
Guest editorial: State-of-the-art for manufacturing management: advancing the research agenda and practice through literature reviews

When we put out the call for papers for this special issue, our aim was to develop a comprehensive collection of scholarly knowledge on manufacturing management and its associated topics. By doing so, we hoped to provide both academics and practitioners with valuable insights gained from previous research. Through this consolidation of knowledge, researchers can establish a solid foundation for future studies, identify new avenues for research and inform practitioners about the effectiveness of concepts and interventions, as well as any trade-offs they might need to consider.

Challenges for manufacturing management

For the call, we identified four topics that present challenges to both academics conducting studies and managers, particularly those involved in manufacturing and supply chain management, regarding the effectiveness and implementation of concepts, methods and tools. Let us look at these challenges first.

Dealing with adverse events and building resilience

The first challenge is the need for manufacturing and its supply networks to cope with adverse events. This has become more prominent with the pandemic, but not limited to; further examples are geopolitical tensions tied to new nationalism, natural disasters and economic cycles. With [Bhamra et al. \(2011\)](#) providing a review on resilience, it could be expected that further literature reviews would go beyond being conceptual in nature. A case in point of a conceptual model is [Kusiak \(2020\)](#), who presents an approach that combines the cluster algorithm, known from group technology, and modular design to improve resilience. In this spirit of dealing with the impact of unexpected events, [Bhamra et al. \(2011, p. 5380\)](#) observe three dimensions in studies looking at resilience (slightly reformulated here for consistency):

- Readiness and preparedness;
- Responsiveness and capability for adaption;
- Recoverability and accommodation.

Another take is presented by [Zhang and van Luttervelt \(2011, p. 471\)](#) when they succinctly describe resilience as insensitivity to perturbations of a manufacturing system (a reformulation here better reflecting their intent). Perturbations may be caused by abrupt disruptions in markets, availability of resources, geopolitical tensions and disruptions of supply. They can be categorised as black swans and grey swans (see [Akkermans and Van Wassenhove, 2013, p. 6747 ff.](#)), events that have highly unlikely probability and huge impact, respectively, unlikely probability and severe impact on manufacturing systems. Hence, this challenge requires both evaluation of conceptual developments and empirical data, particularly through literature reviews.



Ubiquitous calls for sustainability

A second challenge for manufacturing firms is becoming more sustainable. There is a contradiction here, as any manufacturing process calls on the use of systems of resources and requires input of materials in one form or another. Logically, this implies that only both the impact of materials and systems of resources on the environment can be reduced or mitigated (with the latter calling on other systems of resources). Implicitly, this is acknowledged by [Gunasekaran and Spalanzani \(2012, pp. 40–41, 44\)](#) when they review other studies, and declare that business process reengineering, just-in-time production, computer-integrated manufacturing, quality management, lean production, virtual enterprise, supply chain management and agile production are among concepts that make significant contributions to sustainability; however, all of these fall into the category for reduction of impact. Following on from this, [Herrmann *et al.* \(2014, pp. 286–288\)](#) propose the holistic factory as a concept for sustainability in manufacturing, albeit that it implicitly relies on traditional concepts from systems theories such as the distinction of aspects, process modelling, control processes and steady-state model ([Dekkers, 2017, pp. 29–32, 117–119, 164, 188](#)). However, [Hoekstra \(2015, p. 83\)](#) seems to imply that some caution may be necessary since a holistic approach to the sustainability of a manufacturing system does not necessarily mean that the sustainability of a single activity, production process or product is assured; this implies that multiple methods at different aggregation strata may be necessary to address the sustainability of manufacturing systems. Moreover, [Sarkis and Zhu \(2018, p. 754\)](#) highlight that according to ecological modernisation theory, environmental burden and economic growth can be decoupled through technology. Presenting a different perspective, [Huetting \(2010\)](#) reflects on the impact of growth in production levels, which may conversely lead to reducing potential production levels. All this indicates the multi-faceted and contradictory nature for achieving sustainability in manufacturing systems, truly, a challenge for this challenge!

