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Sustainability and Quality Management: has EFQM fostered a Sustainability Orientation that delivers to stakeholders?

Sustainability
and Quality
Management

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Abstract

Purpose – As a Quality Management (QM) framework, the European Foundation for Quality Management (EFQM) Excellence Model has stakeholder management at its core. In EFQM (2012), based on which assessments were made until 2021, “creating a sustainable future” was a fundamental principle, but how it translated to a Sustainability Orientation and delivered to stakeholders remains questionable. This study aims to investigate the Sustainability Orientation within EFQM (2012) and its associations with Results for stakeholders.

Design/methodology/approach – Longitudinal assessments of recognized-for-excellence organizations by a partner of EFQM are considered. Using factor analysis, scores on the sub-criteria that defined “creating a sustainable future” are investigated, and a Sustainability Orientation is inferred. Panel regressions and structural equation modeling assess the correlations between Sustainability Orientation and Results. A qualitative analysis follows, where sustainability reports from role-models within this population are text mined to examine whether and how they reflected the guidance in EFQM (2012) concerning “creating a sustainable future”.

Findings – Direct and indirect positive associations between the Sustainability Orientation implied by EFQM (2012) and stakeholder-performance are confirmed. Yet, inferences from text mining of reported priorities of role-models of excellence illustrate that EFQM (2012) might have driven different strategies towards sustainability.

Originality/value – Despite conceptualizations that the EFQM model embeds a Sustainability Orientation, to the best of the researchers’ knowledge, its existence and likely impact remain to be examined. By combining longitudinal statistical analysis, structural equation models and text mining, consistent insights on the link between Sustainability Orientation and organizational performance are obtained.

Keywords Sustainability, Quality Management, EFQM excellence model, Stakeholder’s theory, GRI reports, Longitudinal analysis, Text mining

Paper type Research paper

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1. Introduction

Following the Triple Bottom Line model (Elkington, 1999) and ongoing pressures towards Corporate Social Responsibility (CSR), business excellence has become associated with organizations doing the right things and demonstrating a Sustainability Orientation. Organizational policies and practices are therefore expected to reflect interactions with stakeholders, and concerns with the environmental and social impacts of their business, as well as economic performance (e.g. Khizar *et al.*, 2021). Nonetheless, for most organizations, continuous improvements in these directions are challenging, and how a Sustainability Orientation can be fostered and integrated into day-to-day operations remains debatable (Attig and Cleary, 2015).

Nowadays, Quality Management (QM) is about doing the right things right and contributing to the quality of society. Indeed, when considering the evolution of QM, scholars (e.g. Zwetsloot and van Marrewijk, 2004; Foster and Jonker, 2007; Zink, 2007) have highlighted how focus has evolved from customer satisfaction to stakeholder-engagement. In particular, the EFQM Excellence Model defines Enablers and stakeholders-Results, and is expected to foster a Sustainability Orientation (Pérez and Escrig, 2018; Neri *et al.*, 2019). Concerns with stakeholders are even more salient in its latest revision, EFQM 2020, which is grounded on the United Nations' Global Compact and Sustainable Development Goals (SDGs). Specifically, EFQM (2012), for which historical data are available, defines a Sustainability Orientation through its principle of "creating a sustainable future". Accordingly, seven sub-criteria are indicative of this principle, and a Sustainability Orientation would be manifested in the extent of ethical leadership, dialogue with key stakeholders, integration of sustainability into the organizational strategy and in having "people, planet and profit" as reference for decision-making.

In this context, several authors (e.g. Quintana *et al.*, 2018; Sila, 2018, 2020; Abbas, 2020) addressed how QM enhances CSR, and assumed that these concepts are separate. Within case-studies on the EFQM model, however, some authors concluded that the model could imply a Sustainability Orientation (e.g. Pedersen y Neergaard, 2008; Ascigil, 2010; Medne *et al.*, 2020). Still, there were arguments that many adoptions of the model lacked strategic thinking or consistency (Gómez *et al.*, 2015; Pérez and Escrig, 2018), and that the economic impact was generally prioritized (Asif *et al.*, 2011; Siva *et al.*, 2016; Jabnoun, 2019). Indeed, there is a broader debate on whether business excellence models and quality awards are capable, or flexible enough, to jointly respond to multiple stakeholders with varying demands (Enquist *et al.*, 2015). Overall, the efficacy of the EFQM model in fostering sustainability remains a point of contention.

This study uses historical assessments' scores by EFQM's Spanish partner to examine whether recognitions for excellence have implied a Sustainability Orientation, and if so, whether such an orientation may be linked to stakeholders' Results. This is important since EFQM (2012) had been adopted by over 50,000 organizations worldwide (EFQM, 2020). Furthermore, as organizations consistently recognized at the highest level are role-models of excellence, and exemplify and disseminate best practice, a qualitative analysis of reported approaches towards sustainability provides insights into how the envisaged Sustainability Orientation translates into practice. This study therefore responds to calls for research on sustainability in business excellence (e.g. Hussain *et al.*, 2020), and informs scholars and practitioners whether a widespread QM framework can promote corporate sustainability and deliver to key stakeholders. It combines quantitative longitudinal data-analysis with text mining and qualitative inferences of sustainability reports. The context is Spain, which has the highest share of EFQM applications and recognitions in Europe (Arranz *et al.*, 2020), and where until April 2021 EFQM assessments were mostly based on EFQM (2012). Differently from previous research that addressed Enablers and their associations with Results (e.g. Bou *et al.*, 2009; van Schoten *et al.*, 2016), one of the fundamental principles of EFQM (2012) is here investigated.

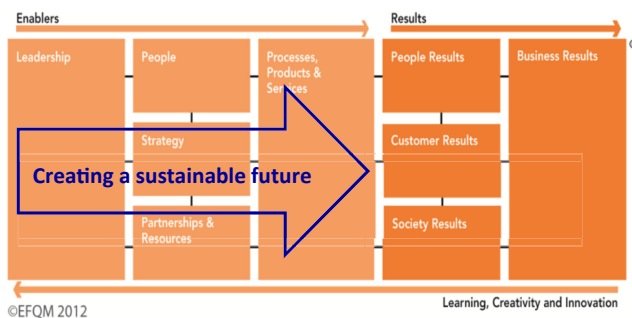
The present study contributes to the literature by clarifying whether a Sustainability Orientation was in fact embedded in EFQM (2012) and by providing further insights into the potential impact of the adoption of this framework on its key stakeholders. In the next section, first the theoretical background and hypotheses that lead to the longitudinal analysis are summarized; subsequently, the importance of role-models of excellence as disseminators of the EFQM framework is addressed, and the objective of the complementary qualitative analysis is set. In section 3, the data and the methodology are explained. Section 4 reports the empirical analyses. Finally, implications are discussed, and future research avenues and conclusions are drawn.

2. Sustainability and business excellence

2.1 Quality Management and EFQM recognition

QM is a continuous improvement approach that aims to exceed the expectations of all stakeholders (Sila, 2018). As a QM framework, EFQM (2012) provides a systematic process for organizations to thoroughly review how their operations are managed and perform. EFQM (2012) defines nine criteria, which are underpinned by 32 sub-criteria. As depicted in Figure 1, criteria are categorized into Enablers (Leadership, Strategy, People, Partnership and resources, and Processes, products and services), which cover practices and processes in the organization, and Results, which concern performance on key stakeholders' dimensions: Customers, People, Society and Business. In Figure 1, direct links imply that Enablers are expected to impact Results, and the feedback-loop highlights learning. EFQM (2012) was supported by the RADAR logic (Results-Approach-Deployment-Assessment and Refinement), which incorporates the Deming-Shewhart Cycle (Calvo *et al.*, 2018) thus providing a structure for the systematic review of sub-criteria in self-assessments and applications for recognition.

EFQM (2012) also described eight fundamental principles that were embedded in the model and integrated within different Enabler-criteria, namely: adding values to customer, creating a sustainable future, developing organizational capability, harnessing creativity and innovation, leading with vision inspiration and integrity, managing agility, succeeding through the talent of people, sustaining outstanding Results. As a whole, these principles offered an alternative, horizontal, reading of the model, which might have been more attractive to assessors and practitioners because they highlight the objectives underlying sets of sub-criteria. Since within these sets there are elements (sub-criteria) from different enablers, the principles are transversal (Calvo *et al.*, 2015), as illustrated by the horizontal arrow in Figure 1, where “creating a sustainable future”, which is the focus of this study, is highlighted.



Source(s): Adapted from EFQM (2012)

Figure 1.
EFQM model

To obtain recognition-for-excellence, a narrative (self-assessment) supports the application and, subsequently, trained EFQM-assessors visit and evaluate the organization. Assessors evaluate each sub-criterion based on their judgment concerning the fulfillment of the “guidance points” specified by EFQM. Scores on a criterion are obtained by averaging scores on respective sub-criteria. Recognition for excellence is awarded depending on the aggregate score of all criteria. According to [EFQM \(2012\)](#), a maximum score of 1,000 could be obtained and recognition-for-excellence was at three levels (300+, 400+ and 500+). Organizations could also apply for committed-to-excellence status, by submitting a self-assessment and an improvement plan to be evaluated by an EFQM-assessor, who would only provide the aggregate score (<300), visits and scoring of sub-criteria would not be performed.

