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European Foundation for Quality Management Business Excellence Model

An integrative review and research agenda

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Abstract

Purpose – The purpose of this paper is to explore the nature of the research topics and methodologies used in the European Foundation for Quality Management (EFQM) Business Excellence Model studies, as well as to suggest a future research agenda.

Design/methodology/approach – An integrative literature review methodology was used to explore the diversity of studies being conducted concerning the EFQM model.

Findings – Results of the review indicate that the majority of papers are focused on too few research topics (e.g. performance measurement) with limited methodologies (e.g. case study).

Research limitations/implications – The paper enables researchers and practitioners to recognize the missing avenues of current studies and how these avenues could be improved. It provides ideas to stimulate researchers to take divergent and multiple methodological facts. It will be helpful to enhance both the quality and volume of the EFQM model studies.

Originality/value – This paper identifies the current status of the EFQM model studies in terms of research topic and methodological issues.

Keywords European Foundation for Quality Management, Business Excellence Model, Quality awards, Self assessment

Paper type Research paper

Introduction

The European Foundation for Quality Management (EFQM) Business Excellence Model is widely recognized as a representative theory to improve traditional total quality management (TQM) by expanding the narrow quality-oriented concept into a holistic management concept. The EFQM model, an integrative business system, covers all management activities composed of input, process, and output (Black and Crumley, 1997; Seghezzi, 2001). From this theoretical perspective, the evolution of the EFQM model inquiry should be based on various research topics and methodologies in order to cover a wide span of management areas. Despite the key issue related to the employment of research topics and instruments, examining current papers indicates that studies of the EFQM model have not addressed these concerns. Unfortunately, researchers made little effort to identify the current status of the field and propose future research areas. We argue that current studies on the EFQM model have missed the model's fundamental premise: emphasizing comprehensive exploration and implementation. A number of papers, for instance, have been focused on limited research topics, namely performance measurement and the EFQM model's paradigm (e.g. Bititci, 1995). Moreover, a dominant design for the research methodologies has



been the use of case studies. Consistent with the view of Kilduff (2006), it is, however, our argument that theory should be developed by constantly challenging the existing knowledge with various research topics and a variety of methodologies.

The purpose of this paper is to explore the nature of the research topics and methodologies used in EFQM model studies, as well as suggest three promising future research avenues. To achieve the objective, the research questions identified are:

- What are the research topics in the EFQM model studies?
- What are the varieties of research methodologies in the EFQM model studies?

An integrative literature review method is employed to analyze the EFQM model studies. This paper is organized into five sections. In section 2, a literature review addresses the nature of the EFQM model research in comparison with other quality models. In section 3, a research methodology is presented to explore published papers. Section 4 presents findings of the literature review to support the argument that most of the papers have used limited research topics and methodologies since 1994. Finally, we provide concrete ideas regarding a research agenda to address the identified limitations.

Literature review

The following section briefly describes the concept of the EFQM Business Excellence Model and associated methodological issues. This is central to understanding why we should explore EFQM model studies in divergent and multiple ways.

EFQM Business Excellence Model

The EFQM Business Excellence Model is a framework to assess organizations for the European Quality Award that aims to develop awareness of the importance of quality in the intensified global market (Evans and Lindsay, 2005). The objective of the EFQM model, proposed in 1992, is to support organizations to achieve business excellence through continuous improvement and deployment of processes (Andersen *et al.*, 2003). The model's important assumption is that excellent performances (e.g. customer and financial performance) are derived through five enablers (e.g. leadership, people and processes). On the basis of the premise, the model is divided into two areas – i.e. enabler and results – and allocates balanced weights (50-50) between the two areas. In particular, the results are comprised of people results, customer results, society results, and key performance results. The resulting criteria thus cover both tangible and intangible performance (e.g. employees' capability, strong relationship with customers, and organizational reputation). Using the model, organizations can develop tangible and intangible-oriented indicators, measure their performance periodically, and develop relevant enablers.

