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Does the EFQM model identify and reinforce information capability?

Marta Zárraga-Rodríguez^{a*}, M. Jesús Álvarez^b

^aISSA, School of Management Assistants. University of Navarra, Cuesta de Aldapeta 49, San Sebastián 2009, Spain

^bTECNUN, School of Industrial Engineers. University of Navarra, Paseo Manuel Lardizábal 13, San Sebastian, 20018, Spain

Abstract

The efficient management of information is a success factor that has become critical in today's turbulent global environment. The quality of the information employed directly affects results, and a company can rely on the quality of information used when it has information capability. Total Quality Management (TQM) models and practices help organizations to achieve better results and to increase competitiveness. In order to successfully implement quality systems, organizations need an effective information system that provides quality information; therefore, we can assume that there should be a relationship between information capability and TQM models. The aim of this study is to explore whether information capability is identified and reinforced in companies when adopting a TQM model, in particular the EFQM model.

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1. Introduction

From the resource-based view (RBV) organizational theory, the key to the strategic success of a company lies in its organizational capabilities. In this paper we are focusing on what we call the information capability. We consider that a company has information capability when the use and management of information is so efficient that it is a source of competitive advantage for the company.

In today's turbulent global environment, organizations need to increase their competitiveness. Alfaro-Saiz et al. (2011) point out that a TQM model can be clearly used as an instrument to acquire and keep a leader position if it is properly implemented. A TQM model provides a framework for assessing organizational performance and self-assessment allows an organization to measure the situation it is in relative to its target excellence position. Thus, the model guides organizations in achieving better results by indicating areas of improvement.

TQM models are information intensive systems and thus, as García-Bernal & Ramirez-Aleson (2010) point out, organizational design problems regarding information should be avoided in order to properly adopt a TQM system. The implementation of a TQM model requires that the use and management of information is totally efficient, and therefore we can assume that information capability would be very helpful when implementing a TQM model.

* Corresponding Author: Marta Zárraga-Rodríguez. Tel.: +34-943-467144
E-mail address: mzarraga@unav.es

This paper deals with whether information capability is really a capability that a company has once it implements a TQM model. In addition, it highlights how the TQM model could help to promote and develop information capability in organizations. In particular, we review the EFQM model, which is the TQM model most widely used in Europe.

The first section of this work provides a conceptual overview of information capability from the resource-based view organizational theory. The second section provides a brief theoretical review of the EFQM model, and the third section explores the theoretical links between the EFQM model and information capability. The article ends with conclusions and future research lines.

2. Information Capability. Information Orientation

A capability is a source of competitive advantage for a company (Peppard & Ward, 2004; Ashurst et al., 2008, among others) that allows the generation of value and differentiation through the combined use of a series of resources. The strategic success of a company not only lies in the environment but also in the resources the organization has and in the strategic use that it makes of those resources. As we pointed out in the previous section, we consider a company to have information capability when the use and management of information is so efficient that it is a source of competitive advantage for the company.

Many authors have studied the positive impact of using information-related capabilities on company performance (Marchand et al. 2000, Bharadwaj 2000, Sharma et al. 2008, Marchand et al. 2009, Mithas et al. 2011, McLaren et al. 2011). Some conclude that there is a relationship between information capabilities and other business capabilities, which in turn directly impact company performance. For example, Mithas et al. (2011) demonstrated that “information management capability” plays an important role in developing other company capabilities: customer management capability, process management capability and performance management capability. It turns out that these capabilities favourably influence customer-focused performance, financial and market performance, human resources performance and organizational effectiveness.

Although the authors agree that effective use and management of information is key when talking about a company's results and business performance, they are not always focused on information system capability as a whole. Their studies only deal with the capabilities enabled by the company's information system or by its information technologies.

