Journal of Business Research 147 (2022) 290–307

Contents lists available at ScienceDirect

Journal of Business Research

journal homepage: www.elsevier.com/locate/jbusres

Supply chain collaboration and sustainable development goals (SDGs). Teamwork makes achieving SDGs dream work

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ARTICLE INFO

Keywords:
Sustainable supply chain
Supply chain collaboration
Sustainable development goals
Coordination

ABSTRACT

The global push towards sustainable development has led to an upsurge in academic literature at the juncture of supply chain collaboration (SCC) and sustainability. The present paper aims to map this growing literature to understand how SCC can contribute to the achievement of broader Sustainable Development Goals (SDGs). Via a systematic review of literature (SLR), the paper maps key themes at the intersection of SCC and sustainable development. Relying on nine key themes, the study presents novel insights into the domain of SCC for sustainable development. The results of the SLR reveal that collaborative innovation, collaborative process and product development are key mechanisms driving SCC. However, the extant literature has not devoted much attention to the effectiveness of SCC mechanisms or their performance. Further, the current study posits that more effective SCC strategies can boost the sustainable operational performance of the supply chain (SC) by enhancing capacity building and resource utilisation. Based on the contingency approach, this study offers a novel framework linking SCC to SDGs. The study thus has the potential to help managers and practitioners identify strategic fields of action for achieving SDGs.

1. Introduction

Supply chain collaboration (SCC) can be understood as any action or activity, vis-à-vis interaction, where actors and/or organisations achieve mutually beneficial outcomes by working in cooperative ways (Gunasekaran et al., 2015; Whitelock, 2019; Rong and Xu, 2020). SCC can enhance the performance of supply chains (SCs) and provide the greatest benefits to SC members (Arshinder et al., 2011). For example, SCC can be utilised to improve performance by redesigning workflows and promoting resource sharing between SC members (Arshinder et al., 2011). Multi-stakeholder initiatives that seek to address issues of mutual concern form the cornerstone of SCC and are essential for implementing sustainable management approaches (Gunasekaran et al., 2015). Modern-day SCC initiatives specifically gauge the extent to which SC partners collaborate to conduct sustainability-oriented activities (Yang, 2013). Furthermore, the resources and capabilities of SC members that evolve from SCC have become the drivers of sustained competitive advantage (Gold et al., 2010).

The Sustainable Development Goals (SDGs) of the United Nation's (UN's) serve as guidelines for the attainment of sustainable business development. Seventeen specific SDGs focus on cross-sector as well as cross-country partnerships and cooperation for sustainability (Gunasekaran et al., 2015). Efforts to drive businesses towards SDGs are grounded in the equitable sharing of risks and benefits and require actions such as collaborative planning and product development, exchange of information and coordination at various levels among different actors within an SC (Mehdikhani and Valmohammadi, 2019). To achieve a sustainable future, businesses must align their goals with the SDGs at the strategic as well as operational level (Pohlmann et al., 2020).

To drive any agenda successfully, SCC must be built upon a shared vision, principles and values at every level. Therefore, firms that aim to

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https://doi.org/10.1016/j.jbusres.2022.03.044
Received 26 June 2021; Received in revised form 15 March 2022; Accepted 19 March 2022
Available online 18 April 2022

attain sustainability must interact with internal as well as external members of the SC, including suppliers and retailers (Silva and Figueiredo, 2020). This further confirms the importance of implementing SCC. Previous scholars have emphasised the impact that businesses have on one another. For example, firms' operational decisions affect the revenue of other SC actors and the revenue of the SC in its entirety (Meng et al., 2021). However, when actors focus specifically on sustainability-related outcomes, the complexity associated with successful SCC increases further (Chauhan & Singh, 2018). Complex SCs and their activities, which extend across multiple nodes and stages and face various institutional barriers, pose myriad challenges to effective SCC (Cheon and Deakin, 2010). These challenges have motivated keener scholarly interest and significant growth in the literature on sustainability-oriented SCC (Beske-Janssen et al., 2015).

A keener examination of the extant literature discloses that the topic of sustainability-oriented SCC is multi-layered and requires the attention of various stakeholders, including suppliers, focal firms, retailers, logistics service providers, governments, consumers and society at large (Arshinder et al., 2011). As the literature demonstrates, the strategies for SCC extend across a variety of horizons, such as advertising, pricing and innovation (Song et al., 2017). Examining the prior literature reveals a few existing review studies that have focused on similar topics (Asif et al., 2020). However, the findings of the extant literature in this domain remain disjointed due to the complex nature of the topic that encompasses all the three aspects of sustainability (i.e. people, planet and profit; Asif et al., 2020). For example, in their literature review, Asif et al. (2020) assessed SCC from the lens of its environmental benefits by explicating the implementation of ecologically friendly practices through the SCC approach, particularly in the developing nations context. Assessing the effectiveness of various types of SCC through contract-based strategies among SC members, Chauhan and Singh (2018) underscored the vast potential for creating coordination strategies to improve the operational performance of green SCs. Further, reviewing the contributions of collaborative efforts involving firms and logistics service providers in a reverse logistics network, Wijewickrama et al. (2021) contend that such efforts can be facilitated by information and communications technologies (ICT). Cloutier et al.'s (2020) review of the literature found that SCC relies on standardised real-time information sharing and a high level of SC re-engineering. Finally, Turken and Geda (2020) utilised the lens of industrial symbiosis to uncover the level of SCC among firms, i.e. whether SCC occurs at the strategic, tactical or operational level. They identified a plethora of barriers to SCC implementation, including the sharing of proprietary information.

The review studies mentioned above, however, exhibit a narrow focus in terms of the level at which SCC occurs in any particular SC process, such as reverse logistics (Wijewickrama et al., 2021), contracts (Chauhan & Singh, 2018), mechanisms (Cloutier, Oktaei and Lehoux, 2020), environmental practices including green product and process development (Asif et al., 2020) and the level of SCC (Turken and Geda, 2020). In contrast, the present work aims to offer a thorough investigation of prior studies in terms of key themes, research gaps and opportunities for further exploration while also proposing a research framework rooted in a qualitative assessment of the prior relevant literature. The proposed framework provides a contingency theory-based, multi-stakeholder perspective that enables researchers and practitioners to understand the ways in which SCC can be utilised to achieve the SDGs. Indeed, the SCC mechanisms derived from a thematic analysis of the literature are regarded as the optimum course of action to promote the evolution of SCs towards sustainability. The framework outlines the role of actors, contingent situations within SCs, optimum courses of action and their linkages with the SDGs (the outcome). The optimum courses of action identified rely upon the thematic analysis of the literature and take into consideration strategic initiatives such as digitalisation, selection of collaborative partners and policy discourse.

A systematic literature review (SLR) can promote the assimilation and assessment of existing work and can be utilised to create a comprehensive theoretical framework that can guide scholars and managers (Denyer and Tranfield, 2009; Dhir et al., 2020; Khan et al., 2021). The present study addresses four important research questions (**RQs**): **RQ1.** What is the research profile of the relevant extant literature on SCC (e.g. publication timeline, distribution across journals, methodology of research, etc.)? **RQ2.** To what key research themes and related important issues have scholars attended in the past? **RQ3.** What are the various gaps and limitations of the extant studies and possible avenues for future research? **RQ4.** How can research in this domain be advanced to achieve the SDGs?

Because they assess the SCC literature and link it to ongoing global conversation regarding the SDGs, the findings of the present SLR should interest to a broad range of researchers, managers and policymakers. Scholars can utilise the findings to conduct future studies and address issues of topical interest that have yet to receive sufficient attention in this domain. Practitioners, meanwhile, can employ the findings to recognize the drivers of and barriers to sustainability-oriented SCC and shed spotlight on strategic arenas of action. Likewise, policymakers can utilise the present work to undertake the policy intercessions required to effectively manage SCC. Overall, the present SLR has the potential to contribute significantly to theory as well as practice.

The organisation of the present research is as follows. Following this introduction (Section 1), Section 2 presents the scope of the SLR. Section 3 outlines the research method employed in the study along with the research profile of the extant literature. Section 4 identifies the thematic foci of the extant literature while Section 5 presents the research gaps and avenues for future research. Section 6 develops a theoretical framework while Section 7 concludes the study by exploring its implications, limitations and research directions for future.

2. Scope of the review

Specifying the scope of the SLR as well as outlining its boundary is necessary to enhance transparency in the development of the search protocol in the area of SCC, SDGs and sustainability in general (Chauhan et al., 2021; Khan et al., 2021). A set of inclusion and exclusion criteria for the studies in this review were defined. The time frame for peer-reviewed papers in this domain to be included in the current study spanned from January 2006 through October 2021.

The important conceptual boundaries for the phenomenon under investigation were defined. Specifically, the boundary condition of this review, i.e. the definition of the term SCC, was established.

