond those which are strictly economic or to do with the market, become important in decisions (Smith, 2000).

Currently, the quality of public organisations is related with their ability to provide services which satisfy the needs and expectations of citizens at the lowest cost possible (Fryer et al., 2007). In the same line, the ability to use new information and communication technologies is associated with the quality, making the services provided to citizens more

accessible and faster (Denhardt & Denhardt, 2015). Other basic aspects are the awareness of the public employees through the dissemination of quality culture and the starting up of appropriate training processes for all the staff (Eskildsen et al., 2004). Furthermore, there are effective ways for public organisations to advance towards the fulfilling of these objectives with a guarantee of effectiveness and productivity, such as, for example, adopting business excellence models like the EEM (Mesgari et al., 2017).

2.3. The EFQM excellence model

The aim of the EFQM Excellence Model (EEM) is to support organisations to achieve sustained excellence through continuous improvement, learning, innovation and the deployment of the key processes (EFQM, 2013). Also, the EEM enables carrying out a thorough review of the management, obtaining comparisons with other organisations, disposing of a guide for the definition and deployment of the strategy, identifying capacities and key resources, as well as having a diagnostic tool and a measurement framework based on nine criteria (Gómez-López et al., 2016; Sternad et al., 2019). These criteria represent, on the one hand, the way in which an organisation acts – and progresses over time – in its search for excellence through the five so-called *Enablers* (what the organisation ‘does and how it does it’), and, on the other hand, the four which reflect the *Results* which the organisation attains regarding customers, employees, the whole of society and the key business elements, both at the strategic and the operational level.

The EEM’s logic is founded on a basic hypothesis: the achievement of excellent results in an organisation is directly related with the performance of its leaders, with the quality of its strategy regarding its conception and with its deployment through people, resources and processes (Araújo & Sampaio, 2014; Kafetzopoulos et al., 2019). Furthermore, it is a dynamic model, as it is understood that innovation, learning and creativity always based on the results achieved and on the analysis of their causes, boosts and drives the improvement in performance contemplated in the *enabler* criteria. This circular scheme in which the *results* feedback the enhancement of the *enablers* and these, in turn, bring about the achievement of better *results* according to a spiral of permanent growth, makes up a management philosophy in the which continuous improvement is the fundamental axis for the achievement of excellence (Bou-Llugar et al., 2009; Calvo-Mora et al., 2014). Due to all this, the EEM presents a complete, operational and useful reference framework for the effective implementation of the TQM philosophy in any kind of organisation (Ehrlich, 2006; Gómez et al., 2017).

As is laid down in the EEM itself: ‘Excellent Organisations achieve and sustain outstanding levels of performance that meet or exceed the expectations of all their stakeholders’. Thus, excellence is a way of managing and understanding the organisation which seeks that these organisations obtain excellent results not only at the economic level but also in relation with their customers, their workers and the whole of society. From these premises, it is considered that an organisation is really excellent when, as well as attaining results in terms of competitiveness within the market, it has a positive and sustained impact on its interest groups (Calvo-Mora et al., 2015; Para-González et al., 2018).

In the EFQM 2020 Model (EFQM, 2019) a complete block of criteria continues being dedicated to organisational results and the previous enablers are transformed into two large groups of criteria: those of ‘Direction’ and those of ‘Execution’. Also, the importance of the strategic purposes of the organisations (‘Direction’) and the need for them to manage their daily routine and their adaptation to the future with excellence criteria is reaffirmed.

On the other hand, the new EFQM model highlights aspects such as: the importance of the customers, the management of the stakeholders with a long-term perspective and the analysis of the cause-effect relations between why an organisation does something, how it does it and what it achieves as a consequence of its actions (EFQM, 2019).

To sum up, the very essence of the EFQM 2020 Model shows a connection between an organisation's purpose and its strategy and how this is used to help sustainable value creation for their key stakeholders and generate excellent results (EFQM, 2019).

2.4. Organisational profiles in accordance with the key factors of TQM and business excellence

Yeung et al. (2003) and Zhao et al. (2004) propose an empirical taxonomy of organisations according to the intensity of the key factors of quality management (QM) implementation and its effect on specific result averages (Table 1). To obtain the taxonomy, they use a cluster analysis and reach very similar results and conclusions. The combination of both studies enables identifying four types of quality systems (QS) according to their degree of development; that is to say, of the higher or lower scores which they attain in the key factors of the QM implementation and the results. The less developed QS are the so-called *Undeveloped QS*, which show a limited management leadership and commitment, do not count on formal systems of control and improvement of processes and present low levels as to strategic planning and the focus of human resources. At an intermediate level one finds the *Accommodating QS* in which the leaders are aware of the importance of quality, back teamwork and attach importance to the cooperation and training of the employees to achieve the continuous improvement of the processes. Thirdly, and highlighting a higher level of development, are the *Strategic QS*, which are characterised by counting on a quality-oriented culture, a clear leadership of the top management and a focus on processes. They also consider quality as a strategic question which it is necessary to integrate into the daily management and show a clear orientation towards the interest groups. As well as these three QS, Zhao et al. (2004) identify the so-called *Soft QS* which are characterised by a special attention to the social or *soft* elements of quality (culture, leadership and people) and to a lesser extent by what is technical or *hard* (processes management or planning). Centring on the results, the studies of Yeung and of Zhao conclude that the *Strategic QS* and the *Soft QS* obtain superior results to the rest: if the former stand out in organisational efficiency, the latter do so in employee and customer satisfaction.