2.2 Quality Management and Corporate Sustainability

Corporate sustainability, or CSR [\[1\]](#), concerns what organizations do that demonstrate commitment to stakeholders, and how organizations address the economic, social and environmental impacts of their operations ([Aguinis and Glavas, 2012](#); [Mehralian et al., 2016](#)). QM may support strategies for corporate sustainability ([Zink, 2007](#)), and there is belief that where quality-related initiatives are in place, corporate sustainability may be easily developed ([McAdam and Leonard, 2003](#); [Hazlett et al., 2007](#); [Kuei and Lu, 2013](#); [Aquilani et al., 2016](#); [Siva et al., 2016](#)), since “the values at the heart of quality offer a foundation for CSR adoption” ([Neri et al., 2019](#), p. 450).

The literature highlights increasing attention to the parallels between QM and CSR, with a series of conceptual articles (e.g. [Zwetsloot and van Marrewijk, 2004](#); [Foster and Jonker, 2007](#); [Zink, 2007](#); [Aquilani et al., 2016](#)) theorizing how QM would fulfill stakeholders’ expectations and integrate corporate sustainability to processes. [Ghobadian et al. \(2007\)](#) and [Tari \(2011\)](#) underscored common pillars: multiple stakeholders, an ethical dimension, people as the prime asset of the organization, transparency and consultation. As organizations learn from their environments and react, continuous improvement is critical, and thus frameworks for CSR based on QM have been proposed (e.g. quality-driven sustainability management ([Kuei and Lu, 2013](#)), total quality-socially responsible management ([Khurshid et al.’s, 2018](#))). Nonetheless, CSR could be more explicit in QM ([Ghobadian et al., 2007](#)).

Reviews of QM and CSR ([Siva et al., 2016](#); [Carnerud et al., 2020](#)) concluded that the concepts are intertwined, in a way that QM may drive sustainable practices. Specifically, [Siva et al. \(2016\)](#) identified four dominant themes in this research, of which two were more common: the integration of management systems to support sustainability, and QM as a bridge for environmental management. For example, [Curkovic et al. \(2000\)](#) and [Carnerud et al. \(2020\)](#) argued that QM and environmental sustainability correlate, and the former would enhance operational capabilities for the latter. [Siva et al. \(2016\)](#) concluded that two themes deserved attention: QM as a mechanism for sustainability in routine operations, and how to support a balanced stakeholder management.

In this context, Stakeholder Theory ([Mitchell et al., 1997](#); [Laplume et al., 2008](#)) is central in linking QM to CSR ([Foster and Jonker, 2007](#); [Zink, 2007](#); [Siva et al., 2016](#); [Khurshid et al., 2018](#); [Sila, 2018, 2020](#)). Accordingly, organizations should deliver to shareholders, and equally assess the impact on “any group or individual who can affect or is affected by the achievement of the organization’s objectives” ([Freeman, 1984](#), p. 46). Moreover, all stakeholders have the right to information, and can demand standards of organizational performance. In this vein, [Foster and Jonker \(2007\)](#) advocated a Stakeholder Theory of QM, which universally addresses expectations of diverse stakeholders inside and outside the organization, as implied by [Figure 1](#), where Results are defined according to key stakeholders.

Several empirical studies considered the nexus between QM and CSR (see [Appendix](#)). Most investigated how QM affected CSR, and concluded that the ethical foundations of the former

can drive the adoption of the latter (McAdam and Leonard, 2003; Hazlett *et al.*, 2007; Quintana *et al.*, 2018). An exception is a study by Mehralian *et al.* (2016), which argued for the reverse. The empirical evidence suggests that QM and CSR correlate. Scholars (e.g. Sila, 2018, 2020) have therefore examined whether QM practices impacted sustainability-performance (the triple bottom line). At an extreme, Mellat and Adams (2012) envisaged CSR as a subset of QM.

Different versions of the EFQM model have been portrayed as platforms for corporate sustainability (Asif *et al.*, 2011; Calvo *et al.*, 2018; Medne *et al.*, 2020). According to EFQM (2012), excellent organizations are those that “achieve and sustain outstanding levels of performance that meet or exceeds the expectations of all their stakeholders” (EFQM, 2012, p. 2). Moreover, studies of the EFQM model (see Appendix) have observed elements of sustainability in different Enablers. In particular, Ascigil (2010) argued that the model would translate pledges of sustainable practices into work processes and results. Nonetheless, results may not be generated for all stakeholders (Pedersen and Neergaard, 2008). Actually, research has tended to focus on Society Results (e.g. del Rio *et al.*, 2017; Calvo *et al.*, 2018), and whether or not recognition via the EFQM framework embeds a Sustainability Orientation remains unclear. In short, how a QM framework may deliver to key stakeholders deserves further investigation.

2.3 EFQM's Sustainability Orientation

As summarized at the top of Table 1, different definitions of Sustainability Orientation coexist in the literature, but share common goals. Accordingly, a Sustainability Orientation can be defined as the extent to which organizations actively integrate sustainability principles into their business objectives (Jin *et al.*, 2019) and also in terms of their commitment towards addressing social and environmental concerns in decision-making (Shou *et al.*, 2019).

Despite varying terminologies in different editions, since its conception, the EFQM model has embraced a Sustainability Orientation (EFQM, 2015). Embedded in EFQM (2012), as described above, there is a fundamental principle of “creating a sustainable future”, according to which, recognized-for-excellence organizations positively affect the world around them “by enhancing their performance whilst simultaneously advancing the economic, environmental and social conditions within the communities they touch” (EFQM, 2012, p. 5). As described in EFQM (2012, p. 21) this principle integrates the following sub-criteria: 1a. Leaders develop the mission, vision, values and ethics, and act as role models; 1c. Leaders engage with external stakeholders; 1e. Leaders ensure that the organization is flexible and manages change effectively; 2c. Strategy and supporting policies are developed, reviewed and updated; 4b. Finances are managed to secure sustained success; 4c. Buildings, equipment, materials and natural resources are managed in a sustainable way; 5b. Products and services are developed to create optimum value for customers.

For each sub-criterion in EFQM (2012) there was a set of recommendations or “guidance points”, based on which EFQM-assessors judged the extent to which an organization satisfied the sub-criteria. Accordingly, high scores on a sub-criterion would be achieved by those organizations that fully satisfied the respective “guidance points”. As shown in the lower part of Table 1, “guidance points” of the sub-criteria that jointly define “creating a sustainable future” covered key aspects of definitions of Sustainability Orientation. Hence, by definition “creating a sustainable future” would imply a Sustainability Orientation. However, to date, evidence of a Sustainability Orientation within adopters of EFQM (2012) is scarce, and relies heavily on small samples, a few case-studies or qualitative assessments of specific practices in an organization. For example, Ascigil (2010) observed sustainability practices in EFQM-award finalists, while Pérez and Escrig (2018) noted that sequential assessments required for recognition enabled improvements in sustainable practices. Recently, an analysis of the operations within a university (Medne *et al.*, 2020) illustrated that EFQM (2012) might have facilitated integrating sustainability into strategy.

Author	Definition of Sustainability Orientation
Kuckertz & Wagner (2010)	Manage to the “triple bottom line” by balancing economic health, social equity and environmental resilience
Calic & Mosakowski (2016)	Embracing goals or objectives that focus on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society
Claudy <i>et al.</i> (2016)	Dimension of the strategic orientation that manifests in the organizational culture and strategic configurations , which allow firms to integrate sustainability concerns in operational programs
Jin <i>et al.</i> (2019)	The extent to which firms are actively integrating sustainability principles into their business purpose
Shou <i>et al.</i> (2019)	A firm’s internal long-term commitment towards the integration of environmental and social concerns into its decision making .
Cheng (2020)	Deeply rooted values and beliefs that provide an organizational inclination to incorporate social and environmental issues into strategic, tactical and operational activities. Greater emphasis is placed on understanding the needs of current and prospective stakeholders
Ruiz <i>et al.</i> (2021)	Organizational strategic orientation toward the integration of interests in sustainability into their culture, decision-making, strategy and business operations
Zhao <i>et al.</i> (2021)	Extent to which the firm’s overall strategic posture, decision-making philosophies, and managerial preferences involve integrating environmental and social issues into its business operations