Collaboration among SC partners refers to joint activities that partners undertake to bring substantial improvements in the longer run (Wong et al., 2021). SCC is defined as engagement in SC activities that are grounded in inter-reliance between SC members and the formulation of mechanisms for managing such interdependencies (Gunasekaran et al., 2015). SCC for sustainability depends upon sustainable benefits, sustainable relationships, sustainability integration and sustainable practices (Wong et al., 2021). While scholars have made efforts to define SCC, no comprehensive and universally accepted definition currently prevails. Gunasekaran et al. (2015), posit the precursors of sustainable SCC as sustainable coordination, sustainable transactions and sustainable cooperation. The term cooperation means working jointly for a common goal by taking the abovementioned issues into consideration and associating for the long term (Gunasekaran et al., 2015). An examination of the extant studies reveals, however, that scholars have used terms such as 'coordination' and 'cooperation' interchangeably with 'collaboration' (e.g. B. Liu & De Giovanni, 2019). To eliminate any chances of excluding any relevant studies, the present SLR also employed these terms interchangeably and, therefore, incorporated these terms into the search string during the keyword search.

SDG-17 focuses on cross-sectoral collaboration for the achievement of sustainability goals and, therefore, can be regarded as the core of sustainability-oriented SCC (van Hille et al., 2020). Achieving the targeted SDGs is possible with the help of risk- and benefit-sharing (van

Hille et al., 2020). However, risks and benefits can only be shared if SC partners collaborate with one another on activities such as planning and product design, information exchange and knowledge sharing, among others (Kache and Seuring, 2014). Because it attempts to link sustainability to SCC, the present study can serve as a cornerstone for understanding how the SDGs can be achieved through SCC. The SDGs incorporate affordable, sustainable, reliable and modern-day energy access for all (SDG-7), an environment of decent work and economic growth (SDG-8), trade, innovativeness and infrastructure (SDG-9), responsible consumption and manufacture (SDG-12) and climate action (SDG-13). In particular, SCC plays a role in the context of these SDGs because topics such as energy, economic growth, innovation and the responsible use of resources and the environment are at the heart of collaboration.

3. Method

The first step of the SLR methodology involves strategically planning to search for significant publications; efforts to determine the target journals, decide the criteria for inclusion and exclusion and conduct the review of the selected publications follow and finally, the findings are documented. (Khanra et al., 2020; Talwar et al., 2020; Chauhan et al., 2021; Hina et al., 2022). This SLR study was conducted in two main stages. In the first stage, the keywords were selected along with the inclusion and exclusion criteria. Subsequently, the databases were searched for relevant studies. Successively, a strict quality evaluation of the papers was conducted by applying the previously established criteria. In addition, forward and backward citation chaining was employed to confirm that all relevant papers were included (Kushwah et al., 2019). Finally, the results of the SLR were discussed in the next stage, providing the authors with an overview of the most important literature on the topic.

3.1. Planning of the review

This SLR aimed to investigate and appreciate the existing scholarly work on the role of SCC in achieving sustainability goals. In addition to a *Google Scholar* search, the two main databases utilised for the present study were *Scopus* and *Web of Science (WoS)*, as recommended by some extant studies (Kushwah et al., 2019; Chaudhary et al., 2021). The specific emphasis of the present study was SCC; therefore, similar domains of research, such as green transactions, knowledge management and SC partner selection, were excluded if they did not clearly focus on SCC. First, a few keywords were chosen, and a preliminary database search was conducted to identify the publications relevant to the present SLR. These keywords were then searched on *Google Scholar*. The first ten pages that resulted from this search were then evaluated to update the keyword list. Next, the leading journals in the management domain were searched separately to ensure that the list contained all relevant keywords. The analysis of keywords obtained at this stage revealed an overlap of SCC with SCs. Therefore, this keyword was also added to the list. In addition, the keywords obtained from the search of articles on *Scopus* and *WoS* were screened to ensure that no relevant keywords were excluded.

A panel of experts was established to eliminate biases in the review process and ensure its rigour. Five experts (two professors and three researchers) comprised the expert panel. Following consultation with the panel, a final consensus regarding the keywords was achieved (Table 1).

3.2. Specification of the study

This stage involved establishing the criteria for inclusion and exclusion (see Table 2) based on extant SLR studies. The studies identified in the earlier stage were refined according to these criteria.

Table 1
Selected keywords.

Supply chain collaboration	Sustainability-related keywords	Search string
Supply chain Collaboration Coordination	Sustainable development goals SDG Green Sustainability	(‘supply chain’ and ‘collaboration’ or ‘cooperation’ or ‘coordination’) and (‘sustainable development goals’ or ’SDG*’ or ’green’ or ‘sustainability)

Table 2
Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
Articles with a focus on SCC for sustainability or SDGs	Articles that mention strategic, tactical or operational level collaboration between entities but do not focus specifically on SCC
English language articles published through October 2021	Editorials, short surveys, reports, errata, book chapters and notes
Peer-reviewed journal articles	Articles that focus on chemical, biological or biochemical processes Topics such as green transactions, knowledge sharing and supply chain partner selection if not focused clearly on SCC

3.3. Extraction of the data

The keywords chosen for the study were translated into keyword string by applying Boolean logic. The operators - ‘OR’ and ‘AND’ were used for the same. A search of this string on Google Scholar complemented a search of titles, keywords and abstracts in the *Scopus* and *Web of Science (WoS)*. The search included articles published through October 2021. The number of publications extracted by searching the *Scopus* and *WoS* databases was 1655 at this stage. Following the removal of articles duplicated across databases, a total of 1362 articles remained. The pool was then further screened using the criteria for inclusion and exclusion. A pool of 511 studies was obtained in this stage.

The authors again requested the assistance of the review panel in the subsequent level of screening. Two experts from the panel carried out an assessment of titles, keywords and abstracts based on the basis of scope, boundary and screening criteria for research. To ensure the rigour of the protocol of screening the articles, each expert conducted this task independently. In the next phase, short-listed articles were shared by the experts. A total of 350 publications remained at this stage. The experts were then asked to reach at a consensus regarding which studies to include from this pool. The panel experts eliminated 52 studies, which did not fit the conceptual boundary and scope of the SLR. In the subsequent step, the authors assessed the complete texts of the 298 studies that were remaining, to determine their alignment with the present SLR. Following this full-text analysis, 174 studies remained. Most of the articles removed in this step focused on engineering, construction, biological and biochemical processes. Forward and backward citation chaining was also conducted for each of the selected studies to ensure that no relevant study was excluded. The expert panel reviewed a total of 29 articles identified via citation chaining. Of these, 13 studies were incorporated into the pool.

The next step comprised of the process where panel assessed all 187 studies, which were ultimately included in the review. The next stage involved developing the research profile of the publications in the pool. Fig. 1 details the entire process in detail.

3.4. Data execution: Research profiling

The research profile of the studies is presented in this section. The data provided describes the body of knowledge based on year, source

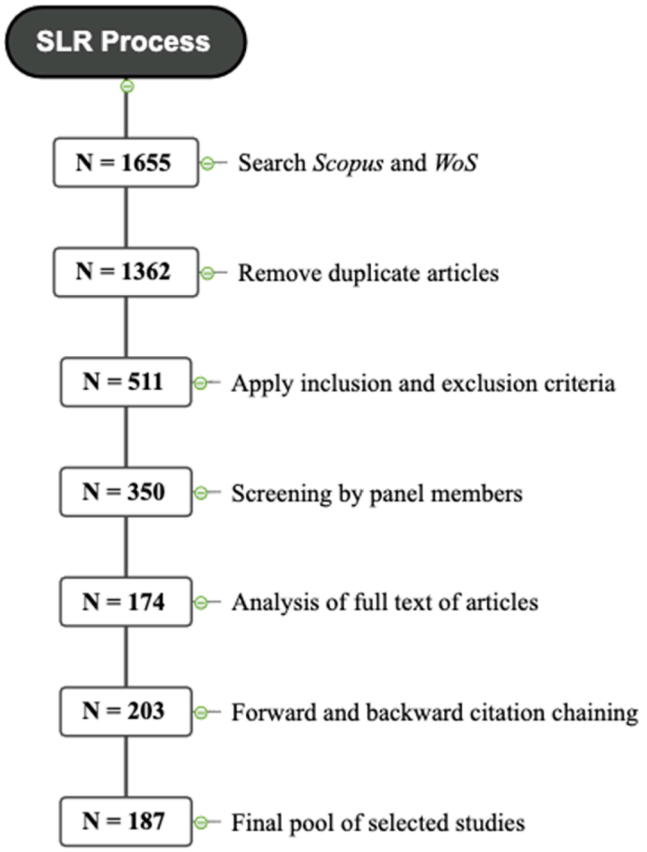

Fig. 1. SLR process and protocols.

titles and the type of paper. Fig. 2 highlights the year-wise research at the juncture of SCC and sustainability. A recent upsurge in the literature is evident in Fig. 2. In particular, scholarly attention more than doubled between 2019 and 2020. The commencement of SDG reporting-based ranking systems of higher education institutes (HEIs), which require HEIs to conduct high-quality research in the area of sustainability in general and SDGs in particular (De La Poza et al., 2021), provides a likely explanation for this upsurge. The variety of journals publishing relevant research (Fig. 3) further highlights the increasing attention scholars have devoted to this domain. Indeed, the intersection of SCC and sustainability is a popular topic of research in journals with a focus on environmental sustainability. Further, Fig. 4 reveals the geographical distribution of studies. Finally, Fig. 5 categorises the selected pool according to the methodologies used; here, mathematical models dominate.