In organizations, the EFQM model is widely used in different ways:

- as a tool for self-assessment;
- as a way to benchmark with other organizations;
- as a guide to identify areas for improvement;
- as the basis for a common vocabulary and a way of thinking; and
- as a structure for the organization's management system (European Foundation for Quality Management, 2006).

Similarly, the EFQM model has been explored in terms of different tools for systematic performance management (Wongrassamee *et al.*, 2003), self-assessment (Tari, 2006), teamwork development (Castka *et al.*, 2003), integration issues (Davies, 2008), and benchmarking (Castka *et al.*, 2004). Among them, self-assessment is regarded as one of the most interesting topics for both researchers and companies implementing the EFQM model (Hillman, 1994; Samuelsson and Nilsson, 2002; Black and Crumley, 1997). This is because the self-assessment enables organizations to identify their strengths and areas for improvement. Based on the outcomes of the self-assessment, organizations can gain more objective and holistic views by comparing their results with other organizations. At the operational level, the outcomes also encourage managers not only to determine which key areas should be managed, but also to monitor a variety of activities in a controlled manner.

Comparison with other quality models

It is broadly recognized that the EFQM model, the Malcolm Baldrige National Quality Award (MBNQA) model, and the ISO 9000 quality management system standard have been significantly spotlighted worldwide (Oger and Platt, 2002). In terms of main similarities, the three models follow the principles of TQM that have ramifications for all functions of organizations. The quality-award models (the EFQM and the MBNQA models) concentrate on evaluating organizational progress toward TQM (Biazzo and Bernardi, 2003), while ISO 9000 promotes companies to implement TQM-centered principles (eight), such as customer focus (Lewis *et al.*, 2006). To produce ISO 9000 impacts, the principles should be widely applied and internalized in all aspects of the business, including suppliers and customers (Van der Wiele *et al.*, 1997).

All three models encourage companies to conduct value-added audits. In the quality-award models, the audit aims at identifying organizational strengths and improvement areas. In ISO 9000, the audit is an essential condition to obtain or renew a certification. Another similarity is that the three models emphasize process management to achieve organizational performance. To highlight the importance of process management, the MBNQA model allocates 100 points out of a total of 1,000 points to the criterion of process management (National Institute of Standards and Technology, 2009). The EFQM also posits that the process management is a bridge to mediate enablers and results.

With regards to the differences, the three models have different purposes and managerial areas. The objective of the quality-award models is to evaluate organization achievement and enhance awareness about the importance of quality and high performance, whereas ISO 9000 aims to assist companies to establish and maintain an effective QMS. The quality-award models cover all management areas, such as leadership and performance (Porter and Tanner, 1996). Companies should incorporate the quality-award models into corporate-wide issues and broad-range information sources (Czuchry *et al.*, 1997). In contrast, ISO 9000 focuses on only key processes and systems that influence quality and operational performance. Another difference is that the importance of each category in the quality-award models is unequally weighted. The award models also have a scoring scheme using numerical scores out of 1,000 points. In ISO 9000, on the other hand, all requirements are weighed equally. There is no weighting of managerial areas or requirements. ISO 9000 provides binomial outputs, certification or termination. Next, in terms of the maturity level,

applicants of the award models are in high levels of the TQM evolution stages (Czuchry *et al.*, 1997), while ISO 9000 certified companies are typically in an early stage toward establishing TQM (Mahadevappa and Kotreshwar, 2004). Companies of the award models have internalized TQM principles in their organizational systems and cultures (Czuchry *et al.*, 1997). Table I summarizes key features and components of the three models discussed in the literature (e.g. International Organization for Standardization, 2000, 2009; European Foundation for Quality Management, 2003; National Institute of Standards and Technology, 2009).

Research methodology

An integrative literature review methodology was used to explore the diversity of studies conducted concerning the EFQM model from 1994 to 2007. This methodology was employed for the following two purposes:

- (1) to offer a comprehensive picture of current research trends and themes by reviewing topics; and
- (2) to lead a much-needed discussion for future research (Torraco, 2005; Baumeister and Leary, 1997; Forza and Di Nuzzo, 1998).