Key aspects extracted from the definitions of Sustainability Orientation	Equivalences in EFQM “Creating a Sustainable Future” Sub-criteria
-Integration of sustainability into culture and strategy	1c. Establish shared values, accountability, ethics and a culture of trust and openness throughout the value chain. 1c. Leaders are transparent and accountable to their stakeholders and society at large for their performance and ensure their people act ethically, responsibly and with integrity. 2c. Integrate the concepts of sustainability within their core strategy, value chain and process design and allocate the resources required to deliver these goals.
-Balancing economic, social and environmental criteria in decision making with a long-term orientation	1e. Consider “People, Planet and Profit” as a reference when balancing the sometimes-conflicting imperatives that they face. 4b. Evaluate, select and validate investment in, and divestment of, both tangible and non-tangible assets, respecting their long-term economic, societal and ecological effects. 4c. Use strategies, policies and processes for managing buildings, equipment and materials in a financial and environmentally sustainable way. 4c. Actively advance the economic, environmental and social standards within their sector. 5b. Design their product and service portfolio and actively manage the full product lifecycle in a responsible way.
-Environmental orientation	4c. Minimise their local and global environmental impact, including setting challenging goals for meeting and exceeding legal standards and requirements. 4c. Are able to demonstrate that they measure and optimise the impact of their operations, product lifecycle and services on public health, safety and the environment.
-Commitment to social concerns (development and welfare of the society, more safe and health respectful processes, providing the right information to customers and meeting the needs of the society)	1a. Leaders champion the organisation’s values and are role models for integrity, social responsibility and ethical behaviour, both internally and externally 1c. Encourage their stakeholders to participate in activities that contribute to the wider society 2c. Understand their key competencies and how they can generate shared value to benefit wider society 4c. Are able to demonstrate that they measure and optimise the impact of their operations, product lifecycle and services on public health, safety and the environment.
-Engagement with stakeholders	1c. Use approaches to understand, anticipate and respond to the different needs and expectations of their key stakeholders. 1c. Ensure transparency of financial & non-financial reporting to relevant stakeholders. 1e. Involve and seek support and contributions from all relevant stakeholders for changes necessary to ensure the sustainable success of the organisation. 5b. Strive to innovate and create value for their customers, involving them and other stakeholders, where appropriate, in the development of new and innovative products, services and experiences.

Source(s): Own elaboration

Table 1.
EFQM’s Sustainability Orientation

2.4 EFQM’s Sustainability Orientation and Stakeholders Results

As a QM framework, EFQM (2012) implied that adopters of the model define objectives and monitor performance according to four stakeholders’ domains (Bou *et al.*, 2009; Enquist *et al.*, 2015; Jabnoun, 2019), as summarized in Table 2.

Customer and People Results are commonly associated with business excellence (Para-González *et al.*, 2021), accordingly, customer and employee satisfactions and levels of engagement are assessed. Business Results concern financial-economic performance and expectations from those with a financial interest in the organization. Society Results distinguished EFQM (2012) within Quality-Management (Paraschi *et al.*, 2019), and account

Customers results	People results	Society results	Business results
Reputation and image	Satisfaction and engagement at work	Environmental impact (reduction of noise, pollution and other damages)	Financial outcomes (sales, margins, profits)
Product delivery	Perceptions of leadership	Preservation of resources (reduction of packaging, recycling)	Non-financial outcomes (market share, process performance indicators, partners and suppliers' performance)
Customer loyalty	Training and career development	Involvement in community	
Customer satisfaction	Effective communication	Support for education and health	
Complaints handling	Working conditions		
Customer involvement in product design	Diversity and inclusion		

Source(s): The authors based on [EFQM \(2012\)](#)

Table 2.
Performance indicators

for the impact of the organization on its community at large and, importantly, at the local-level, in terms of socio-cultural and environmental dimensions ([del Río et al., 2017](#); [Neri et al., 2019](#)).

Despite defining Results according to key stakeholders, [EFQM \(2012\)](#) did not explicitly link the Sustainability Orientation underlying “creating a sustainable future” to Results, as shown in [Figure 1](#). Still, a positive association is envisaged. As shown in [Table 1](#), EFQM’s Sustainability Orientation, according to the guidance points in [EFQM \(2012\)](#), implies commitment to stakeholders and focus on economic, social and environmental performance while managing operations. This association between Sustainability Orientation and Results that can be inferred from the model is consistent with Stakeholder’s Theory. Given [Jones et al. \(2018\)](#), the instrumental perspective on Stakeholder’s Theory entails that the extent to which organizations manage expectations of stakeholders predicts performance. [Wang et al. \(2016\)](#) also argued that, since stakeholders are relevant for operations, organizations should consider stakeholders as part of an ecosystem that should be managed to create value and generate revenues. Moreover, when organizations address stakeholder’s expectations, stakeholders are more likely to engage resources and support the organizational strategy. High levels of cooperation and information sharing with stakeholders can lead to the development of what [Jones et al. \(2018\)](#) termed “close relationship capability”, where stakeholders are motivated to create joint value by engaging in reciprocal coordination or knowledge sharing. From this perspective, a Sustainability Orientation drives stakeholder engagement ([Wang et al., 2016](#)) and avoids potential conflicts of interests ([Danso et al., 2020](#)).

As highlighted in [Table 1](#), a Sustainability Orientation also means having an ethical leadership and developing trusting relationships with customers within the whole product/service lifecycle, which enable high-quality output that can increase customers’ purchase intention and satisfaction. Hence, a Sustainability Orientation would correlate with Customer Results. Indeed, socially responsible activities have been linked to customers’ perceptions of product-differentiation and quality, as well as customer satisfaction and loyalty on grounds of perceptions of transactions with trustworthy organizations ([Aguinis and Glavas, 2012](#); [Longoni and Cagliano, 2016](#)).

Since the seven sub-criteria entail management practices that foster perceptions of pleasant, meaningful and fulfilling work, as well as pride of workmanship and identification

with the organization, positive employee-outcomes are expected from EFQM's Sustainability Orientation. For example, confidence in management can facilitate employee-engagement and commitment, which often correlate with employee well-being. Sustainability practices may create safer and attractive working environments, where employee-health and well-being are valued (Abdul-Rashid *et al.*, 2017; Huo *et al.*, 2019). According to Longoni and Cagliano (2016), common benefits from sustainability practices are motivation and retention. In short, the guidance points in Table 1 would imply positive association between the Sustainability Orientation and People Results.

As discussed earlier, a stream of literature has focused on testing associations between Enablers and Results. Positive correlations with Society Results were observed by del Río *et al.* (2017) and Calvo *et al.* (2018), who commented that features of Society Results (preservation of resources, environmental protection or community involvement) follow from EFQM's principle of "creating a sustainable future". That is, the observed associations were likely to stem from investments in resources that do not harm the environment, how customers are guided to responsibly use products, community projects, compliance of laws and transparency, creating employment locally, or promoting activities that support health and culture. Hence, the underlying Sustainability Orientation would foster positive attitudes towards organizations that are recognized for excellence (EFQM, 2015), and correlate with business performance, as markets compensate organizations that engage with sustainability (Maqbool, 2019).

In line with Stakeholders Theory, a business-case for sustainability can be made: performance and reputational gains materialize from addressing expectations of key stakeholders and from mitigating any threats that they could make (e.g. Carroll and Shabana, 2010; Kong *et al.*, 2020). As per Figure 1, indirect pathways from Enablers to Business Results via People, Customer and Society Results are also implied and underscore a performance-chain (e.g. Hong *et al.*, 2019), where financial performance is the outcome of other dimensions of performance. To date, only a small number of studies of the link Enablers-Results support this mediation (e.g. Quintana *et al.*, 2018), or the hypothesis that economic performance is better explained by intermediate performance variables. Yet, mediation would have been supported by observations of direct effects of sustainability approaches on operational performance, but indirect effects on business performance (Mellat and Adams, 2012). Given the broader business case that follows from Stakeholders Theory (Carroll and Shabana, 2010), it can be argued that reputational gains from satisfied customers, happy workers and positive contributions to society would improve business results (financial performance, market share, etc.). Consequently, the following hypotheses are here investigated:

- H1. There is direct positive association between the Sustainability Orientation and Results.
- H2. There is indirect positive association between the Sustainability Orientation and Business Results via People, Society and Customers Results.

2.5 Role-models of excellence as disseminators of Sustainability approaches

Quality awards and recognitions of excellence are institutional drivers for continuous improvement. Implicit in their design is the expectation that those awarded recognitions at the highest level are rare and become role-models of excellence, and that such recognitions trigger a mimetic process where best practices are disseminated in their sector and, ultimately, in the whole economy. This mimetic process creates institutional pressures and reinforces the continuous improvement cycle, so that after achieving the highest level or recognition, an organization is more likely to remain at that level in the next recognition.

Organizations at the highest level of excellence are expected to have adhered to EFQM's fundamental principles, of which "creating a sustainable future" in EFQM (2012)

implied a Sustainability Orientation. Consequently, organizations that were consistently judged by EFQM assessors to be at the highest level of excellence would exemplify best practice, and how they addressed the seven sustainability sub-criteria would be indicative of how the EFQM model might have fostered a Sustainability Orientation. In this vein, Pérez and Escrig (2018) observed that the greater the level of recognition, the better the sustainable practice. Given this observation, the Theory of Planned Behavior at the organizational-level (e.g. Miller *et al.*, 2018) would entail that a sequence of successful recognitions by EFQM at the highest level would only be possible if organizations had internalized a Sustainability Orientation. Yet, studies of EFQM (2012) observed that while some recognized-for-excellence organizations adopt the model by attempting to fulfill all criteria, others opt for piecemeal adoptions (Escrig and de Menezes, 2015). Different emphases on approaches to sustainability might have stemmed from practical interpretations of the sub-criteria underlying “creating a sustainable future”, which might have affected how EFQM’s Sustainability Orientation evolved and its likely impact. Consequently, sustainability actions and priorities reported by organizations consistently judged role-models of excellence by EFQM-assessors may inform how the Sustainability Orientation translated into practice.