4. Thematic foci

Utilising content assessment, this section an overview of the literature in terms of frequently occurring themes and sub-themes is provided in the present section. The selected studies' content was analysed to identify the important findings of the extant literature. The content analysis technique, which is based on systematic classification, identification and coding of themes (Dhir et al., 2020; Hina et al., 2022) enabled the subjective analysis of the selected texts. In the initial stage, the first author grouped similar studies together by assigning open codes. In the next stage, all the authors discussed and reviewed the open codes to arrive a consensus regarding the classifications. Finally, open codes were combined to develop axial codes on the basis of similitude. Thus, a consensus regarding prominent themes was achieved.

4.1. Linkage of SCC to SDGs

The UN and national governments have established high expectations for the achievement of the SDGs, especially SDG-17 (van Hille et al., 2020). However, only a few studies shed light on the direct linkages between SCC and the SDGs. Pohlmann et al. (2020) highlight the critical issues in prior research on the SDGs; these include the lack of frameworks for implementing the SDGs and the absence of education and public participation regarding the SDGs. SCC can facilitate efforts to tackle these issues. Both internal and SC-wide collaboration among SC partners can contribute to the fulfilment of SDG-12 (Silva and Figueiredo, 2020). van Hille et al. (2020) argue that collaboration with nonprofit organisations (NPOs) would facilitate firms' efforts to adopt sustainable sourcing, co-development and certification. Kumar et al. (2020) foster a methodology for the selection of suitable sustainable SC indicators (SSCIs) for measuring the SDGs. Such indicators would promote sustainability by tracking the progress towards regulatory requirements and understanding the SCC potential of SC partners based on their ability to fulfil these requirements.

4.2. SCC performance indicators

Few extant studies have focused on the performance of SCC. Govindan et al. (2021) argue that identifying the performance indicators for assessing suppliers in sustainable SCC is a critical challenge for firms. For example, Chen and Huang (2021) present an algorithm to evaluate the performance of SCC among firms. Trujillo-Gallego and Sarache (2019) and Dania et al. (2019) benchmark results associated with the performance of stakeholder collaboration. Dania et al. (2019) note a reverse causality, finding that sustainability has helped to achieve high-quality collaboration. Trujillo-Gallego and Sarache (2019) identify technology and information systems as the key drivers of improving the green performance of companies. A study assessing the important performance indicators of SCC found information disclosure to be the most influential key performance indicator (KPI) for the evaluation of suppliers in sustainable SCC (Govindan et al., 2021).

4.3. Mechanisms for SCC

A plethora of studies focuses on the mechanisms that enhance environmental sustainability and the overall utility improvement of the SC. These mechanisms are facilitated by the help of a contract between SC members (Wang et al., 2021). Our review suggests that scholars have examined a total of eight mechanisms for SCC.

4.3.1. Collaborative innovation

SC-wide innovations (Yang and Lin, 2020) and innovation in various stages of the SC, such as product design, packaging (Wong et al., 2021) and reverse logistics (S. Yoon and Jeong, 2017), can produce significant benefits if internal and external partners collaborate. A plethora of research focuses on the utility of collaborative innovation among SC partners (Hong et al., 2019; Ma et al., 2019; Shen et al., 2019; Li et al., 2020; Li et al., 2020; Yang et al., 2020; Krishnan et al., 2021; Liao et al., 2021). Collaborative innovation focuses on utilising the exclusive capabilities of firms and the SC to solve green management problems jointly (Li et al., 2020). Existing research shows that such relationships, which can focus on inter-organisation, organisation–government and organisation–institution collaborative innovation, positively impact sustainability performance (Hong et al., 2019; Guo et al., 2021). In the context of agricultural SCs, Krishnan et al. (2021) argue that SCs can be made sustainable by solving wastage-related issues through collaborative innovation. Research also demonstrates the direct and indirect effects of SCC on innovation capability (Liao et al., 2021). For example, according to Jimenez-Jimenez, Martínez-Costa and Sanchez Rodriguez (2019), collaboration promotes superior competitive advantages through innovation.

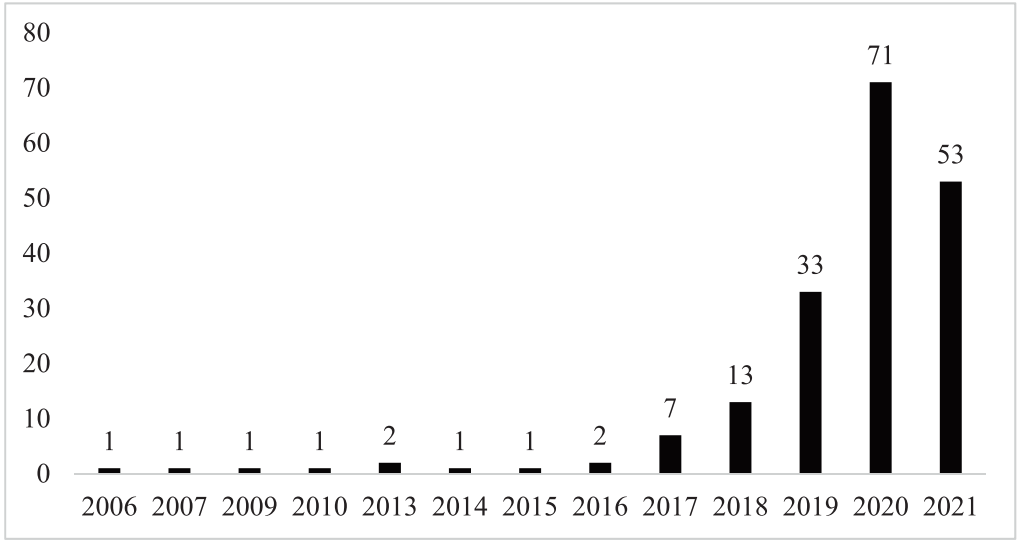

Fig. 2. Year-wise publications Note: Other journals that published the selected articles include B Benchmarking, Computers and Industrial Engineering, Industrial Management and Data Systems, Journal of Enterprise Information Management, Journal of the Operational Research Society, Operations Management Research, Supply Chain Management, Annals of Operations Research, Complexity, IFAC-PapersOnLine, International Journal of Operations and Production Management, International Journal of Productivity and Performance Management, International Journal of Sustainable Engineering, Journal of Manufacturing Technology Management, Journal of Retailing and Consumer Services, Management of Environmental Quality: An International Journal, Production Planning and Control, Sustainable Production and Consumption, Academy of Strategic Management Journal, Agriculture and Human Values, AIChE Journal, Applied Ecology and Environmental Research, Applied Mathematical Modelling, Applied Sciences (Switzerland), Biotechnology and Bioengineering, Business Process Management Journal, Chaos, Solitons and Fractals, Competitiveness Review, Critical Studies on Corporate Responsibility, Governance and Sustainability, Ekoloji, Environmental Impact Assessment Review, Environmental Progress and Sustainable Energy, Environmental Science and Pollution Research, European Journal of Industrial Engineering, European Journal of Operational Research, Frontiers in Psychology, IEEE Engineering Management Review, IEEE Robotics and Automation Letters, IEEE Transactions on Engineering Management, IEEE Transactions on Industrial Informatics, Industrial Marketing Management, Information (Switzerland), International Journal of Advanced Manufacturing Technology, International Journal of Advanced Trends in Computer Science and Engineering, International Journal of Logistics Management, International Journal of Logistics Systems and Management, International Journal of Precision Engineering and Manufacturing—Green Technology, International Journal of Procurement Management, International Journal of Smart Home, International Journal of Systems Assurance Engineering and Management, Journal Europeen des Systemes Automatises, Journal of Asian Finance, Economics and Business, Journal of Business and Industrial Marketing, Journal of Business Research, Journal of Enterprising Communities, Journal of Environmental Management, Journal of International Studies, Journal of Modelling in Management, Journal of Purchasing and Supply Management, Journal of Transport and Supply Chain Management, Journal on Chain and Network Science Management Science Letters, Mathematical Problems in Engineering, Mathematics and Computers in Simulation, Networks and Spatial Economics, Neural Computing and Applications, Omega (United Kingdom), Operational Research, Organization, Processes, RAIRO—Operations Research, Science Progress, Social Responsibility Journal, Technological Forecasting and Social Change, Total Quality Management and Business Excellence, Transportation Planning and Technology, WIT Transactions on Ecology and the Environment.