Claver and Tarí (2003) and Lee et al. (2009) take a sample of firms certified with the ISO 9001 standard as a reference for their study. Via a cluster analysis they identify, on the one hand, organisations especially endowed in the implementation of QM principles and practices and, on the other hand, those which attain poorer performances. The more advanced certified firms stand out for their degree of implementation of the QS' technical elements (processes management and strategic planning) and human elements, which leads to a high commitment and involvement of human resources at all the levels. For their part, the less advanced firms present low levels of implementation of the QS' technical and human aspects, which influences the continuous improvement process, as they limit themselves to formally complying with the standard's requirements, but they do not completely benefit from its potential. In the results, the more developed firms stand out for their business results and for those related with customer satisfaction.

The main novelty of the work of Criado and Calvo-Mora (2009) is that they propose the construction of an indicator called 'predictor of reformed excellence' to identify the management system's critical aspects. Having constructed the indicator, they analyse the

Table 1. Empirical taxonomies of quality management practices.

Authors	Quality management practices	Results	Methodology	Taxonomy	Excellence management practices and results
Yeung et al. (2003)	Literature review: Top management leadership; Customer focus; Supplier management; Process control and improvement; Quality system procedures; Employee management system; Learning and teamwork; Communications and cooperation; Work information sharing; Spread of quality responsibility; Common quality tools; Specialised quality tools.	Time-based efficiency; Cost-related efficiency; Customer satisfaction; Marketing performance; Financial performance.	Cluster analysis	<ul style="list-style-type: none"> • Undeveloped QS • Framed QS • Accommodating QS • Strategic QS 	<ul style="list-style-type: none"> • Quality oriented culture • Management Leadership • Quality as a strategic issue • Stakeholder orientation • Organizational efficiency • Employee and customer satisfaction
Zhao et al. (2004)	Malcolm Baldrige National Quality Award (MBNQA): Leadership; Strategy; Customers; Measurement, Analysis, and knowledge management; Workforce; Operations.	Employee satisfaction; Organisational efficiency; Customer satisfaction; Financial and marketing results.	Cluster analysis	<ul style="list-style-type: none"> • Undeveloped QS • Accommodating QS • Strategic QS • Soft QS 	
Claver and Tarí (2003)	Literature review: Customer-based approach; Management commitment and leadership, visible before the eyes of employees; Quality planning; Management based on facts; Continuous improvement; Involvement of all members in the firm; Training; Work teams; Communication systems; Learning; Process management; Organisational awareness and concern for the social and environmental context.	Customer satisfaction; Employee satisfaction; Social impact; Business results.	Factor analysis Cluster analysis	<ul style="list-style-type: none"> • Levels of more TQM-advanced certified firms • Levels of certified firms less advanced in TQM 	<ul style="list-style-type: none"> • Process management y strategic planning (hard factors) • Human resources commitment and involvement at all levels of the organisation (soft factors) • Business results • Clients satisfaction

(Continued)

Table 1. Continued.

Authors	Quality management practices	Results	Methodology	Taxonomy	Excellence management practices and results
Lee et al. (2009)	ISO 9001(2000) standard: Customer focus; Leaderships; Involvement of people; Process approach; System approach to management; Continual improvement; Factual approach to decision making; Mutually beneficial supplier relationships.	Overall performance; Behavioural response.	Cluster analysis	<ul style="list-style-type: none"> • Firms with a high level of adoption in ISO 9000 • Firms with a lower level of adoption in ISO 9000 	
Criado and Calvo-Mora (2009)	Literature review: Implementation scope; Time frame of objectives; Urgency to obtain results; Investment required; Emphasis of effectiveness; Orientation to external clients; Management commitment; Communication; Involvement of external clients; Involvement of suppliers; Internal and external benchmarking; Management and staff training; Participation of internal clients; Failure reduction programmes; Process improvement programmes; Improvement teams and groups.	External clients results; Internal clients results; Economic results; Inventories	Creation of an Excellence Predictor (EP)	<ul style="list-style-type: none"> • Potential for success • Other archetypes 	<ul style="list-style-type: none"> • Broad scope of the QM system • Management commitment • Training and qualification of the human resources • Experience in QM system • External and internal clients results • Economic results • Inventories results
Escrig and de Menezes (2015)	EFQM Excellence Model: Leadership; Strategy; People; Partnership and resources; Process, products and services	Customer Results; People Results; Society Results; Business Results	Factor analysis ANOVA Regression analysis	<ul style="list-style-type: none"> • Recognised for Excellence 5 stars, 4 stars and 3 stars 	<ul style="list-style-type: none"> • Human resources management • Customers and business results

profiles of implementation as well as the results of the firms which have attained the highest levels of excellence for the indicator designed. With respect to the key factors of TQM implementation, the excellent organisations stand out for: disposing of a QS with a broad scope which encompasses the relevant areas of the organisation; counting on a management team which transmits its commitment with the continuous improvement at the internal and external level; developing significant efforts in the training of their workers; and, finally, being organisations which have an ample experience in management and quality improvement.