In order to complement the longitudinal analysis that follows, a qualitative analysis of sustainability reports of a subset of role models of excellence is undertaken. More recent sustainability reports of those organizations which remained at the highest level of recognition are considered, as they do not only provide greater detail than scores, but also highlight organizational priorities and objectives. Together the quantitative and qualitative analyses that follow investigate whether a QM framework, which claimed to have sustainability at its core, has facilitated a Sustainability Orientation and key stakeholders’ Results.

3. Methodology

3.1 Quantitative data

All recognitions by the Club Excelencia en Gestión (CEG), EFQM’s Spanish Certified Recognition Organization, from January 2000 to September 2014 are considered. For each recognition-for-excellence, the data includes: level (300+, 400+ or 500+), issue and expiration dates (a recognition was valid for two years, after which an organization would have to reapply to an EFQM partner-organization for further assessments); size, activity and the location of the unit awarded, aggregate score and scores on each sub-criterion attained after assessments by CEG (only available when recognized-for-excellence is awarded).

Overall, 80% of awards in the period were judged by CEG to be committed-to-excellence, and cannot be examined as sub-criteria were not scored. The data therefore contain 800 recognitions for excellence by CEG, corresponding to 580 organizations over 14 years. Given that three recognitions were outliers in this population and related to two organizations, the quantitative analysis covers 797 recognitions and 578 organizations.

The seven sub-criteria and Results are measured by their respective scores. There is difference in Results. Society and People mean scores are respectively 30.67 and 36.9, while for Business and Customer, these are 41.32 and 42.85. Given no statistically significant difference in variance (standard deviation ~ 10), the non-economic criteria appear harder to satisfy. The strongest correlations are equal to 0.6 (People and Customer, People and Society). Otherwise, pairwise correlations within Results are not high. Considering the sub-criteria that define “creating a sustainable future” (defined in 2.3), means range from 39.95 (1e) to 44.58 (4b), and variances are not statistically different (standard deviations in [8.75,10.4]). Hence, there is variation in how a Sustainability Orientation might be manifested, and the effective implementation of change towards sustainability (1e) is harder to achieve. Pairwise correlations

are in the interval [0.54,0.75], thus suggesting a common underlying factor (the Sustainability Orientation) as inferred below.

Since most organizations had a single recognition in the period (number of recognitions/organization: median = 1, average = 1.38), for longitudinal analysis, a panel of those with at least two recognitions is considered. It covers 162 organizations, over 12 years. The maximum number of recognitions per organization in the period is five. Most awards remain at the same level, and estimated transition probabilities imply that the likelihood of progression from the lowest to the highest level is 1.39%, and from the middle to the highest is 32%. When compared to the whole sample, pairwise correlations within Results are higher (between 0.55 and 0.75), which is not surprising given the reduction in sample size, but the pattern of associations remains.

3.2 Qualitative data

By matching additional information from CEG's and EFQM's website, 36 organizations were identified that had been awarded the highest recognition in 2014 and remained at this level in 2019. These represent a minority of role-models of excellence (CEG, 2017), and are generally large (more than 250 employees), from different sectors (healthcare, financial services, energy, transport and education), and based in distinct regions. Sustainability reports following the Global Reporting Initiative (GRI) guidelines of 13 of the 36 organizations judged role models (consistently at the highest level up to 2019) are examined. GRI was chosen due to the quality of disclosure that provides a mechanism for comparison, e.g. the content-index includes all disclosures reported (Rezaee and Tuo, 2019). As GRI underscores materiality and focus, reports cover what is critical for organizational goals.

3.3 Analytical procedure

3.3.1 Measuring EFQM's Sustainability Orientation. The Sustainability Orientation is inferred from the correlation between the scores on seven sub-criteria (1a, 1c, 1e, 2c, 4b, 4c and 5b) that according to EFQM (2012, p. 21) are indicative of "creating a sustainable future". Given the relatively small yearly sample sizes, yearly one-factor models cannot be estimated. It is assumed that pairwise correlations between sub-criteria do not vary significantly over time, which is consistent with the fact that when subsequent recognitions are awarded, most remain at the same level. Accordingly, the standard conditional independence assumption of manifest variables (in factor models) is made, and factor analysis of the all scores on sustainability sub-criteria is performed using Stata 16 (maximum likelihood). Given goodness-of-fit and evidence of a single dimension, factor-scores estimated from the one-factor model, for each organization at recognition (year), are used to measure EFQM's Sustainability Orientation.

3.3.2 Inferring association between EFQM's Sustainability Orientation and Results. Direct relationships (H1) are firstly examined using the panel data. Fixed and random effects models are estimated, i.e.:

$$Y_{it} = \alpha + \beta_{1i}X_{it} + u_i + e_{it} \quad (1)$$

where the dependent variable (Y_{it}) and independent variables (X_{it}) vary with organization (i) and year of recognition (t); u_i is an organization-specific random component, normally distributed with mean zero and constant variance; e_{it} is a similar random component. Stata 16 is used, and the associations are controlled for $size_t$ (logarithm of number of employees). Following Cameron and Triverdi (2010), model specification is judged by the Hausman Test, and the significance of the model is assessed by either the F or the Chi-Square statistics. Significance of the estimates is inferred via t -tests (fixed effect) and Z -tests (random effect). Goodness-of-fit is considered at both levels and overall.

Secondly, direct and indirect associations (H1, H2) as implied by EFQM (2012), Figure 1, are assessed by structural equation models of the panel and whole data. Intermediate dependent variables are Customer, People and Society Results, and the final dependent variable is Business Result. An additional model of the panel assesses feedback and longer-term effects of a Sustainability Orientation, by adding a link from the previous Sustainability Orientation to the current. The models are estimated using clustered recognitions (by organization) and robust standard errors to account for the correlation in assessments of the same organization. Goodness-of-fit is judged by Standardized Root Mean Squared Residuals (SRMR) and the Coefficient of Determination (CD).

3.3.3 Examining Sustainability approaches of role-models of excellence. From the profile in the GRI database, information is collected on the adherence to GRI and other sustainability standards (SDGs, UNGC or ISO 26000). Reports are manually scrubbed to extract the List of Material Topics, which must be included in a report since they relate to what organizations should focus in order to achieve their sustainability goals. Following Wang *et al.* (2020), extracts are then input to an add-in of RapidMiner Studio for text mining.

In a preliminary step, the content of each sustainability sub-criterion is text mined. A profile of keywords (Table 3) is obtained, and forms the basis (dictionary) for the content analysis. Occurrences of these keywords in each extract are examined. Subsequently, a cluster analysis of the lists of Material Topics is performed. Following Ertek *et al.* (2013), the information provided in the Centroid table is then used to infer patterns in sustainability approaches of role-models of excellence.

4. Results

First, Factor Analysis [2] of the correlation of scores on the seven sub-criteria implies a single factor, which measures EFQM's Sustainability Orientation: only one eigenvalue is greater than 1, and the share of variance in a sub-criterion unexplained by the common factor varies between 28% and 43%. Factor-loadings for the one-factor model vary from 0.72 (4b) to 0.85 (1a); the highest correspond to leadership and strategy criteria. A two-factor model confirms a single dimension: the first factor accounts for 95% of the variance, and a second factor is rejected by a likelihood-ratio, Chi-square, test. Consequently, the Sustainability Orientation implicit in EFQM (2012) can be measured by a single factor.

Given the one-factor model, scores on the Sustainability Orientation are predicted for each recognition. By definition, this measure follows a standard Normal (mean = 0, variance = 1).

Sub-criteria	Descriptive keywords
1a. Leaders develop the mission, vision, values and ethics, and act as role models	Culture, leaders, integrity, people, ethics
1c. Leaders engage with external stakeholders	External, expectations, stakeholders, information, partners
1e. Leaders ensure that the organization is flexible and manages change effectively	Communication, contingency, efficacy, leaders, people, process, risks
2c. Strategy and supporting policies are developed, reviewed and updated	Strategy, scenario, future, partners, plans, policies, sustainability
4b. Finances are managed to secure sustained success	Economic, inversions, indicators, goals, budget, resources
4c. Buildings, equipment, materials and natural resources are managed in a sustainable way	Assets, cycle, efficacy, global, impact, waste, energy, environmental
5b. Products and services are developed to create optimum value for customers	Customers, products, service, partners, creativity, experiences, innovators, markets, new

Table 3. Sustainability sub-criteria: keywords

4.1 Direct associations

Figure 2 depicts the associations between Sustainability Orientation and Results for each recognition. Data are split, so that the pattern of those consistently excellent, role-models, can be observed and compared to other recognitions. Overall, there is indication of positive correlation, independently of the subset of recognitions.