Search for productivity and design of manufacturing systems

The quest for productivity and optimal design of manufacturing systems is the third challenge. Following on from [Tangen \(2005, pp. 41–43\)](#), productivity can be seen as the product of effectiveness ('doing the right things') and efficiency ('doing things right'). One approach is lean production, rooted in the preceding concept of just-in-time production; see [Holweg \(2007\)](#) for the conception of lean production, [Krafcik \(1988\)](#) for an early publication and [Schonberger \(1982\)](#) for just-in-time production. As conceptualisation, lean production aims at delivering products that are demanded by the market and of expected quality, i.e. doing the right things, and reducing waste in various manifestations, i.e. doing things right. Whereas lean production has evolved as a concept embedding quality management, production control and the structuring of manufacturing processes, control and management to enhance productivity have also been the subject of design science. The concept of design science (see, for example, [Romme, 2003](#)) is based on methods for redesigning operational processes, their control and management and technological rules informing these methods and designs; for a description of technological rules, see [van Aken \(2004\)](#). Such referral to the development and application of technological rules is found in an example by [van Aken \(2005, p. 26\)](#) concerning stock control. Also, [Holmström *et al.* \(2009, p. 90\)](#) provide instances of studies based on design science. Furthermore, [van Aken \(2005, p. 28\)](#) refers to a method for redesign small-batch assembly operations in small and medium-sized enterprises (SMEs), as does [Dekkers \(2018, pp. 264–265\)](#). Thus, literature reviews can shed further light on generic conceptualisations and methods and technological rules for design of manufacturing systems, using an overall perspective of productivity.

Capturing and integrating advances in information and communication technology

In the spirit of thinking that technology will effectively solve challenges faced by manufacturing companies, advances in information and communication technologies are offering new venues for manufacturing processes, planning, scheduling and control. Most notable are the thoughts about Industry 4.0 (e.g. Lasi *et al.*, 2014; Shrouf and Miragliotta, 2014), smart manufacturing (for instance, Davis *et al.*, 2015; Kusiak, 2018) and cyber-physical systems (for example, Monostori *et al.*, 2016). Some of the wording and the claims are reminiscent of the introduction of computer-integrated manufacturing in the 1980s; for the latter, see early publications such as Boaden and Dale (1986), Merchant (1985) and Yoshikawa (1987); it is Merchant (1985, pp. 97–98) who already points to the impact of artificial intelligence. Returning to the more contemporary writings, they also connect to other challenges, with Ghobakhloo (2020) being a case in point for sustainability and Fowler *et al.* (2023) for resilience. This not only means that advances in information and communication technologies are changing manufacturing processes and their control but can possibly be connected to the three previous challenges.

Contributions to this special issue

The potential of broad-ranging topics for literature reviews in manufacturing and supply chain management is reflected in the contributions to this special issue. We received 58 submissions, of which 9 were not relevant to the call for papers. The keywords for the remaining 49 submissions are captured with a word cloud in Figure 1a. These submissions were narrowed down in successive rounds. A word cloud from the accepted manuscripts to this special issue is found in Figure 1b. Both word clouds align with the intent of the special issue, covering the four challenges mentioned in the previous section. A feature of the contributions is that all use methodologies for protocol-driven literature reviews to explore and synthesise literature.



Figure 1.
(a) Word cloud from initial submissions to the call for papers (excluding desk rejects) and (b) word cloud from accepted manuscripts

Contributions to dealing with adverse events and building resilience

El-Breshy *et al.* (2024) investigate how incorporating Industry 4.0 into current manufacturing systems has affects their resilience (positively or negatively). After a protocol-driven search, the paper categorises the retrieved studies in three streams, namely (1) technologies associated with Industry 4.0, (2) resilience and (3) manufacturing systems. The authors look at resilience in two out of the three dimensions that Bhamra *et al.* (2011, p. 5380) put forward: (1) responsiveness and capability for adaption, and (2) recoverability and accommodation, although they reclassify them as 'preserve' and 'recover.' Based on the categorisation, the paper investigates the documented impact of some technologies on manufacturing system's resilience, explores more avenues to incorporate resiliency to preserve their state and suggests metrics to quantify the resilience of these systems. It also argues the importance of conducting additional research using four research themes in this field; particularly of interest is the actual impact of measures for resilience on manufacturing capabilities.