Escrig and de Menezes (2015) analyse the characteristics of excellent organisations, taking as a reference the level of EFQM recognition (5, 4 or 3 stars) attained by them. To this end, they use a regression model which allows them to identify the management practices which lead to obtaining the best results. In this sense, it is noted that the distribution of the scores of the sub-criteria in the three levels of recognition followed the same tendency, and that the highest score within the three levels is criterion 5 (Processes). Furthermore, the data do not contribute evidence of a specific combination of management practices helping to distinguish excellent organisations from those that are not, as in both types the criteria trends are similar. With respect to the association between the *enabler* criteria and those of *results*, the data show that excellent organisations give the former the same importance as those which are not excellent. However, the difference between both is in the degree of use of these criteria. In excellent organisations the relation between the management of human resources and the results is especially significant.

3. Methodology

3.1. Data collection and analysis

The data have been obtained from the results of the process of self-evaluation and external assessment followed by Spanish organisations using the EEM as a reference. The scores derive from applying the RADAR logic – Results-Approach-Deployment-Assessment and Review – and its score matrixes of the enablers and the results criteria. The score scale of the RADAR matrixes for the enablers is divided into 5 sections which go from the value 0 (Without evidence or anecdotal) to the value 100 (Total evidence). For the results criteria the scale also varies between 0 and 100, but the significance of the extreme values changes according to the type of result which is being analysed (trend of the results, fulfilling aims, comparisons with other firms, causes of the results or application area).

Given the research aim, cluster analysis is the most appropriate method for the data analysis (Hair et al., 2014). Applying this analysis, we achieve groups of organisations with similar characteristics between each other, these groups presenting a high degree of internal homogeneity and a high degree of external heterogeneity (with the other clusters). Moreover, two-phase cluster analysis is an exploration instrument proposed to discover the groupings of data which otherwise it would not be possible to reveal. The algorithm which this procedure uses includes diverse characteristics which distinguish it from usual cluster techniques. For example, it allows dealing with categorical and continuous variables at the same time, supposing that the variables are independent it is possible to apply a joint multinomial normal distribution for all the variables. But perhaps the most important aspect is the automatic selection of the number of clusters. Through the comparison of the values of a criterion of choosing the model for different solutions of grouping, the procedure can automatically determine the optimum number of groups. Two-step clustering also permits

analysing large data files. This method is especially appropriate if all the variables are continuous, such as is the case in this study (Bacher et al., 2004).

From the cluster results, it was considered necessary to do an analysis which would allow determining if the differences of the agent criteria values and the results of the groups or clusters identified were significant. To do so, we utilised the analysis of variance differences (Levene test) or of averages (*t* test) (Cliff, 1987; Ferrán, 2002). Likewise, to check if the variables size and/or type of ownership are correlated with the obtaining of more or less excellent results, we performed cross-tabulation tests with the corresponding calculation of the Chi-squared statistics (Cohen, 1988).

3.2. *Population, sample and measures*

The study population is made up of Spanish organisations committed with excellence in management and which apply the EEM. All of them have some kind of EFQM recognition (+300, +400, +500) (EFQM, 2013). According to the information which is gathered in the webpage of the partners of the EFQM in Spain (Excellence in Management – <http://www.clubexcelencia.org>), at the end of 2018 there was a total of 558 organisations registered. We received data from 205 firms (36.73%) which make up the definitive sample (Table 2).

Finally, the measurements correspond with the 23 sub-criteria related to the five enabler criteria and the 4 criteria of the EEM results. The data obtained through these measurements follow the ‘evaluation through the participation in prizes and excellence rewards’ methodology. In this methodology, the scores are extracted from the self-evaluation reports and the organisations’ external evaluation. So, the scores and evidence provided in the self-evaluation reports are examined and the organisations are visited to validate and verify the reports. In this way, the definitive scores are obtained. The reliability and validity of the measurements obtained via this methodology have been confirmed by previous research works, such as those of Pannirselvam and Ferguson (2001) and Suarez et al. (2016).

4. Results and discussion

4.1. *Cluster identification*

The variables used to identify the clusters were the average values of the EEM’s enabler sub-criteria. The cluster analysis was done in two stages and the classification which offers the lowest Bayesian Information Criterion (BIC) is that of two groups. Thus, taking into account the measurement of the silhouette of cohesion and separation, the classification can be considered good (Figure 1). Specifically, the first cluster includes 65 organisations (31.7%), while the second contains 140 (68.3%).

Figure 2 analyses the influence of each EEM enabler in the classification of the two clusters identified. Hence, it is noted that the most influential is Strategy, followed by

Table 2. Sample.