Table 4 summarizes the output from longitudinal regression models. According to the Hausman Test, the model that best describes the relationship is highlighted in bold. Tests for the invariance of each model across organizations ($u_i = 0$, in equation (1)) imply that the unit-specific components are significant (P -values = 0.00, based on F -test). The estimated proportion of the variance owed to different panels is generally above 50%. Considering Table 4, the rows “Sustainability Orientation” confirm positive correlation with all Results, since the estimated coefficients are positive and significant at 1% level, irrespective of model specification.

It is noteworthy that when the Sustainability Orientation in the previous recognition is added to the models, its coefficients are insignificant. The association with size may vary with the type of Result. Further examination of the panel suggests that organizations with more recognitions are likely to be larger.

4.2 Direct and indirect associations: potential pathways from the Sustainability Orientation to Business Results

Figure 3 summarizes Results from the structural equation models, highlights the estimated standardized effects of the Sustainability Orientation, and shows estimated correlations. It enables a comparison of estimates on the panel with those on the whole sample. In general, there is consistency between the panel and the whole sample (left and right models): estimated correlations and standardized effects do not vary significantly, despite small differences in goodness-of-fit (SRMR and CD).

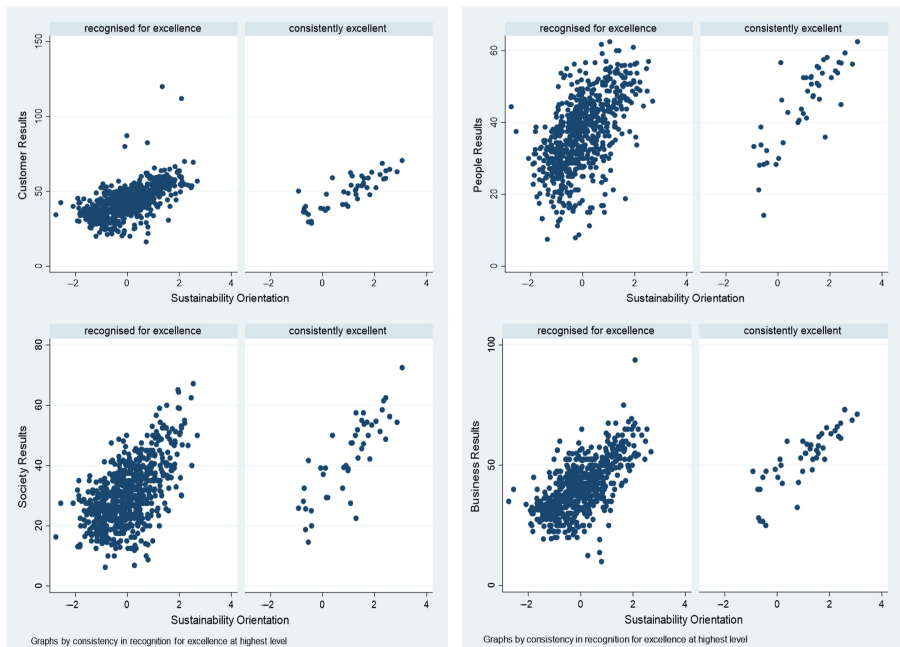


Figure 2.
EFQM's sustainability
orientation and results

Sustainability Orientation and results								
	Customer results				People results			
	Fixed effect		Random effect		Fixed effect		Random effect	
	Coef	SE	Coef	SE	Coef	SE	Coef	SE
Sustainability Orientation	5.48	0.611	6.35	0.42	6.30	0.73	7.07	0.50
Size	65.68	28.81	1.67	1.06	24.14	34.41	-2.19	1.30
Constant	-41.65	37.37	41.07	1.41	5.91	44.64	39.88	1.73
Prob > F	0.00				0.00			
Prob > Chi-Square			0.00				0.00	
R-Square (within)	0.32		0.32		0.28		0.28	
R-Square (between)	0.17		0.17		0.17		0.48	
Overall R-Square	0.19		0.19		0.17		0.44	
	Society results				Business results			
	Fixed effect		Random effect		Fixed effect		Random effect	
	Coef	SE	Coef	SE	Coef	SE	Coef	SE
Sustainability Orientation	6.07	0.70	6.76	0.51	5.60	0.60	7.06	0.43
Size	-12.6	33.21	3.49	1.36	7.82	28.49	2.97	1.12
Constant	-47.70	43.09	26.57	1.81	32.68	36.96	38.42	1.49
Prob > F	0.00				0.00			
Prob > Chi-Square			0.00				0.00	
R-Square (within)	0.28		0.28		0.30		0.31	
R-Square (between)	0.06		0.51		0.58		0.65	
Overall R-Square	0.09		0.48		0.53		0.58	

Note(s): $N = 377$ (162 organizations, 12 years, unbalanced panel)

Table 4.
Direct associations –
panel regressions

As hypothesized (H1), the Sustainability Orientation is directly associated with all Results, and indirectly linked to Business Results (H2). Indirect effects are positive and of similar magnitude to direct effects, and those via People Results are significant, despite the non-significant association between People and Business Results.

A dynamic model, with an additional direct link from the Sustainability Orientation in the previous recognition to the current Sustainability Orientation, does not fit the panel as well as the one implied by Figure 1 (SRMR = 0.026, CD = 0.091). Still, it shows positive association between levels of previous and contemporaneous Sustainability Orientations ($b = 0.3$; $p = 0.00$), and indirect effects of the previous Sustainability Orientation on all Results ($b \sim 0.2$; $p = 0.00$). The total effects of the contemporaneous Sustainability Orientation remain of similar magnitude and are greater than at the previous recognition. Hence, the contemporaneous Sustainability Orientation is a stronger predictor of business excellence.

In conclusion, scores of recognized-for-excellence organizations supported positive direct correlation between the Sustainability Orientation and all stakeholders-Results in EFQM (2012), and also positive indirect associations between Sustainability Orientation and Business Results. H1 and H2 are supported. The impact of the Sustainability Orientation was mostly contemporaneous, despite strong positive correlation between its levels in consecutive recognitions.

4.3 EFQM role-models and Sustainability

Although role-models score higher on the Sustainability Orientation, the variance in scores (standard deviation = 1.1; minimum = -0.93; maximum = 3.05) is not significantly different from what would be expected in the population based on the one-factor model. Hence, it is not

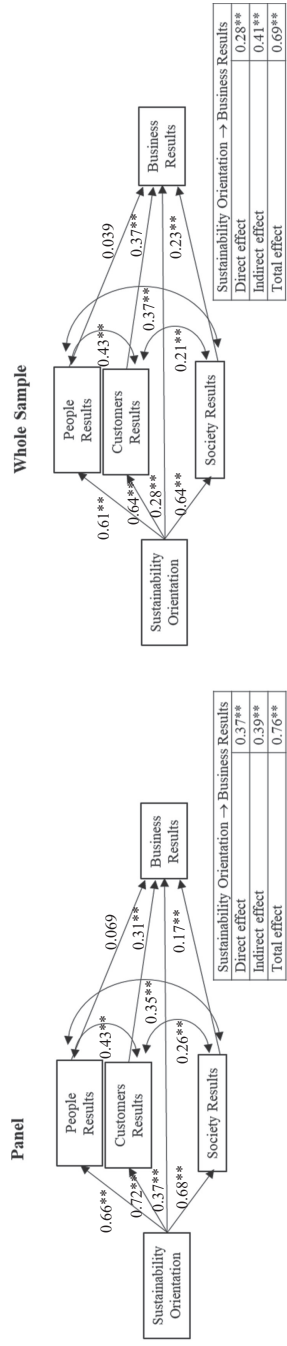


Figure 3.
Direct and indirect
associations

surprising that adherence to GRI guidelines and other standards is not uniform. Given profiles of 13/36 organizations that remained recognized at the highest level in 2019 and reported sustainability according to GRI, 69.3% of selected reports are “in accordance and comprehensive”, and 53.8% indicate an external assurance. A third undertook partnerships in support of United Nations Global Compact (UNGC), and 46.15% addressed SDGs. Only one organization adopted OECD guidelines.

EFQM recognition and/or processes are highlighted in 12 reports (92%). [EFQM \(2012\)](#) was generally portrayed as an initiative towards outstanding management. Sometimes the model was explicitly linked to sustainability. [Enagás \(2018\)](#) in its self-assessment used the model to identify actions for its sustainable strategy, and reported its content index using EFQM-criteria and terminology. While, [University of Cádiz \(2018\)](#) portrayed [EFQM \(2012\)](#) as a guide to minimize operational and reputational risks, and to demonstrate commitment to good corporate governance.

Via materiality analysis, organizations identify and prioritize topics to be reported, by matching their relevance (possible impact on its strategy and objectives) and value for stakeholders. Common features in the reports are efforts to identify and evaluate stakeholders' expectations via different communication channels (social networks, questionnaires, focus groups and mailboxes) and benchmarking.

