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ORIGINAL ARTICLE

Organizational excellence methodologies (OEMs): a systematic literature review

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Abstract The purpose of this research is to conduct a Systematic Literature Review to identify organizational excellence methodologies (OEMs) from the state of the art literature, classify them based on their business sector, generate a unified list of organizational excellence (OE) critical success factors (CSFs), and propose future research agenda. A comprehensive analysis conducted on publications/year, publications/journals, journals' rank, research methods, business sector, publications' research area, and much more. The analysis reveals the identification of 46 OEMs, a unified list of 47 OE CSFs, and proposing future research agenda that include testing OEMs in the same business sector but in different countries, regions, or even different business sectors; conducting longitudinal studies on OEMs research scope; developing OEMs for the public sector and NPOs; studying the OE aspects in the MENA region; the researchers from the MENA, Africa, Malaysia, China, and the USA should put more effort to contribute to the OE scope; exploring the OE CSFs, barriers, and challenges on the different levels, business sectors, and geographical locations; testing the importance of the unified list of CSFs for organizational performance; developing a methodology to facilitate OEMs adaptation process; integrating some of the OEMs that never integrated before and test their impact on organizations' performance; integrating the sustainability concept with the BEMs or OE concept; studying the OE applications in the new era of digitization, globalization, the Internet of Things, and industry 4.0; and proposing a methodology or framework to maintain an excellent performance level beyond the implementation stage.

Keywords Organizational excellence · Methodology · Systematic literature review · Critical success factors

1 Introduction

Organizational success may have different means and each organization may have a different success perspective. Rezaei et al. stated that, for long term success, organizations should maintain a high-performance level (Rezaei et al. 2018). Toma and Naruo stated that excellent organizational performance is one of the main goals of the organizations and, on a global level, organizations strive to achieve and sustain an excellent performance because it is one of the important pillars to keep organizations ahead of other competitors (Toma and Naruo 2017). To have a general understanding of what meant by organizational performance (OP) and what is excellent organizational performance (EOP), we should first define organizational excellence (OE), OP, EOP. OE can be defined as the optimum utilization of internal and external resources to meet and exceed customers' requirements as well as achieving sustainable business development (Ionica et al. 2010). Antony and Bhattacharyya defined OP as a

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"measure of how well organizations are managed and maximize the value they deliver to customers and other stakeholders" and redefined EOP as "the outstanding measure of the relationship of all performance variables influencing an organization's functioning" (Antony and Bhattacharyya 2010b, page 42). Antony and Bhattacharyya stated as well that to be on EOP level, organizations should have "holistic focus as compared to organizations aspiring only for performance and that an organization cannot attain excellence merely by adding onto the existing level of a single performance variable" (Antony and Bhattacharyya 2010b, page 50). Therefore, Ringrose stated that excellent organizations are those organizations that adapt themselves continuously and pace toward OE (Ringrose 2013).

To reach an excellent performance level, the organization needs to adopt an Organizational Excellence Methodology (OEMs). Ubaid and Dweiri defined OEMs as a "system of methods, techniques, tools, and self-assessment approaches, used by organizations to build necessary performance management system and excellent performance fundamentals that encompasses the creation of necessary core competencies, people capabilities, innovative culture, strong partnership relations, customer focus business model, top management commitment, ISO system adoption, optimum resources utilization, and managing organization behaviors. Then, use equipment, fundamentals, and performance management system, as the foundation to convert organization inputs to output through the process to achieve and sustain excellent organizational performance" (Ubaid and Dweiri 2019). The research efforts, on the OE scope in general and on the OEMs specifically, were and still at the core of the researchers' attention. To prove this statement, on Monday, May 25, 2020, we searched on the Google scholar database by using keywords "Organizational Excellence" and "Methodology" for a timeframe between 2019 and 2020 only. The search resulted in 1390 published articles, after excluding citations and patents, which show the degree to which that OE research scope is important and is still a highly attractive topic. However, the published literature review papers on the OE research scope, up to our knowledge level, were very few and focused on narrow areas as we can see the following paragraph.

Suárez, Calvo-Mora, Roldán, and Periáñez-Cristóbal conducted a Systematic Literature Review (SLR) on the quantitative researches on the EFQM model only (Suárez et al. 2017), Sony conducted a literature review to propose a sustainable operational excellence model. The purpose of Sony's work is to guide organizations on "how to implement a sustainable operational excellence initiative in the organization" (Sony 2019), and de Waal used a literature review approach to identify success factors that assist organizations to be a high performing organizations (de Waal 2018). Tony Bendell described the 6σ and lean thinking approaches, explained each approach strengths and weaknesses, pros and cons of integrating 6σ and lean thinking approach, and proposed a decision path for six sigma (6σ)-lean to assist organizations in implementing 6σ-lean approach (Bendell 2005). Young Kim, Kumar, and Murphy conducted an integrative literature review to explore the studies that focused on the EFQM model only (Young Kim et al. 2010). Other researchers tried, throughout the literature review, to propose an assessment framework for supply chain partnership performance (Young Kim et al. 2010), or measuring reverse logistics enterprise performance (Shaik and Abdul-Kader 2012). Therefore, a comprehensive literature review is required. To conduct such research, selecting the right research approach is a focal point of research. Young Kim, Kumar, and Murphy have discussed the two approaches usually used for analyzing the body of literature, i.e. qualitative approach (narrative literature review and systematic literature review) and quantitative methods (meta-analysis), explained the pros and cons of each approach, and then decided to use the qualitative approach because of its usefulness for exploring the nature of research topics and methodologies employed in prior papers (Young Kimet al. 2010).

Against the above literature review papers' research topics, we can conclude that the OE research scope is lacking comprehensive literature review research employing Systematic Literature Review (SLR) methodology and focus on analyzing the OEMs literature and its related issues. The objectives of this research are identifying OEMs from the state of the art literature, classify them based on their business sector, generate a unified list of OE implementation success factors, highlight the knowledge gaps found in the OEMs' literature, and propose future research agenda. A comprehensive SLR methodology will be used in this research to ensure having a focused literature review process and getting high-quality results (Suárez et al. 2017). SLR methodology used in the current research adapted from methodologies used in the work of Crossan and Apaydin (Crossan and Apaydin 2010) and work of Tranfield, Denyer, and Smart (Tranfield, Denyer and Smart 2003).

In this research, a list of 46 OEMs (28 generic methodologies and 18 customized methodologies) presented, a unified list of 47 CSFs generated, many gaps in knowledge in the OEMs literature identified, and future research agenda proposed. This research started with the introduction section. Then, in Sect. 2, the research methodology discussed. In Sect. 3, the systematic literature review conducted. In Sect. 4, the research results discussed. After that, in Sect. 5, research implications

outlined, and, in Sect. 6, the research limitations highlighted. Conclusions discussed in the last section.

2 Research methodology

The methodology used in the current research adapted from Crossan and Apaydin's work and its shown in Fig. 1. The literature review process divided into three steps namely data collection, results' analysis, and results' synthesis (Crossan and Apaydin 2010). within the data Collection step, the approach used by Tranfield, Denyer and Smart will be used, i.e. the data collection step consists of three steps namely literature review planning, literature review execution, and literature review reporting. SLR steps' details will be explained in the coming sections.

3 Literature review

3.1 Data collection

3.1.1 Literature review planning

The first step in the literature review planning is the formulation of the problem to solve (Suárez et al. 2017). Therefore, based on the research objectives discussed in the introduction section, the following research questions need to answer throughout the literature review:

1. What are the OEMs available in the literature, how can we classify them, and what are the CSFs for OE implementation?
2. What the knowledge gaps are found in the OEMs' literature and what is the proposed research agenda?

One of the important steps of the SLR process, during literature review planning, is defining search terms. Search terms will be defined and used to exclude all irrelevant results, to have a focused literature review process, and to limit search scope. The search terms include:

1. Using the " + " sign to include only results containing all keywords. The keywords used in this literature review are "Organizational Excellence", "Excellent Performance", "Methodology", and "Critical Success Factors".
2. The literature review timeframe will start from 1999 onwards because, as it was stated by Nabitz, Quaglia and Wangen, the EFQM model version issued in 1999 was the first known Business Excellence Model (BEM). In the EFQM model, the term 'quality' was completely replaced by the term 'excellence' (Nabitz et al. 1999).
3. For publications' type selection, only journal articles and conference papers, in the English language, from engineering and business disciplines will be accepted in this research.

3.1.2 Literature review execution

The search in online databases, after excluding all irrelevant subject terms, resulted in a list of 335 journal articles. Publications' classification approach from Crossan and Apaydin work will be considered, i.e. the selected publications will be categorized to three main categories that are review papers (Review), highly cited papers (Highly); and the most recent papers, i.e. in the current research, it will be papers published after 2016 (Recent) (Crossan and Apaydin 2010).

The criteria for accepting highly cited papers, set by Crossan and Apaydin, is accepting papers only if they have received 5 citations each year. However, different criteria have been set for the current research, i.e. a highly cited paper will be accepted only if it has earned more than 15 citations by the time of writing this research. However, certain research papers are exceptions if the authors find that the publication contains substantially relevant material even though it has not earned the required number of citations. The logic of this criterion is acceptable in light of the categorization approach adopted by Crossan and Apaydin, i.e. setting a separate category for recent publications to avoid citation discrimination against the recent publications. For the Recent category, the criterion set by Crossan and Apaydin to accept the most recent papers is evaluating those papers based on journal quality. It is decided for the current research to accept recent publications only if they have been published in the journals ranked as a first or second quarter that is Q1 or Q2 by Scientific Journals Ranking (SJR) website (https://www.scimagojr.com/journalrank.php), or any other relevant database. However, if the publications have relevant work or results and they were published in the third or fourth quarter journals that is Q3 or Q4, they would be accepted for the systematic literature review. Regarding the third category, i.e. Review papers, papers will be accepted as they are without any criterion (Crossan and Apaydin 2010).

After screening the 335 publications, only 84 journal articles from different online databases were found relevant. However, after applying the aforementioned selection criteria, only 70 papers fulfilled the selection criteria, and four papers were conditionally accepted due to the relevant results and 10 were rejected. The selected 74 papers consist of 55 papers from the "Highly" category, 13 papers from the "Recent" category, and 6 papers from the "Review" category, see Fig. 2.

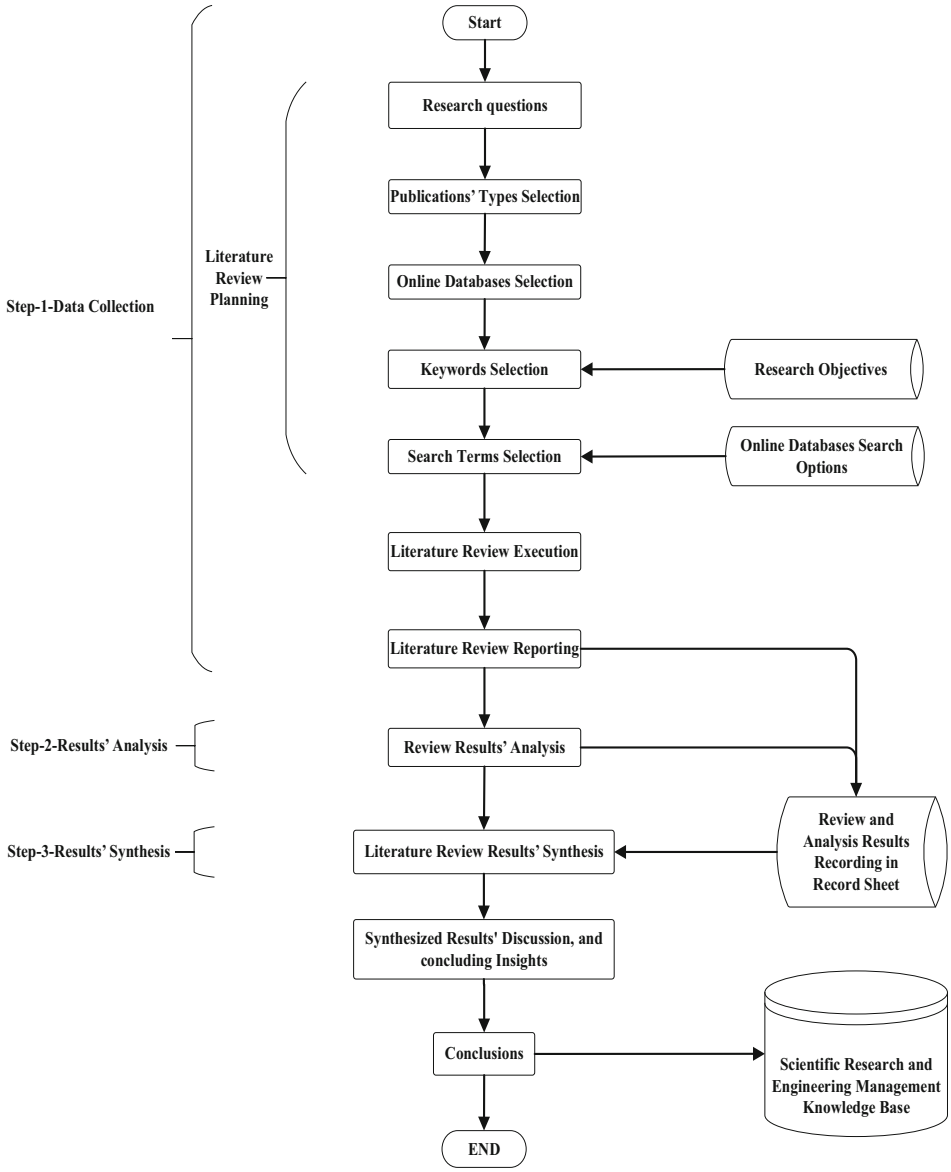

Fig. 1 Research methodology

3.1.3 Literature review reporting

The details of the OEMs in the selected 74 papers will be reported in this section. To simplify the review process, the reviewed publications will be classified into five categories.

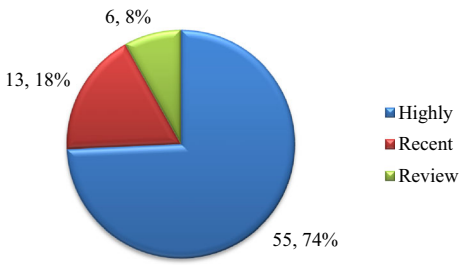

Fig. 2 Publications classification

The first category will include studies focusing on analyzing 6σ and lean-thinking approaches. The second category will include studies focusing on analyzing the Balanced Scorecard (BSC) approach. The third category will include studies conducted on assessment methodologies i.e. the studies focusing on analyzing self-assessment, self-audit, external audit, or other methodologies. The fourth category will include conclusive studies, i.e. studies focusing on extracting necessary conclusions about Business Excellence Models (BEMs) and other OEMs, the relationships between models criteria, the CSFs, the drivers and barriers of OE, and others. The last category includes studies directed to develop hybrid OEMs or models that combine more than one methodology. A summary of the details of the papers presented in the following sections can be seen in Appendix Table 3.