	Company size		Ownership of capital		Total
	SMEs	Large	Private	Public	
Frequency	123	82	158	47	205
Percentage	60%	40%	77%	23%	100%

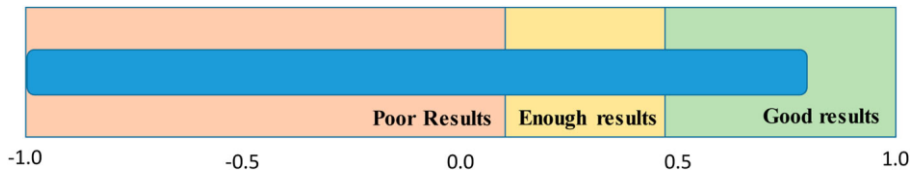


Figure 1. Cluster analysis quality.

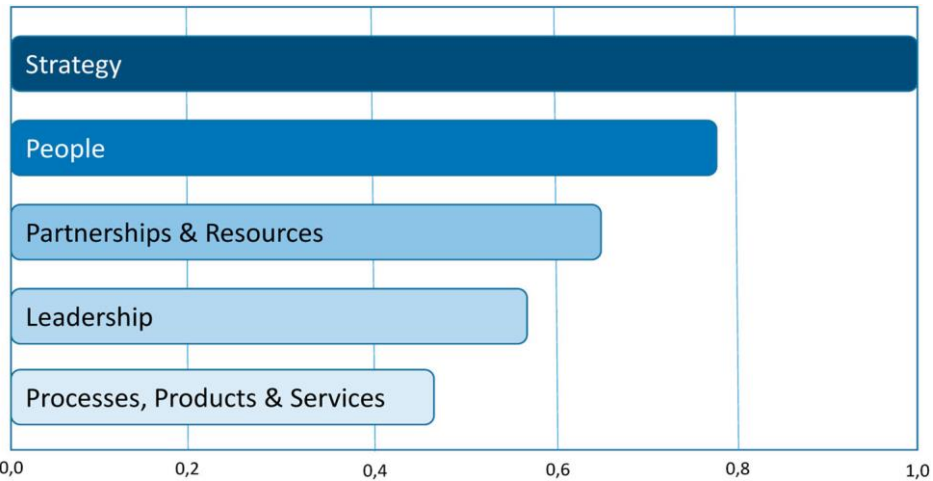


Figure 2. Classification of the Enablers according to their importance as predictors.

People and Partnerships and Resources. On the contrary, the Leadership and Processes, Products & Services criteria are those which have less discriminant power.

In this sense, the works of Zhao et al. (2004), Claver and Tarí (2003), Lee et al. (2009) and Calvo-Mora et al. (2015) note the importance of considering quality management as a question which must be integrated into the organisation’s strategy to attain a sustained success. Moreover, Escrig and de Menezes (2015) and Gómez-López et al. (2017) corroborate the importance of human resources management practices and other TQM soft factors to obtain superior performances.

On the other hand, the scant discriminating power of the criteria leadership and processes, and products and services could be due to a question of key factors which the organisation have very much interiorised and that they consider basic and fundamental to initiate the implementation and improvement of a management system which aims to be excellent (Calvo-Mora et al., 2014; Dahlgaard-Park, 2009; Mann et al., 2011). In this sense, if we pay attention to the model’s structure, the use of a scheme that goes from what is generic (fundamental concepts of excellence) to what is more specific is noted, this latter expressed with examples of observable actions and/or situations with the model’s follow-up as a management guide. Our attention is drawn to two of the fundamental concepts of excellence of the EEM being, precisely, the need to manage quickly in the current turbulent environments, implementing a management scheme by processes and of added value for the customers via the products and services. The need to use an inspiring and visionary leadership as a basic pillar of excellent management is placed at the same level.

4.2. Cluster analysis according to the enablers of the EFQM model

Figure 3 presents the average scores for the enablers of the two clusters identified. The organisations included in cluster 2 clearly have greater scores than those of cluster 1 in all the EEM enablers, so it must be understood that it represents the organisations which better manage excellence criteria. The organisations of cluster 2 obtain an average score of 42.5 points out of 100, while those of cluster 1 have an average of 24.7 points. These organisations, although involved in the development of excellent management, need time and resources to appropriately and very intensely implement the EEM enablers. Also, it is seen how the Processes, Products & Services criterion attains the highest score in both clusters. On the other hand, the lowest score is for Alliances and Resources in cluster 2 and for Strategy in cluster 1.

Table 3 shows that there exist statistically significant differences between clusters 1 and 2 as to the way of managing the organisation, analysed through the use of the EEM enablers. The difference between the averages of the enablers of the two clusters is greater in the criteria Strategy and People, and less in the criterion Processes, Products & Services.