The text analyses of extracts of material topics in the sustainability reports add to the results from the longitudinal analysis. First, regarding what characterized EFQM's Sustainability Orientation, not all features embedded in the seven sub-criteria, as summarized in [Table 3](#), are observed. [Table 5](#) illustrates how material topics might have reflected the sub-criteria defined in [Table 3](#). Given the most frequent terms, summarized in [Table 5](#), it appears that the Sustainability Orientation was about emphasizing socially responsible leaderships, where people, ethics and integrity are key, which corroborates with the higher loadings of Leadership sub-criteria on the factor model that led to the measure of the Sustainability Orientation. In addition, by matching and comparing [Tables 3 and 5](#), there is indication that managing finances to secure sustainable success (4c) was not a common priority for role-models of excellence.

Secondly, in an attempt to understand the observed variance in Sustainability Orientation that was observed in the statistical analysis and, more broadly, in the content of the reports, listed material topics are examined via cluster analysis. [Figure 4](#) provides a textual representation of the identified clusters. The most frequent words on average in a cluster, Descriptive Keywords, characterize the Cluster. There is thus indication of approaches to sustainability that implied distinct stakeholder-management strategies.

While Cluster0 prioritized the environment, supply chain and safety, in line with criterion 4 (Partnerships and resources), and appears to have had limited concerns with fostering culture, talent and well-being. Cluster1 emphasized ethics (Leadership criterion) and customers (Process, products and services criterion), and demonstrated less effort towards environmental and well-being concerns. Although more heterogeneous, Cluster2 focused on service and social issues (EFQM Leadership criterion and Process, products and services criterion), while supply-chain related issues might have been neglected. It is noteworthy that identified clusters are not characterized by size, sector, or region.

5. Discussion

5.1 Research implications

The present study adds evidence in support of a QM-sustainability nexus (e.g. [Siva et al., 2016](#); [Sila, 2018, 2020](#)), and also contributes to research on drivers of CSR (e.g. [Attig and Cleary, 2015](#)). Research implications relate to how a Sustainability Orientation may be fostered by QM and how stakeholder's expectations may be fulfilled. These are discussed in

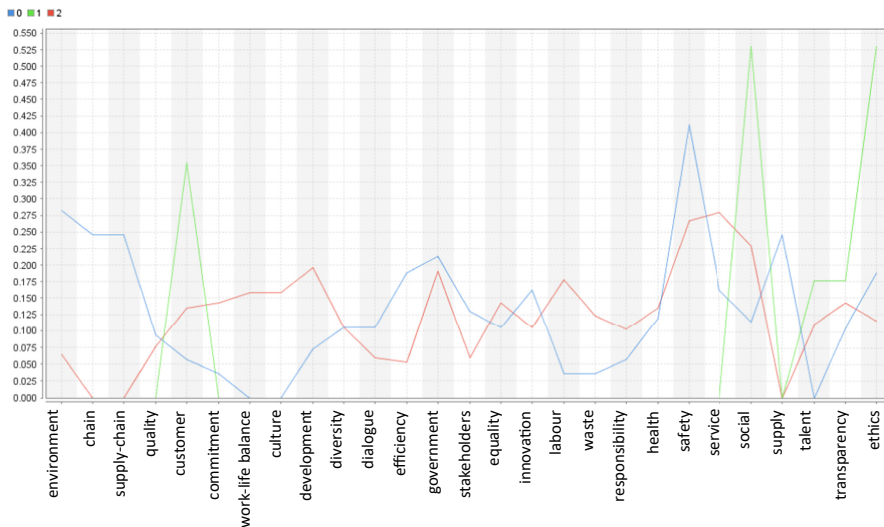
Keyword	Illustrative examples
Customer	Customer service and customer satisfaction (Adif, 2017); adaptation to customers' needs (Caixabank, 2018); customer satisfaction (FREMAP, 2018); customer health and safety (Hospital Plató, 2018); transparency in customer relations (Ibercaja, 2018); customer orientation (Red Eléctrica, 2018); careful relationship with customers (Sanitas, 2018); commitment and customer satisfaction (University of Cádiz, 2018)
Ethics and Integrity	Ethics and corruption prevention (Adif, 2017); ethics and transparency (Aena, 2018); ethical and socially responsible investment (Banco Sabadell, 2018); ethics and compliance (Enagás, 2018); social responsibility, ethics and human rights (FREMAP, 2018); ethical behavior and integrity (Ibercaja, 2018); Integrity (Red Eléctrica, 2018); Ethics and integrity (Sanitas, 2018); code of ethics (University of Cádiz, 2018)
Service	Customer service (Adif, 2017); quality and service improvement (Aena, 2018); quality of service (FREMAP, 2018); product and service information (Hospital Plató, 2018); service quality and safety (Red Eléctrica, 2018); orientation towards good service (Sanitas, 2018); adaptation of services to legislation (Umivale, 2017); excellence in service provision (Unión de Mutuas, 2018); excellence and service assessment (University of Cádiz, 2018)
Culture	Open to innovation culture (Aena, 2018); ethical and responsible culture (Caixabank, 2018); prevention culture (Umivale, 2017); culture and reputation (Unión de Mutuas, 2018)
Stakeholders	Dialogue with stakeholders (Adif, 2017); partnership with stakeholders (Red Eléctrica, 2018); dialogue with stakeholders and search of partnerships (Unión de Mutuas, 2018); dialogue and commitment to stakeholders (University of Cádiz, 2018)
People	Well-being (Aena, 2018); diversity, equality and work-life balance (Caixabank, 2018); people, health and safety (Enagás, 2018); training, career development, equal opportunity and work-life balance (FREMAP, 2018); training, employee relations (Hospital Plató, 2018); attraction and retention of talent (Ibercaja, 2018); people flexibility and adaptation to change (Red Eléctrica, 2018); training, diversity, equality (Sanitas, 2018); work-life balance (Umivale, 2017); career development, communication, diversity, equality, work-life balance (Unión de Mutuas, 2018); attraction and retention talent, training and professional development (University of Cádiz, 2018)
Environmental impact	Various environmental impacts (pollution, fire prevention, waste management, etc.) (Adif, 2017); energy and climate change (Aena, 2018); climate change (Banco Sabadell, 2018); environmental criteria in business (Caixabank, 2018); climate change and energy efficiency (Enagás, 2018); waste management, energy and emissions (Hospital Plató, 2018); environmental management (Ibercaja, 2018); climate change (Red Eléctrica, 2018; Sanitas, 2018); environmental sustainability, energy efficiency and waste management (Unión de Mutuas, 2018); energy efficiency, waste management and recycling (University of Cádiz, 2018)

Table 5.
EFQM sub-criteria in reported material topics

the next paragraphs and can guide future research on reinterpretations of the EFQM model and on pathways to business excellence.

5.1.1 EFQM's Sustainability Orientation. A Sustainability Orientation underlying EFQM's principle of "creating a sustainable future", as defined by EFQM (2012, p. 21), confirmed that business excellence models can drive sustainability (Pérez and Escrig, 2018). Specifically, according to the estimated loadings in the one-factor model that led to the measure of Sustainability Orientation [3], the practices embedded in Leadership and Strategy criteria discriminated how recognized-for-excellence organizations approach sustainability, so that "creating a sustainable future" implied leaders engaging with stakeholders and developing fair relationships, which are foundations of CSR (Mehralian *et al.*, 2016).

Frequent themes reported by role-models of excellence in material topics were: people, stakeholders, customers and service. Further reading of reported missions and values statements corroborate the importance of their relevance. It could be argued that these



Cluster	0	1	2
Reports	Adif (2017) Enagás (2018) Red Eléctrica (2018) Sanitas (2018)	Banco Sabadell (2018) Ibercaja (2018)	Aena (2018) Caixabank (2018) FREMAP (2018) Hospital Plató (2018) Umivale (2017) Unión de Mutuas (2018) University of Cádiz (2018)
Descriptive Keywords	safety, environment, supply chain, government, efficiency, ethics, innovation, service	social, ethics, customer, talent, transparency	service, safety, social, development, government, labour, work-life balance, culture

Figure 4. Summary of cluster analysis

priorities reflect the composition of the sample, primarily of service providers, but they may stem from the importance of shared decision-making and consultation in modern management. Alternatively, frequent themes simply highlight that, in essence, sustainability-reporting is about managing stakeholders' expectations. The emphasis on the Leadership and Strategy criterion is not surprising, given leadership's role in QM, and how socially-responsible leadership is underscored in CSR. Indeed, cross-sectional analyses of EFQM (2012) supported a variation of Figure 1, where Leadership drives other criteria (e.g. Escrig and de Menezes, 2016). There are also arguments for the presence of an ethical dimension in the QM-CSR intersection (Neri et al., 2019), since socially responsible QM is grounded on ethics (McAdam and Leonard, 2003). Yet, reported material topics by role-models of excellence highlight that environmental impact (i.e. pollution, waste management and energy efficiency) was of significant concern for a third of role-models. In addition, few reported socially responsible investments, which is another indicator of "creating a sustainable future". Whether these gaps were restricted to Spanish organizations, or the timeframe, how to address them deserve further investigation, which may inform business excellence models and pathways to organizational performance.