Found *et al.* (2024) highlight the impact of a major global pandemic, in their case the COVID-19 pandemic, on food supply chains. Their systematic literature review explores what responses to this disruption were observed by others and how this relates to resilience in food supply chains; the concept of resilience in this review incorporates all three dimensions noted by Bhamra *et al.* (2011, p. 5380). A particular feature of their review methodology is attention to the quality of evidence in studies, as authors might have been hurried to get their results out. Furthermore, they extend an earlier assessment model for supply chain resilience, a Mode 2 contribution as defined by Zahra and Newey (2009, pp. 1067–1068), and identify strategies for building resilience towards mitigating potential future risks of such a grey event. Consequently, their paper also reveals the need for more study on food supply chain resilience, particularly for major global pandemics.

Contributions to ubiquitous calls for sustainability

The starting point for the contribution by Machingura *et al.* (2024) is that lean production and green manufacturing are firmly connected. Despite substantial development in lean-green manufacturing over the past decade, a comprehensive review of the literature post-2013 was yet to be conducted. To this purpose, the authors reviewed the literature since 2013 to understand the complementary and conflicting areas between lean production and green manufacturing. By comparing their findings of a thematic analysis with those of Dries *et al.* (2013), the authors confirm that the integration of lean production and green manufacturing often results in enhanced organisational performance. Also, they shed new light on recent advancements in this intersection between two topics, highlighting the benefits towards achieving sustainability and added value.

Contributions to the search for productivity and design of manufacturing systems

A holistic view on manufacturing strategy and systems arrives from the contribution by Hristov *et al.* (2024), who conduct a systematic literature review on qualitative modelling of the interrelationships for variables within and between the four quadrants of the balanced scorecard. To find these interrelationships, they study 40 articles, which applied the balanced scorecard to strategy for operations management, to find performance drivers (lead indicators) and outcome measures (lag indicators). This exercise results in a strategy map for operations. Its four causal loops constitute four different perspectives: learning and growth dynamics, internal processes dynamics, customer dynamics and financial dynamics. Not only are these four perspectives graphically represented, their linkages are also brought to the fore. Consequently, this review will and can serve as starting point for underpinning the development of manufacturing strategies by firms, further research to validate its strategy map, and possibly, extend it. An interesting extension would be to

investigate how this strategy map can be linked to the discussions about manufacturing capabilities (for the latter, see [Egbunike et al. \(2018\)](#) and [Sarmiento et al. \(2010\)](#), among others).

A particular aspect of manufacturing strategy is how technological capabilities relate to performance for manufacturing firms, which [Fitz-Oliveira and Tello-Gamarra \(2024\)](#) investigate through a systematic review with meta-analysis. Although at first glance this seems to be an obvious relationship, their main finding is that statistical between-study heterogeneity inhibits drawing a firm conclusion; we note that often in systematic reviews with meta-analysis, the implications of statistical between-study heterogeneity are poorly discussed as high levels of these indicate that results may be untrustworthy. To understand why the estimate for the correlation is untrustworthy, they look at the constructs used for measuring technological capabilities and firm performance in the manufacturing sector. The hugely varying measures in studies are seen by the authors as a potential explanation. Consequently, they indicate that standardisation of measures is necessary to create a more consistent body of knowledge on the statistical relationship between technological capabilities and firm performance in the manufacturing sector.

The next contribution to the theme is the systematic literature review by [Badhotiya et al. \(2024\)](#), who look into the implementation of the principles for lean manufacturing (aka lean production). Despite the principles having been widely applied across industry sectors, there is a noticeable gap in reviews that specifically address information found in case studies. Since case studies offer a direct glimpse into real-world applications, they serve as a valuable source of secondary data; in this sense, the authors do justice to [Yin and Heald's \(1975\)](#) intent for the case survey method. The review here examines case studies conducted during the last decade. The implementation shows considerable variation among different manufacturing firms, with results indicating improvements in manufacturing capabilities. Notably, in the latter part of the previous decade, organisations began to integrate lean manufacturing with technologies like radio frequency identification (RFID), e-kanban and simulation. This exploration of case studies documenting the implementation of lean manufacturing offers a fresh perspective, marks a pioneering effort to understand the complexities and complements existing reviews such as [Hu et al. \(2015\)](#).