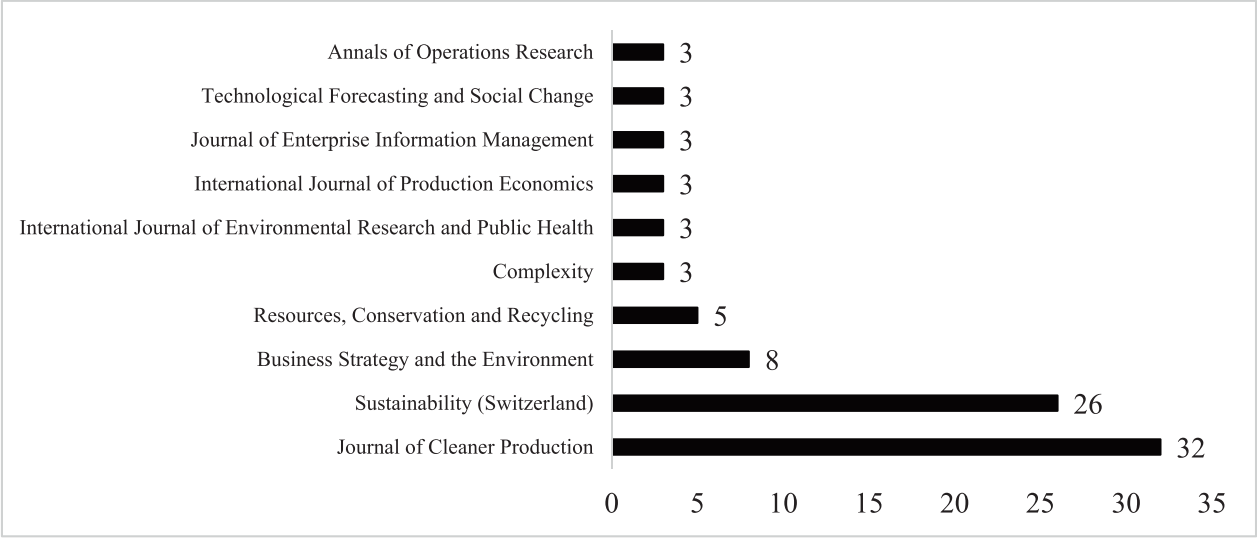

Fig. 3. Distribution across journals.

A few studies have assessed the drivers of innovation capability in collaborating firms (Liao et al., 2021; Yin et al., 2021; Li et al., 2020). The important drivers of collaborative innovation include incentive systems, competitors and technological capabilities, among others (Yang and Lin, 2020). Environmental regulation policies have been found to exert a strong positive effect on the co-evolution of collaborative innovation systems (Yin et al., 2021). According to Li et al. (2020), the level of trust among producers and suppliers as innovating partners is the key factor determining the successful formation and execution of collaborative innovation.

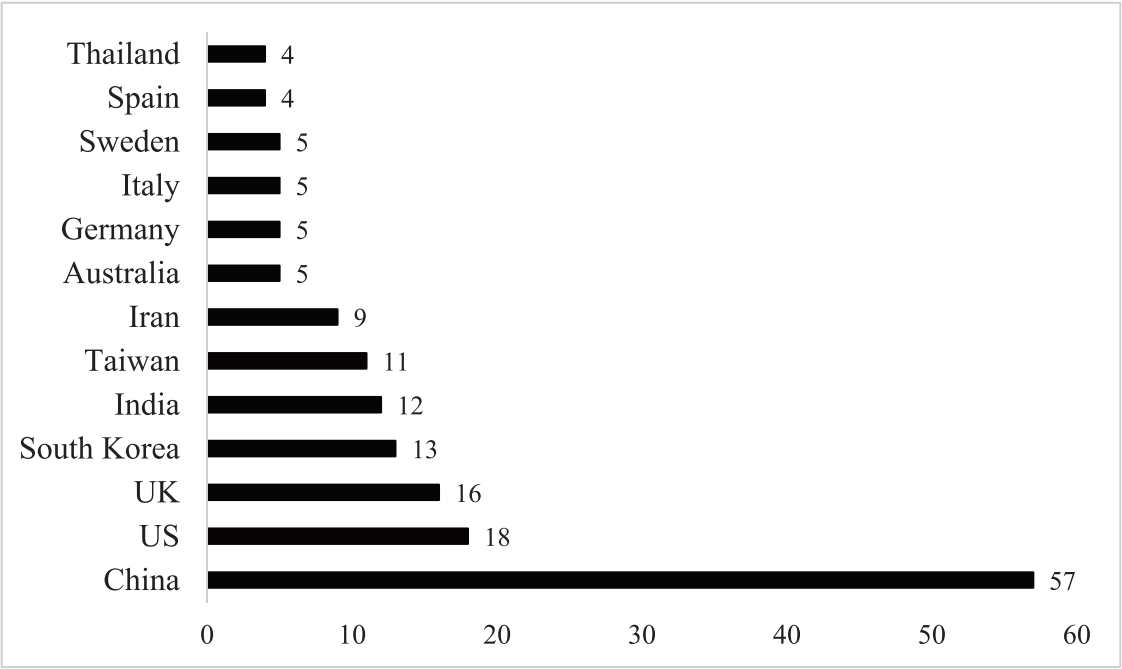

Fig. 4. Geographical distribution of studies.

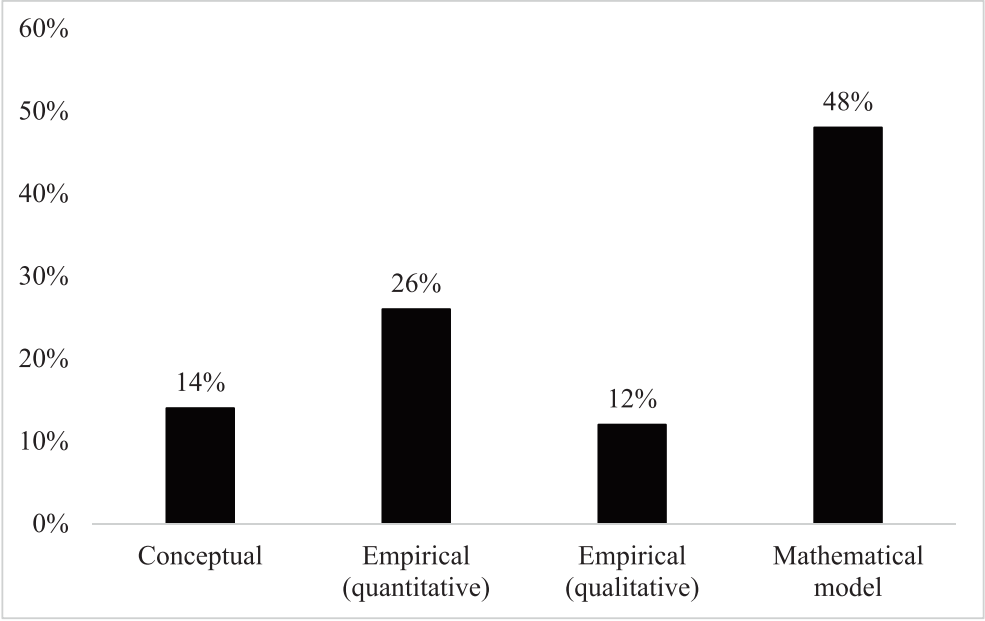

Fig. 5. Methodologies used in the study.

Scholars have argued that firms' economic performance in collaborative innovation scenarios is determined by their contribution towards greening (Kumar and Goswami, 2019). In addition, the performance of green innovation activities depends upon the relationships between SC partners (Yang and Lin, 2020). In addition, the government plays a key role in green innovation (Ma et al., 2019). For example, if green innovation leads to higher costs, the authorities should subsidise the SC players (Ma et al., 2019).

4.3.2. Information sharing and knowledge integration

Information sharing is a frequently used strategy in collaborative mechanisms (Negra et al., 2020). A few studies specifically investigate the effect of information sharing strategy on the sustainability of SCs (e.g. Mehdikhani and Valmohammadi, 2019). Whitehead, Zacharia and Prater (2019) suggest that successful transfer of knowledge improves collaboration and the expected outcomes in terms of performance. Firms should strategically manage dispersed knowledge in ecosystems to enhance their performance (de Vasconcelos Gomes, 2021).

Papa et al. (2021) suggest that various knowledge sources and collaboration modes are key antecedents of knowledge-intensive innovation marketing activities. The level of SCC between SC actors for sustainable relationships depends upon information sharing. However, information sharing has mixed effects on the sustainability of the SC. In contrast to the popular belief that information sharing between SC members is always advantageous, Yu et al. (2020) assert that collaborative efforts do not always benefit the SC. Kumar and Van Dissel (1996)

contend that information sharing can lead to conflicts. In addition, engaging with knowledge networks might not affect the perceived ability of the employees to access knowledge (Shi and Weber, 2021). To realise the intended benefits of SCC, therefore, SC leaders must anticipate these conflicts and work proactively to manage them. Pan et al. (2020) argue that the effect of SCC on the SC's sustainable performance depends upon the frequency of communication between the collaborating partners.

4.3.3. Resource sharing and management

Resource sharing strategies can be helpful for optimising material usage and reducing emissions (Kuo et al., 2021). For example, resource sharing initiatives that require collaborative consolidation and strategic allocation of shared components between SC stages can reduce pressure on resources (Kuo et al., 2021). Scholars have also argued that commitment to SCC plays a crucial role in building resources (G. Kumar et al., 2021; Shin and Park, 2021). In the case of high technology or customisation-intensive products, however, resource sharing requires advanced alterations or re-programming of the resources being shared (Melander and Arvidsson, 2021).