Even role-models of excellence, i.e. those organizations consistently awarded the highest level of excellence, varied in Sustainability Orientation. Despite reporting reliance on EFQM (2012), role-models of excellence appeared to adapt the model to their specific circumstances. Some focused on processes (safety in the supply chain, environmental care and corporate governance), while others emphasized social responsibility or concerns for well-being and

work-environment, thus underscoring people concerns. In conclusion, different pathways to a sustainable future are likely, as suggested by [Agudo et al. \(2015\)](#).

The relevance of people-related issues in one of the clusters and the fact that these were common within material topics is not surprising, given that human resource management is at the intersection between QM and sustainability ([Aquilani et al., 2016](#)). In fact, “succeeding through the talent of people” was another fundamental principle in [EFQM \(2012\)](#) which integrates four of the five sub-criteria that formed the People Enabler in the model depicted in [Figure 1](#). Elements that promote cultural change and employee-involvement in QM are critical, since people-management practices foster value alignment and involvement that support efforts towards sustainability ([Daily et al., 2012](#); [Gallagher et al., 2018](#); [Chaudhuri and Jayaram, 2019](#)). It could be argued that a weakness of the definition of “creating a sustainable future” in [EFQM \(2012\)](#) was the exclusion of elements in criterion 3 (People), as a Sustainability Orientation would also manifest in how organizations manage their workforce. To an extent people management might have been embedded in “creating a sustainable future” via criterion 1 (Leadership). In addition, the data show a strong positive correlation between EFQM’s Sustainability Orientation and criterion 3 ($r = 0.85$), thus providing support to the expectation that, in practice, such an orientation would correlate with how people are managed and supported by the organization. Given this, a positive association between the fundamental principles of “creating a sustainable future” and “succeeding through the talent of people” in [EFQM \(2012\)](#) is envisaged. Unsurprisingly, [EFQM 2020](#) underscores UN sustainable development goals, and as this new model is further disseminated, data on more recent and future recognitions may enable more detailed assessments of the impact of this QM framework on the triple bottom line.

5.1.2 EFQM’s Sustainability Orientation and Results. Expectations on the link between QM and corporate sustainability (e.g. [Tari, 2011](#); [Neri et al., 2019](#); [Sila, 2020](#)) were confirmed: organizations recognized-for-excellence by EFQM portrayed a Sustainability Orientation that was positively associated with key stakeholder-Results. The associations were mostly contemporaneous, as estimated effects from the previous level of the Sustainability Orientation on Results were found to be weaker, which could owe to the fact that most organizations reapplying were awarded the same level of recognition. Further estimations of the models on the panel, where the current Sustainability Orientation was replaced by the previous in [Figure 3](#) (left), confirmed positive correlations and indirect effects, but total and direct effects were weaker than those reported in [Figure 3](#). An additional investigation of likely effects of size on the structural equation models, via group analyses of small and medium versus large organizations, showed no significant effect.

Given the consistent correlations, the EFQM model is a tool for stakeholder management, as advocated in case-studies and conceptualizations that linked QM and CSR ([Calvo et al., 2018](#); [Medne et al., 2020](#)). There is a clear business case for sustainability (e.g. [Carroll and Shabana, 2010](#); [Wang et al., 2016](#)), since direct and indirect effects of the Sustainability Orientation on Business Results were consistently positive, as hypothesis 1 and 2 presumed. Although a balance among planet, profit and people may be difficult due to the inherent tensions between the three ([Gallagher et al., 2018](#)), the EFQM framework seems to have effectively communicated to organizations what sustainability might mean in practice. Consequently, this study questions a common perception that mainly economic expectations can be fulfilled by a QM framework such as the EFQM model (e.g. [Pedersen and Neergaard, 2008](#); [Asif et al., 2011](#)). Yet, People Results did not predict Business Results, therefore contradicting conceptualizations based on high involvement management and the mutual gains perspectives, which have been advocated as core to modern management (e.g. [Wood et al., 2012](#)). By contrast, the correlation between People Results and Customer Results, which is often highlighted in Operations Management, was consistently positive. Hence, people results may have an indirect impact on business results through its association with customer’s results. This observation appears to support previous analyses of the internal structure of

EFQM (2012), by Gómez *et al.* (2015) and Mesgari *et al.* (2017), which argued for such indirect effect on business results. There is also some corroboration with the service profit chain model (Heskett *et al.*, 2008), which stresses the importance of employee-satisfaction and retention in providing value to customers and subsequently improving business performance.

5.2 Practical implications

For managers, this study highlights that adoption of the EFQM model can drive positive change via a Sustainability Orientation, which emphasizes ethical leadership and can benefit the business, as well as society and other stakeholders. The findings shed light on how QM practices may contribute to sustainability. Most noticeably, emphases on customers and people, which were strengths in EFQM (2012), can facilitate value creation. The findings also identified areas for improvement concerning environmental management and sustainable finances, which are warning signals that can be addressed by EFQM-assessors, future self-assessments and revisions of the EFQM model.

Managers can rely on the self-assessment documentation that is needed for EFQM recognition, to disclose sustainable practices. Likewise, when developing sustainability actions, more efforts towards GRI or related standards, such as UNGC and SDGs, would support benchmarking. In this context, the latest edition of the EFQM model (EFQM, 2019a), which has been available since 2020, underlines that business excellence is about integrating sustainability, transparent corporate governance and QM. It is an improved tool for stakeholder management (Fonseca, 2021), since the focus on stakeholders has become more explicit in this later revision. In particular, stakeholder-engagement is formally assessed within two criteria, and the extent of stakeholder involvement in setting the organizational purpose and culture is also considered.

5.3 Limitations and future line of research

The above findings relied on a longitudinal analysis of scores from organizations awarded recognized-for-excellence in Spain, and on the content of sustainability reports of a sample of those consistently awarded the highest level of excellence within this population. A limitation of the longitudinal analysis is the sparseness of the data, which owes to the fact that most organizations that apply for EFQM recognition do not achieve recognized-for-excellence status. Actually, EFQM's website states: "All organizations strive to be successful, some fail, some achieve periods of success but ultimately fade from view, and a few achieve sustainable success, gaining deserved respect and admiration" (EFQM, 2019b). Future research may engage with several EFQM-partners to build a database of a larger population over time to enable clearer assessments of effects, including time-effects that could be due to previous recognitions or learning, and may signal the strength of the RADAR methodology.

As it could be argued that sustainability reports are idealizations, the value of self-declared compliance statements may be limited (e.g. Goebel *et al.*, 2018). Still, in this study, the qualitative analysis complements the longitudinal analysis, by providing and update and insights on different sources of the data. The focus on reports representing best practice, by adherence to GRI, may have introduced bias, but the trade-offs are comparability and access. Future studies with greater resources may consider more comprehensive samples and data, as well as make more use of Internet-sources and social media.

Finally, the relevance of people in the Sustainability Orientation of organizations being awarded recognition deserves further research. Given the evidence on the relevance of good people management for QM and strategic human resource management (Martin *et al.*, 2016), alternative pathways to Business Results may be explored by interdisciplinary research that may explain models of governance in recognitions-for-excellence by EFQM.

6. Conclusion

The present study highlights that a Sustainability Orientation was implicit in the principle of “creating a sustainable future” in the EFQM (2012). In recognitions for excellence, EFQM’s Sustainability Orientation positively correlated with Customers, People, Society and Business Results. Consequently, successful implementations of the EFQM model can impact the triple bottom line, and there is evidence supporting a business case for socially responsible QM.

Ethical leadership, people and customer orientation, which are core to business excellence models, characterized the Sustainability Orientation of Spanish organizations that were consistently judged to be role-models by EFQM. Yet, their sustainability reports illustrated that priorities and stakeholder management vary, and indicated that even at the highest level of excellence, some were yet to prioritize sustainable financial investments and environmental impact, which are causes for concern. In all, the EFQM model has been shown to facilitate a Sustainability Orientation that can deliver to stakeholders, but there remains a long way ahead to fulfilling its principle of creating a sustainable future.

Notes

1. As per Van Marrewijk (2003), corporate sustainability and corporate social responsibility (CSR) might have followed separate paths, but share a vision, and nowadays the two concepts are interchangeable.
2. The analysis is available upon request.
3. Given varying definitions of Sustainability Orientation and the 24 Enabler sub-criteria in EFQM (2012), other measures might have been envisaged. Following suggestion by an anonymous referee, a one-factor model of scores on 10 Enabler sub-criteria was considered. There was no improvement in goodness-of-fit and the alternative measure that would have followed from this model strongly correlates with this measure ($r = 0.9911$).