When we talk about information capability as a whole—that is, the effective use and management of information—we are taking the same approach as the one adopted in Marchand et al. (2000). These authors proposed the concept of Information Orientation (IO) as a managerial perspective that facilitates the effective use and management of information such that it adds value to a company's strategic orientation. According to these authors, Information Orientation results from the combination of three basic information capabilities: information technology capability, information management capability, and information behaviours and values capability. When these three capabilities are combined and work together, business performance is improved.

Marchand et al. (2000) define information technology capability as a company's ability to effectively manage appropriate IT applications and infrastructure. These are regarded as support for operational decision-making and communication processes related to operations, business processes, innovation and management.

Information management capability is defined as the ability of a company to manage information effectively over the life cycle of information use. This includes the information management processes that sense, gather, organize, process and maintain information.

Last but not least, information behaviours and values capability is defined as the ability of a company to instil and promote behaviours and values in employees for the effective use of information. They include integrity, formality, control, transparency, sharing and proactiveness.

All of the above leads us to state the following: if a company wants to adopt the Information Orientation approach so that its information capabilities become a source of competitive advantage, it should meet three prerequisites:

1. It has to ensure that it has the software, hardware, telecommunication networks and technical expertise to facilitate and expedite the processes of information management in terms of the operations, business processes, innovation and management in general.
2. It has to ensure that the information management processes are designed in order to sense, gather, organize, process and maintain information. Information distribution is also important, as Chou et al. (2007) point out, and should be taken into account even though Marchand et al. (2000) doesn't mention it.
3. It has to ensure that it spreads and promotes a culture of efficient use of information among employees at all levels.

3. TQM. EFQM

Total Quality Management (TQM) is a business management system focused on continual process improvement and the satisfaction of customer needs. Employee involvement in continuous improvement, the use of data and effective communication are also important characteristics of TQM.

In order to assess organizational performance, many TQM models have been developed to be used as a framework: the EFQM Excellence Model, the Deming Management Model, the Latin American model for Excellence and the Malcolm Baldrige Model.

The EFQM model is the TQM model developed and applied in Europe. It is based on nine criteria and 32 sub-criteria. The five criteria on the left-hand side of Fig. 1 are called enablers, and they cover what an organization does and how it performs activities. Enablers are related to leadership, people, politics and strategy, partnership and resources, and processes. The four criteria on the right-hand side of Fig. 1 cover what an organization achieves, that is, the results that the organization obtains. Results are considered in terms of customers, people (employees), society and shareholders. Enablers and results, which cover all areas of an organization's functioning, are evaluated and used as criteria for business excellence.

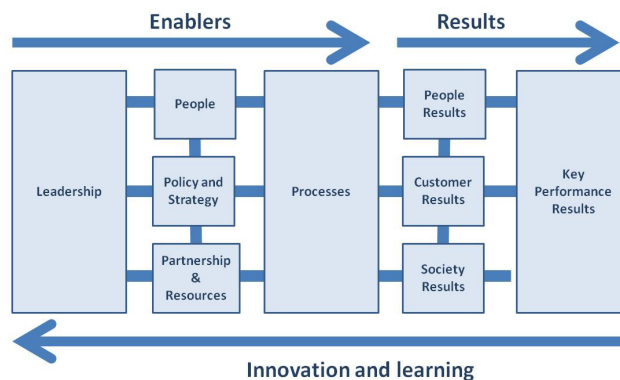


Figure 1. European model of quality (EFQM). *Source:* EFQM (2003)

4. Information Orientation in companies with the EFQM model.

Since the EFQM model serves as a framework that helps companies to improve management and results, we can expect that it takes into account the various capabilities companies have, but does the EFQM model help to promote and develop Information Orientation? Under this framework, information is identified as a key resource, but does this model also identify information capability?

We can state that information in the EFQM model is identified as a key resource because we find references to it as a resource when looking, for instance, at sub-criterion 2b (how policy and strategy are based on information from

performance measurement, research, learning and creativity related activities) and sub-criterion 4e (how information and knowledge are managed).