4.3.4. Collaborative transportation

Emissions from production also depend upon emissions from transportation, which further varies with payload and vehicle type (Ghosh et al., 2018). Scholars have argued that SC players' efforts to collaborate for transportation can contribute to an approximately 26% decline in fuel consumption (Santos et al., 2021).

4.3.5. Collaborative processes and product greening

A plethora of studies identifies the critical conditions that affect the behaviour of producers and suppliers as they aim to improve their green investments in the SC. Cooperation among SC members with respect to their investments in reducing the environmental footprint of SC processes can improve performance in terms of environment (Li et al., 2019; Ni and Sun, 2019; Nguyen et al., 2020; Nielsen et al., 2020). For example, Manteghi et al. (2021) and Taleizadeh et al. (2020) report that SCC between SC partners regarding raw materials processing, coupled with government intervention, leads to better environmental performance. Similarly, Peng et al. (2021) demonstrate that collaborative efforts between port companies and shipping companies, coupled with carbon taxes, can reduce emissions from electricity generation for ships. Process greening and customer cooperation can also drive sustainability. However, such outcomes are dependent upon management's relationships with the customer firms (Andres and Marcucci, 2020).

Cooperation between manufacturers and suppliers to improve the products' greenness, enhances customers' environmental consciousness and drives sustainability (Melander, 2018; Xing et al., 2019; Rane et al., 2020; Li et al., 2021). Kuiti et al. (2019) posit that increasing consumer demand can stimulate such green investments. However, scholars have contended that ensuring the maximum environmental performance of products does not guarantee improved economic performance (Liu and De Giovanni, 2019; Andres and Marcucci, 2020).

4.3.6. Collaborative advertising

Several studies highlight the green efforts of SC members to drive demand for environmentally friendly products with the help of a contract. Sharing advertising costs also increases consumer goodwill for environmentally friendly products (Ranjan and Jha, 2019; Wang and Song, 2020; Hosseini-Motlagh et al., 2021; Zhang and Yu, 2021). Furthermore, collaborative advertising between SC actors may produce higher profits and lower carbon emissions. For example, Cao et al. (2016) develop a promotional cost-sharing contract that can perfectly coordinate the SC and thereby lead to increased profits and reduced emissions. Zhang and Yu (2021) contend that consumer recognition of low-carbon goodwill products, achieved through collaborative advertising efforts, is beneficial for both manufacturers and retailers.

4.3.7. Collaborative inventory management

Coordination between SC players to improve inventory management leads to improved economic performance (Toptal, Özlü and Konur, 2014; Lu, Yang and Yen, 2020; Dhaigude et al., 2021). Collaborative efforts among SC players for efficient inventory management, especially in cases of uncertain demand, can also reduce emissions (Rout et al., 2020). Efforts such as collaborative preservation technology investment for perishable products can reduce such products' carbon footprints (Shen et al., 2019). Toptal et al. (2014) show that joint inventory management further reduces carbon emissions and paves the way for cost reductions.

4.3.8. Collaborative forecasting

Collaborative forecasting involves sharing information, anticipating demand and devising production plans via the unanimous decision-making of SC members (Marusak et al., 2021a). Shoukohyar and Seddigh (2020) argue that factors such as laws and regulations, information technology capabilities and adequate regulations are necessary for collaborative forecasting.

4.4. Antecedents and consequences of SCC

Certain factors act as antecedents and consequences of SCC. The antecedents, in particular, include pressure from various actors as well as the drivers of and barriers to SCC. The outcomes include the consequences of successful SCC, such as lower prices and increased safety.

4.4.1. Pressure from various actors

Scholars have identified the important drivers of SCC. Pressure from stakeholders is one such driver. Silva et al. (2021) argue that sustainability is primarily driven by the market pressure facing focal firms. Khurshid et al. (2021) posit that the institutional pressure focal firms face translates into strategies such as assessing suppliers for effective SCC. Focal firms can also exert pressure on other members of the SC to improve the SCs' overall sustainability performance (Ahmed et al., 2020). The extant literature has emphasised top management as a key driver of sustainability (Luthra and Mangla, 2018; Yadav et al., 2020) Thongrawd et al. (2019) outline the positive roles of coercive, mimetic and normative pressures as well as top management support for sustainability-oriented SCC. Similarly, Fawcett et al. (2021) identify the instrumental, normative and transformative commitment of top management as the key enabler of SCC. Hofman et al. (2020) report that the coercive pressure SCC imposes on suppliers reduces the chances of sustainability non-compliance. Finally, Yen (2018) note that competitor and regulatory pressures—as well as customer pressure and commitment from top management—affect buyer–supplier collaboration.

4.4.2. Other drivers and barriers

Asif et al. (2020) argue that government regulations, customer demand and supplier performance are the most important drivers of SCC. Social capital (do Canto et al., 2020) and managerial orientation (Vandchali et al., 2021) are also important drivers of SCC. Vandchali et al. (2021) posit that collaborative relationships between manufacturers and suppliers increase when the power of suppliers increases within the SC network. Research has shown that the integration of quality systems positively impacts green cooperation, which, in turn, improves environmental performance (Y. Yu et al., 2019). Furthermore, consumers are sensitive to the sustainability of the products they purchase, which is yet another driver of SCC (J. Yoon et al., 2020). In addition, regulations, managers' commitment and social recognition are among the most important factors that drive SCC (Mangla et al., 2017; Aray et al., 2020).

4.4.3. Consequences of SCC

A plethora of studies is dedicated to understanding the consequences of successful SCC. The extant literature widely acknowledges that SCC

leads to economic and environmental benefits (Swami and Shah, 2013; Basiri and Heydari, 2017; Carballo-Penela et al., 2018; G. Kumar et al., 2018; Su et al., 2019; Y. Cao et al., 2020; Haque et al., 2020; Sooksai et al., 2020; Tseng et al., 2020; M. Yang and Gong, 2021). For example, Lee and Joo (2020) explore the mediating role of SCC in the association between top management support and the SCs' environmental footprint. The higher costs of sustainable products can negatively affect the affordability of these products for customers (Ranjan and Jha, 2019). In this context, SCC, with the assistance of contracts, is widely seen as a viable solution for providing low-carbon products at affordable prices (Taleizadeh et al., 2018; Halat et al., 2021). Scholars have also argued that the greening level of firms' operations is high when SCs collaborate, which is beneficial from an environmental perspective (Januardi and Widodo, 2021; L. Wang and Song, 2020). Specifically, SCC lessens the negative impact of the apparent costs and the complicated regulations associated with sustainability (Geng et al., 2019).

Cooperative strategies increase market demand for sustainable and environmentally friendly products (He et al., 2019; A. Liu et al., 2020; Meng et al., 2021; C. T. Zhang and Wang, 2021). SCC is especially vital in industries facing wellbeing concerns that require collaboration for product development between consumers and firms (He et al., 2019). Nematollahi et al. (2018) argue that the collaborative model also increases the service level of the SC. However, it is crucial to evaluate the performance of varying coordination contracts (Noh and Kim, 2019). Wiengarten and Longoni (2015) contend that different levels of SCC depth are responsible for different sustainability outcomes.

In the SCC model, manufacturers are expected to exert greater innovation efforts, while suppliers' efforts are expected to be lower (F. Zhang et al., 2020). SCC reduces both the positive and negative effects of technological and regulatory dynamism on green process innovation (F. Zhang et al., 2021). Furthermore, SCC with suppliers, in particular, improves green purchasing (Tarigan et al., 2020).

4.5. Strategic decisions affecting SCC

Analysing the literature reveals that firms' strategic decisions have an immense effect on their SCC, which eventually affects their sustainability performance. These strategic decisions can be divided into two broad categories: the selection of collaborating partners and digitalisation.

4.5.1. Selection of collaborating partners

Most firms prefer to cooperate with trustworthy and sustainable firms. Therefore, scholars have argued that partner selection for technological innovation is an important factor that affects SCC (Tirkolaee et al., 2020; Xia et al., 2020). Ramanathan et al. (2014) contend that cautiously selecting SC partners and logistics service providers for collaboration is important for firms to maintain green operations. Govindan et al. (2019) posit that collaboration between logistics providers (LPs) and original equipment manufacturers (OEMs) could help LPs to comply with legislation and improve customer contentment. However, such collaboration can be fruitful only if LPs identify and collaborate with OEMs that have similar sustainability objectives and goals.

4.5.2. Digitalisation

Studies have widely propounded the positive effects of digitalisation technologies on SCC. For example, Kuo et al. (2021) argue that collaborative resource management by SC members can be achieved with digitalisation. According to Scuotto et al. (2017), utilising ICT infrastructure in the service sector would reduce the cost of coordination and improve buyer–supplier relationships by facilitating transactions between them. Therefore, individual SC actors should invest in systems that integrate ICT and radio frequency identification to ensure the visibility of the entire SC (C. Kim and Shin, 2019; Alzoubi et al., 2020). Furthermore, the implementation of these technologies should be staged so that they begin with the focal firm and subsequently integrate the partner firms (Shao et al., 2021).