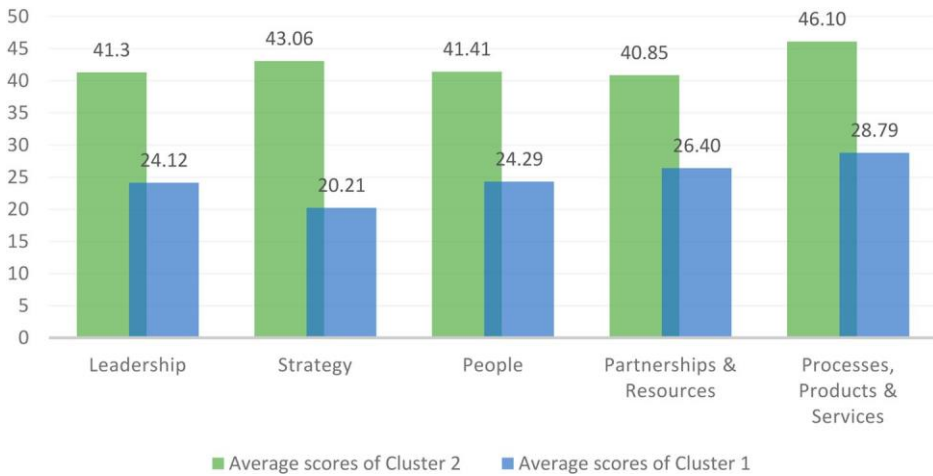


Figure 3. Average scores of the clusters for the Enablers.

Table 3. Comparison of the average scores in the Enablers.

			Analysis of difference between means					
	Means		Levene's test		95% confidence interval of the difference			
	Cluster 1	Cluster 2	F	Sig.	T	Sig.	Lower	higher
Leadership	24.12	41.30	15.32	.000	-8.43	.000	-24.425	-15.714
Strategy	20.21	43.06	84.02	.000	-15.1	.000	-19.742	-13.365
People	24.29	41.41	22.54	.000	-11.5	.000	-12.591	-7.159
Partnerships & Resources	26.40	40.85	17.15	.000	-11.3	.000	-21.357	-14.843
Processes, Products & Services	28.79	46.10	7.854	.000	-6.86	.000	-11.549	-6.893

This cluster 2 correspond with the so-called Strategic QS in the works of Yeung et al. (2003) and Zhao et al. (2004). They are organisations which stand out for considering management and improvement of quality and excellence to be a strategic question. They have an open and flexible culture, a staff (leaders and employees) committed to continuous improvement and especially based on an effective and efficient management of its processes to attain the best results.

Furthermore, the distributions of the scores of the criteria in the two groups obtained continue following similar trends. This confirms the thesis that excellent management practices must be implemented forming a coherent strategic whole; that is to say, through a perfectly designed and implemented management system (Calvo-Mora et al., 2005; Gómez-López et al., 2019). The difference lies in the intensity in the use of the practices. This result is similar to that found in the work of Escrig and de Menezes (2015).

4.3. Clusters analysis according to the results of the EFQM model

Figure 4 also shows important differences in all the average scores of clusters 1 (16.8 points) and 2 (33.8 points) for the results in customers, people, society and business. The high scores in absolute value attained by the organisations of cluster 2 in business results and in customers stand out. Our attention is likewise drawn to the low score attained by the organisations of cluster 1 in relation to those of cluster 2 as to the results in people: 13.57 compared to 32.85.

Table 4 notes that there are significant differences between the two clusters for the different results considered in the EEM. This fact clearly highlights that the organisations of group 2 have higher statistically significant performances than those of group 1. Furthermore, the difference between the averages of the two groups is greater in the people and business results, and less in the results in society and customers.

This validates what was already pointed out in the works of Mathews et al. (2001), Hongyi et al. (2004) and Gómez-López et al. (2019) in the sense that in excellent organisations the results related with people are as important as those of a strictly financial and

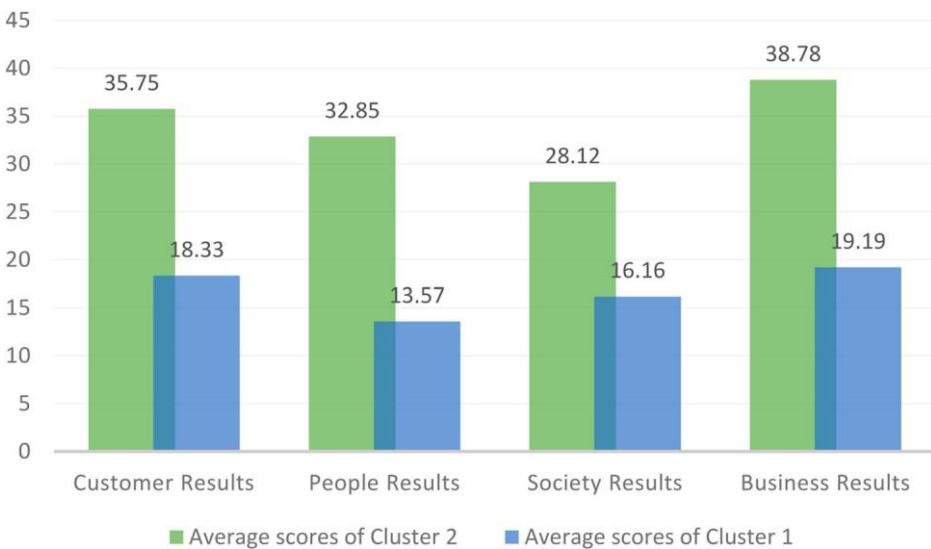


Figure 4. Average scores of the clusters for the criteria Results.