Drawing on Checkland's soft systems methodology as analytical framework to explore the introduction of robots in manufacturing, [Stingl et al. \(2024\)](#) provide valuable insights into understanding complex, human-centric systems where technology, organisation and people intersect. Using soft systems methodology in this context allows for a holistic and structured approach to the complex changes brought by the introduction of robots on the shop floor. The systematic literature review does not just look at the technological aspects but also human, organisational and cultural dimensions, ensuring a comprehensive understanding of the implications resulting from the implementation of robotised work. The review highlights four entangled themes of change for the design and implementation of robots in manufacturing: work, organisation of labour, workers (and their experiences) and the firm's environment. Their overviews not only view reported variables of change for each theme but also consider the interaction between themes. The extent and detail of this review will serve as a starting point for studies.

Contributions to capturing and integrating advances in information and communication technology

Transiting to the next theme as challenge for manufacturing in this editorial, [Kassem et al. \(2024\)](#) focus on the interaction between lean production and Industry 4.0, with the aim to observe how this interaction unfolds and determine whether it is synergistic. Based on a systematic literature review, the paper shows that the interaction between the two paradigms

occurs through a representation of the pillars embedded in the house of lean interacting with the nine technological pillars of Industry 4.0. Accordingly, it facilitates a deeper insight into the interaction between lean production and Industry 4.0 by demonstrating the weights of the interactions between the two paradigms and the areas of operations management where this interaction takes place through Sankey charts.

With Industry 4.0 often presented as a paradigm shift, the paper by [Angreani et al. \(2024\)](#) examines maturity models for Industry 4.0 and relates these to reputable reference architecture models to enhance strategy for transformation and implementation of Industry 4.0. To this purpose, it also aligns key factors and maturity levels to these reference architecture models. Based on its systematic literature review, the paper discovers several key findings: (1) different maturity models for Industry 4.0 hold different perspectives with only few covering all factors identified in the review; (2) no reference architecture model covers all aspects of maturity models, and therefore, firms need to employ additional frameworks for implementation to achieve full benefits of reference architecture models; (3) aligning the staged implementation of reference architecture models with maturity models for Industry 4.0 enhances digital transformation and (4) the maturity models for Industry 4.0 and reference architecture models often overlook aspects related to organisational changes and shifts required in organisational culture to fully reap benefits from implementing technologies associated with Industry 4.0.

[Krishnan \(2024\)](#) presents a conceptual framework designed from an initial survey of the literature on the impact of implementing smart manufacturing practices on performance to guide SMEs in their adoption. This framework, which is proposed to encourage future research and testing in this field, outlines a path for these firms to embark on smart manufacturing with minimal initial investment by leveraging their current assets, which are categorised according to a smart industry readiness index framework.

Contributions complementary to the four challenges

While there is a growing interest from both academics and industry professionals in the development of product-service systems, a comprehensive overview of the contributions of SMEs to its design is noticeably absent; to this purpose, the paper by [Åkesson et al. \(2024\)](#) endeavours to consolidate existing studies. It also proposes research questions guiding future inquiries into the design of product-service systems, with the ultimate aim of providing actionable insights for SMEs. In the analysis, the authors have discerned five main themes within the existing body of literature concerning the design of product-service systems in SMEs: motivations, obstacles, characteristics specific to SMEs, methodologies and digitalisation. These themes are interconnected, with the characteristics of SMEs playing a pivotal role as they influence every other theme. The authors pinpoint areas where knowledge is lacking and recommend directions for future research, particularly from the viewpoint that motivations of SMEs to engage in design of product-service systems have not yet been related to (specific) design approaches and activities.

Considering the impact of antecedents for supply chain agility on firm performance is the focus of the systematic review with meta-analysis by [Beigi Firoozi et al. \(2024\)](#). Somewhat unusual for studying phenomena in supply chain management, they take the perspective of allopoietic systems for the analysis of studies. This results in them considering the related concepts of homeostasis, feedforward, feedback, modularity, market sensing and collaboration. The outcomes of the study are robust, with low values for statistical between-study heterogeneity. Their findings point to not only antecedents contributing to supply chain agility, but they also intimate that collaboration between partners in a supply chain remains one of the most determinant factors for achieving supply chain agility.

Positioning contributions

More detail on what the papers in this special issue contribute can be found in the co-occurrence matrix displayed in [Figure 2](#). The categorisation in the matrix is inspired by standardised formats for review questions, such as population-intervention-comparison-outcome (PICO), common in healthcare (e.g. [Dekkers et al., 2022](#), pp. 123–124) and context-intervention-mechanism-outcome (CIMO) logic as put forward by [Denyer et al. \(2008](#), pp. 395–396). The categorisation context-aggregation stratum-intervention-mechanism-performance (CAIMP) is briefly elaborated here.