The implementation of SCC for a sustainable agricultural SC using blockchain technology can improve sustainability (Alkahtani et al., 2021; Kramer et al., 2021). The extant literature has shown that blockchain technology can be utilised to meet the expectations of SC partners. Ciccullo et al. (2021) highlight the importance of SCC that relies on technology solution providers for assistance and consultation regarding food loss and waste prevention within sustainable food SCs. Dubey et al. (2018), Del Giudice et al. (2020), Raut et al. (2021) and Benzidia et al. (2021) contend that big data and predictive analytics can enhance SCC performance. Benzidia et al. (2021) further assert that green digital learning strengthens the relationship between big data and SCC for greening. W. Liao and Wang (2019) develop an IoT technology-based decision support system to integrate production and delivery and help firms achieve SC sustainability. In line with these findings, Di Vaio et al. (2020) find that AI can adoption can lead to improvement in SDGs by identifying the cultural changes needed by the firms for their achievement. However, contrary to the findings above, Di Vaio and Varriale (2020) argue that technological solutions such as blockchain may not guarantee the achievement of the best performance sustainability.

4.6. Policy and governance

A plethora of research at the intersection of SCC and sustainability focuses on the policies that play a role in improving sustainability. The studies in this domain are divided into two major categories. The first focuses on carbon emission-related policies, while the second focuses on other policy and governance-related issues that require interventions.

4.6.1. Carbon emission-related policies

Cap-and-trade regulations are generally considered among the most important market-based mechanisms for limiting carbon emissions (Qu et al., 2021). Like other inputs for production, rights for carbon emission have become an input resource for manufacturing as well as service firms, and such emissions impact these firms' profits (Xiao et al., 2016). A few studies in the domain of SCC incorporate greening investment and carbon emission trading simultaneously to develop a long-term strategy for sustainable SCs (L. Xia and He, 2014). Cap-and-trade policies have been shown to influence SCC performance outcomes (Hao and Li, 2020; Kuiti et al., 2020; Mondal and Giri, 2020; S. Y. Wang and Choi, 2020; Taleizadeh et al., 2021). Research has also revealed that higher carbon trading prices are beneficial for customers because the benefits of a carbon surplus increase the revenues of SC actors, which, in turn, lower prices for consumers. Xu et al. (2017) argue that manufacturers can reduce unit product carbon emissions with greening investment by cooperating with other SC members under certain contracts. Mondal and Giri (2020) contend that government subsidies and cap-and-trade policies are beneficial for all SC members. Finally, Lu et al. (2020) propound the value of joint investment in carbon emission reduction technology with carbon cap-and-trade policies for sustainable SCs.

A carbon tax is another major carbon emission-related policy initiated by several governments to curtail emissions by reducing emissions for all members of the SC (Ghosh et al., 2018). J. Liu and Hu (2020) argue that the carbon tax rate and differences in the dominance of various SC players are key factors determining SCC.

Green Credit Policy (GCP) in South Korea is a regulation that enables producers to reduce pollution by collaborating with suppliers (Kang et al., 2020). Kang et al. (2020) contend that producers can create value by reducing their suppliers' pollution levels to the desired levels under the presence of GCP.

Governments can also reduce emissions by strengthening carbon intensity regulations (Xie et al., 2020). Xie et al. (2020) suggest that in the presence of carbon intensity regulations, the government should also focus on incentivising firms to improve the level of social welfare.

Comparing carbon tax, carbon cap-and-offset and cap-and-trade policies, Rout et al. (2020) suggest that the carbon tax is the least effective of the three policies for improving a firm's economic performance. Comparing carbon cap-and-trade and carbon offset policies, Lu et al. (2020) reveal that different policies shed different effects on the total profits of various SC players.

4.6.2. Other policy and governance issues

Sustainable SCs require scientific, political and ethical solutions that involve the development of rigorous, multi-stakeholder business and governance models (Gurzawska, 2020). Subsidy policies can promote emission reduction investments and ensure profits for SCs (S. Yu and Hou, 2021). S. Kim et al. (2020) suggest that governments should promote environmental sustainability by adjusting subsidy levels according to the price of recycling resources. In addition, policy actions should ensure the inclusion and facilitate the collaboration of smallholding and artisanal manufacturers in food supply chains; furthermore, policymakers should measure the efficiency of these initiatives using social indicators (dos Santos and Guarnieri, 2021). Social benefits, moreover, should be created by promoting the growth of the rural economy (dos Santos and Guarnieri, 2021). Cheon and Deakin (2010) stress the importance of collaborating with policymakers for sustainable cargo SCs. For example, intergovernmental collaborations can be utilised to promote information sharing between domestic and extraterritorial ports and broad national-level rules on environmental charges and standards should be implemented in these port districts. Forin et al. (2020) contend that the systematic and uniform compilation of companies' ecological footprints requires intervention from the government and other regulatory bodies. Such a compilation represents a nascent step for SCs seeking to improve their resource usage by substituting ecodesign options for resource-intensive materials. Similarly, early government command-and-control measures and legal compliance incentives are considered necessary to slow deforestation (Furumo and Lambin, 2021).

4.7. Role of stakeholders

Firms are required to manage their products from conception to remanufacturing while acknowledging the interests of various stakeholders (Clarke and Roome, 1995). The extant studies suggest that relationships between SC players exert an extreme influence on green innovation performance (Nilsson-Lindén et al., 2019; Silva and Figueiredo, 2020; Wei, 2020; Z. Yang and Lin, 2020; Gupta et al., 2021; Melander and Arvidsson, 2021; Rangelov et al., 2021). Gupta et al. (2021) argue that logistics providers focus on the progress of developing mutual trust with all stakeholders to become the top-notch choice of their customers. Kalkanci et al. (2019) contend that innovation should include various stakeholders because successful innovation requires for-profit firms to collaborate with the government, civil society and individuals. A structured communication process between SC partners is essential for facilitating the SCC (El Idrissi et al., 2021). Finally, Jug (2020) suggests that firms must partner with social enterprises or make them players in the SC for sustainable performance.

In the context of sustainable agricultural SCs, farmers should manage stakeholder relationships to reduce food waste with the help of the circular economy (CE) framework (Masi et al., 2021). Similarly, Krishnakumar et al. (2009) highlight the importance of research and SC partnerships between small farmers, industries and social agencies to eliminate wastages within the SC. Specifically, in relation to SCC with customers, Wakiyama et al. (2019) and Mangla et al. (2021) highlight that producer–consumer collaboration can be utilised to counter overproduction-related losses. In addition, alternative markets for overproduced products can help to mitigate the shortage of crops. Burki et al. (2019) posit that collaboration with customers increases the implementation of green innovations between SC partners and thereby promotes a healthy environment. Attaining achievements in the field of sustainability also helps firms to secure good collaborators among their stakeholders (Aray et al., 2020).

4.8. Nature of collaboration

The nature of collaboration has an important role to play in determining the benefits SC members derive. The nature of collaboration depends upon conditions of the contract, such as the dominant position of one player over the other or the types of transactions that occur between the two players. For example, a green cost-sharing contract made by the dominant player of the SC may not be beneficial to all firms (Lou et al., 2020). In fact, being dominant does not necessarily mean being more profitable, and sometimes surrendering power to others may benefit all SC members. Shin et al. (2019) contend that both investment and contract-based partnerships strengthen partnership commitment. The authors argue further that investment level moderates the relationship between the members' commitment to and the firm performance structure of SCC. Scholars have also found that engaging in SCC with upstream members, in general, produces greater profits than engaging in SCC with downstream members (Pérez-Mesa et al., 2021).

4.9. Other emerging themes of research

Our analysis uncovered two promising themes of research: behavioural aspects of SCC and corporate social responsibility (CSR). An upsurge in the literature on these themes is evident in recent years.

4.9.1. Behavioural aspects of SCC

Social preferences, such as the quest for status, reciprocity, trust, fairness concerns and group identities, influence SCC decisions (Adhikari and Bisi, 2020). Scholars have widely studied the effect of fairness concerns on members' decisions and their cooperation for sustainable SC management (Adhikari and Bisi, 2020; Huq and Stevenson, 2020; Z. Liu et al., 2021; Zhang et al., 2021). While SCC increases profits and improves environmental performance, fairness concerns exert a detrimental impact on the benefits imparted by SCC (Y. Liu et al., 2020; Zhang et al., 2021).

4.9.2. Corporate social responsibility (CSR)

CSR is an important factor affecting SCC for greening (Hsueh, 2015; Omar et al., 2019; Huang et al., 2021). Nematollahi et al. (2017) suggest that optimal CSR investment can maximise the profits for all members and motivate them towards CSR. Similarly, Heydari and Mosanna (2018) develop an SCC model to help SC managers effectively contribute towards cause-related campaigns by optimising the size of their donations. Increased investment in CSR and improved CSR performance levels can be better attained through the SCC than through other decision-making structures (Nematollahi et al., 2017). However, Kuiti et al. (2020) argue that consumers ultimately bear the costs of CSR in the form of higher prices. Unconventional stakeholders, for example, non-governmental organisations (NGOs), may be able to positively influence the adoption of CSR practices. Companies also cooperate with NGOs to assess potential suppliers for responsible purchasing (Stekelorum et al., 2020).