Table 4. Comparison of the average scores in the *Results*.

	Means		Levene's test		Analysis of difference between means			
					95% confidence interval of the difference			
	Cluster 1	Cluster 2	F	Sig.	T	Sig.	Lower	higher
Customer Results	18.33	35.75	13.05	.000	-10.6	.000	-22.35	-14.22
People Results	13.57	32.85	73.32	.000	-12.5	.000	-21.99	-15.85
Society Results	16.16	28.12	13.59	.000	-7.53	.000	-13.99	-7.58
Business Results	19.19	38.75	21.32	.000	-10.8	.000	-20.87	-15.14

commercial nature (business results). On the other hand, the fact that there are less differences between the organisation of both clusters related to the results in customers can be due to the orientation towards customers being a fundamental management principle which the organisations that embark on excellence initiatives are aware of (Soltani et al., 2005). As to the results in society, the same as in the study of Claver and Tarí (2003), they attain the lowest score in the results of excellent organisations. In this sense, as Ascigil (2010) and Olaru et al. (2011) note, the organisation's social impact takes time to appear and is not as easily perceived as another type of results.

With respect to RQ1 (*Can we identify organisational profiles related with the scores in the key management factors (enablers) and the EEM results in the organisations which make up the sample?*), the results show that *Strategy* is the most discriminant criterion when determining if an organisation is excellent in its management or not. The importance of considering quality as a strategic question which must be integrated into the organisation's planning has also been confirmed by the works on profiles of Yeung et al. (2003), Claver and Tarí (2003), Zhao et al. (2004) and Lee et al. (2009). This also being the criterion in which the differences between the organisation of clusters 2 and 1 are again more significant (Table 3). In Table 5 the average score of sub-criterion 2a stands out, referring to the effort which the organisation makes to comply with the needs and expectations of its stakeholders and to obtain information that allows it to know how the environment and the future trends evolve (Suarez et al., 2016).

The importance that excellent organisations seem to give to the criterion *People* must also be emphasised. For their part, Claver and Tarí (2003), Criado and Calvo-Mora (2009), Lee et al. (2009) and Escrig and de Menezes (2015) identify the management of human resources as a determinant factor in the profile of the firms which stand out in the management of quality and excellence. Thus, the scores attained for the sub-criteria related with the alignment between staff policies and organisational strategy (3a) and with the backing for training, learning and knowledge stand out (3b).

In relation to results the most important and significant differences between the organisations of cluster 1 and 2 are concentrated in the results of people and business. In this sense, the results of people are related with the way in which the organisation is managed. Logically, the specific management of people has a special impact but not only that. The way in which the leadership is exercised in the organisation also clearly influences these results (Para-González et al., 2018). The satisfaction of people seems to be sensitive to the organisation's strategy. When it is not known – or is badly known – and when this strategy is not capable of giving a clear meaning to the work of the organisation's

Table 5. Average scores of Strategy and People sub-criteria.

	Average scores
Strategy	
2a. Strategy is based on understanding the needs and expectations of both stakeholders and the external environment	46.46
2b. Strategy is based on understanding internal performance and capabilities	41.11
2c. Strategy and supporting policies are developed, reviewed and updated	42.40
2d. Strategy and supporting policies are communicated, implemented and monitored	42.29
People	
3a. People plans support the organisation's strategy	44.21
3b. People's knowledge and capabilities are developed	43.73
3c. People are aligned, involved and empowered	41.12
3d. People communicate effectively throughout the organisation	39.42
3e. People are rewarded, recognised and cared for	38.61

members, the results notably suffer (Suarez et al., 2016). In an identical line the way in which the organisation manages its processes seems to have an influence: their better functioning generates greater satisfaction among the people who materially carry them out, less complaints are caused and there exists a greater feeling of work well done (Safari et al., 2012).

Table 6 shows that the greatest weight in the results of people seems to be sub-criterion 7a, related to perceptions that the people who make up the organisation have of it. These measurements can be centred in the following areas: satisfaction, involvement and commitment; pride of belonging and of doing one's job; leadership and management, establishment of aims, management of competences and of performance; training and development of professional careers; efficient communication or work conditions.

Regarding business results and for the case of profit-oriented entities, the interpretation of this criterion is simple as excellent organisations, as well as carrying out good management and creating a good image among their customers, workers and surrounding society, must obligatorily generate economic profits (Calvo-Mora et al., 2014; O'Neill et al., 2016; Psomas & Jaca, 2016). In non-profit seeking entities, the basic aim is not strictly economic (at least in terms of profit), although this – understood in terms of efficiency – could end up being crucial in the face of the effective survival of the activity which it develops (Boyne, 2002; Elg et al., 2017). Furthermore, as is noted in Table 6, for excellent organisations the key economic-financial and non-economic results which demonstrate the success attained in the implementation of the strategy are again especially important (9a).