- **Context.** This concerns the context for the review, for example, countries (or regions), industrial sectors (including competitive heterogeneity) and order entry points. The latter arrives from writings on modes of operation for manufacturing firms such as engineer-to-order, make-to-order, assemble-to-order and make-to-stock, as found in [Sackett et al. \(1997](#), p. 362) and [Wiendahl and Scholtissek \(1994](#), p. 534).
- **Aggregation stratum (unit of analysis).** The aggregation stratum, terminology adapted from systems theories ([Dekkers, 2006](#), pp. 48–49), refers to the unit of analysis, such as workplace and job and workplace design, plants and production networks (for the latter, see, for example, [Cheng et al. \(2015\)](#)).
- **Intervention.** The intervention is about what concepts have been introduced for a manufacturing system. Examples are, but are not limited to, manufacturing strategy, lean production, robotics, advanced information and communication technologies and design of structures.
- **Mechanisms.** Theoretical concepts are the mechanisms through which the performance of manufacturing systems can be explained. Among them are: theories, laws of observed regularities, technological rules, causal relationships, models, and frameworks and pathways for implementation.
- **Performance.** The impact of interventions can be measured in terms of traditional manufacturing capabilities, such as productivity, lead or throughput time, quality, etc. (for example, see [Sarmiento et al. \(2010\)](#) and [Swink and Hegarty \(1998](#), p. 377 ff.)). It can also include more contemporary performance measures and attributes of manufacturing systems, inclusive quality of work life, reduction of emissions, energy consumption and burden on (natural) resources.

These components of the co-occurrence matrix cannot only be used for literature reviews in manufacturing management but also for related domains, albeit other constructs for each component may need to be used.

Implications for practice

Since research into manufacturing management and its related domains has a strong orientation towards practice, the question is what this special issue brings to the table for practitioners. A first strand of implications from the reviews is related to strategy. [Found et al. \(2024\)](#) visualise the responses to specific risks in the context of pandemics caused by coronaviruses, and [Hristov et al. \(2024\)](#) provide a tentative strategy map based on the balanced scorecard that supports setting out appropriate manufacturing strategies. The second strand of managerial implications concerns the implementation of lean production. [Badhotiya et al. \(2024\)](#) point to pathways for implementation of its principles, though the evidence for the order of specific steps is poorly documented in literature. A takeaway from [Machingura et al. \(2024\)](#) is their recommendation that organisations considering the implementation of lean production (or perhaps, lean thinking) should integrate this with green manufacturing as complementary approach, thus creating a more holistic path to meeting contemporary challenges. And, as a third strand, [Stingl et al. \(2024\)](#) highlight how the use of robots in manufacturing affects the design of work and production systems. Also,

Wicaksono *et al.*'s (2024) contribution points to the need for considering organisational changes in order for advancements in information and communication technologies to work. These three strands have been highlighted here in addition to the recommendations for practice found in the individual papers.

Reflecting on further reviews following from this special issue

From our brief deliberations in this editorial for the special issue, there are directions for further literature reviews in addition to suggestions raised in the contributions. The first theme is that there are opportunities for evidence-based reviews (aka best-evidence synthesis, see Dekkers *et al.* (2022, pp. 319–327)) that inform practitioners about implementation of conceptualisations, solutions, methods and tools. Although this has already been advocated by Tranfield *et al.* (2003), there are two additional points that researchers should consider reflecting current insight in the conduct of protocol-driven literature reviews. The first is that the recommendations and pathways for implementation following from such an exercise should be formulated in a neutral way so that practitioners can make decisions based on achieving performance objectives, trade-offs for manufacturing capabilities and other constraints including financial limitations. Second, the quality of evidence at an aggregated level (e.g. Dekkers *et al.*, p. 224) should be considered, i.e. the credibility of the synthesised evidence; often, this also involves assessing the credibility of individual studies and the trustworthiness of results, conjectures and findings. A second theme for further reviews indicated here concerns the impact of resilience on manufacturing capabilities and related trade-offs that may have to be made. A third theme of reviews is an evaluation of concepts, methods, tools and practices for sustainability in manufacturing and supply chains, particularly how these relate to the traditional and extended manufacturing capabilities in Figure 2. It could well be possible that also here trade-offs may take centre stage. Thus, there are substantial opportunities to provide further consolidated insight through literature reviews based on these three highlighted themes.