Six sigma (6σ) and lean-thinking studies Raisinghani et al. explained the history of 6σ development along with what 6σ methodology stands for in industrial and service sectors. They stated that 6σ is a toolset focused on process improvement. It is not a management system; thus, it should be used in conjunction with other quality management methodologies like Baldrige or EFQM models. 6σ methodology starts with management commitment, resource allocation, extensive training at all organization levels and focuses on the change of culture. In the industrial sector, 6σ methodology encompasses a set of methodologies that may include measurement system analysis, the methodology of controlling processes, design of experiments, Failure Mode and Effects Analysis (FMEA), and process capability (CPK) methodology. In the service sector, 6σ methodology uses the DMAIC approach (define, measure, analyze, improve, and control) to define, measure, analyze, improve, and control their service processes. Mostly 6σ methodology, when applied, may take five years to reach the desired level, i.e. excellent performance (Raisinghani et al. 2005).

Bendell described the 6σ and lean thinking approaches, explained each approach strengths and weaknesses, pros and cons of integrating 6σ and lean thinking approach, and proposed a decision path for 6σ-lean to assist organizations in implementing 6σ-lean approach (Bendell 2005). Corbett explained the concepts of BEMs, lean thinking, 6σ, and the integration of Lean 6σ (LSS) and BEM. They have used a case study approach for investigating the benefits of integrating the LSS approach in the BE framework specifically the MBNQA model and have presented a framework explaining how award winners integrated LSS approach, tools, and techniques in the BE framework. At the stage when an organization or a company has identified its strengths, weaknesses, and improvement opportunities, LSS can be used to eliminate waste; reduce variation; improve quality and use a project-based approach for each criterion of BE framework to conduct and maintain improvement activities (Corbett 2011). Habidin, Mohd Yusof and Mohd Fuzi studied the relationship and impact of implementing LSS practices on OP indicators. The study results proved that implementing LSS practices has a positive and significant direct relationship with OP. In this research, the mediating role that Strategic Control System (SCS) practices playing between LSS and OP has been investigated. The study results showed that SCS as a mediator has a positive impact on OP but it is not of a significant level. Nonetheless, it could be implemented to ensure OP improvement (Habidin et al. 2016).

Balance scorecard (BSC) studies Sureshchandar and Leisten studied the BSC methodology, highlighted the pros and cons of the methodology, and proved that BSC works as a template where the contents of BSC perspectives are decided by each organization depend on its circumstances. A new theoretical framework called Holistic Scorecard (HSC) for the software industry sector was proposed for performance management and improvement. The proposed framework consists of six perspectives—four perspectives from BSC and two additional perspectives—which were overlooked by BSC. The six perspectives are financial, customer, business process, intellectual capital, employee, and social perspective. HSC works in a multifaceted manner at strategic, macro, and micro levels (Sureshchandar and Leisten 2005).

The impact of applying the BSC approach on public sector organizations of New Zealand has been studied by using a longitudinal case study approach by Greatbanks and Tapp as they studied the impact of BSC on three levels of the organizational structure namely strategic planning, team management, and staff performance. It has been proved by the research that frameworks/approaches for OE, like the BSC approach, originated for the private sector cannot be implemented in the public sector without necessary adaptations. The main reason behind this could be the differences in organizational outlooks such as customers, stakeholders, and others. It has been proved also that the positive impact of implementing the BSC approach on the public sector organizations will not be guaranteed without adding other supporting initiatives like a dashboard of data reporting and a reward system for employees. It has been proved as well that the implementation of the revised version of BSC for the public sector has shown a positive impact. However, its exact contribution cannot be defined precisely (Greatbanks and Tapp 2007).

Assessment methodologies' studies Karapetrovic and Willborn studied Quality Audit (QA) and Self-Assessments (SAs) methodologies to identify their role in attaining excellent performance and to find out the degree to which those methodologies are compatible. They explained that QA and SAs methodologies followed the PDCA cycle in conducting audit and assessment processes and proved that QA and SAs are compatible and should co-exist in the organization's efforts for achieving OE and maintaining continuous improvement. QA represents a baseline for improvement, i.e. assurance of suitability and effectiveness of the quality system and its compliance with ISO standard. On the other hand, SAs are necessary to identify the enablers of continuous improvement. Karapetrovic and Willborn reinforced their previous work and proposed a self-audit methodology to overcome the weaknesses of the QA by incorporating the strengths of self-assessment methodology from BEMs and Benchmarking. In the self-audit methodology, the process owner will conduct a periodic audit on the process performance which has to

assume regular product quality inspection status. The objective of self-audit is performance improvement by evaluating process effectiveness (the suitability of process enablers for achieving targeted objectives) and efficiency (achieving targeted objectives with minimum efforts) (Karapetrovic and Willborn 2001).

The self-assessment methodology for the operational level was developed based on the self-assessment methodology implemented by BEMs on the strategic level. MacKerron, Masson and McGlynn identified a list of criteria for accepting self-assessment methodology on the operational level, and list of positive and negative constructs for departmental (operational) self-assessment. The aim was to devise the way for a development that will guide self-assessment methodology development, and they finally developed a five-stage self-assessment methodology (MacKerron et al. 2003). Ahmed, Yang and Dale discussed the strengths and weaknesses of the self-assessment methodologies used by the organization who had adapted the EFQM model for ongoing processes and were able to propose a new methodology to improve self-assessment accuracy and provide faster and more accurate scoring for the organization. In the proposed methodology, multi-criteria decision making (MCDM) method was used along with the evidential reasoning (ER) approach to propose an assessment methodology consisting of eight levels for conducting an effective self-assessment (Ahmed et al. 2003).

Van Aken et al. developed and tested a tool to assess and improve the maturity and effectiveness of performance measurement and overall improvement system, by implementing it on the public sector organizations. The researchers discussed the pros and cons of the popular performance measurement frameworks and highlighted the gaps found in integrating those frameworks with organizational systems as well as gaps in implementation guidance. Based on it, the improvement system assessment tool (ISAT) was developed. Organizational performance improvement systems are viewed by the ISAT tool as a system of processes and it includes two types of assessments namely, "Improvement processes and outputs and actual results achieved on measures". In this regard, it can be noted that all aforementioned assessment systems have a set of elements and all those elements have different customized assessment templates encompassing specific criteria for that element. The scoring approaches have mainly been taken and adapted from Baldrige and EFQM models. Each template consists of four major dimensions namely approach, deployment, study, and refinement (ADSR). Under each one of the template dimensions, a set of assessment element criteria has been listed, assessed, and scored based on the aforementioned scoring system (Van Aken et al. 2005). Farris et al. continued their project and published their work in 2005 where they had developed the tool (ISAT) for assessing performance measurement and improvement systems. These researchers used the tool to assess the performance review processes in a telecommunications organization and their work proved the effectiveness of the ISAT tool (Farris et al. 2011).

A multi-organizational self-assessment with Best Practices Benchmarking (MOSA-BPB) was introduced by New Zealand Benchmarking Club (NZBC) as an OEM. In summary, it was a collective effort organized and managed by club members to create a questionnaire based on the New Zealand excellence model for conducting a multi-organizational self-assessment and identifying strengths and weaknesses of the assessed members. The aim was to then set up improvement projects through benchmarking with better performing members (Saunders and Mann 2005).

By use of international BEMs structures and multi-criteria analysis tools, a "Multi-criteria Self-Assessment for Business Excellence (MUSABE)" tool was developed as a self-assessment tool for assessing global organization performance that aggregated from discrete criteria performance. The proposed MUSABE self-assessment method consists of four stages namely "Preliminary analysis, Self-assessment, Verification of the results, and Self-assessment results and improvement actions". The enablers and results together make the MUSABE BEM. In total MUSABE-BEM encompasses 13 criteria and 45 sub-criteria. Briefly speaking, the core concept of this tool is that an OE is to be realized and continuously improved by periodically assessing the organization's global and discrete performance based on perceptions of all stakeholders, external customers, and internal customers through which the organization identifies the improvement areas and takes the necessary actions (Politis and Siskos 2010).

Conclusive studies Focus groups, survey questionnaire, and semi-structured interviews approach was used by McAdam, Reid, and Saulters to study the quality frameworks adopted in the UK public sector for identifying the best OEMs approaches used. Six quality frameworks that were being used by public sector organizations included BEMs, Investor in Peoples (IiP), Charter Mark, BSC, ISO 9000, and Benchmarking. The results of this study showed that combining BEM with IiP could be the best approach to OE. However, ISO standards also need to be used to establish a groundwork and prepare organizations for other quality frameworks implementation. McAdam, Reid and Saulters stated that according to surveys and semi-structured interviews more than 17% of the studied organizations reported that BEMs implementation did not guide to an improvement in the performance even after one year and

other quality frameworks presented with a similar situation. Therefore, a focused and structured OEMs needed to resolve the weaknesses of the quality frameworks (McAdam et al. 2002).

Sousa et al. discussed the available performance measurements systems (PMSs), the advantages of applying PMSs, and the obstacles PMSs faced when implemented in SMEs. The research highlighted the available knowledge level and degree of awareness about requirements of PMSs' implementation in the SMEs in Portugal and was aimed at guiding future research for establishing a continuous improvement process to change the way businesses were conducted (Sousa et al. 2005). Robinson et al. researched construction sector organizations of the UK. The survey reveals that organizations in the construction sector used different financial and non-financial measures for assessing their performance. Moreover, an increasing number of organizations adopted BEMs or BSC to create and implement a structured approach for continuous improvement. Among the surveyed organizations, 23% had adopted BEMs and 13% were using BSC. A detailed analysis showed that 15% of surveyed organizations used more than one system for performance and improvement. The majority of the surveyed organizations agreed on the benefits of adopting BEMs and BSC because it represented a holistic approach and provide mechanisms for implementing improvement initiatives and sustaining excellent performance. However, the survey revealed that BEMs and BSC had their drawbacks. Robinson et al. found that adopting and implementing performance measurement and improvement systems was affected by some barriers such as inability to identify indicators and measure them; difficulty in collecting data and problems with the management of time and financial resources. On the other hand, they identified essential elements that should be present for a successful model implementation including leaders' commitment; selection of most appropriate model/system for the organizational processes and business; identification of improvement areas; selection of the right measures and incorporating knowledge management and sharing and change management (Robinson et al. 2005).

Using a range of financial and non-financial measures and integrating them to reach an appropriate OE approach is further supported by Kumar et al. as they stated that the finalist TQM adopters of "Canada Awards for Business Excellence" were surveyed to identify the most appropriate and frequently used performance measures and systems. The results of surveys and statistical analysis revealed that the simultaneous use of financial and non-financial measures is very important for TQM success. Other important findings were related to the performance measurement systems used by TQM adopters where the researchers found that the "management by cycle time" and "value-added management accounting" are considered particularly appropriate by most of the adapters (Kumar et al. 2008).

Haffer and Kristensen identified the effect of business excellence initiatives on organizational performance in Polish organizations. The data collected from Polish organizations were compared with data collected from Danish organizations and with them EFQM criteria and sub-criteria were used as indicators for organizational evaluation. This research revealed many important findings, e.g. the results of the analysis showed that organizations applying holistic BEMs were likely achieving better results than others in terms of business excellence. Another important result was related to the importance of people management factors, i.e. the organizations that focused on managing and improving people factor were likely to achieve better results. The study also highlighted an important OEMs that is the Danish Business Excellence Index (DBEI) (Haffer and Kristensen 2008).

Continuing in the area of BEMs, a consultative research approach that includes literature review, focus groups, surveys, informant interviews and inputs from 16 countries was seen in the light of the existing practices by Australian Business Excellence Framework (ABEF) custodians to design, review, promote and deploy ABEF. Grigg and Mann reviewed a range of studies and highlighted the benefits of Business Excellence Frameworks (BEFs), the correlations between BEFs items, the challenges of BEFs promotion and administration and the international efforts to improve BEFs and their support systems. The most important findings of this research are the need to conduct major reviews on the BEFs. However, the period of those reviews could be different for each country; however, a majority of custodians agreed that it should take place every 5 years (Grigg and Mann 2008).

Angell and Corbett conducted a case study research on a group of organizations. Qualitative and quantitative analysis conducted on 13 organizations that repeated applicants on the New Zealand Business Excellence Foundation (NZBEF) which is adopted the US Baldrige criteria with no major alterations. The analysis was done on the organization's scores and interviews with applicants that were conducted to identify the drivers and barriers of OE. As a result of this research, a conceptual framework for drivers and barriers (CFDB) was proposed. The most important finding of the study emphasized the importance of internal and external assessment that could work as a driver of business excellence. It helped the organization identify the strengths and weaknesses of the processes and creating improvement projects. Another driver of excellence was related to the difference of feedback approaches used for enablers and results, i.e. the approach used to plan and take

improvement actions should be different between enablers and results. Researchers also emphasized on the importance of aligning measurement systems with overall activities and targeted results. Finally, researchers stated that the starting point is important for continuous improvement path success and the way to excellence will depend on the organization's size and business type (Angell and Corbett 2009).

Young Kim et al. presented useful information about the methodologies and future research agenda related to the EFQM model which assists in improving the model efficiency and effectiveness in attaining excellent performance. researchers stated that reviewed literature showed a narrow focus of the conducted researches, i.e. the majority of researches used case studies and focused on narrow areas of the model and missed the model's holistic approach. Therefore, they stated that the EFQM model should be analyzed from multiple angles with a wider scope and approach (Young Kim et al. 2010).

Ališ and Rusjan stated that for organizations with mature Quality Management System (QMS), internally motivated organizations for applying ISO system, and organizations with quality goals connected to strategic goals, the use of internal audit and applying ISO system has a positive impact on improving organization performance (Ališ and Rusjan 2010). Breja, Banwet and Iyer found that linking quality strategy with business strategy is very important to reach and maintain a competitive position. Also, they proved that effective and efficient implementation of TQM will lead to improved organizational performance. It was proved as well that "strategic focus, process objective alignment, change, broadening of the customer base, flexibility, empowerment and speed, distinctive competencies and continuous improvement" represent the critical factors for sustaining excellent performance (Breja et al. 2011).

Meng and Minogue identified the performance models mostly used by the facility management (FM) sector in the UK and Ireland. The research identified that three performance models were mainly adopted by the FM sector including Balanced Scorecard (BSC), BEMs, and Key Performance Indicators (KPIs) models. The results showed that the aforementioned models were used either separately or by combining two models. Greater acceptance and effectiveness was found for KPIs model followed by BSC and BEM. Ten performance indicators proposed to be used in the FM sector in this research were "client satisfaction, cost-effectiveness, response time, service reliability, health, safety, environmental compliance, staff commitment, client-service provider relationship, and IT application" (Meng and Minogue 2011).