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Appendix

Table A1.
Empirical studies on
the Quality
Management (QM)-
Corporate Social
Responsibility
(CSR) nexus

Study	Purpose and theoretical perspective	Sample	Variables	Method	Main findings
Hazlett <i>et al.</i> (2007)	Explore the association between QM and CSR QM and CSR literature	Six business improvement award-winners in Northern Ireland	QM: award-winner CSR practices: environment, workplace, social impact, and economic impact	Case-study based on archival data Qualitative description of award submission	QM can aid the development of CSR activities, but a strategic focus on CSR is still in its infancy
Mellett and Adams (2012)	Considering CSR as a subset of QM, assess CSR's link to other QM practices and its impact on performance QM literature, convergence theory, institutional theory	31 firms in the petroleum industry in Iran	Exogenous variable: top management support Endogenous variables: quality information and analysis, benchmarking, CSR Dependent variables: operational results, business results	Cross-sectional survey Structural Equation Modeling	Top management support and quality information affect CSR CSR has a direct effect on operational results and an indirect effect on business results
Mehralian <i>et al.</i> (2016)	Analyze how the relationship between CSR and QM impact performance QM and CSR literature	933 pharmaceutical distribution companies in Iran	Exogenous variable: CSR as multidimensional (corporate governance, employee relations, social concern, environment concern, and economic and financial concern) Mediator: QM as multidimensional (management commitment, employee-involvement, employee-training, quality information availability and usage, supplier-quality, customer focus) Dependent variable: performance as per the Balanced Score Card	Cross-sectional survey Structural Equation Modeling	CSR practices promote QM implementation QM mediates the association between CSR and performance
Quintana <i>et al.</i> (2018)	Analyze how TQM and CSR implementations influence stakeholder results and in turn business performance QM and CSR literature, and Stakeholders theory	122 hotels in Andalusia (Spain)	Exogenous variable: TQM construct made of the EFQM-enablers (leadership, strategy, people, partnership and resources; process; products and services) Exogenous variable: Gender diversity of management team Environmental and social dimensions) Endogenous variables: people, customers and society results Dependent variables: net income and economic-financial goals	Cross-sectional survey and archival data Structural equation modeling	The implementation of TQM facilitates the development of CSR, which benefits stakeholders and has a positive association with business performance
Benavides <i>et al.</i> (2014): related research, but 141 hotels and excludes gender diversity	Examine how TQM practices and CSR affect entrepreneurial orientation QM and CSR literature	268 Iranian hotels	Exogenous variables: 5 TQM practices (human resource management, customer focus, strategic planning, process management, information and analysis) Mediator: CSR behavior as a single construct that measure the integration of stakeholders' concerns into operations Dependent variable: entrepreneurial orientation as a single construct that measure the tendency to take entrepreneurial activities	Cross-sectional survey Structural Equation Modeling	TQM practices positively affect CSR CSR is an antecedent of entrepreneurial orientation

(continued)

Study	Purpose and theoretical perspective	Sample	Variables	Method	Main findings
Sila (2018, 2020)	Analyze the relationships between TQM, corporate social performance (CSP), and financial and market performance (FMP). QM and CSR literature, and Stakeholders theory	Sila (2018): 156 manufacturing and service companies in Turkey and 132 in Cyprus Sila (2020): 156 manufacturing and service companies in Turkey in 2012 and 229 in 2017	Exogenous variable: multidimensional TQM (leadership, strategic planning, customer focus, information and analysis, human resource management, process management, supplier management) Mediator: CSP (environmental and community performance) Dependent variable: financial and market performance Contextual variables: sector and country (only in Sila, 2018)	Sila (2018) - Cross-sectional survey - Structural Equation Modeling Sila (2020) - Survey data in 2012 and 2017 (cross-sections) - Structural Equation Modeling	TQM practices improve CSP TQM impact FMP directly and indirectly via CSP
Chaudhuri and Jayaram (2019)	Explain how social and technical integration influence QM and sustainability management, and in turn quality and sustainability performance Socio-technical systems (STS) theory	931 manufacturing companies in 22 countries in Europe	Exogenous variables: Social integration and Technical integration Mediator variables: Quality program development and Sustainability program development Dependent variables: Quality performance and Sustainability performance	Sixth version of International Manufacturing Strategy Survey (cross-section) Structural Equation Modeling	Social and technical integration enable the positive association between quality/sustainability programmes and quality performance/sustainability performance No effect of quality programmes on sustainability performance or of sustainability programmes on quality performance TQM helps to develop CSR practices CSR is a partial mediator in the relationship between TQM and CGP
Abbas (2020)	Investigate the role of CSR in the relationship between TQM and corporate green performance (CGP) QM and CSR literature, and Green theory	291 manufacturing firms in Pakistan	Exogenous variable: TQM, multidimensional construct (leadership, strategic planning, customer focus, process management, human resource management, information and analysis) Mediator: CSR practices as a construct of social, employees and customers dimensions Dependent variable: CGP as a multidimensional construct (green management strategies, green processes and green products performance)	Cross-sectional survey Structural Equation Modeling	
Alsawafi et al. (2021)	Analyze the role of internal dimensions of QM in driving sustainability performance Dynamic capability theory	226 UK manufacturing firms	Exogenous variable: management relations Endogenous variables: employee relations, and quality training Dependent variables: sustainability performance (economic, social and environmental)	Cross-sectional survey Structural Equation Modeling	Management relations support employee relations and quality training Management relations indirectly related to the 3 sustainability performance variables via employee relations

(continued)

Table A1.

Study	Purpose and theoretical perspective	Sample	Variables	Method	Main findings
<i>Studies of the EFQM Model</i>					
<i>Pedersen y Neergaard (2008)</i>	- Analyze how CSR is embedded in the EFQM model - QM and CSR literature	One Danish pump manufacturer, winner of the EFQM Excellence Award in 2006	- QM: award-winner - CSR practices: social and environmental concerns	- Case-study based on secondary information and interviews with managers and senior professionals - Qualitative description of CSR integration	- CSR can be integrated in business excellence model, but an instrumental view is dominant
<i>Ascigil (2010)</i>	- Investigate if the EFQM model guides integrating CSR - QM and CSR literature	Two EFQM award finalists in Turkey	- QM: award-finalist - CSR practices: evidences of approaches to different stakeholders	- Case-study on archival data - Qualitative description of EFQM self-assessments	- EFQM model accommodates aspects of CSR - EFQM encourages firms to run impact assessments and prioritize social responsibility
<i>Olaru et al. (2011)</i>	- Analyze the extent to which the implementation of a QM system according to ISO9001 impacts the EFQM society Results - QM and CSR literature	918 Romanian SMEs	- Exogenous variable: having an ISO 9001 QM system - Dependent variable: Society Results	- Cross-sectional survey - Descriptive analysis of mean values of elements in society Results	- A QM system may facilitate the attainment of society Results
<i>Del Rio et al. (2017)</i>	- Analyze whether QM practices influence EFQM society Results criterion - QM and CSR literature	100 rural accommodation establishments in Spain, certified by "Quality Tourism Q"	- Exogenous variable: QM practice on leadership - Endogenous variables: 4 QM practices (quality polity and strategy, personnel management, learning, process management) - Dependent variable: Society Results	- Cross-sectional survey - Structural Equation Modeling	- Process management is the only QM practice with a direct effect on society Results - Other QM practices are antecedents of process management
<i>Calvo et al. (2018)</i>	- Study the influence of EFQM enablers on society Results - QM and CSR literature	116 Spanish companies assessed using the EFQM model as a guidance	- Exogenous variable: TQM social factors - Endogenous variables: strategy-resources management factors, and process management - Dependent variable: Society Results	- Archival data on scores of EFQM assessments - Partial Least Squares Path Models	- The EFQM model is a valid framework to improve organizational social impact
<i>Pérez and Escrib (2018)</i>	- Assess CSR development when organizations adopt the EFQM model - QM and CSR literature	Four organizations with EFQM recognition in Spain	- QM: EFQM recognition - CSR practices: approaches to ISO 26000 topics and levels of CSR development	- Case-study of secondary information and interviews with managers and employees - Qualitative descriptions of CSR integration	- A higher level of excellence implies a greater level of CSR development - Organizations still have to internalize CSR

(continued)

Study	Purpose and theoretical perspective	Sample	Variables	Method	Main findings
Neri <i>et al.</i> (2019)	- Examine drivers of top executives' perceptions of CSR when adopting the EFQM model - QM and CSR literature	52 executives in different countries within an Asian technology multinational	- Exogenous variable: factors shaping executive CSR perceptions (value generation and industry forces; stakeholders, institutions and values; competition, shareholders and the business case for CSR) - Dependent variable: perceptions of the inclusion of CSR in QM	- Cross-sectional survey - Factor analysis and linear regression	An approach towards excellence contributes to shaping managers' perceptions on CSR
Meche <i>et al.</i> (2020)	- Analyze how the EFQM model can contribute to sustainable activities in a university - QM and CSR literature	Riga Technical University	- QM: state of QM framework based on the EFQM model - CSR practices: sustainability (environment, economy and society) in the EFQM enablers	- Case-study based on secondary data - Qualitative descriptions of evidences of sustainability	Enabler EFQM criteria recognize sustainability and may guide a strategic focus for sustainable development

Source(s): Own elaboration

Table A1.

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