Moreover, the identification of such opportunities arises from the format CAIMP for review questions introduced in this special issue. In the first instance, the format could inform systematic literature reviews and systematic reviews by providing a systematic consideration for review questions suitable for the domains of operations and supply chain management. Care has to be taken that such formats only serve as guidance; for example, Badhotiya *et al.* (2024) have used another common format to inform their review, namely population-intervention-outcome (PIO). A further exercise could be to use the co-occurrence matrix as foundation for tertiary reviews, which are more commonly called umbrella reviews. These mapping exercises would lead to overviews of which topics are covered by existing reviews, what their strengths and weaknesses are, and to what other reviews could contribute by synthesising scholarly knowledge.

A final point is that across all contributions to this special issue, good practices for protocol-driven literature reviews have been observed that should or could be followed by others conducting protocol-driven literature reviews. These practices are captured in Figure 3. Some of the practices in the figure have been raised in the text of this editorial. Other practices are observed by the approaches taken by authors for the two systematic reviews with meta-analysis, the systematic review with bibliometric analysis and the others that are dominantly systematic literature reviews. Reflected in the figure is that systematic reviews with meta-analysis or bibliometric analysis are normally followed by qualitative analysis since studies in the domain of operations and supply chain management are heterogeneous regarding the design of key constructs for research questions, design of research methodologies and data collection (including consideration of contexts). This impedes the

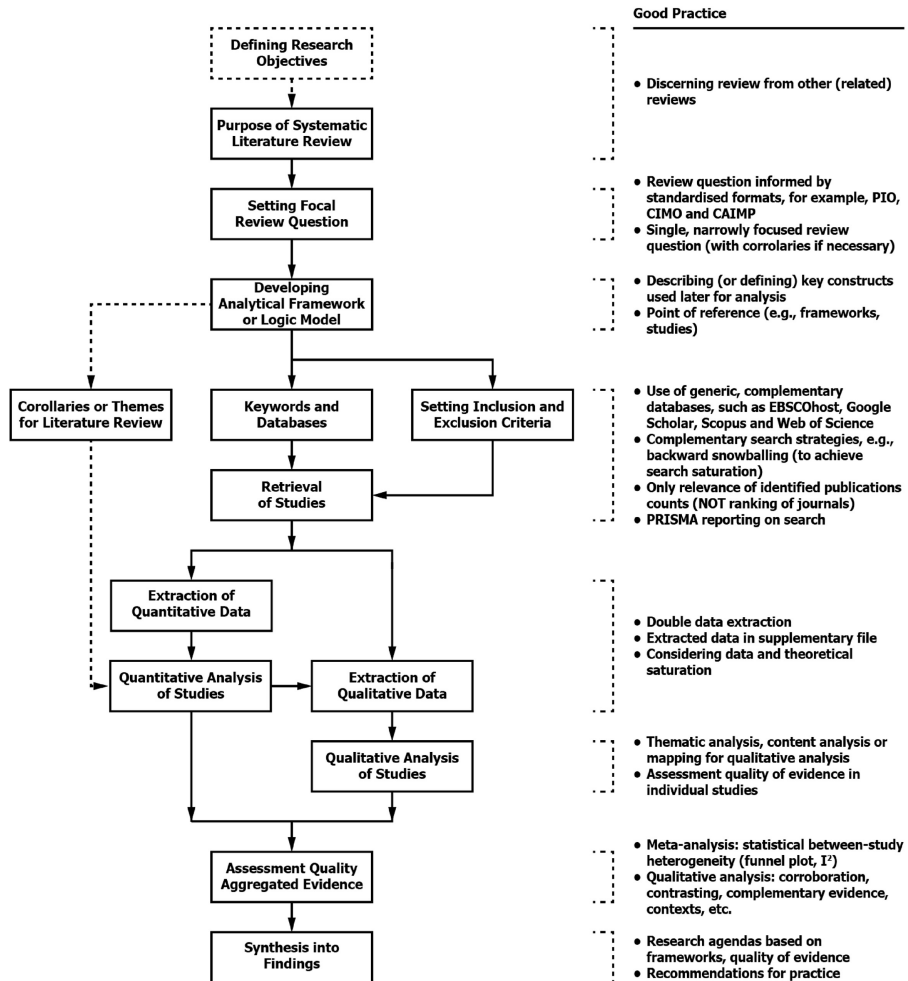


Figure 3. Good practices for systematic literature reviews

synthesis and evaluation of a collection of studies in a protocol-driven literature review. Figure 3 with the highlighted practices should be seen as a template that is tailored to the needs of a specific systematic literature review or systematic review.