For Baldrige Criteria for Performance Excellence (BCPE), information and statistics regarding applicant organizations from the Australian Business Excellence Award and the applicants of the New Zealand Businesses Excellence Award were used to validate the measures embedded in the categories (criteria) of Baldrige BEM for two measurement perspectives. Those measurement perspectives are predicting and explaining results and calculating the overall performance excellence index. The result of validations showed that measures did not fit for either measurement perspective, i.e. the improvement of the measures was needed to improve Baldrige BEM efficiency and effectiveness (Palitha Jayamaha et al. 2011). It has been proved as well that concurrent implementation of TQM and total productive maintenance (TPM) over a considerable period will lead to significant performance improvement and create a strong basis for excellent performance in manufacturing organizations (Kaur et al. 2012).

Brown explored through a case study approach the challenges faced by organizations that had already won excellence awards in Australia based on ABEF, specifically the problems they faced in sustaining the excellent performance level they had reached. Many challenges were highlighted and the ways to overcome those challenges were discussed in the study (Brown 2013). Al-Tabbaa, Gadd and Ankrah explained the concept of quality in the non-profit organizations (NPOs) and proved that BEMs originally developed for-profit businesses can be used to self-assess, plan and continuously improve the performance of NPOs. researchers specifically studied EFQM and MBNQA models and proved that both models can be used for NPOs but the EFQM model has superior features. The study proposed some modifications to the EFQM model in the criteria and sub-criteria weights as well as highlighted some changes in the criteria to make it more befitting for NPOs. Finally, they proposed a framework, adapted from EFQM, for evaluating and improving the performance of NPOs (Al-Tabbaa et al. 2013).

Vora introduced the concept of sustainable change management (SCM) to create and sustain excellent performance and thoroughly discussed the pillars of SCM. This researcher explained the importance of each pillar, its elements, and actions associated with it. The researcher also explained that any change process should entail four principles namely, "Determine need for change; Prepare and plan for change; Implement the change and Sustain the Change". One of the important points highlighted in this research is the fact that organizations should make and keep their employees motivated and excited about their work. Excited employees better contribute to processes improvement, resultantly enhancing customer satisfaction (Vora 2013). Breja, Banwet and Iyer identified through survey analysis, as a part of running project efforts to propose a framework for "sustainable business

excellence", the most CSFs for organizations to sustain the achieved excellent performance. CSFs for excellence sustainability include continuous improvement, "continuously matching strategies with resources and capabilities", "transforming capabilities into distinctive competencies", maintaining "strategic focus" and "flexibility in strategy" (Breja et al. 2016).

Tickle, Mann and Adebanjo conducted research to improve understanding of how organizations deploy excellence principles and which tools and strategies they usually use. Literature review analysis and the information gathered from questionnaires help researchers identify a list of 25 tools that are commonly used by organizations with high Business Excellence (BE) maturity. This research also highlights the methods of identification of CSFs for BE adoption. It has been proved that strategies and approaches used by organizations with high BE maturity are most likely different from those used by organizations with low BE maturity. researchers classified organizations, based on their level of BE maturity, to five levels including "Awareness, Understanding, Progress, Competence, and Advanced". In brief, they recommended that any organization seeking a high level of maturity in BE should adopt approaches, tools, and strategies that have been used frequently by organizations with a high level of maturity which has been explained in the research (Tickle et al. 2016).

Aladwan and Forrester used the assessment reports, available in King Abdullah II Centre for Excellence Records, about some public sector organizations that failed to reach an acceptable excellence level. Researchers studied those reports, analyzed them, and detected the main challenges faced by the organizational leadership in implementing Jordan BEM that is originally adapted from the EFQM model. The main findings of the study were the fact that failure of some public sector organizations to reach a satisfactory performance level was due to a lack of effective implementation of BEM, poor strategic planning, and lack of top management support. Aladwan and Forrester proposed some recommendations to overcome the aforementioned challenges and weaknesses (Aladwan and Forrester 2016).

Al-Dhaafri, Al-Swidi and Yusoff differentiated between TQM, OE (organization practices that bring about excellence by improving the growth pattern and an ability to retain old customers and attract new customers), and organizational performance. The researchers proved that Enterprise Resource Planning (ERP) system, TQM, and OE have a significant and positive effect on organizational performance. On the other hand, it was proved in this study that entrepreneurial culture has no significant moderating effect in the relationship between TQM, ERP, and organizational performance. It has been proved as well that TQM represents a foundation for OE and it leads to improvement of overall organizational performance. For the mediating effect role, it has been proved that TQM is a partial mediator between ERP and organizational performance. OE has been proved to be a full mediator between ERP and organizational performance. The last finding showed that ERP and TQM have a significant collective effect on OE (Al-Dhaafri et al. 2016). Escrig and de Meneze proved that the size of an organization affects the adoption of EFQM. However, some model criteria were universally adopted and it is not affected by the size of the organization. On the other hand, research results showed that organization size might shape the adoption of other criteria and the impact that enablers can cast on the results. Based on the results of the research, revision of relationships embedded in the EFQM model has been suggested (Escrig and de Menezes 2016).

For Swedish Institute for Quality (SIQ) excellence model, Raharjo and Eriksson studied the differences public and private sectors have on the path to business excellence and identified essential drivers for achieving and sustaining high customer satisfaction and business results. They proved that BEMs need to be adapted to fit different business sectors. They also highlighted that not only pathways to excellence for private and public sectors are different but also are the relationship between models' criteria. Raharjo and Eriksson concluded that leadership is an important driver for creating excellent results for both public and private sectors, Management of processes are an important driver for creating results for the private sector, information and analysis is an important driver for creating results for the public sector, and Human resource development key driver for creating results is equally important for both sectors (Raharjo and Eriksson 2017).

Randhawa and Ahuja in the first part of their work proved that, in manufacturing organizations, implementing and sustaining 5S Initiatives has significant importance in reach an excellent performance level. Researchers found that associations between 5S and performance parameters are significant and it will lead to OE, i.e. effective deployment of 5S and sustain it will lead to OE (Randhawa and Ahuja 2017a, b). The same researchers in the second part of their work re-investigated the impact of implementing 5S on the OE and proved again that, in manufacturing organizations, implementing and sustaining 5S initiatives has significant importance to reach an excellent performance level (Randhawa and Ahuja 2017a).

Tasopoulou and Tsiotras proved through questionnaire-based research conducted in 20 universities located worldwide that Benchmarking methodology is one of the main methodologies used by educational institutions across the world to reach and sustain excellent performance and improve quality. This research reveals that four

benchmarking types were used usually by educational institutions namely Internal Benchmarking, External Benchmarking, Generic Benchmarking, and Competitive Benchmarking. However, the majority of universities used Internal Benchmarking followed by Competitive benchmarking. The tools used for conducting Benchmarking include "Process mapping, Process performance measurements, Project management, Questionnaire design, Interviewing skills and Etiquette and legal issues" (Tasopoulou and Tsiotras 2017).

Andzela was able to identify the factors that impact the implementation of the EFQM Model. The researcher found that external factors include "support from quality associations", "increased competitiveness" and "special events (seminars, conferences) dedicated to quality issues". On the other hand, the internal factors were "availability of information resources", "availability of financial resources", and "management initiative". For impeding factors, the external impeding factors were partners' disinterest, investors' disinterest, and lack of positive examples). The internal impeding factors were the "lack of management knowledge about the model", "lack of funding for man excellence-driven approach", and "lack of employees' knowledge and skills" (Andzela 2018). In a similar area, another researcher was able to identify the success factors for High-Performance Organization (HPO) transformation. The factors divided into theoretical factors and practical factors. However, after analyzing those factors, the results show that only eight main factors were can best support a "successful HPO transformation" theoretically and in practice. Those factors are: "active top management, active employees, active HPO Champion and Coaches, HPO education, the distinction between hygiene and HPO factors, effective interventions, connected company, and high-performance partnerships" (de Waal 2018). Arbab and Abaker found that the human resources management practices which include the following dimensions have a significant impact on the OE: (1) human resources planning; (2) recruitment and selection; (3) training and development; (4) wages and salaries; (5) incentives and benefits; and (6) performance assessment (Arbab and Abaker 2018).

Rezaei et al. studied the Culture of Excellence (CoE) factors' impact on the "success of organizational performance (OP)". Culture of Excellence defined as "shared expectation for high performance within the organization". Culture of Excellence (CoE) comprised of ten categories that are "open and transparent communication (OCO), a high degree of motivation (HMO), inspiring leadership (ILE), the highly empowered team (HTE), clear vision and strategy (CST), engaging and challenging environment (EEN), excellent training and education (ETR), seamless collaboration (SCL), mutual trust (MTR), and strong commitment (SCT)". The researchers were able to prove that all 10 CoE constructs were "significantly correlated with OP and there exists a significant relationship between CoE and OP" (Rezaei et al. 2018). Sony developed a model integrating the concept of sustainability and operational excellence initiatives on the organizational level. The factors considered in the developed model comprised of social, economic, environmental, organizational culture, and agility (Sony 2019).

Ershadi and Eskandari Dehdazzi examined the "effect of strategic thinking on establishing an organizational excellence model by identifying the mediating role of organizational forgetting". Strategic thinking is a "creative and divergent process and is related to the vision and outlook that is designed by the leaders of an organization". The activities of Strategic thinking include "information gathering, analysis, discussion and dialog of the conditions governing an organization, and, in companies with diverse activities, it includes answering the basic questions about the organization's portfolio". Organizational forgetting is the "voluntary or non-voluntary loss of organizational knowledge that can lead to changes in the capabilities of an organization". This research results confirmed the significant impact of strategic thinking on OE success. Moreover, organizational forgetting has a significant mediating role between strategic thinking and OE (Ershadi and Eskandari Dehdazzi 2019).

Hybrid OEMs studies Computer-aided self-assessment (CAD-SA) methodology software was developed to assist organizations to reach excellent performance. The proposed methodology provides very limited support to the detailed design and implementation of the improvement project and focuses on the market and customers' satisfaction performance areas excluding other performance areas. Also, the researchers who proposed this tool considered that users of the tool must be highly expert and qualified (Gieskes et al. 1999). Lee et al. proposed Strategy Formulation (SF) methodology to guide educational institutions for achieving and sustaining excellent performance. The proposed methodology combines SWOT analysis, BSC, MBNQA, and Quality Function Deployment (QFD) for enhancing performance excellence. A SWOT analysis was used to guide strategic decision making and formulating four critical success perspectives for BSC. QFD was used to link four success perspectives to critical criteria and success implementation factors. BSC perspectives represented the Whats in the QFD matrix, i.e. what strategic directions the organization must take to achieve and sustain excellent performance, whereas MBNQA education criteria represented the Hows in the QFD matrix, i.e. how a practical step for strategic planning can be taken. The methodology was found limited to the vocational education

sector only. Therefore, the need to test it for other areas/sectors remains there. Another limitation identified in the methodology was that it depended on users' experiences for conducting a SWOT analysis and generating BSC perspectives and also the way they modified MBNQA to suit their institution (Lee et al. 2000).

Mani, e Sá and Kanji discussed the past work in the area of BEMs and performance measurement systems and attempted to explain the criticisms in the BSC system. They also highlighted the elements of a successful performance measurement system and formulated a system based on the CSFs of public sector organizations. The system they proposed was called the "Kanji Business Excellence Measurement System (KBEMS) which was created based on Kanji's Business Excellence Model (KBEM) and Kanji's Business Scorecard (KBS)". It integrated a set of performance indicators, based on stakeholders' perspectives and the CSFs that represent the areas organizations need to excel in to achieve their targets and succeed. What differentiated the proposed system from other systems was the use of the K&W software and Structural Equation Modelling (SEM) method for calculating weights of the model constructs which indicate CSFs contributing to the overall performance excellence. KBEMS also explained the relationship between the performance indicators and the final performance index, duly highlighting the targeted improvement areas (Mani et al. 2003).

O'Kane showed the importance of simulation methodology as an OEM. Three case studies for three organizations with different sizes were analyzed by using the cross-case analysis to reach the conclusion and devise a set of propositions for future research. The proposed simulation methodology could be used for all future simulation research as it comprised the following steps; identification and formulation of the problem; project planning and related analysis; data collection; building simulation model; verification and validation of the built model; experimental design; running the simulations and analysis of the output and documenting and implementing model results (O'Kane 2003).

Another balanced approach was developed called Managers' Performance Management (MPM). This approach developed after studying the construction companies in the UK. The developed holistic approach focused on the performance of the managers by considering task requirements, personal behaviors, and the role context. In brief, the developed framework could help in managing managers' performance that in turn helped to promote OE (Cheng et al. 2005). Beatham et al. developed an Integrated Business Improvement System (IBIS) based on the survey analysis conducted within a case study of one of the leading organizations in the UK. The model was developed based on EFQM model criteria and results. researchers stated that using the EFQM system would give the possibility of developing organizational strategic objectives, CSFs at the tactical level, and developing measures on the operational level. For each one of nine criteria and results adapted from the EFQM model, strategic objectives were aligned with organizational vision and mission developed in the IBIS system. IBIS system involved creating detailed spreadsheets for each one of strategic objectives explaining the related KPIs measures, goals of each one of measures, process owners, data collection and its method, data analysis method, measures calculation, review period, and other essential aspects (Beatham et al. 2005).

An analytical approach along with comparative analysis was used for identifying similarities, strengths as well as weaknesses of the EFQM and BSC models to develop an Integrated Management Model (IMM) for OE and to improve organizations competitiveness. The process involved gathering information about ecological, political, social, technological, economic, and cultural environments. Moreover, information about users, collaborators, shareholders, suppliers, competitors, regulations needs to be collected to form the strategy, vision, mission, and strategic goals on the normative management level (principally based on nine criteria of EFQM model). On the next level, the objectives, measures, targets, and initiatives at the strategic management level will be developed, by using the BSC model, after taking into consideration the input from marketing studies. At the following level, i.e. operational management level, the operational objectives, measures, targets, and initiatives will be developed based on the input from a strategic level. After that, the instructions need to be created to ensure that basic processes will lead to satisfy customers and meet market demands. The process flow of the model described above was only the general process described, but in practice, model contribution/usage depended largely on the organizational management structure (Podobnik and Dolinšek 2008).

Kanji explained that leadership is a set of behaviors or activities and can exist at any level of organization and the style of this leadership will depend on the set of forces at work in the organization. Kanji stated as well that for the organization adopting TQM, participative leadership style is the most recommended style to ensure successful implementation and sustainability of TQM. the researcher also explained that leadership is the prime factor for business excellence and can be realized only if leaders and leadership drive all CSFs at the overall organization levels. In this research, a Leadership Excellence Model (LEM) developed to calculate the leadership excellence index. The benefit of the index is the indication that it gives, i.e. the CSFs with low index value will be potential improvement

areas (Kanji 2008a). Kanji in the second part of his work focused on the 6σ approach and its role for OE within BEMs. Kanji explained that 6σ has limited scope when compared to the comprehensive and holistic approaches of business excellence. Therefore, Kanji suggested that 6σ can be used as a performance measurement system for Kanji's Business Excellence Model (KBEM), as a statistical technique, for measuring the performance of different areas of an organization (Kanji 2008b).