The literature synthesis implements two different approaches, namely a qualitative (e.g. narrative literature review and systematic review) and a quantitative approach (e.g. meta-analyses). Even though there is much debate on which approach is appropriate in management research, each approach has both advantages and weaknesses. A narrative literature review, for instance, has been used in many papers because this method permits in-depth analysis to accomplish a research purpose. Researchers' subjective judgments, however, were considered as one of the representative limitations of the method. With this background, a quantitative meta-analytic approach has been tried in some research fields, such as public policy, psychology, and geophysical science (Forza and Di Nuzzo, 1998). The purpose of the meta-analysis is to reexamine prior statistical findings of empirical research. However, the meta-analysis, a positivist approach, also suffers from the following limitations:

- a problem of publication bias that journal editors are more likely to publish special results;
- disagreement over which study characteristics are important;
- equally weighted papers; and
- analyzing all empirical studies without considering their quality (Stanley, 2001).

Therefore, while the narrative literature review has been used when the objective of the research is to build and explore theory, the meta-analysis has been employed to retest prior statistical hypotheses (Baumeister and Leary, 1997; Nair, 2006).

On the basis of the above discussion, we argue that there is no single method to analyze papers published in journals. The most important concern should be to understand and employ an appropriate methodology for achieving a research objective and context. This paper chooses the narrative literature review because the purpose of this paper is to thoroughly explore the nature of research topics and methodologies employed in prior papers using quantitative and qualitative data.

Table I.
Comparison with other
quality models

	EFQM Model	ISO 9000	MBNQA Model
Purpose	To promote sustainable excellence in European organizations and to increase awareness of the importance of quality to their competitiveness across the European community	To assist organizations to implement and operate an effective QMS	To recognize US organizations for their achievements in quality and performance and to raise awareness about the importance of quality and performance excellence as a competitive edge
When established	In 1992 created by the EFQM	In 1987 established by the ISO	In 1988 established by the US Congress. National Institute of Standards and Technology (NIST) is responsible for designing and managing the award program
Basic premise	Excellent results with respect to performance, customers, people, and society are achieved through leadership, people, policy and strategy, partnerships and resources, and processes	Certain generic features of management practices can be standardized. A well-designed, implemented, and managed QMS improves confidence that companies' outputs will meet customer requirements and satisfaction	An organization can improve overall performance by concentrating on the Baldrige performance excellence criteria
Scope of the model	All activities and all interested parties of an organization	All requirements for a QMS	All activities and all interested parties of an organization
Applicability	Any kind of high performing organization operating within a European perspective in the public as well as the private sector (European-based national accredited award)	All types and sizes of organizations (an international standard)	Any organization headquartered in the US or its territories including US subunits of foreign companies, that are in the manufacturing, service, small business, education, and health care sectors (US-based national accredited award)
Key evaluation criteria	Leadership, people, policy and strategy, partnerships and resources, processes, people results, customer results, society results, and key performance results	Customer, management responsibility, resource management, product realization, measurement, analysis, and improvement	Leadership, strategic planning, customer and market focus, information and analysis, human-resources focus, process management, and business results

(continued)