However, as the Information Orientation (IO) framework makes clear, the strategic use of this resource (information) could lead to a company gaining a competitive advantage to the extent that it has established a culture of efficient use of information, where information management processes are appropriately designed and the necessary resources for providing the company with the appropriate information technology are allocated.

Castresana and Fernández (2005) showed that the European quality model (EFQM) uses as theoretical basis the resource-based view organizational theory, and they analysed the usefulness of the model in identifying the most representative resources and capabilities of a company aiming to reinforce their use. They analysed each criterion of the EFQM model, including the sub-criteria that describe the model's meaning in detail, and they determined the kind of resources and capabilities measured by each criterion. As a result of their work, they established the relationships between the criteria of the EFQM model and the RBV.

As we mentioned above, the EFQM model proposes information as a resource. However, since this study deals with information capability, our aim is to analyse whether the EFQM model somehow measures information capability, which is the ability to manage information in an efficient way.

To that end, we reviewed the work of Castresana and Fernández (2005), and we found that they don't mention information capability at all; they just refer to some of the technological capabilities proposed by Bharadwaj (2000). However, some of the observations derived from their work on analysing the EFQM model from the point of view of RBV are interesting and help to align the model with the IO framework. So, we are going to overview their work pointing out the aspects that can help us to align the EFQM model with the IO framework.

Criterion 1: Leadership. Castresana and Fernández (2005) propose that criterion 1 measures the managerial capabilities but they point out two interesting aspects that reinforce the importance of Information Orientation. In analysing sub-criterion 1b, they state that organizational culture is key because it impacts the reception, interpretation and evaluation of information and therefore may influence strategy. In analyzing sub-criterion 1c, Hall (1993) emphasizes that the people managing an organization must act as a channel in order to transmit information internally and externally. Perhaps the EFQM model should emphasize the importance of values and behaviours associated with the efficient use of information as part of the culture to be transmitted by the leaders.

Criterion 2: Policy and Strategy. In this case, sub-criterion 2b directly reflects the importance of information as a necessary element in defining an organization's policy and strategy. However, the importance of information in every process of a company is not stressed enough.

Criterion 3: People. In analysing this criterion, Castresana and Fernández (2005) refer to De Saa and Garcia (2001), who point out the need for a communication system that is capable of gathering the ideas and suggestions of employees, which means that the organization must have a culture of openness. However, the EFQM model does not enhance the importance of a communication system that is capable of gathering information from all the stakeholders. The reference to a culture of openness points to a company's Information Orientation in the part that refers to the values and behaviours related to the efficient use of information, but it is too general to be useful.

Criterion 4: Partnerships and resources. Castresana and Fernández (2005) state that criterion 4 relates to managerial, technological and knowledge capabilities although they refer to information as an input that could provide differential advantage to the organization. When analysing sub-criterion 4e, they quote Fernandez (1993) in order to note the need for a system that facilitates and expedites the flow of information within and outside the organization. So in the end, only sub-criterion 4e refers to information, which it regards it as a resource, and thus it could be said that this sub-criterion is in line with the IO. Although technological resources are considered in a general way under this criterion, the first prerequisite we put forth at the end of the first section, namely that an organization has to possess the software, hardware, telecommunication networks and technical expertise to facilitate and expedite the processes of information management in terms of the operations, business processes, innovation and management in general, is not taken into account.

Criterion 5: Processes. Castresana and Fernández (2005) state that criterion 5 is related to organizational capabilities, production capabilities and dynamic capabilities. Although criterion 5 does not explicitly refer to the use and management of information, it refers to the need to systematically design and manage processes. Given that

the process of information management supports the rest of the business processes, there must be greater emphasis on the fact that the company should review its information management process in order to ensure appropriate design from the perspective of Information Orientation.

5. Conclusions

Information Orientation (IO), that is, a company's information capability as a whole, is an important aspect to bear in mind when implementing a TQM model. Successfully applying these models makes companies improve their results. That fact is enhanced when companies adopt the IO approach. However, this point is not highlighted enough in the literature.