Bassioni, Hassan, and Price developed an Excellence Model for Construction Sector (EMCS). The methodology used in this model followed the same methodology used by most of the excellence models, i.e. it started with the leadership commitment and focus on customers, people, and stakeholders' requirements to create strategic plans. After creating strategic plans, functional business plans need to be created and later they need to be translated into processes for implementation. The implementation results may include stakeholders' results, projects, business results, and others. The model gives bi-directional relationships between models enablers, results and information, and analysis that helps in learning lessons and guidance for the next improvement cycles. The developed model was tested and validated in a large construction contracting company (Bassioni et al. 2008).

Lyons, Acsente, and van Waesberghe presented their practical experience and shared the framework established in the Acquisition Solutions organization to reach and sustain excellent performance. The presented seamless framework integrated Knowledge Management (KM) and Quality Management (QM). Knowledge Enabled Excellence in Performance (KEEP) framework integrating concepts, strategies, and operational activities of KM and QM. researchers stated that creating a culture of high trust and collaboration is a prerequisite for the success of any performance improvement framework. They stated as well that implementing quality framework/ performance management systems should avoid adding another layer to the work. Researchers emphasized that for implementing the KEEP framework, the approach of "Quality at the Point of Execution" should be followed, i.e. at the operational level where the work is done the concept and strategy of the KEEP model must make sense (Lyons et al. 2008).

A holistic framework for organizational success winning wheel (WW) was proposed by Cocks. The proposed framework comprises nine elements of organizational success that include "Effective execution, Perfect alignment, Rapid adaptation, Clear and fuzzy strategy, Leadership, Looking out, Looking in, Right people, Manage the downside, and Balance everything". Effective execution was considered as the pivotal element in the framework because as Cocks stated, without effective execution, desired results could not be achieved. The name given to this framework by the researcher was "Winning Wheel" because it included all winning/success elements and all of them moved connectedly as a wheel that is without a start or an end. the researcher also stated that each region or country may have a different winning wheel and different success elements based on multiple factors that may include culture, business environments, and others. Finally, Cocks shared ten keys messages which represent general advice for organizations targeting sustainable excellent performance (Cocks 2009).

Lam, Ip and Lau developed Activity Model (AM), the proposed model was aimed to model and analyze the business processes to identify ineffective and inefficient looping process and redesign those processes to improve organization performance. Activity model was based on the logic that any business process structure consists of six types business activities interacting between entities, namely "Start (START), Serial Interaction (SEI), Merge Interaction (MEI), Split Interaction (SPI), Merge and Split Interaction (MSI) and End (END)" (Lam et al. 2009). Colledani et al. developed an analytical model to improve productivity and performance of manufacturing systems in Scania Company which comprised of four steps and between every two steps, a set of analytical tools was used (Colledani et al. 2010). Antony and Bhattacharyya in the first part of their work proposed a model to measure Organizational Performance (OP) and OE. The researchers presented a new perspective on the differences between OP and OE. They stated that OP and OE are different outcomes. The proposed model, as per researchers, can be used for SMEs both at the unit level and organizational level. Performance measures used in the proposed model for measuring OP and OE include "creativeness, innovativeness, productivity, efficiency, effectiveness, competitiveness and profitability" (Antony and Bhattacharyya 2010a). same researchers in the second part of their work tested the model for measuring OP and OE in SMEs, at the overall organizational level, and the unit level and they were able to prove model validity and fitness (Antony and Bhattacharyya 2010b).

Kim, Kumar and Kumar developed a framework for assessing and measuring the performance of the supply chain partnership (SCP). The main factors/criteria for evaluating the SCP were defined and an EFQM model structure was used to create a framework for evaluating SCP performance. The developed framework consisted of enablers (weightage 50%) and results (weightage 50%). The assessment criteria of the framework included "Mutuality, Dynamic relations, and Joint problem-solving efforts". The framework enablers comprised of "Leadership, Commitment, Coordination, Trust, Communication, Conflict resolution techniques, and Recourses", whereas results comprised of "Cost efficiency, Output, and

flexibility". Similar to the EFQM model, "Innovation and learning" represented the feedback of the proposed framework. Similar to the Radar Tool, each key evaluation point in the enablers was to be evaluated based on three assessment dimensions namely "Approach, Deployment, and Assessment and review", for results, the key evaluation points were to be evaluated based on "Targets, Causes, and Comparisons" (Young Kim et al. 2010). Key performance index (KPI) approach, system dynamics (SD), and auto-regressive integrated moving average (ARIMA) were also used to create a model for measuring supply chain performance and stability (SCPS). Ip, Chan and Lam stated that the performance of the overall supply chain network could be measured by calculating the overall performance index number (OPIN). OPIN value indicated the decision-makers about the whole supply chain performance in comparison to the ideal or estimated value. OPIN value in this research calculated in the second stage of the model by using of SD approach. At the third stage, multiple values of OPIN were calculated throughout time and the ARIMA approach was used to study and provide the required data to decision-makers for evaluating supply chain performance stability (Ip et al. 2011).

de Waal and Chachage used Highly Performing Organization (HPO) characteristics to develop and conduct questionnaires at Iringa University College (IUCo) in East Africa. The aim was to identify improvement areas and create a strategic plan for 5–10 years to improve the College performance and excellence in different areas. HPO was developed as a framework and included 35 characteristics that if applied in any organization could take it to an excellent performance level. The 35 characteristics were divided into five factors namely management quality, openness and action orientation, long-term orientation, continuous improvement and renewal, and workforce quality. See the Appendix of reference (de Waal and Chachage 2011) for more details (de Waal and Chachage 2011).

Tavana et al. developed a Benchmarking framework by using the "EFQM model, Rembrandt Method, the Entropy Concept, the Weighted-sum Approach, and the Theory of the Displaced Ideal". researchers used subjective beliefs, objective data, and preferences of decision-makers to calculate two performance scores. Then, they used those scores to evaluate business units vs. ideal business units in a four-quadrant model by applying the Euclidean distance approach (EDA) which involved categorizing business units in light of the performance scores to four types namely "efficacious, productive ineffectual, proficient unproductive and inefficacious". Different levels of benchmarking can be applied in this framework, e.g. at the business unit level, at enablers or results levels, or each criterion level (Tavana et al. 2011).

Shaik and Abdul-Kader developed a framework for reverse logistics (RL) enterprise performance measurement and improvement. The framework was developed based on reviewed literature on the areas of RL performance framework, BSC, performance prism, and AHP tool. Based on the developed framework and AHP tool used in this framework, the "Overall Comprehensive Performance Index (OCPI)" of the RL enterprise was calculated. The researchers stated that the "Comprehensive Reverse Logistics Enterprise Performance Measurement Framework (CRLEPM)" developed in this research had BSC perspectives and some additional perspectives to ensure that all performance perspectives required for evaluating RL were included. Therefore, the Performance perspectives included in the framework encompassed "Financial, Process, Stakeholder, Innovation and growth, Environmental and Social" perspectives. The aforementioned perspectives were selected based on the drivers that drove RL business. CRLEPM framework consisted of four elements namely Inputs, Intermediate Aspects, Outputs, and Outcomes (Shaik and Abdul-Kader 2012).

Sustainable enterprise excellence (SEE) model developed by Edgeman based on BEMs namely EFQM and MBNQA and sustainability principles. The model used as an assessment tool and performance improvement approach based on best practices. The developed model integrated sustainability concepts and excellence principles to ensure sustaining excellent performance in all business aspects with a special focus on sustainability [Triable Bottom Line (TBL)] criteria. The SEE model consisted of three high-level steps starting from organization design until performance and refinement and then foresight feedback to further refine the strategy. Each step decomposed to a detailed description explained what kind of elements were embedded in this step of the model as the researcher has elaborated. Finally, based on the developed SEE model, the researcher developed a "SEE NEWS Compass" to conduct an assessment and give feedback and foresight about enterprise performance (Edgeman 2013).

Ranjan et al. developed a Multi-Criteria Decision-Making System for Service Sector (MCDMS-SS) and used it to evaluate the performance of Indian Railways. The performance system was used as a reference for benchmarking (Ranjan et al. 2016). Total business excellence management (TBEM) model developed by Ferdowsian. The model was developed to prevent and address ethical and quality problems in any organization, especially organizations that had a network business model and had many branches over the world, by operationalizing excellence. The developed model introduced ten CSFs namely "Products, Financials, Stakeholders, Employees, Leadership, Societal, Operational, Innovation, Alignment, and Ethical excellence" to measure the results for each

criterion embedded in the model. The model was associated with an assessment tool for the leaders designed to conduct an assessment of the excellence level organizations had achieved. The model had a different approach from previous models because its criteria started with creating a strong foundation of ethics and excellence and ended with "developing a meaningful grander purpose". It contrasted with all previous BEMs that started with leadership and ended at results (Ferdowsian 2016).

Rezaei Pandari and Azar developed a model for evaluating Insurance Service Supply Chain Performance (ISSCP). The model consisted of 11 criteria and 52 performance measures mapped to strategic, tactical, and operational levels. The proposed model calculated the strength of casual relations between service criteria and included casual relations with an influence of more than 0.5. Managers were supposed to use the proposed model to identify areas that had strong casual relations which assisted in reaching the targeted goals and identifying improvement areas (Rezaei Pandari and Azar 2017).

A conceptual model for High-Performance Work Practices (HPWPs) was proposed by Garg and Punia which was aimed at improving organizational agility, innovativeness, workplace efficiency, employees' productivity, and organizational performance. The model comprised five factors and 17 practices categorized under those five factors Roy and Mukherjee created an "Excellence Grid Tool (EGT)" and "3D Model of Excellence-Performance Analysis (3DM-EPA)". The model analysis mainly focused on positive performance areas. Excellence Grid Tool categorized service attributes based on their ability to impact on customers' perceptions of being excellent in service Vs good in service. The 3D model was developed to assist managers in creating strategies for building perceptions about excellence in service. Customers' feedback on attributes, by rating them between "very poor" performance (1) to "excellent" performance (7), used to build the tool and excellence model. In the 3D model, a set of improvement actions was developed to guide managers on the right action to be taken for each attribute category (Roy and Mukherjee 2017).

Edgeman proved that "embedding Virtuous Reciprocity Cycles (VRC)" and making them a routine in the organizational processes is an effective approach to attain and sustain excellent performance. Shingo operational excellence model (SOEM) was developed to test the impact of adopting VRC in organizations' processes and culture. SOEM was created based on 10 principles namely "Respect Every Individual; Lead with Humility; Seek Perfection; Embrace Scientific Thinking; Focus on Process; Assure Quality at the Source; Flow and Pull Value; Think Systemically; Create Constancy of Purpose; Create Value for the Customers". Based on the SOEM, if any organization follows the above principles, the organization will have three insights of enterprise excellence namely "Ideal results require ideal behavior; Systems drive behavior; and Principles inform ideal behavior". In the system, two continuous improvement cycles exist concurrently and conform to each other representing the VRC. It has been proved in this research that adopting these cycles will lead to the creation of a positive organizational culture and value for enterprise stakeholders and customers, which will assist in deploying SOEM and leading the organization to excellence sustainability. What differentiates this research from others is the framework of four cycles presented because it needs to be implemented at strategic, tactical, and operational levels by organizational teams to achieve the aforementioned results (Edgeman 2017).

For the Tourism sector, Paraschi, Georgopoulos, and Kaldis developed Airport Business Excellence Model (ABEM). The proposed model was adapted from the EFQM model. ABEM model tested and validated in 143 airports worldwide. ABEM model comprised of twelve Key Performance Areas (KPAs). KPAs grouped into six Enablers: Leadership (E1), Strategy (E2), HRM (E3), Suppliers & Resources (E4), Partners & Customers (E5), Processes, Products & Services (E6) and six Results: Employee Results (R1), Operational Results (R2), Quality Results (R3), Customer Results (R4), Society Results (R5) and Financial Results (R6) (Paraschi et al. 2019).

3.2 Results analysis

The reviewed literature will be analyzed in this section to synthesize results and answer the research questions in the next section. The selected publications stretch over 20 years—from 1999 to 2019—with 64% of the publications published after 2010 which indicates the recentness of the OE topic as shown in Fig. 3. Moreover, a steady interest in this scope can be seen in the increasing number of publications in the years 2005, 2008, 2010, 2011, 2016, and 2017, i.e. Figure 3 indicates the growing importance of the OE research scope. The reviewed publications selected from 28 journals, as shown in Fig. 4, demonstrate the high diversity of the reviewed literature and ensure the inclusion of a wide range of researchers' contributions. Moreover, the importance of the OE research scope and the high quality of the OE publications can is also demonstrated by the fact that a large number of high ranking academic journals publishing in this research scope. The previous statement can be confirmed by the percentage of high-rank journals that published those researches, see Fig. 5. The reviewed publications appeared in journals ranked among Q1 (64%), Q2 (34%), and Q3 only (1%), as shown in Fig. 5.

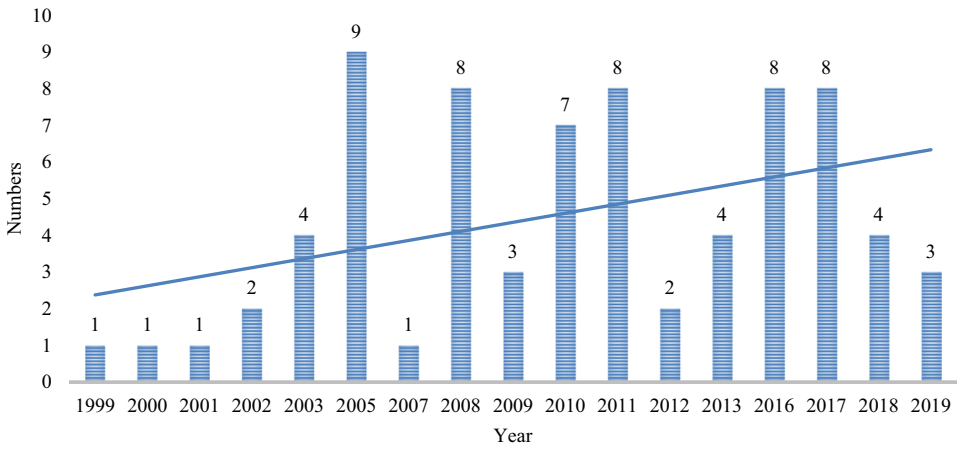

Fig. 3 Publications numbers/ year

Fig. 4 Publications numbers/ journal

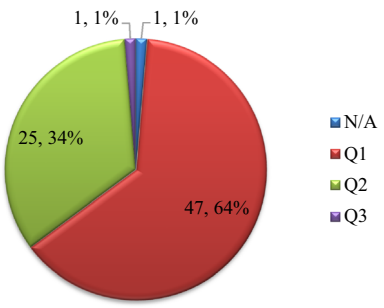

Fig. 5 References journals' quartiles

The review of the state of the art literature of OEMs reveals the identification of two main categories of OEMs that is generic OEMs and customized OEMs. The generic OEMs is the methodologies developed to use it in any business sector after adapting them to fit for that business sector criteria. The generic methodologies were either well-known methodologies such 6σ, Lean-thinking, BEMs (EFQM, MBNQA, etc.…) (Raisinghani et al. 2005), BSC (Sureshchandar and Leisten 2005), and quality audit (Karapetrovic and Willborn 2001) or methodologies developed based on the well-known methodologies such as ISAT model (Farris et al. 2011), Jordan BEM (Aladwan and Forrester 2016), IBIS model (Beatham et al. 2005), SEE model (Edgeman 2013), and Benchmarking framework (Tavana et al. 2011). Other types of generic methodologies were independent methodologies that were

developed based on their independent approach such as the SOEM model (Edgeman 2017), CFDB framework (Angell and Corbett 2009), LEM (Kanji 2008b), and Winning Wheel framework (Cocks 2009).