	EFQM Model	ISO 9000	MBNQA Model
Fundamental principles	Results orientation, customer focus, leadership and constancy of purpose, management by processes and facts, people development and involvement, continuous learning, innovation and improvement, partnership development, and corporate social responsibility	Customer focus, leadership, process involvement of people, process approach, system approach to management, continual improvement, factual approach to decision making, and mutually beneficial supplier relationships	Focus on results, continuous improvement, delivery of value to customers, valuing employees and partners, focus on the future, innovation, management by fact, social responsibility, leadership, system perspective, and organizational and personal learning
Major model	The EFQM excellence model (a non-prescriptive framework based on nine criteria) for assessing an organization's progress towards excellence	The model of a process-based QMS describing the ISO 9000 family of standards	The Baldrige award criteria framework for designing, implementing, and assessing a process for managing all business operations
Type of audit	Self-assessment and external audit including a scoring scheme (total score of 1,000 points)	First-party, second-party, and third-party audit	Self-assessment and external audit including a scoring scheme (total score of 1,000 points)
Evaluation process	Decision to apply → preparation → self-assessment → submission of qualification file → introduction session with assessors → site visit sessions → feedback session → communication of the outcomes → receive the jury decision	Decision of the adoption → documentation and other preparation → internal audit → feedback of the internal audit results → document-based audit by third-party auditors → site visit audit by third-party auditors → decision of the certification → feedback of the third-party audit	Decision to apply → preparation → self-assessment → confirmation of eligibility → submission of application forms → independent review → consensus review → site visit review → judges' selection of the recommended award recipients
Output	Award The feedback report to identify strengths and opportunities for improvement and show scoring ranges in each criterion	Certification The audit report to include conformity or nonconformity with audit criteria and indicate opportunities for improvement	Award The feedback report to identify strengths and opportunities for improvement and show scoring ranges in each criterion

Table I.

This paper employed a four-step process to analyze the nature of research topics and methodologies. First, six keywords – “EFQM”, “BEM”, “business quality model”, “quality evaluation model”, “European quality model”, and “excellence business model” – were compiled to identify relevant studies using electronic databases (Business Source Complete and Emerald Library). Second, references of the relevant papers were examined to search papers that might be missed through the first process. Next, the quality of papers was assessed through an independent and a peer-review screening process where an associate researcher was involved. In particular, the peer-review screening process was conducted by asking critical questions to exclude papers that did not meet the selection criteria. For instance, the questions included, “Does the paper meet an academic standard in terms of structure?”, and “Is the methodology appropriately addressed in the paper?”. Finally, a data-extraction technique was employed to reexamine the result of the analysis from the previous step. The form includes information of the papers such as title, author, published year, research objective, research topic, and research technique. Through the final cross-checking process, 91 papers were identified as suitable to review for this paper.

The final list was analyzed using classification criteria that were widely used in operations management research (Schroeder *et al.*, 2005; Ahire *et al.*, 1995). The first classification criterion aims to understand general trends such as time distribution and co-authorship distribution. The second criterion is focused on the research method used in previous papers. The third criterion is seven research topics that are based on the EFQM sub-criteria.

Research findings

This section will address research findings in terms of general distribution, research methodology, and research topic. The three categories of analysis aim to identify theoretical and methodological trends and themes of the EFQM model studies.

General distribution

The general distribution is helpful to understand the history of the studies and the number of researchers who are involved in the study. First, analysis of time distribution from 1994 to 2007 reveals that studies on the EFQM model were actively started in 2000, because the majority of papers (75; 82 percent) were published during that time. Only 16 (18 percent) papers were, on the other hand, written from 1994 to 1999. Moreover, the greatest numbers of papers were published in 2003 (14 percent), 2005 (15 percent), and 2007 (11 percent). This indicates that in the 1990s there were very few scholars exploring the EFQM model. Next, analysis of co-authorship distribution shows that a total of 206 researchers have been involved in the EFQM model studies since 1994. The majority of papers (32 percent) were published by two co-authors, while 31 percent (28) were written by a single author. Thus, the majority of EFQM model research (63 percent) was conducted by a dedicated researcher or dyad.

Research methodologies

Table II shows the frequency of research methodologies used in EFQM model studies. The first finding is that the case study method has been used as a major technique. A number of papers (41; 45 percent) have employed the case study method. The case

Research topic	Overview		Conceptual		Case study		Empirical		Analytical		Simulation		Total	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
EFQM Model paradigm	2	2	7	8	2	2	8	9	0	0	0	0	19	21
Leadership and people	0	0	5	5	3	3	3	3	0	0	0	0	11	12
Policy and strategy	0	0	0	0	1	1	0	0	0	0	0	0	1	1
Partnership and resource	0	0	2	2	0	0	0	0	0	0	0	0	2	2
Processes	0	0	0	0	1	1	1	1	0	0	0	0	2	2
Customer and society	0	0	1	1	2	2	1	1	0	0	0	0	4	4
Performance measurement	4	4	4	4	32	35	12	13	0	0	0	0	52	57
Total	6	7	19	21	41	45	25	27	0	0	0	0	91	100