4.4. Analysis of differences regarding the ownership of the organisation

Next, it is analysed if the organisation's public or private character influences the organisational profiles. Having carried out the Chi-squared tests, Tables 7 and 8 show that there

Table 6. Average scores of People and Business Results sub-criteria.

People Results	Average scores	Business Results	Average scores
7a. Perceptions	35.48	9a. Business Outcomes	41.12
7b. Performance Indicators	30.22	9b. Business Performance Indicators	36.44

Table 7. Crossed table for ownership of the organisation.

			Cluster		
			1	2	Total
Ownership of capital	Public	Recount	16	31	47
		% within Public-Private	34%	66%	100%
		% within the cluster	24.6%	22.14%	22.9%
	Private	Recount	49	109	158
		% within Public-Private	31%	69%	100%
		% within the cluster	75.4%	77.86%	77.1%
Total	Recount	65	140	205	
	% within Public-Private	31.7%	68.3%	100%	
	% within the cluster	100%	100%	100%	

Table 8. Chi-Square test for the ownership of the organisation.

	Value	Gf	Asymptotic sig. (2 sided)	Exact sig. (2 sided)	Exact sig. (1 sided)	Probability in the point
Pearson's Chi-squared	.495 ^a	1	.452	.485	.312	
Correction of continuity ^b	.241	1	.598			
Likelihood ratio	.546	1	.461	.485	.312	
Fisher exact test				.485	.312	
Linear-by-linear association	.487 ^c	1	.457	.485	.312	.115
N of valid cases	205					

^a0 blocks (0.0%) have expected a recount less than 5. The minimum expected recount is 10.56.

^bThis has only been calculated for a 2×2 table.

^cThe standardised statistic is -0.711 .

does not seem to exist a relation between the organisation's public or private character and the cluster in which it is grouped (RQ2). It is noted that the percentages of public and private organisations in each group are similar.

This result is aligned with the postures which consider that the EEM can be constructed in a referent for the transformation and continuous improvement of the management of both public and private organisations (Elg et al., 2017; Raharjo & Eriksson, 2017).

4.5. Analysis of differences regarding the size of the organisation

For the size, the Chi-squared test (Tables 9 and 10) indicates that there is no relation between belonging to cluster 1 or 2; that is to say, between the organisational profiles and the organisation's size (RQ3). Thus, it is highlighted that the proportion of SMEs and large firms is similar in both groups.

This result is in the line of the works of Ahire and Golhar (1996), Tari' and Sabater (2004), Taylor and Wright (2003) and Sila (2007). They do not find a difference between the size and the implementation and the results of quality and excellence.

The previous results related with ownership and size confirm that business excellence models in general, and the EEM in particular, have an orientation, motivational, open

Table 9. Crossed table for organisation size.

			Cluster		Total
			1	2	
Company size	SMEs	Recount	42	81	123
		% within Company size	34.1%	65.9%	100%
		% within the cluster	64.6%	57.9%	60%
	Large	Recount	23	59	82
		% within Company size	28%	72%	100%
		% within the cluster	35.4%	42.1%	40%
Total	Recount	65	140	205	
	% within Company size	31.7%	68.3%	100%	
	% within the cluster	100%	100%	100%	

Table 10. Chi-Square test for the size of the organisations.

	Value	Gl	Asymptotic sig. (2 sided)	Exact sig. (2 sided)	Exact sig. (1 sided)	Probability in the point
Pearson's Chi-squared	1.571 ^a	1	.186	.219	.134	
Correction of continuity ^b	1.312	1	.241			
Likelihood ratio	1.589	1	.187	.219	.134	
Fisher exact test				.219	.134	
Linear-by-linear association	1.687 ^c	1	.196	.219	.134	.061
N of valid cases	205					

^aBlocks (0.0%) have expected a recount less than 5. The minimum expected recount is 24.71.

^bThis has only been calculated for a 2 × 2 table.

^cThe standardised statistic is 1.185.

and non-prescriptive or dogmatic character. Moreover, the EEM can serve to explore opportunities, to reflect and to act and is applicable to any organisation, be it public or private, large or small, which is immersed in a process of modernisation in response to the characteristics of its respective environments (Martín-Castilla & Rodríguez-Ruiz, 2008).

5. Conclusions and implications

From a theoretical point of view, the study has identified two groups of organisations or clusters from the scores obtained in the EEM enablers. In cluster 1 are the organisations which have attained the lowest scores in all the enabler criteria and especially in Strategy and People. Moreover, they are the ones which obtain worse results, the low score attained in People Results standing out.

Cluster 2 encompasses the organisations with better scores. These organisations obtain better scores in all the results criteria, the Business Results and People Results standing out.

The enabler criteria which most differentiate between the groups are Strategy and People, while those which least differentiate are Processes, Products & Services and Leadership.