The customized methodologies are the methodologies developed for the specific business sectors, organizations, or business units. The customized methodologies were either developed based on well-known methodologies such as MPM (Cheng et al. 2005), ABEM (Paraschi et al. 2019), and SCP models (Young Kim et al. 2010) or methodologies developed independently such as MCDMS-SS (Ranjan, Chatterjee and Chakraborty 2016), TBEM (Ferdowsian 2016), and KEEP models (Lyons et al. 2008). To synthesis the results and explain where OEMs have been used, in the next section, the analyzed methodologies will be categorized and presented in one table which will help the practitioners from different business sectors to select appropriate models/frameworks for their business.

For the research methods used in the literature, it can be noted that good balance has been maintained between qualitative and quantitative research methods used as Fig. 6 shows. Regarding the details of the qualitative methods, the analysis showed that the majority of researchers focused on using case studies and contents analysis research approaches-as shown in Fig. 7, which

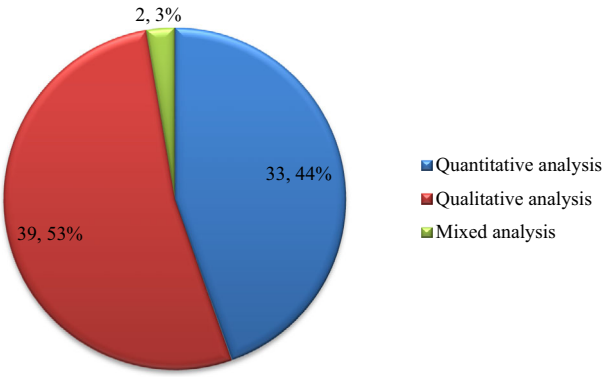

Fig. 6 Research methods numbers

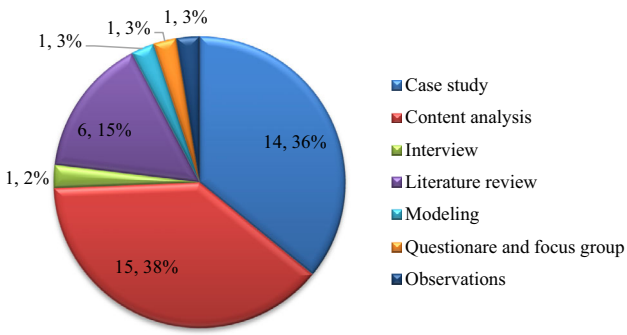

Fig. 7 Classification of qualitative research methods

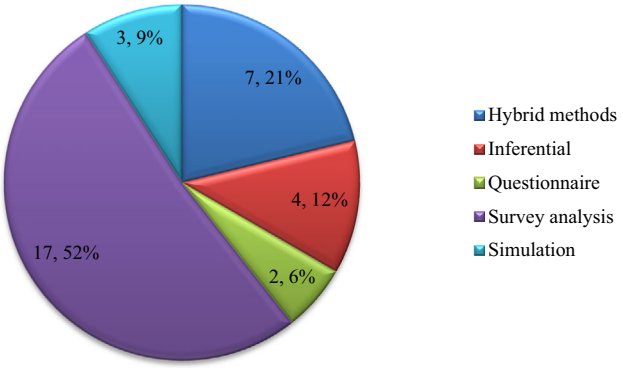

Fig. 8 Classification of quantitative research methods

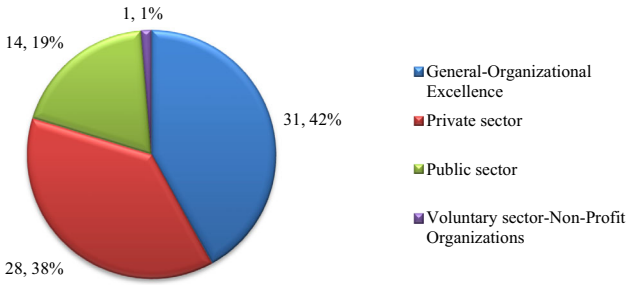

Fig. 9 Business sector type numbers

may reflect the deep insight and focused analysis on specific research areas while missing correlations and connections with other areas. On the other hand, the analysis of the details of the quantitative methods used showed that the majority of researchers used the survey analysis approach-as shown in Fig. 8. It was also noted that less attention was paid to hybrid methods. i.e. the methods that are combining questionnaire analysis, focus group analysis, interviews and other methods to ensure high accuracy and confidence in research results as shown in Fig. 8. Finally, as Fig. 6 shows, it's clear that reviewed literature lacks mixed analysis methods that ensure a wider scope of analysis and at the same time deep insight about the subject or sector under study. The analysis of research methods showed as well that literature lacking longitudinal studies.

The analysis by the business sector showed that the majority of the reviewed literature was directed either to private sector organizations or it was in general OE research scope (meaning those researches were directed to analyzing the BEMs; comparing them or comparing BEMs with other approaches) as shown in Fig. 9. Therefore, future research on the subject may need to focus on the public sector and non-profit organizations (NPOs). The above-stated conclusions can be further supported by analyzing the private-sector studies. Figure 10 shows that a wide range of private sector organizations was covered by

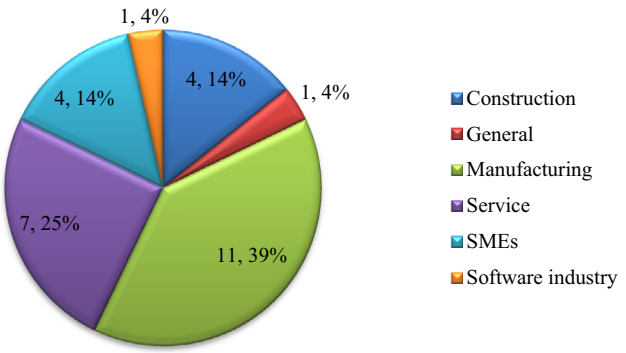

Fig. 10 Private business sector categories

researchers in the OE scope, and future work needs to be directed to tackle new or less investigated sectors.

It was stated in the literature that the way international excellence models adopted or adapted the criteria from major BEMs (EFQM, BPEP, or Deming Prize model) was based on the set of factors. Those factors include the culture of the country, the economy of the country, social development of the country, and consideration of international standards (Mavroidis et al. 2007) and organizational profile (Saunders et al. 2008). Therefore, the literature review must cover diverse geographical locations (the places where studies were conducted and from where the data was collected) to ensure coverage of differences between OEMs in different geographical locations and identification of any geographical areas that have not been covered by researchers. The analysis of geographical locations of the studies showed that reviewed literature covered most of geographical locations over the world as shown in Fig. 11.

Figure 11 shows the importance of the OE research scope, because 12% of the reviewed literature included international studies, i.e. it covered varied locations from around the world. 63.5% of the reviewed literature was

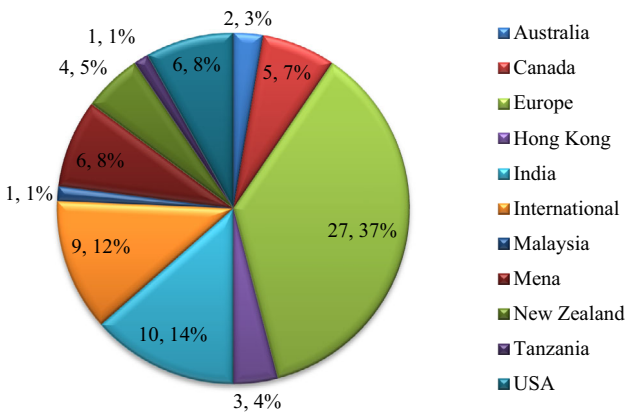

Fig. 11 Study of geographical location

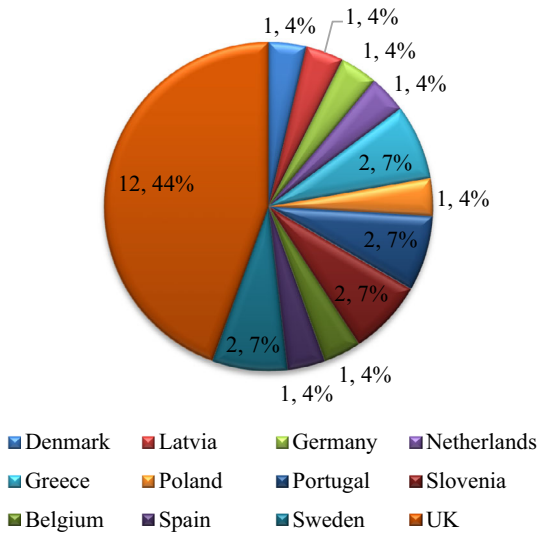

Fig. 12 Europe countries research geographical locations

concentred in developed countries. 37% were concentrated in Europe. For studies located in European countries, it could be noticed that the majority of the studies were located in the UK which showed a high impact of this country on the OE research scope, See Fig. 12. Another important aspect could be noted in Fig. 11 that very few pieces of research were conducted in the MENA region (8%) despite it being a wide geographical area as compared to other areas. Therefore, the researchers' efforts in the future should be directed to this area. The conclusions regarding the MENA region can be further supported by the results shown in Fig. 13, categorizing literature by researchers' geographical locations, which clearly shows that researchers for only two researches were from the MENA Region.

The review of the literature concerning researchers' locations reinforces the importance of the OE research scope. It could be noticed in Figs. 13 and 14 that 17.5% of the reviewed literature was conducted by collaborative research efforts of researchers from different geographical locations and 62% of the studies were conducted by researchers from developed countries. Again, it could be noticed that researchers from Europe and especially the UK with (33.7%) have played a major role in developing OE literature. On the other hand, researchers from the MENA (2.7%), Africa (2.7%), Malaysia (1.35%), China (4%), and the USA (6.75%) has less contribution. Therefore, in the future, more efforts need to be made by researchers from those areas to make a substantial contribution to the OE scope.

As shown in Fig. 15, analyzing the reviewed literature concerning the number of researchers/research showed that a majority of research, more than 81%, was conducted by two or more researchers, which shows the authenticity of

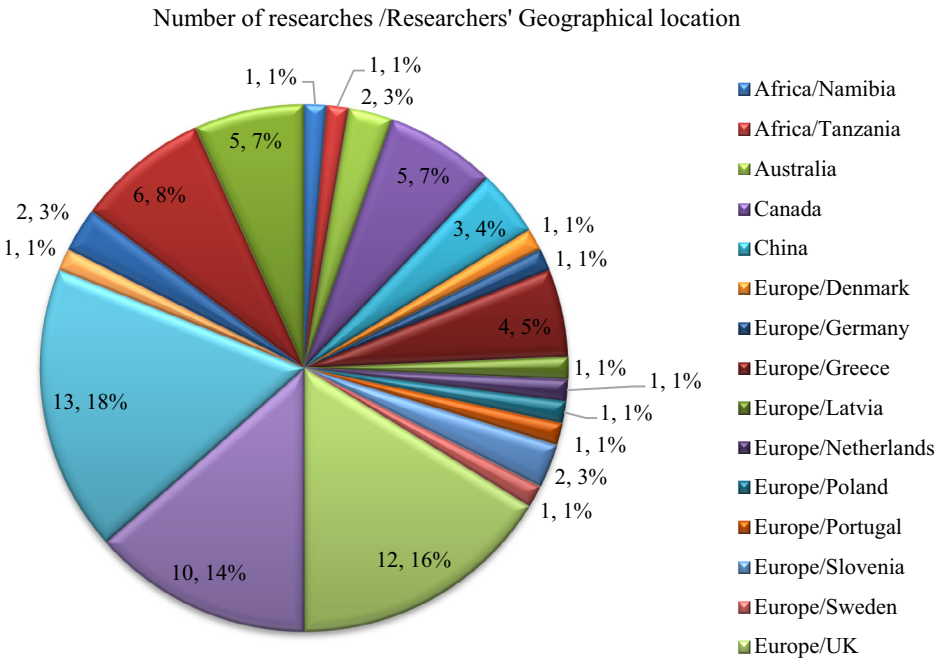

Fig. 13 Researchers geographical locations

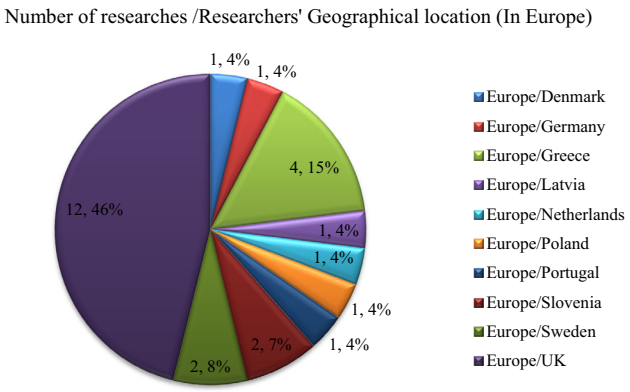

Fig. 14 Europe researchers' geographical locations

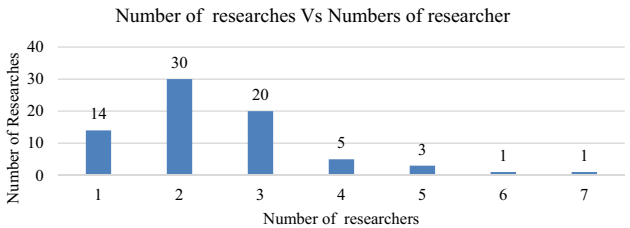

Fig. 15 Number of researchers/research

the topic and high quality of published researches contributions. It may also indicate that due to the huge size of the collected data and its required analysis, singlehanded efforts by any researcher's efforts would probably not have been enough to reach the desirable accurate results.

The current research, as it was stated in the objectives, is focusing on reviewing the state of the art literature related to OEMs. Therefore, the analysis conducted on the reviewed literature based on the publications' research area showed that reviewed literature can be categorized to four research areas that are the publications focusing on OEMs' development, the publications focusing on the OEMs' evaluation, the publications focusing on the assessments methodologies development, and the publications focusing on exploring the CSFs and barriers of excellence. The trends analysis of the stated research areas showed the following trends see Fig. 16:

1. A gradual increase in the numbers of OEMs' evaluation publications between 1999 and 2009 then a decrease in the numbers again between 2009 and 2019.
2. A gradual increase in the numbers of OEMs' development publications between 1999 and 2014 then a decrease in the numbers again between 2014 and 2019.
3. At the early stage, very few publications were published on the assessment of methodologies development, then this research area's publications disappear in recent publications.
4. The publications focus on exploring CSFs and barriers of excellence are considered one of growing research areas and this can be noticed on the publications numbers between 2009 and 2019 years.