Table II.
EFQM Business
Excellence Model
research topic and
method

study allows scholars to recognize and improve useful best practices for managers (Karami *et al.*, 2006). In this sense, the majority of papers deal with practical topics:

- how to implement the EFQM model successfully;
- the main barriers to model success; and
- what factors motivate the implementation of the model.

The EFQM model has been widely tested in various organizations such as education, medical institutions, non-profit public organizations, and manufacturing companies.

Second, 25 (27 percent) papers employed an empirical approach with large-scale sample data. The broad survey-based inquiries were conducted to generalize the effectiveness of the EFQM model. While most papers mainly rely on quantitative techniques such as structural equation modeling, only a few papers employed qualitative techniques such as in-depth interviews or observation. Moreover, even fewer papers employed mixed method approaches (Naylor, 1999; Pritchard and Armistead, 1999; Dijkstra, 1997).

The conceptual approach (19; 21 percent) as the third major technique used. This is consistent with the fact that the studies of the EFQM model have been focused on analyzing and theorizing about the model itself, in order to make practitioners understand and promote the EFQM model. The relevant papers largely rely on qualitative approaches to explore theory building. Another finding of this research is that there are no papers using analytical or simulation techniques. The EFQM model, however, is based on the principles and practices of total quality management (TQM). TQM-oriented studies have frequently used mathematical and analytical models. Although the techniques can be complicated for readers, the techniques could be meaningful to understand and implement the EFQM model in complex situations.

Research topics

The majority of research topics involved performance measurement (52; 57 percent), followed by EFQM model paradigms (19; 21 percent), and leadership and people management (11; 12 percent). The result of our analyses also revealed that there is a serious lack of attention to other topics such as policy and strategy (1 percent), partnership and resources (2 percent), processes (2 percent), and customers and society (4 percent).

The most important finding is that the EFQM model studies have been concentrated on performance measurement and implementation of the EFQM model. The relevant papers (52; 57 percent) can be divided into three sub-topics:

- (1) self-assessment of organizational performances;
- (2) the effectiveness of implementation for individual organizations; and
- (3) the effectiveness of implementation across organizations.

Most papers have attempted to prove that the EFQM model is one of the best models to measure and improve organizational performance. It might be expected that a substantial number of papers were focused on performance measurement, since the EFQM model is developed for assessing organizations for the European Quality Award. While we agree that these efforts have played a crucial role in developing the model's reputation in both the private and public sectors, we also contend that the

dominant focus on performance measurement is the biggest barrier when broadening the scope of the EFQM model studies. This is largely because the model has a holistic assumption: excellent performance is derived through five enablers (e.g. leadership, people, policy and strategy, partnership and resource, and processes). Consistent with the views of Rusjan (2005), we believe that the EFQM model is useful to identify not a problem itself, but a problematic situation. In other words, the EFQM model does not offer any answers regarding how to improve upon an organization's strengths or weaknesses. It is important to explore these questions because the purpose of the EFQM model is to support organizations in achieving business excellence through continuous improvement and deployment of processes (Andersen *et al.*, 2003). Therefore, future research should be focused on exploring the enabler criteria such as leadership, people management, and processes in a new perspective, specifically quality and continuous improvement.