4.9.3. Collaboration for the circular economy

Dora (2019) suggests that geographical proximity is an important factor for CE. However, its relevance is established by whether the exchange is physical or non-physical. Strategic partnerships between entrepreneurs and firms have an important role to play in reducing environmental impacts and thus help to establish viable firm–entrepreneur collaboration models to advance a CE (Wu et al., 2020). Mina et al. (2021) suggest that selection and collaboration with circular suppliers are important for circular SCs. For example, CE based SC relationship management in the presence of big data analytics can significantly improve the performance of SCs (Del Giudice et al., 2020).

Veleva and Bodkin (2018) argue that firms fail to incorporate CE principles due to the absence of mandates, associated costs and inertia to change. However, strategic partnerships between entrepreneurs and firms can help them to overcome such inertia.

4.9.4. Collaboration to manage disruption

Marusak et al. (2021a) demonstrate the potential for food SC actors to collaborate in developing a resilient and sustainable food system even in the wake of intense disruptions, such as the COVID-19. Oh et al. (2020) argue that it is necessary to manage contingencies (such as COVID-19) with technical capability, collaboration with SC players and integration of systems, that promote SCC. Humanitarian agencies can ensure the safety of aid workers and people disturbed by disasters through cooperative relationships in their SCs (Larson, 2021). SCC helps organisations to implement and manage joint strategies to counter a disruptive event or uncertainty and minimise such events' negative impacts (Ball and Deshmukh, 2013; Awan et al., 2018).

5. Research gaps and avenues of future research

Our rigorous examination of the selected studies reveals gaps in the extant literature. These research gaps are related to the themes that emerged from the systematic synthesis of the extant literature. Existing studies insufficiently acknowledge and offer only limited theoretical advances at the intersection of the SDGs and SCC. This area of research requires explicit attention; despite the recent attention garnered by SDGs, however, significant gaps persist (De La Poza et al., 2021). Therefore, we identify several gaps and research questions (RQs) at the intersection of SCC and SDGs. As evident from the above analysis, most SCC studies fail to focus explicitly on the SDGs. Instead, the research in this domain acknowledges the agenda of the SDGs by focusing on sustainability-related issues. In addition, the literature has yet to offer theory-driven explanations for improvements in sustainability. The performance measurement of SCC-led sustainability initiatives is another area that requires attention. The present SLR demonstrates that most SCC-related research focuses on collaboration mechanisms, but mechanisms such as collaborative transport, logistics and the role of related technologies, require further scholarly attention. A vast body of studies also focuses on the antecedents (barriers and drivers) and outcomes (e.g. CE performance) of SCC; however, efforts to quantify the effects of these factors are limited. In terms of strategic decisions related to SCC, further research in the domain of collaborative partner selection for sustainable SCs is also required. In this realm, studies comparing and contrasting sustainable and traditional SCs would be particularly valuable.

As the scholarly debate on digitalisation evolves, future research in this area should explore novel opportunities for digitalisation-led SCC and sustainability. Furthermore, future scholars should extend the classic tenets of research on policy interventions vis-à-vis the regulation of contracts to industry-specific research. These explorations should, in particular, focus on empirically examining the effectiveness of various policies. The extant literature pursues an agenda that investigates the factors that enhance SCC, and much of the accumulated knowledge in this domain accentuates the importance of motivating stakeholders to participate in SCC. Further research in this context should examine the 'how' aspect of motivation, i.e. how this motivation can be encouraged. In addition, the literature must explore the role of stakeholders in achieving particular SDGs and milestones, such as mitigating food loss through SCC. Two promising themes of research—the behavioural aspects of SCC and CSR—require further in-depth examination to answer important questions. For example, future studies must provide a nuanced understanding of the dynamics of SCC involving unconventional members, such as NGOs, and the role of these members in achieving sustainability targets and/or the SDGs.

The research profile developed here indicates an expansion of the literature in this domain in recent years. However, approximately 48% of the studies utilised mathematical modelling to simulate the effects of various coordination mechanisms, and in general, the literature includes a dearth of empirical studies. In this regard, empirical investigations using longitudinal datasets can provide a nuanced view of SCC implications. Table 3 outlines the research questions based on the key gaps, with the potential to address them.

6. Framework development

The current study proposes a framework to assess the intellectual boundaries of SCC for sustainability, thereby synthesising the state of the art (see Fig. 7). The core purpose of the framework is to present a pathway for utilising the findings of the present study to achieve the SDGs through SCC. The framework is based on contingency theory, which posits that an organisation is an open system where information is exchanged (Sousa and Voss, 2008). The tenet of contingency theory also believes that the firms should make appropriate changes by considering the external and internal environment to improve their performance (Donaldson, 2001). Typically, a contingency model comprises contingency variables and performance. The contingency variables, which might include the country context, culture, strategic or firm context, are termed inputs. Further, the responses to these inputs encompass actions and strategies, labelled as processes. Performance, which is examined via a multitude of variables, such as business performance, is termed an output. Outputs are the outcomes of the processes.

Scholars have developed several contingency models for achieving varied performance objectives (Sousa and Voss, 2008). Thus, the exchange of information in a firm occurs through a system that comprises inputs, processes and outputs. Theorists in the domain of contingency approach posit that organizations attempt to recognise the important efforts to handle the contextual situations by utilising their processes. When an organisation comes across contextual issues, say SC disruption, contingency theory recommends that it devise strategies to cope with such issues (McAdam et al., 2019).

The framework presented in Fig. 7 specifically utilises the findings of the above thematic analysis of the literature to depict the utilisation of SCC to achieve the SDGs. The framework outlines the role of actors, the internal situation of SCs in terms of sustainability issues and the SCC-related challenges these actors face (contingent situation or input) as well as the steps (optimum course of actions or processes) these actors take to participate in the transition and the associated SDGs (final outcome or output).

The contingent situation or input in the developed framework is the context where the traditional SC is operating. It encompasses the internal situations as well as the external factors. The external factors include the drivers and barriers that affect the SC's decision to collaborate or not collaborate. Factors such as demand, social capital and managerial orientation play an important role in terms of the input.

Next comes the optimum course of action or processes. In this case, the optimum course of action includes mechanisms for SCC and the strategic decisions identified from the above survey of the literature. Of these, collaborative innovation, collaborative process and product development are the most important SCC mechanisms. In addition, strategic decisions, such as the level of digitalisation of the SC, policies and governance mechanisms, and collaborative partner selection, play an important role in an SC's choice of an optimum course of action. It must be noted that collaboration occurs between various actors and stakeholders; therefore, an interplay between these actors and the optimum course of action is expected.

The final outcomes of the optimum course of action, as explicated in Fig. 7, should promote the evolution towards more sustainable SCs, which, in turn, can help economies to attain the SDGs. For example, resource sharing and management and collaborative product and process greening would enhance access to affordable, sustainable, reliable and modern-day energy for all (SDG-7). The same actions would also help to foster an environment of decent work and economic growth

Table 3
Theme-based gaps and research questions.