Based on the research areas trends noticed in Fig. 16, we can conclude that future research on OEMs' scope will be directed to explore the CSFs, barriers, and challenges of implementing organizational excellence concept on the different levels, different business sectors, and different geographical locations. Therefore, another important part

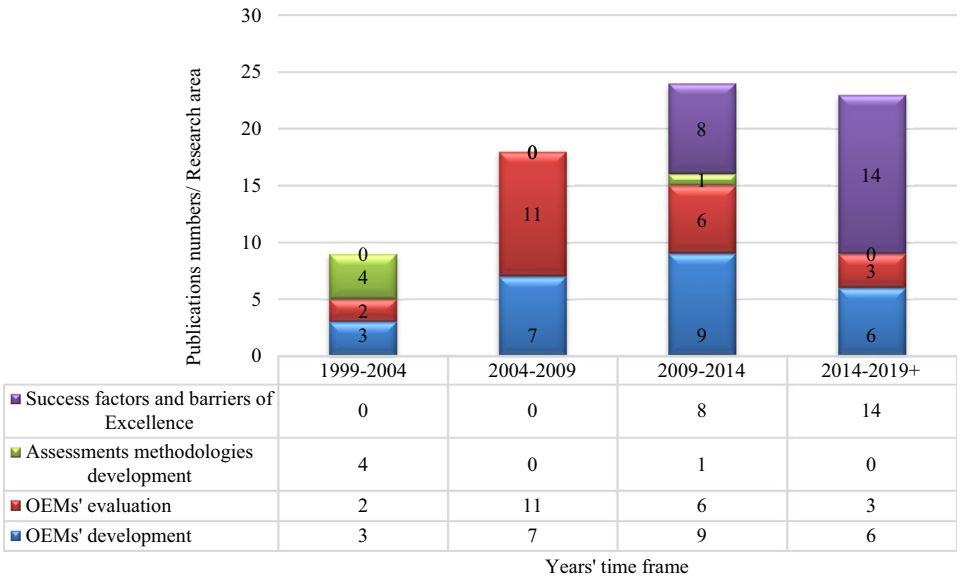

Fig. 16 Publications' research areas distributed over the years' timeframe

of this literature review is identifying the CSFs that if followed properly will lead to the achievement of competitive advantage and sustaining an excellent performance level. The analysis conducted on the reviewed literature reveals the identification of a comprehensive list of CSFs. Based on the business sector of the reviewed literature, the CSFs will be as follow:

*(a) General Organizational Excellence Scope:*A long list of CSFs generated from the reviewed literature after analyzing those factors, matching similar factors from different references, and remove the duplicated factors, a unified list of CSFs generated. The unified list of CSFs is as follow:

1. Top management commitment and Leadership (Kanji 2008a; Cocks 2009; Tickle et al. 2016; de Waal 2018).
2. Shared values (Kanji 2008a).
3. Vision (Kanji 2008a; Ershadi and Eskandari Dehdazzi 2019).
4. Mission (Kanji 2008a).
5. Clear and fuzzy strategy (Kanji 2008a; Cocks 2009).
6. The peoples who believe in using BEMs to drive organizational excellence efforts should be managed and developed properly (Haffer and Kristensen 2008; Cocks 2009; Tickle et al. 2016).
7. Effective execution (Cocks 2009).
8. Perfect alignment (Cocks 2009).
9. Adapt rapidly or Ability to manage change (Cocks 2009; Tickle et al. 2016).
10. Looking out (Cocks 2009).
11. Looking in (Cocks 2009).
12. Manage the downside (Cocks 2009).
13. Balance everything (Cocks 2009).
14. Organization's top management passionate to grow the organization (Tickle et al. 2016).
15. Communicate openly and transparently throughout the organization (Tickle et al. 2016; de Waal 2018).
16. Staff buy-in excellence project (Tickle et al. 2016).
17. Organization employees should work as a team (Tickle et al. 2016; de Waal 2018).
18. Promote Champions and Coaches of excellence (Tickle et al. 2016; de Waal 2018).
19. Awards and recognition programs to support the BE model (Tickle et al. 2016).
20. Organizational learning and implementing lessons learned into work processes and procedures (Tickle et al. 2016; de Waal 2018; Ershadi and Eskandari Dehdazzi 2019).
21. Continuous improvement culture (Tickle et al. 2016).
22. Distinguishing between hygiene factors (i.e. those factors that have to be before an organization can even begin working on a Highly Performing Organization (HPO) transformation) and taking target actions on getting these on order (de Waal 2018).
23. Effective interventions (de Waal 2018).
24. High-performance partnerships (de Waal 2018).
25. Creativity (Ershadi and Eskandari Dehdazzi 2019)
26. Systematic thinking (Ershadi and Eskandari Dehdazzi 2019).
27. Purposefulness (Ershadi and Eskandari Dehdazzi 2019).
28. Randomness (Ershadi and Eskandari Dehdazzi 2019)

(b) Educational sector:

To be a Highly Performing Organizations, a list of 35 characteristics distributed between five factors presented by de Waal, and Chachage. The five factors are "Quality of management, openness and action orientation, long-term orientation, Continuous improvement and renewal, and Workforce quality" (de Waal and Chachage 2011). However, the stated factors need to be tested in another educational sector from other countries.

(c) Private sector:

OE CSFs for the private sector available in the literature are mainly CSFs for OE applications in the construction sector, manufacturing sector, and service sector. The summary of CSFs is as follow:

1. OE CSFs for the construction sector:

In the construction sector, Robinson, et al. stated that CSFs necessary for OE initiatives success is "Leaders' commitment, Business important areas should be discovered, the selected model/system should fit with organization business, Right measures selection, Knowledge management and sharing, and Management of change" (Robinson et al. 2005).

2. OE CSFs for the manufacturing sector:

The manufacturing sector is one of the important business sectors and it was attracted many researchers to study different research areas within the OE research scope. Many researchers published their work on the area of CSFs needed for excellence models implementation in the manufacturing sector. In the following points we summarize the CSFs available in the reviewed literature after screening them, analyze them, and unifying duplicated factors:

1. Integrating business strategy and quality strategy (Breja et al. 2011).
2. TQM and TPM implementation (Breja et al. 2011; Kaur et al. 2012).
3. Clear vision and focused strategy (Breja et al. 2011, 2016; Rezaei et al. 2018).
4. Process objective alignment (Breja et al. 2011).
5. Change (Breja et al. 2011).
6. Customers base-broadening (Breja et al. 2011).
7. Flexibility (Breja et al. 2011, 2016).
8. Employee empowerment (Breja et al. 2011; Rezaei et al. 2018).
9. Continuous improvement (Breja et al. 2011, 2016).
10. Maintaining the best fit between strategies and the resources and capabilities (Breja et al. 2016).
11. Continuously developing distinctive competencies from capabilities (Breja et al. 2016).
12. Communicate Openly and transparently (Rezaei et al. 2018).
13. Highly motivated organizations (Rezaei et al. 2018).
14. Inspiring leadership (Rezaei et al. 2018).
15. Create an environment that engages employees and encourage them (Rezaei et al. 2018).
16. Efficient and effective training and education programs (Rezaei et al. 2018).
17. Seamless collaboration (Rezaei et al. 2018).
18. Mutual trust (Rezaei et al. 2018).
19. Strong commitment (Rezaei et al. 2018).

3. Organizational ecellence (OE) CSFs for service sector:

In the private sector, the CSFs for OE in the service sector is "employee engagement", Create a rewards system to support excellence efforts, "Human Resource Management (HRM) practices", employees' social and safety needs should drive and support excellence efforts, and employees should work as a team (Garg and Punia 2017).

(d) Public sector:

The CSFs for OE implementation in the public sector can be listed in the following points:

1. Leadership (Mani et al. 2003).
2. Delight the Customer (Mani et al. 2003).
3. Management by Fact (Mani et al. 2003).
4. People-based Management (Mani et al. 2003).
5. Continuous Improvement (Mani et al. 2003).
6. Process excellence (Mani et al. 2003).
7. Organizational Learning (Mani et al. 2003; Lyons et al. 2008).
8. Stakeholders' Delight (Mani et al. 2003).
9. Creation a Culture of high trust and collaboration (Lyons et al. 2008).
10. Avoid adding other layers to the work during the Implementation quality framework/performance management system (Lyons et al. 2008).
11. Human resources management (HRM) practices (Arbab and Abaker 2018).

The analysis conducted on the above lists of the CSFs showed that overlap or similarity exists between CSFs listed in the literature of specific business sectors or between the literature of different business sectors. For instance, the success factor "Avoid adding other layers to the work during Implementation quality framework/performance management system" from the public sector is similar to the success factor "Integrating business strategy and quality strategy" from the manufacturing- private sector. A similar case can be noticed in the CSFs such as "Human resources management (HRM) practices" from the public sector and service-private sector, and success factor "The peoples who believe in using BEMs to drive organizational excellence efforts should be managed and developed properly" from General OE business sector. Many other examples can be noticed as well in the above lists, therefore, a unified list of CSFs, after removing

duplicated factors and unifying terminologies, will be generated in the next section and to answer the first research question. Each one of the CSFs presented in the above categories was validated individually or within the group of factors in the published researches, but it is still a valid approach to validate the unified list of CSFs and check the importance of each factor throughout testing the real impact of those factors on each other and overall organization performance in all business sectors.

3.3 Results' synthesis

Two research questions were derived in the methodology section. In this section, we will answer these questions. The first research question was, "what are the OEMs available in the literature, how can we classify them, and what are the CSFs for OE implementation?".

The review and analysis of the literature revealed the identification of 46 OEMs, 28 generic OEMs, i.e. the proposed methodologies can be implemented in any business sector but with adaptations, and 18 customized OEMs, i.e. methodologies developed specifically for certain sectors. The customized methodologies comprised of one OEM developed for the software industry, two methodologies developed for public sector organizations, four methodologies developed for construction sector organizations, one methodology developed for NPOs, one methodology developed for the educational sector, one methodology developed for Acquisition Solutions sector, one methodology developed for SMEs sector, four methodologies developed for supply chain and RL (three for supply chain and one for RL) sector, two methodologies developed for the service sector, and one methodology for Airport business excellence.

In general, most of the researchers in the reviewed literature stated that generic OEMs need to be adapted to fit for any organization or business sector, while for customized OEMs, most of the researchers stated that those methodologies need to be tested in broader range to ensure their applicability in other organizations from the same or other business sectors. Details of the OEMs' categories shown in Table 1. Regarding CSFs, a unified list of 47 CSFs generated from the lists of all CSFs extracted from the reviewed literature, after unifying the similarity exists between factors. The unified list of CSFs shown in Table 2. Future work can focus on investigating the impact and importance of those factors in different business sectors. We have noticed that most researchers agreed that the following CSFs are important CSFs for OEMs implementation:

A. Continuous improvement.
B. Top management commitment and Inspiring leadership.
C. HRM practices.
D. Organization employees should work as a team.
E. Create an environment that engages employees and encourage them.

We have noticed as well that the current research efforts on developing and implementing the aforementioned efforts are very limited.

The second research question was "What the knowledge gaps are found in the OEMs' literature and what is the proposed research agenda?" The review of publications from the past 20 years showed a steady interest in OE research especially from 2005 until 2017, and the numbers are growing as trend line from Fig. 3 shows. It reinforces and verifies the necessity of tackling new research areas and opening new research directions. The aforementioned fact is further supported by looking to Figs. 4 and 5, we can see the diversity of high-rank journals publishing in the OE scope with the majority of journals from Q1 and Q2 Quartiles (97%).

For the methods used in the reviewed literature, as it was explained in the results analysis section, good diversity can be noticed in term of methods used for researches. We can conclude that the current literature lacks longitudinal researches that employ research methods combining qualitative and quantitative methods. For business sectors, we can conclude, based on analysis results, that there is a need to direct more efforts toward analyzing OE aspects and proposing more effective OEMs that can serve public and NPOs sectors.

If we look to the analysis conducted on the geographical locations of studies, i.e. the places where the data collected from, we conclude that very few researches were conducted in the MENA region despite the wide geographical space as compared to other areas. Therefore, more researches efforts should have focused on this region. Also, the researchers from MENA, Africa, Malaysia, China, and the USA should maximize their efforts to cover the big gap between their contributions and European researchers' contributions to the OE research scope. The analysis of the research areas showed that currently there is great interest from researchers to investigate the CSFs of OE projects, see Fig. 16. Therefore, the unified list proposed in this research can be used in future researches efforts.

It has been noticed that almost 38% of OEMs were designed as sector-specific, organization-specific, or even unit specific methodologies. Even general BEMs, 6σ methodology, and BSC methodology were required to be adapted to fit different organizations/units where they were supposed to be applied. Therefore, a methodology or

Table 1 Organizational Excellence Methodologies (OEMs) categories

Organizational Excellence Methodologies	**Generic**	**Six Sigma**	**Lean-Six Sigma**	**BEMs-Lean-Six Sigma**
		Lean Thinking		
		BEMs	Self-Assessments (SAs)	Operational SAs
				Multi-Criteria Decision Making (MCDM), Evidential Reasoning (ER) & SAs
				Improvement System Assessment Tool (ISAT)
				Multi-Organizational Self-Assessment with Best Practices Benchmarking (MOSA-BPB)
				Multi-criteria Self-Assessment for Business Excellence (MUSABE)
				Self-Audit
		ISO	Quality Audit (QA)	
		Balance Scorecard (BSC)		
		Virtuous Reciprocity Cycles (VRC) & Shingo Operational Excellence model (SOEM)		
		Conceptual Framework for Drivers and Barriers (CFDB)		
		Key Performance Indicators (KPIs)		
		Sustainable Change Management (SCM) & Critical Success Factors (CSFs)		
		Computer-Aided Self-Assessment (CAD-SA)		
		Simulation		
		Integrated Business Improvement System (IBIS)		
		Integrated Management Model (IMM)		
		Leadership Excellence Model (LEM)		
		Winning Wheel (WW)		
		Activity Model (AM)		
		Highly Performing Organization (HPO)		
		Benchmarking		
		Sustainable Enterprise Excellence (SEE)		
		Total Business Excellence Management (TBEM)		
		High-Performance Work Practices (HPWPs)		
	Customized	Software Industry Sector	Holistic Scorecard (HSC)	
		Public Sector	Investor in peoples (IiP)	
			Kanji Business Excellence Measurement System (KBEMS)	
		Construction Sector	BEM & BSC	
			Managers' Performance Management (MPM)	
			Kanji's Business Excellence Model (KBEM) & Six Sigma	
			Excellence Model for Construction Sector (EMCS)	
		Non-Profit Organizations (NPOs)	BEM developed for NPOs	
		Educational Sector	Strategy Formulation Framework (SF)	
		Acquisition Solutions	Knowledge Enabled Excellence in Performance (KEEP)	
		Small and Medium Enterprises	Organizational Performance (OP) & Organizational Excellence (OE) Performance Model	
		Supply Chain and Reverse Logistics (RL)	Supply Chain Partnership (SCP) framework	
			Supply Chain Performance and Stability (SCPS) model	
			RL-Comprehensive Reverse Logistics Enterprise Performance Measurement Framework (CRLEPM)	
			Insurance Service Supply Chain Performance (ISSCP) model	
		Service Sector	Multi-Criteria Decision-Making System for Service Sector (MCDMS-SS)	
			Excellence Grid Tool (EGT)" & "3D Model of Excellence-Performance Analysis (3DM-EPA)	
		Tourism sector	Airport Business Excellence Model (ABEM)	

structured process is needed to facilitate the adaptation process. Based on the stated knowledge gaps and analysis results, the following future research agenda proposed:

1. The OEMs in the current work categorized based on their purpose and business sector, therefore, future work should focus on testing these methodologies in

Table 2 Unified list of CSFs

No.	CSFs	General OE sScope	Educational sector	Private sector			Public sector
				Construction sector	Manufacturing sector	Service sector	
1	Top management commitment and Inspiring Leadership	Y[1]		Y	Y		Y
2	Shared values	Y					
3	Vision	Y			Y		
4	Mission	Y					
5	Clear and fuzzy strategy	Y			Y		
6	Human Resource Management (HRM) practices	Y	Y			Y	Y
7	Effective execution	Y					
8	Perfect alignment	Y					
9	Change management or adaptability	Y		Y	Y		
10	Looking out	Y					
11	Looking in	Y					
12	Manage the downside	Y					
13	Balance everything	Y					
14	Organization's top management passionate to grow the organization	Y			Y		
15	Communicate openly and transparently throughout the organization	Y			Y		
16	Staff buy-in excellence project	Y					
17	Organization employees should work as a team	Y			Y	Y	
18	Promote Champions and Coaches of excellence	Y					
19	Awards and recognition programs to support the BE model	Y				Y	
20	Continuous improvement culture	Y	Y		Y		Y
21	"Distinguishing between hygiene factors and taking target actions on getting these on order"	Y					
22	Effective interventions	Y					
23	High-performance partnerships	Y					
24	Creativity	Y					
25	Systematic thinking	Y					
26	Purposefulness	Y					
27	Randomness	Y					
28	Quality of management		Y				
29	Create an environment that engages employees and encourage them		Y		Y	Y	Y
30	Long-term orientation		Y				
31	Discovering business important areas			Y			
32	The model, framework, or system used for performance management or improvement should fit for organization business			Y			
33	Managing and sharing knowledge	Y		Y	Y		Y
34	Integrating business strategy and quality strategy				Y		Y
35	TQM and TPM implementation				Y		
36	Process objective alignment				Y		
37	Customers base-broadening				Y		Y
38	Flexibility				Y		
39	Employees empowerment				Y		
40	Maintaining the best fit between strategies and the resources and capabilities				Y		

Table 2 continued

No.	CSFs	General OE sScope	Educational sector	Private sector			Public sector
				Construction sector	Manufacturing sector	Service sector	
41	Continuously developing distinctive competencies from capabilities				Y		
42	Mutual trust				Y		Y
43	Employees' social and safety needs should drive and support excellence efforts					Y	
44	Management by Fact			Y			Y
45	People-based Management						Y
46	Process excellence						Y
47	Stakeholders' delight						Y

[1] If Y letter appears in any cell in the table it will mean that the corresponding success factor is investigated and proved as useful for the corresponding business sector

the same business sector but in different countries, regions, or even different business sectors.

2. Longitudinal studies on OEMs scope are required to ensure a wider scope of analysis and at the same time deep insight about the subject or sector under study.
3. Future research may need to focus on the public sector and NPOs sector because the analysis showed that those sectors were less investigated compared to other sectors.
4. Future efforts on the OE research scope should focus on analyzing the aspects, challenges, limitations, and CSFs of OEMs implementation in the MENA region.
5. The researchers from the MENA, Africa, Malaysia, China, and the USA should put more effort to contribute to the OE scope.
6. Future work on the OE scope needs to explore the CSFs, barriers, and challenges for implementing the OE concept on the different levels, different business sectors, and different geographical locations.
7. The unified list of CSFs needs to be validated and factors importance needs to be checked throughout testing the real impact of those factors on each other and overall organization performance in all business sectors.
8. To facilitate the OEMs adaptation process, a systematic or structured process/ methodology is needed.
9. It has been proved in the literature that the integration of two or more OEMs will give better results and enhance organizations, performance. Therefore, future work may focus on integrating some of the OEMs that never integrated before and test their impact on organizations' performance.
10. Some researchers tried to integrate the sustainability concept with BEMs or organizational excellence concept but the efforts were very limited. Therefore, in future work agenda, this research approach may need to get more attention from researchers.
11. In the new era of digitization, globalization, the Internet of Things (IoT), industry 4.0, etc.… we couldn't find any paper tackling the area of OE applications in this era. Therefore, future researches efforts may focus on this research approach.
12. It has been noticed that most researchers agreed that continuous improvement is one of the important CSFs for OEMs implementation. However, in many studies, it has been proved as well that many organizations were failed to maintain the achieved excellence level in the long run. Therefore, a better understanding of the factors affecting the excellence journey beyond the implementation stage will be important, and to propose a methodology or framework to maintain an excellent performance level beyond the implementation stage.
13. Use previous researches approaches to conduct new researches in different geographical locations and compare the previous researches' results with new researches results to find the impact of geographical locations and its cultural aspects on OE implementation.
14. The reviewed papers in this research extracted from 28 high-rank journals, the analysis showed that 59.5% of the reviewed papers were published in 5 journals (17.9%) out of 28 journals. Those journals are (TQM Journal, Total Quality Management & Business Excellence, International Journal of Quality & Reliability Management, and International Journal of Operations & Production Management). This fact shows the contribution of those journals on the OE scope. Therefore, future work can focus on analyzing

all papers, related to OE scope, published on one of those journals to propose future research agenda and find the gaps in knowledge.

15. Most of the published researches on the scope of OE CSFs agreed that (top management commitment and Inspiring leadership, HRM practices, Organization employees should work as a team, and create an environment that engages employees and encourage them) are important for OEMs' implementation CSFs. However, up to our knowledge level, the research efforts that focus on proposing practical frameworks that guide the development and implementation of the aforementioned CSFs are very few and future research efforts need to focus on proposing such frameworks.

4 Results discussion

A systematic literature review used in the current research to identify OEMs from the state of the art literature, classify them based on their business sector, generate a unified list of OE implementation CSFs, highlight the knowledge gaps found in the OEMs' literature, and propose future research agenda. As a result of the systematic literature review, two main categories of OEMs were identified in the literature that is generic OEMs and customized OEMs. The generic OEMs is the methodologies developed to use it in any business sector after adapting them to fit for that business sector criteria. The generic methodologies were either well-known methodologies such as 6σ, lean thinking, BEMs (EFQM, MBNQA, etc.…), BSC, and quality audit or methodologies developed based on the well-known methodologies such as ISAT model, Jordan BEM, IBIS model, SEE model, and Benchmarking framework. Other types of generic methodologies were independent methodologies that were developed based on their independent approach such as the SOEM model, CFDB framework, LEM, and Winning Wheel framework. The customized methodologies are the methodologies developed for the specific business sectors, organizations, or business units. The customized methodologies were either developed based on well-known methodologies such as MPM, ABEM, and SCP models or methodologies developed independently such as MCDMS-SS, TBEM, and KEEP models. A list of 46 OEMs (28 generic methodologies and 18 customized methodologies) was presented based on literature review results. The above statement showed the diversity of the OEMs used by organizations from different business sectors, i.e. organization have a flexibility to choose between different OE approaches, however, each approach has its pros and cons and some approaches may fit for one business sector more than others. This literature review proved that research efforts on the scope of organizational excellence are growing and still there are considerable improvement opportunities.

For CSFs, a unified list of 47 CSFs generated from the lists of all CSFs extracted from the reviewed literature, after unifying the similarity exists between factors. The unified list of CSFs shown in Table 2. Despite that research effort on the CSFs is growing as we proved in this research, but it still many areas need to be analyzed and considerable research efforts will be required to develop methodologies and frameworks to support organization's efforts for identifying CSFs' importance, develop them, and implement them successfully. For the strengths and weaknesses of the OE literature, many gaps in knowledge were identifiable in the OEMs' literature. The gaps showed the weaknesses of the OEMs literature which we see as opportunities for improvement and its opening new research directions. Therefore, future research agenda proposed and a long list of future research actions proposed and listed in the previous section.

5 Research implications

The research has both theoretical and managerial/practical implications. The theoretical implications include but are not limited to expanding knowledge about the OEMs' categories and applications, highlight the gaps and potential improvement opportunities on the OEMs' CSFs, proposing a future research agenda that may guide researchers to conduct researches on the right research areas. For managerial /practical implications, the current research presented a classification of OEMs based on their business sector. Therefore, managers or practitioners from those business sectors may refer to this classification to select the right methodology that may fit their business. Moreover, the unified list of CSFs will facilitate managers' or practitioners' mission by giving them a comprehensive list of CSFs and show them clearly which CSFs were important more than others based on the agreement of the researchers from previous researches.

6 Research limitations

The current research focused on reviewing the literature of the OEMs to classify them, unify the list of the CSFs, identify the gaps in knowledge, and propose future research agenda. However, the conclusions of the research were based on the selected literature that was selected based on specific search terms and selection criteria. Therefore, other researches that may have relevant results were

naturally excluded. Nonetheless, the employed selection criteria were inclusive enough to ensure high-quality results.

7 Conclusions

Organizational Excellence (OE) defined as the optimum utilization of internal and external resources to meet and exceed customers' requirements as well as achieving sustainable business development. A Systematic Literature Review (SLR) methodology used in this research to identify Organizational Excellence Methodologies (OEMs) from the state of the art literature, classify them based on their business sector, generate a unified list of OE CSFs, highlight the knowledge gaps found in the OEMs' literature and propose future research agenda. The analysis of OE publications/year, publications/journal, and journal rank reveals the growing importance of the OE research scope, explain how the research community is keen to develop high-quality research and the need for the literature review research to explore new research areas. The analysis conducted on research methods reveals a good balance between qualitative and quantitative research methods but literature is lacking mixed/ hybrid research methods and longitudinal researches. The analysis of the literature by the business sector showed that the majority of the reviewed literature was directed either to private sector organizations or it was in general OE research and very few efforts were directed to the public sector and NPOs. The analysis conducted on the reviewed literature based on the publications' research area showed that reviewed literature can be categorized to four research areas that are the publications focusing on OEMs' development, the publications focusing on the OEMs' evaluation, the publications focusing on the assessments methodologies development, and the publications focusing on exploring the CSFs and barriers of excellence. The trends analysis of the stated research areas' showed a gradual increase in the numbers of OEMs' evaluation publications between 1999 and 2009 then a decrease in the numbers again between 2009 and 2019; a gradual increase in the numbers of OEMs' development publications between 1999 and 2014 then a decrease in the numbers between 2014 and 2019; at the early stage, very few publications were published on the assessment of methodologies development, then this research area's publications disappear in recent publications; the last trend was the publications focus on exploring CSFs and barriers of excellence are considered one of growing research areas and this can be noticed on the publications numbers between 2009 and 2019 years.

Literature review reveals the identification of 46 OEMs (28 generic methodologies and 18 customized methodologies), which showed the diversity of the OEMs used by organizations from different business sectors, i.e. organization have a flexibility to choose between different OE approaches, however, each approach has its pros and cons and some approaches may fit for one business sector more than others. A unified list of 47 CSFs generated from the lists of all CSFs extracted from the reviewed literature, after unifying the similarity exists between factors. Another important outcome of the research is identifying many gaps in knowledge in the OEMs literature and proposing future research agenda. A long list of future research directions proposed. Future research directions include testing OEMs in the same business sector but in different countries, regions, or even different business sectors; conducting longitudinal studies on OEMs research scope; focusing on developing OEMs for the public sector and NPOs; studying the OE aspects in the MENA region; the researchers from the MENA, Africa, Malaysia, China, and the USA should put more effort to contribute to the OE scope; exploring the CSFs, barriers, and challenges for implementing the OE concept on the different levels, different business sectors, and different geographical locations; testing the importance of the unified list of CSFs for organizational performance; developing a methodology to facilitate OEMs adaptation process; focusing on integrating some of the OEMs that never integrated before and test their impact on organizations' performance; focusing on integrating the sustainability concept with the BEMs or OE concept; studying the OE applications in the new era of digitization, globalization, the Internet of Things (IoT), and industry 4.0; and understanding the factors affecting the excellence journey beyond the implementation stage and proposing a methodology or framework to maintain an excellent performance level beyond the implementation stage.

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Conflicts of interest/Competing interests All authors declare that they have no conflict of interest.

Declarations of interest This research has no any Declarations of interest to be disclosed.

Appendix

See Table 3.