As to the results, there exist significant differences between the groups in all the measurements of results, although those which obtain excellent organisations in People and Business Results especially stand out.

Finally, ownership and size do not seem to determine a firm being more or less excellent and the management practices that they use. In this sense, the possibility of applying the TQM principles and practices and the EFQM model in any kind of context and organisation would be confirmed.

On the other hand, the research seems to highlight some relevant practical implications. Firstly, that the Process, Products & Services and Leaderships criteria are not very discriminant to make a difference between more or less excellent organisations. In this sense, it seems to be deduced that to make excellence a reality there exist certain critical or basic questions if one wishes to have some possibility of obtaining the results desired: to implement a processes-based management system and in which special attention is paid to the so-called 'key' or 'operational' processes (those which end up being the basis of fulfilling the mission) (Dahlgard-Park, 2009); to dispose of products and services which add value to the customers by satisfying and surpassing their expectations (Mann et al., 2011); and counting on leaders capable of inspiring their staff, giving meaning to their work while acting as elements of reference in what is ethical (transparency, integrity, etc.) (Calvo-Mora et al., 2014).

In other hand, to achieve high levels of excellence what is crucial is the design and deployment of a good strategy that is accompanied by policies in which success is linked to the action of the people, an especially valuable resource (Prajogo & Sohal, 2006). Thus, excellent organisations prove to be those which have a clear sense of the mission, vision and aims, those which design integrated plans to attain the goals established and those which implement these plans giving special importance to the impact that they will have on the human resources (Bou-Llugar et al., 2009). It seems difficult to approach excellence without a good strategy which is well defined and implemented, but it is as difficult or even more so if this strategy and the plans which accompany it do not take care of a basic principle: the plans are carried out allocating resources and, of all of them, those which must be better considered and have the management's attention are the organisation's people (Hung, 2006).

These findings are coherent with the conceptual orientations of the EFQM Model. Hence, the new EFQM Model also highlights the importance of the strategy of the organisation (block of criteria called 'Direction'), of the definition of its purpose and vision, as well as the need to fit all of this into an organisational culture which supports the values of seeking leadership in its ecosystem.

The importance of linking strategy with policies which watch over the day-by-day management and the preparation for a future in permanent and rapid change is also stressed. All of this is clearly specified in the 3 criteria which make up the block of 'Execution' via the involvement of the stakeholders, the generation of sustainable value and the need to simultaneously manage the functioning and the transformation. In this context, knowledge management and the action of the people who make up the organisation are especially relevant for the present and future achievement of excellent results (EFQM, 2019).

Furthermore, organisations which back excellence stand out in the key results and those obtained concerning people. All this is after noting that they score in a clearly superior way in the set of criteria of the EEM results. It should be deduced from this result that really modern organisations are those capable of reconciling the demands of the different stakeholders, setting their sights beyond mere economic results (Suarez et al., 2016). In fact, the results indicate that excellent organisations adopt proposals of results that, without

neglecting those obtained in the short term, set the attention of their managers on attaining that these be maintained and improved in the medium and long term, combining them with others equally necessary. For example, those resulting from a concern for social questions, those which take care of others linked to the organisation's people and, of course, those which arise from listening, and a consideration of constant concern for customers through a clear market orientation. Although this could sound contradictory, this research demonstrates that the fixation in seeking short-term profitability is perhaps not the most profitable strategy if we look at the medium and long term (Soltani et al., 2005). Thus, it should be deduced that a concern for obtaining results, which are not strictly economic-financial is an intelligent action, contrary to what this could initially seem. In contrast to the idea that everything which is not centred on results of economic efficiency means a loss of competitiveness, this study shows that seeking other results which, a priori, have nothing to do with economics, becomes a key element in the long term for the survival, competitiveness and, in general, the organisation's success (O'Neill et al., 2016).

5.1. Limitations and future research lines

With respect to the size and the management practices, if we eliminate the micro-firms (less than 10 workers) from the group of SMEs, the small-medium organisations and large organisations fit what is understood as firms of great complexity. In this sense, the results obtained in our research are logical, although things could be different if the focus of the analysis were on the differences for the purpose of management between micro-firms and the remaining organisations.

As to the relation between the ownership structure and excellent management, firstly the separation between the public and the private must be highlighted. Although for the purposes of the research it is comprehensible to continue opting for that dichotomic distinction, it would be much more fine-tuned to resort to the concept of 'publicness' (Antonsen & Jørgensen, 1997) as a reflection of the greater or lesser presence of 'public' features in an organisation. The concept 'publicness' situates the question of the ownership structure in the terms of a continuous variable not one that is merely categorical, thus better fitting the observable reality.

Hence, facing future research, it would be interesting to address the impact of contingent variables on the management of excellence from the perspective of the economic sector, the staff's structure, the structural design or the level of automatisisation.


The data and the sample also have a series of limitations, given that it would have been especially interesting to consider a much more open sample of firms and in which the determination of those that are really concerned by the achievement of excellence had not been exclusively subject to the use or non-use of the EEM.


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