The first set of good practices points out that the starting point of a literature review should get careful attention before setting a review question. Deliberations include whether the review is aiming at informing practice or generating and consolidating theoretical insight. This also covers what sets it apart from other related literature reviews and includes the so-called 'so what' question (Dekkers *et al.*, 2022, p. 505). Also helpful is to consider five recommendations for formulating review questions (Dekkers *et al.*, 2022, pp. 110–114). Furthermore, later analysis can be supported by describing the key constructs to be used (for instance, Beigi Firoozi *et al.*, 2024), development of a framework (for example, Stingl *et al.*, 2024) or taking another review as starting point (e.g. Machingura *et al.*, 2024). These practices not only facilitate the analysis and

synthesis of studies but also lead to a more effective execution of the search for relevant studies, the next stage.

The second set of practices is related to the effectiveness of the search strategy. As at least two databases needed to be used (see [Green et al., 2006](#), p. 107), these should be complementary and generic; a case in point is the use of three databases by [Found et al. \(2024\)](#). Databases specific to publishers should be avoided, according to the advice by [Irvine et al. \(2022\)](#), p. 172); by way of illustration, Scopus should be used instead of ScienceDirect, although both are owned by Elsevier. Besides, it is common practice to use backward snowballing as complementary search strategy to achieve saturation for the search. This is done by [Åkesson et al. \(2024\)](#) and [Beigi Firoozi et al. \(2024\)](#), although the latter label it unintentionally 'backward searching.' And, principally, all relevant publications should be considered irrespective of citation rates and ranking of journals ([Beigi Firoozi et al., 2024](#), p. 149). Furthermore, it is common to report the search strategy following the guidelines from PRISMA ([Liberati et al., 2009](#); [Page et al., 2021](#)), as, for example, [Badhotiya et al. \(2024\)](#) do. Particularly, the effective use of databases and complementary search strategies will identify all relevant studies, irrespective of their citation rates and ranking of journals they have been found in.

The third set of good practices supports the in-depth analysis and synthesis of studies. Double-data extraction, where at least two authors extract data from retrieved studies separately, is considered the golden standard. For instance, [Åkesson et al. \(2024\)](#) and [Kassem et al. \(2024\)](#) fused this approach to data extraction. Advice is that the extracted data can be captured in a supplementary file, especially when there are a larger number of empirical studies that have been reviewed, so that these data burden less the manuscript's main body of text. In addition to following specified methods for analysis and synthesis, another point that requires attention by authors is the quality of evidence for data, results, conjectures, findings and conclusions found in retrieved studies, at both the level of individual retrieved studies and aggregated synthesis for outcomes and recommendations from reviews. This point, usually somewhat neglected, ensures that data and statements are not taken at face value but assessed on their credibility. It also avoids that reviews are cherry-picking fragments of studies and collating citations-in-text instead of synthesising and evaluating data, results, conjectures, findings and conclusions from retrieved studies. [Wicaksono et al. \(2024\)](#) use a tailored method derived from other writings for doing so, and [Tello-Gamarra and Fitz-Oliveira \(2024\)](#) used funnel plots and a statistical measure in the meta-analysis. Indicative guidelines can be found in [Dekkers et al. \(2022\)](#), p. 224). Whereas putting extracted data either in the manuscript or a supplementary file improves traceability, the use of methods for analysis and synthesis, and consideration of the quality of evidence lead to more trustworthy outcomes from protocol-driven literature reviews.

The practices mentioned in [Figure 3](#) and elaborated in the previous three paragraphs should be seen as complementary guidance to existing methodological writings (e.g. [Seuring and Gold, 2012](#)) on producing literature reviews in the domain of operations and supply chain management. In addition, some points for considering what the quality of a literature review constitutes are described by [Steenhuis et al. \(2022\)](#). Further, the practices here and guidelines should inspire authors to conduct and report literature reviews of high quality for manufacturing and supply chain management, which we are looking forward to reading.

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