Research agenda

On the basis of the results of the analysis, we have developed a research agenda to advance the field. First, the themes in the sub-criteria (e.g. leadership, process, and customer) provide obvious research opportunities. The EFQM model is not a narrow performance management tool, since the EFQM model emphasizes a balance between five enabler sub-criteria and four performance sub-criteria. One of the limitations of the EFQM model is that there is a lack of guidelines for identifying problems that result from organizational weaknesses (Rusjan, 2005). Studying the sub-criteria topics will contribute to improving theoretical volume and quality. In particular, intangible-oriented sub-criteria (e.g. society, employee and customer results) are valuable research topics because there is no standard criterion on how to identify, measure and report non-financial performance. Unfortunately, while the majority of published papers explored the sub-criteria of performance measurement, only 29 percent of papers explored the remaining sub-criteria. Exploring various themes within the sub-criteria, however, can provide possible solutions to the following questions:

- What problems prevent strong performance?
- What critical factors motivate enablers?
- What measurements are beneficial to enhance performance?

Next, there is value added in discussing the EFQM model in the context of other emerging themes in operations management research. Supply chain management (SCM), for example, is one of the strong themes in a cross-enterprise and cross-functional context. From a SCM perspective, individual companies, holding isolated resources and information, do not effectively survive in intensified global competition. The supply chain widely covers all activities regarding information and material flow in delivering a product, sourcing raw materials, manufacturing, warehousing, and inventory tracking. It may be meaningful to explore SCM research not only within the EFQM model's sub-criteria (e.g. partnership and resource), but also separately between companies that have implemented both the EFQM model and SCM. Flexibility is another emergent topic. Quality is not considered a mandatory component, but an optional component for success. This is largely because a growing

number of factors influence success. It is therefore important to test the following questions

- What relationships and trade-offs, if any, exist between flexibility and the EFQM?
- How can flexibility affect the key performance metrics of the EFQM model?

A third challenge is for researchers to conduct empirical research using both quantitative and qualitative methods. The results of the analysis indicated that the majority of studies (41; 45 percent) employed the case study methodology. Using the case study methodology permitted in-depth observations and context-based interpretations for a single, or a limited number of companies that applied the EFQM model. Further empirical study, however, will provide an opportunity to examine, and generalize, the research findings in different organizations or industries. Furthermore, further empirical work should consider the value of both quantitative and qualitative methods. Although the quantitative method has played a significant role in improving the EFQM model studies, the qualitative method has an important role to play in helping us to better understand the context surrounding the quantitative results (Murphy and O'Brien, 2006).

Conclusion

TQM is often regarded as a “fallen star”, since TQM was difficult to apply practically to companies (Dale *et al.*, 2000). However, we argue that it is not time to judge whether TQM succeeded or failed. The main reason for this line of reasoning is that TQM has constantly evolved. The most important concern should be to recognize the current status of EFQM model studies and how to improve inquiries in terms of theoretical and practical perspectives. With this backdrop, this paper explored the EFQM model studies in order to identify current trends and propose future research avenues. The results of our analysis of EFQM model studies indicate that current studies have missed the model’s holistic approach. First, there is a lack of breadth in research topics to explore the EFQM model from multiple angles. Current papers have mainly focused on performance measurement and the EFQM model paradigm. Second, the majority of papers have employed a case study method to generate or test theory. We have argued that these narrow approaches do not fully cover the comprehensive aspects of the EFQM model, and significant contributions to theory and practice may be readily available from a more rounded use of the model.

This paper contributes to the literature and practice in the following ways. First, this paper identifies the current status of the EFQM model studies in terms of research topics and methodological issues. This will allow researchers and practitioners to recognize the missing avenues of current studies and how these avenues could be improved. Next, this paper provides research ideas to stimulate researchers to explore divergent and multiple methodologies. It will be helpful to enhance both the quality and volume of the EFQM model studies.

We readily admit a few limitations of the current study. First of all, the results of our analyses are based on peer-reviewed papers that were written in English. Future research could utilize various sources including conference proceedings, books, and working papers, including those from Europe and the Pacific Rim that may not be written in English. Next, we used only six keywords to search relevant papers and

analyzed the papers by using first order statistics. Other important keywords and second order statistics, however, might lead to slightly different issues. Third, this paper employs a qualitative analysis methodology, namely an integrative literature review. In order to minimize the authors' biases such as researchers' preferences, quantitative approaches (e.g. meta-analysis) could also be conducted to compare and contrast the performance of various models.

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