Our analysis reveals opportunities for improvement in implementing the EFQM model when companies have IO.

For the criteria that are related to the enablers in the EFQM model, information is thought of as just a resource, and thus it is not given the importance that IO requires. By placing greater importance on information, the model would be applied more successfully and a company's results would improve.

Correctly applying the EFQM model requires control. Taking Information Orientation into account should assess processes. They must be under control and use the right indicators. For that reason it is important to have high quality data. This fact connects with the idea of having an information management process that is able to "sense, gather, organize, process and maintain", which was mentioned as one of the premises of information capability. In addition, the information management process should make the information accessible to anyone who needs it to help the organization perform correctly.

In order to elaborate and update the appropriate indicators that allow us to monitor the whole performance of the quality system, an information system designed according the IO approach would be the most suitable.

Finally, the EFQM model should also emphasize the importance of values and behaviours associated with the efficient use of information as part of a company's culture.

References

- Alfaro-Saiz, J.J., Carot-Sierra, J.M., Rodriguez-Rodriguez, R., & Javaloyes-Vivas, J.M. (2011). Seeking organizational excellence by using the information coming from the EFQM excellence model as starting point: an application to a real case. *Total Quality Management and Business Excellence*, 22 (8), 853-868.
- Ashurst, C., Doherty, N.F., & Peppard, J. (2008). Improving the impact of IT development projects: the benefits realization capability model. *European Journal of Information Systems*, 17, 352-370.
- Bharadwaj, A.S. (2000). A resource-based perspective on information technology capability and firm performance: an empirical investigation. *MIS Quarterly*, 24(1), 169-196.
- Castresana, J.I., & Fernández, R. (2005). Theoretical Foundation of the EFQM Model: The Resource-based View. *Total Quality Management*, 16(1), 31-55.
- Chou, T., Chan, P., Cheng, Y., & Tsai, C. (2007). A path model linking organizational Knowledge attributes, information processing capabilities, and perceived usability. *Information and Management*, 44(4), 408-417.
- De Saá, P., & García, J.M. (2001). El sistema de recursos humanos y el desarrollo de capacidades organizativas: una aplicación empírica en el sector de las cajas de ahorro españolas. *Cuadernos de Economía y dirección de la Empresa*, 8, 109-136.
- Fernández, Z. (1993). La organización interna como ventaja competitiva para la empresa. *Papeles de Economía Española*, 56, 78-193.
- García-Bernal, J., & Ramirez-Aleson, M. (2010). Increasing the organisational performance benefits of TQM: an approach based on organisational design. *Total Quality Management and Business Excellence*, 21(4), 363-382.
- Hall, R. (1993). A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strategic Management Journal*, 14, 607-618.
- Marchand, D.A., Kettinger, W.J., & Rollins, J.D. (2000). Information Orientation: people, technology and the Bottom Line. *Sloan Management Review*, 41(4), 69-80.
- Marchand, D. A., & Hykes, A. (2009). Using information to create value efficiently. *IMD*, 179.
- McLaren, T., Head, M.M., Yuan, Y., & Chan, Y.E. (2011). A multilevel model for measuring fit between a firm's competitive strategies and information system capabilities. *MIS Quarterly*, 35 (4), 909-929.
- Mithas, S., Ramasubbu, N., & Sambamurthy, V. (2011). How information management capability influences firm performance. *MIS Quarterly*, 35(1), 237-256.
- Peppard, J., & Ward, J. (2004). Beyond strategic information systems: towards an IS capability. *Journal of Strategic Information Systems*, 13, 167-194.

Sharma, M.K., Bhagwat, R., & Dangayach, G.S. (2008). Performance measurement of information systems in small and medium sized enterprises: a strategic perspective. *Production Planning & Control*, 19(1), 12-24.