Table 3 Reviewed papers summarized details

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
1	CI and performance: a CUTE approach	1999	International Journal of Operations & Production Management	Q1	Quantitative analysis	Simulation	Private sector	SMEs	Europe/ Greece	Europe/Greece	3	Hybrid
2	Strategy formulation framework for vocational education: integrating SWOT analysis, balanced scorecard, QFD methodology and MBNQA education criteria	2000	Managerial Auditing Journal	Q2	Qualitative analysis	case study	Public sector	Educational sector, Vocational education	Hong Kong	Hong Kong	4	Hybrid
3	Audit and self-assessment in quality management: comparison and compatibility	2001	Managerial Auditing Journal	Q2	Qualitative analysis	Content analysis	General	Organizational Excellence	Canada	Canada	2	Assessment
4	Sustaining quality in the UK public sector: Quality measurement frameworks	2002	International Journal of Quality & Reliability Management	Q1	Quantitative analysis	Hybrid methods	Public sector	Public sector	Europe/ UK	Europe/UK	3	Conclusive
5	Self-audit of process performance	2002	International Journal of Quality & Reliability Management	Q1	Qualitative analysis	Content analysis	General	Organizational Excellence	Canada	Canada	2	Assessment
6	Self-assessment: Use at operational level to promote continuous improvement	2003	Production Planning and Control	Q1	Qualitative analysis	Content analysis	General	Organizational Excellence	Europe/UK	Europe/UK	3	Assessment
7	Simulation as an enabler for organizational excellence	2003	Measuring Business Excellence	Q2	Quantitative analysis	Simulation	Private sector	Manufacturing	Europe/UK	Europe/UK	1	Hybrid
8	Self-assessment methodology: The route to business excellence	2003	Quality Management Journal	Q2	Qualitative analysis	Content analysis	General	Organizational Excellence	Europe/UK	Europe/UK	3	Assessment

Table 3 continued

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
9	Finding the path to organizational excellence in Portuguese local government: A performance measurement approach	2003	Total Quality Management & Business Excellence	Q1	Qualitative analysis	Modeling	Public sector	Municipality	Europe/ Portugal	Europe/ Portugal	2	Hybrid
10	Six Sigma: concepts, tools, and applications	2005	Industrial Management & Data Systems	Q1	Qualitative analysis	Content analysis	Private sector	General	USA	USA	5	Six-Sigma and Lean-Thinking
11	Self-assessment in a multi-organizational network	2005	International Journal of Quality & Reliability Management	Q1	Quantitative analysis	Inferential	General	Organizational Excellence	New Zealand	New Zealand	2	Assessment
12	Towards a multidimensional competency-based managerial performance framework: A hybrid approach	2005	Journal of Managerial Psychology	Q2	Qualitative analysis	Case study	Private sector	Construction sector	Europe/UK	Europe/UK	3	Hybrid
13	Assessing maturity and effectiveness of enterprise performance measurement systems	2005	International Journal of Productivity and Performance Management	Q1	Qualitative analysis	Case study	Public sector	Railways	Belgium	International Collaboration	5	Assessment
14	Business performance measurement practices in construction engineering organizations	2005	Measuring Business Excellence	Q2	Quantitative analysis	Survey analysis	Private sector	Construction sector	Europe/UK	Europe/UK	4	Conclusive
15	Holistic scorecard: strategic performance measurement and management in the software industry	2005	Measuring Business Excellence	Q2	Qualitative analysis	Content analysis	Private sector	Software industry	Europe/ Germany	Europe/ Germany	2	Balanced Scorecard

Table 3 continued

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
16	An integrated business improvement system (IBIS) for construction	2005	Measuring Business Excellence	Q2	Qualitative analysis	Case study	Private sector	Construction sector	Europe/UK	Europe/UK	4	Hybrid
17	Performance measures and quality tools in Portuguese small and medium enterprises: survey results	2005	Total Quality Management & Business Excellence	Q1	Quantitative analysis	Survey analysis	Private sector	SMEs	Europe/ Portugal	International Collaboration	4	Conclusive
18	Structuring Business Process Improvement Methodologies	2005	Total Quality Management & Business Excellence	Q1	Qualitative analysis	Literature review	General	Organizational Excellence	Europe/ UK	Europe/ UK	1	Six-Sigma and Lean-Thinking
19	The impact of balanced scorecards in a public sector environment: Empirical evidence from Dunedin City Council, New Zealand	2007	International Journal of Operations & Production Management	Q1	Qualitative analysis	Case study	Public sector	Municipality	New Zealand	New Zealand	2	Balanced Scorecard
20	Evaluation and analysis of criteria and sub-criteria of a construction excellence model	2008	Engineering, Construction and Architectural Management	Q1	Quantitative analysis	Survey analysis	Private sector	Construction sector	Europe/UK	International Collaboration	3	Hybrid
21	Competitiveness and performance development: an integrated management model	2008	Journal of Organizational Change Management	Q2	Qualitative analysis	Content analysis	General	Organizational Excellence	Europe/ Slovenia	Europe/ Slovenia	2	Hybrid
22	Performance measurement by TQM adopters	2008	TQM journal	Q1	Quantitative analysis	Survey analysis	General	Organizational Excellence	Canada	Canada	4	Conclusive
23	Reality check of Six Sigma for Business Excellence	2008	Total Quality Management & Business Excellence	Q1	Qualitative analysis	Content analysis	General	Organizational Excellence	Europe/UK	Europe/UK	1	Hybrid
24	Leadership is prime: How do you measure Leadership Excellence?	2008	Total Quality Management & Business Excellence	Q1	Qualitative analysis	Content analysis	General	Organizational Excellence	Europe/UK	Europe/UK	1	Hybrid

Table 3 continued

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
25	Developing versus developed companies in Business Excellence initiatives	2008	Total Quality Management & Business Excellence	Q1	Quantitative analysis	Survey analysis	General	Organizational Excellence	Europe/ Poland	Europe/Poland	2	Conclusive
26	Review of the Australian Business Excellence Framework: A comparison of national strategies for designing, administering and promoting Business Excellence Frameworks	2008	Total Quality Management & Business Excellence	Q1	Quantitative analysis	Hybrid methods	General	Organizational Excellence	International	New Zealand	2	Conclusive
27	Integrating knowledge management and quality management to sustain knowledge enabled excellence in performance	2008	VINE Journal of Information and Knowledge Management Systems	Q3	Qualitative analysis	Case study	Public sector	General	USA	USA	3	Hybrid
28	A business process activity model and performance measurement using a time series ARIMA intervention analysis	2009	Expert Systems with Applications	Q1	Quantitative analysis	Simulation	Private sector	Manufacturing sector	Hong Kong	Hong Kong	3	Hybrid
29	The quest for business excellence: evidence from New Zealand's award winners	2009	International Journal of Operations & Production Management	Q1	Mixed analysis	Case study	General	Organizational Excellence	New Zealand	New Zealand	2	Conclusive
30	High performers down under: lessons from Australia's winning companies	2009	Journal of Business Strategy	Q2	Quantitative analysis	Hybrid methods	General	Organizational Excellence	Australia	Australia	1	Hybrid
31	Analytical methods to support continuous improvements at Scania	2010	International Journal of Production Research	Q1	Qualitative analysis	Case study	Private sector	Manufacturing	Europe/ Sweden	International Collaboration	6	Hybrid

Table 3 continued

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
32	Contribution of the ISO 9001 internal audit to business performance	2010	International Journal of Quality & Reliability Management	Q1	Qualitative analysis	Case study	Private sector	Service sector	Europe/ Slovenia	Europe/ Slovenia	2	Conclusive
33	European Foundation for Quality Management Business Excellence Model: An integrative review and research agenda	2010	International Journal of Quality & Reliability Management	Q1	Qualitative analysis	Literature review	General	Organizational Excellence	Canada	Canada	3	Conclusive
34	Measuring organizational performance and organizational excellence of SMEs – Part 1: a conceptual framework	2010	Measuring Business Excellence	Q2	Quantitative analysis	Survey analysis	Private sector	SMEs	India	India	2	Hybrid
35	Measuring organizational performance and organizational excellence of SMEs – Part 2: an empirical study on SMEs in India	2010	Measuring business excellence	Q2	Quantitative analysis	Survey analysis	Private sector	SMEs	India	India	2	Hybrid
36	Performance assessment framework for supply chain partnership	2010	Supply Chain Management	Q1	Qualitative analysis	Literature review	General	Organizational Excellence	International	International Collaboration	2	Hybrid
37	Self-assessment for measuring business excellence: The MUSABE method	2010	Total Quality Management & Business Excellence	Q1	Qualitative analysis	Content analysis	Public sector	Education sector	Europe/ Greece	Europe/Greece	2	Assessment
38	An EFQM-Rembrandt excellence model based on the theory of displaced ideal	2011	Benchmarking	Q2	Quantitative analysis	Hybrid methods	General	Organizational Excellence	USA	International Collaboration	3	Hybrid
39	Performance measurement models in facility management: a comparative study	2011	Facilities	Q2	Quantitative analysis	Hybrid methods	Private sector	Service sector	International	International Collaboration	2	Conclusive

Table 3 continued

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
40	Modeling supply chain performance and stability	2011	Industrial Management & Data Systems	Q1	Quantitative analysis	Hybrid methods	General	Organizational Excellence	Hong Kong	China	3	Hybrid
41	Applicability of the high-performance organization framework at an East African university: The case of Iringa University College	2011	International Journal of Emerging Markets	Q2	Quantitative analysis	Survey analysis	Public sector	Educational sector	Tanzania	Tanzania	2	Hybrid
42	Lean Six Sigma: the contribution to business excellence	2011	International Journal of Lean Six Sigma	Q1	Qualitative analysis	Case study	Private sector	Manufacturing	International	New Zealand	1	Six-Sigma and Lean-Thinking
43	Improving the performance review process: A structured approach and case application	2011	International Journal of Operations & Production Management	Q1	Qualitative analysis	Case study	Private sector	Service sector	USA	International Collaboration	5	Assessment
44	Empirical analysis of the Baldrige Criteria as both an organizational performance measure and a theoretical model	2011	Measuring Business Excellence	Q2	Quantitative analysis	Inferential	General	Organizational Excellence	New Zealand	New Zealand	3	Conclusive
45	Quality strategy for transformation: a case study	2011	TQM journal	Q1	Qualitative analysis	Case study	Private sector	Manufacturing	India	India	2	Conclusive
46	An evaluation of the synergic implementation of TQM and TPM paradigms on business performance	2012	International Journal of Productivity and Performance Management	Q1	Quantitative analysis	Survey analysis	Private sector	Manufacturing	India	India	3	Conclusive
47	Performance measurement of reverse logistics enterprise: a comprehensive and integrated approach	2012	Measuring Business Excellence	Q2	Qualitative analysis	Literature review	Private sector	Service sector	Canada	Canada	2	Hybrid

Table 3 continued

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
48	Sustainable Enterprise Excellence: towards a framework for holistic data-analytics	2013	Corporate Governance	Q1	Qualitative analysis	Content analysis	General	Organizational Excellence	Europe/ Denmark	Europe/ Denmark	1	Hybrid
49	Excellence models in the non-profit context: strategies for continuous improvement	2013	International Journal of Quality & Reliability Management	Q1	Qualitative analysis	Case study	Voluntary sector	Non-Profit Organizations	Europe/UK	Europe/UK	3	Conclusive
50	Managing challenges in sustaining business excellence	2013	International Journal of Quality & Reliability Management	Q1	Qualitative analysis	Case study	General	Organizational Excellence	Australia	Australia	1	Conclusive
51	Business excellence through sustainable change management	2013	TQM journal	Q1	Qualitative analysis	Observations	General	Organizational Excellence	USA	USA	1	Conclusive
52	Performance evaluation of Indian Railway zones using DEMATEL and VIKOR methods	2016	Benchmarking	Q2	Quantitative analysis	Inferential	Public sector	Railways	India	India	3	Hybrid
53	Lean Six Sigma, strategic control systems, and organizational performance for automotive suppliers	2016	International Journal of Lean Six Sigma	Q1	Quantitative analysis	Survey analysis	Private sector	Manufacturing	Malaysia	Malaysia	3	Six-Sigma and Lean-Thinking
54	What is the effect of size on the use of the EFQM excellence model?	2016	International Journal of Operations & Production Management	Q1	Qualitative analysis	Content analysis	General	Organizational Excellence	Spain	International Collaboration	2	Conclusive
55	Total business excellence – a new management model for operationalizing excellence	2016	International Journal of Quality & Reliability Management	Q1	Qualitative analysis	Content analysis	General	Organizational Excellence	International	USA	1	Hybrid
56	Deploying business excellence – success factors for high performance	2016	International Journal of Quality & Reliability Management	Q1	Quantitative analysis	Hybrid methods	General	Organizational Excellence	International	International Collaboration	3	Conclusive

Table 3 continued

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
57	The mediating role of TQM and organizational excellence, and the moderating effect of entrepreneurial organizational culture on the relationship between ERP and organizational performance	2016	TQM journal	Q1	Quantitative analysis	Survey analysis	Public sector	Police	Mena-United Arab Emirate	International Collaboration	3	Conclusive
58	The leadership criterion: challenges in pursuing excellence in the Jordanian	2016	TQM journal	Q1	Qualitative analysis	Content analysis	Public sector	General	Mena- Jordan	Europe/ UK	2	Conclusive
59	Towards sustainable excellence: strategic analysis of Deming Prize winning	2016	TQM journal	Q1	Quantitative analysis	Survey analysis	Private sector	Manufacturing	India	India	3	Conclusive
60	Benchmarking towards excellence in higher education	2017	Benchmarking	Q2	Quantitative analysis	Survey analysis	Public sector	Educational sector	International	Europe/ Greece	2	Conclusive
61	Exploring differences between private and public organizations in business	2017	International Journal of Operations & Production Management	Q1	Quantitative analysis	Inferential	General	Organizational Excellence	Europe/ Sweden	Europe/ Sweden	2	Conclusive
62	Developing high performance work system for Indian insurance industry	2017	International Journal of Productivity and Performance Management	Q1	Quantitative analysis	Survey analysis	Private sector	Service sector	India	India	2	Hybrid
63	The Excellence Grid – a tool to identify attributes that drive service excellence	2017	International Journal of Quality & Reliability Management	Q1	Qualitative analysis	case study	Private sector	Service sector	India	India	2	Hybrid

Table 3 continued

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
64	Structural equation modelling for validating impact of 5S implementation on business excellence of manufacturing organizations	2017	International Journal of Quality & Reliability Management	Q1	Quantitative analysis	Survey analysis	Private sector	Manufacturing	India	India	2	Conclusive
65	Routinizing peak performance and impacts via virtuous cycles	2017	Measuring Business Excellence	Q2	Qualitative analysis	Content analysis	General	Organizational Excellence	USA	USA	1	Hybrid
66	Examining the role of 5S practices as a facilitator of business excellence in manufacturing organizations	2017	Measuring Business Excellence	Q2	Quantitative analysis	Survey analysis	Private sector	Manufacturing	India	India	2	Conclusive
67	A fuzzy cognitive mapping model for service supply chains performance	2017	Measuring Business Excellence	Q2	Qualitative analysis	Interview	Private sector	Service sector	Mena-Iran	Mena- Iran	2	Hybrid
68	The Analysis of Implementation Aspects of EFQM Business Excellence Model	2018	30th International Scientific Conference on Economic and Social Development	N/A	Qualitative analysis	questionnaire and focus group	General	Organizational Excellence	Europe/ Latvia	Europe/ Latvia	1	Conclusive
69	Success factors of high performance organization transformations	2018	Measuring Business Excellence	Q2	Qualitative analysis	Literature review	General	Organizational Excellence	Europe/ Netherlands	Europe/ Netherlands	1	Conclusive
70	Relationship between culture of excellence and organizational performance in Iranian manufacturing companies	2018	Total Quality Management & Business Excellence	Q1	Quantitative analysis	Survey analysis	Private sector	Manufacturing sector	MENA/Iran	International Collaboration	7	Conclusive
71	Human Resources Management Practices and Organizational Excellence in Public Organization	2018	Polish Journal of Management Studies	Q2	Quantitative analysis	questionnaire	Public sector	General	Mena/Sudan	International Collaboration	2	Conclusive

Table 3 continued

Sr	Title	Publishing year	Journal name	Journals ranking	Research method type	Research method category	Business sector type	Business sector category	Study geographical location	Authors Geographical Location	Number of Authors/ research	Research category
72	Implementing sustainable operational excellence in organizations: an integrative viewpoint	2019	Production & Manufacturing Research	Q2	Qualitative analysis	Literature review	General	Organizational Excellence	International	Africa/ Namibia	1	Conclusive
73	Investigating the role of strategic thinking in establishing organizational excellence model A moderating role of organizational forgetting	2019	TQM journal	Q1	Quantitative analysis	questionnaire	General	Organizational Excellence	Mena/Iran	Mena/Iran	2	Conclusive
74	Airport Business Excellence Model: A holistic performance management system	2019	Tourism Management	Q1	Mixed analysis	Literature review and survey analysis	Public sector	Tourism	International	Europe/ Greece	3	Hybrid

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