Theme	Gaps	Potential research questions (RQs)
Linkage of SCC to SDGs	1. Quantifying the effect of types of SCC that can contribute to achieving SDGs Quantifying the impact of SCC on SDGs	**RQ1.** How effective are various types of SCC to achieve SDGs? **RQ2.** How can we best quantify the impact of SCC on a particular SDG?
SCC performance	1. Theory-driven explanations for improvement in sustainability Industry-specific studies on the level of improvement in sustainability due to SCC Understanding the overall performance of various SCC mechanisms	**RQ1.** How can we assess and theoretically explicate the level of improvement in sustainability due to SCC? **RQ2.** Which SCC mechanisms are best suited for a particular industry? **RQ3.** How can we assess the overall performance of the SCs in which SCC occurs?
Mechanisms for SCC	1. Understanding the specific technologies that can help to mitigate the barriers to SCC Exploring the role of breakthrough technologies in attaining various aspects of SCCSome mechanisms (e.g. transport and logistics) receive less attention in the literature and require further exploration Devising alternative models for optimal allocation of common parts Collaborative forecasting Inventory-related investment	**RQ1.** What specific technologies can help to mitigate the barriers to SCC? **RQ2.** What technologies are beneficial for the attainment of various aspects of SCC? **RQ3.** What are the various collaboration mechanisms for sustainable transport, and how can we best quantify their benefits? **RQ4.** What is the role of logistics service providers in attaining sustainability through SCC? **RQ5.** How can the allocation of common parts (sharing-based SCC model) improve a firm's sustainability performance? How can this allocation be achieved? **RQ6.** What are the benefits of collaborative forecasting vis-à-vis standalone forecasting? **RQ7.** How can collaborative investment in maintaining perishable inventories improve sustainability?
Antecedents and consequences of SCC	1. Mapping the techniques for mitigating challenges associated with SCC Effect of drivers and barriers Effects on CE	**RQ1.** What techniques can mitigate the challenges associated with SCC? How can we map these techniques to specific challenges? **RQ2.** How can we quantify the effect of drivers and barriers? **RQ3.** What is the effect of SCC on the CE performance of different sectors?
Strategic decisions affecting SCC	1. Collaborative partner selection for traditional vs sustainable SC Novel areas in SC where digitalisation can be applied to achieve SCC for sustainability Most important digitalisation technologies from the perspective of SCC E-commerce adoption among SC partners	**RQ1.** What is the difference between collaborative partner selection for traditional vs sustainable SC? **RQ2.** In what novel SC areas can digitalisation be applied to achieve SCC for sustainability? **RQ3.** What digitalisation technologies are important from the perspective of SCC? **RQ4.** How can SCC drive the e-commerce adoption of SC partners, and what are its benefits?
Policy and governance	1. Assessment of policies and regulations vis-à-vis regulation of contracts Industry-specific research on policy-level interventions Lack of empirical evidence regarding the effectiveness of various policies Comparative analysis of various emission reduction policies Limited research on cargo SCs	**RQ1.** What specific policies and protocols for regulating SC contracts are required from the perspective of developing countries? **RQ2.** Which sectors need to be regulated the most and how? **RQ3.** How can we examine SCC effectiveness in the presence of various types of policies and subsidies? **RQ4.** What policies are best suited to emission reduction in various sectors? **RQ5.** How can cargo SCs be made more sustainable through SCC?
Role of stakeholders	1. Motivating stakeholders to participate in SCC Risks associated with SCC Role of stakeholders in implementing a given SDG Role of stakeholders in mitigating food loss through SCC	**RQ1.** How can stakeholders be motivated to participate in SCC? **RQ2.** What risks associated with SCC must stakeholders address, and how they can manage them? **RQ3.** What is the role of a particular stakeholder in achieving a specific SDG? **RQ4.** How can food losses be mitigated to develop sustainable agri-food SCs through SCC?
Nature of collaboration	1. Prioritising the most effective SCC strategies Empirically examining the effectiveness of various types of SCC	**RQ1.** What SCC strategies are best, and how can we examine their effectiveness with respect to specific sectors? **RQ2.** How can we measure the effectiveness of various types of SCC mechanisms?
Emerging themes of research	1. Examining the effect of social preferences on SCC decisions and performance of the SC Collaboration with NGOs	**RQ1.** How can we examine the effect of social preferences on SCC decisions and SC performance? **RQ2.** How can SCC involving unconventional members, such as NGOs, help to achieve sustainability targets?
Gaps identified from research profiling	1. Most existing studies originate in China and US Limited empirical examination of the link between SCC and SDGs as well as sustainability	**RQ1.** How are SCC-driven sustainability initiatives evolving across the world? **RQ2.** How can we empirically examine the link between SCC and SDGs as well as sustainability?

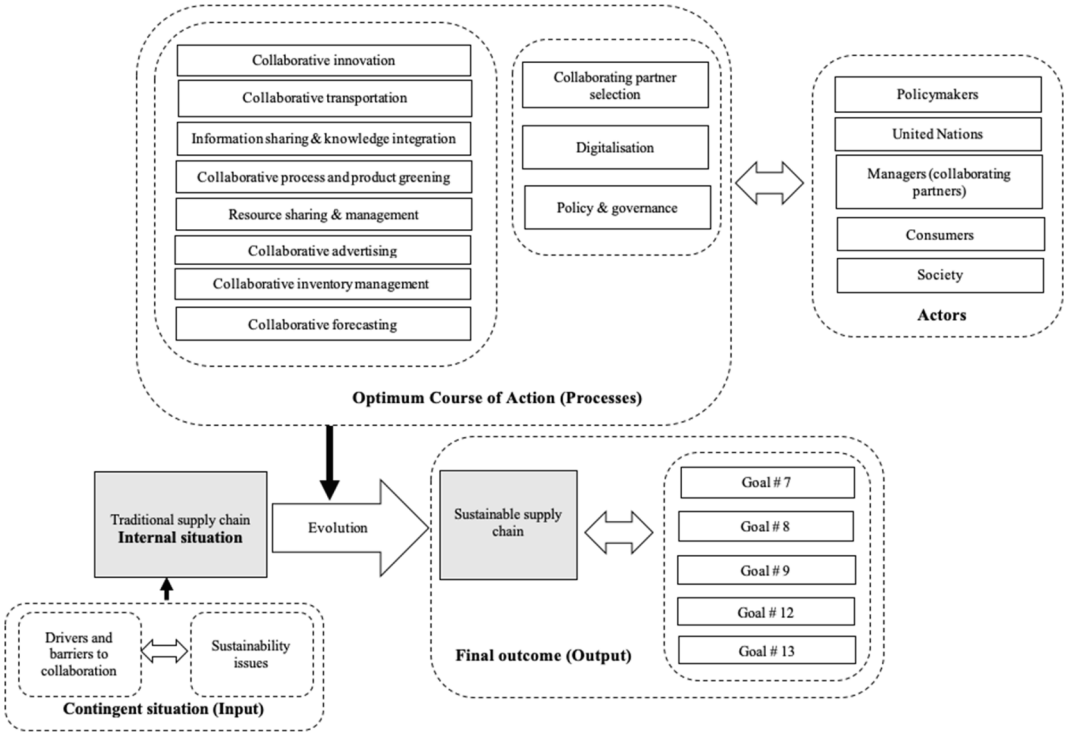

Fig. 7. A contingency approach based framework for SCC for SDGs.

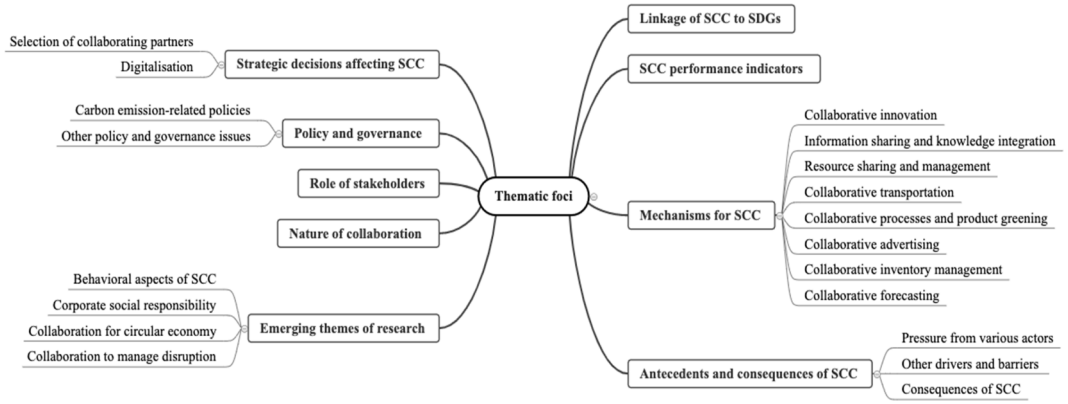

Fig. 6. Thematic foci of studies.

(SDG-8). Collaborative innovation, collaborative inventory management and collaborative information sharing would enhance industry, innovation and infrastructure (SDG-9). Collaborative forecasting and inventory management as well as process and product greening would emphasise accountability in consumption and manufacturing (SDG-12). Further, the SCC mechanisms that aim to improve the environment would also exert a positive impact on the SDGs related to climate action (SDG-13).

The contingency approach, although simple, offers a structured and holistic understanding of the key domains of a phenomenon under consideration and, therefore, has been applied to several areas of investigation (Makkonen et al., 2014). The proposed framework synthesises the extant literature and highlights the need to conduct additional research in this domain. Future scholars can advance the elements of this framework to include additional aspects and thereby expand the intellectual boundaries of this area.

7. Conclusion

The above analysis of the literature indicates that SCC does, in fact, increase sustainable performance. The major themes are : (a) linkage of SCC to the SDGs; (b) SCC performance; (c) mechanisms for SCC; (d) antecedents and consequences of SCC; (e) strategic decisions affecting SCC; (f) policy and governance; (g) the role of stakeholders; (h) the nature of collaboration and (i) Other emerging themes of research. The important mechanisms of SCC for sustainability include collaborative innovation, collaborative processes, collaborative product greening and collaborative advertising. A multitude of reasons account for the importance of strategic decisions, such as collaborating partner selection (Tirkolaee et al., 2020; Xia et al., 2020). For example, retailers not only collaborate with manufacturers to purchase products but also look to as strategic partners who help to create competitively differentiated and sustainable products.

7.1. Theoretical implications

The present study entails some key theoretical implications. First, works of many scholars have been devoted to understanding the role of sustainability-oriented SCC. However, no existing SLRs have integrated these studies. Therefore, the present SLR was conducted to synthesise and assimilate the existing literature at the intersection of SCC and sustainability. To this end, the authors have outlined the profile of the extant literature in the field in terms of the countries of research, the timewise proliferation of studies, the nature of these studies and the key thematic areas they have addressed. The theoretical implications of the present research are as follows.

First, the assessment of key thematic areas of research and subsequent identification of gaps and avenues of future research represent the key contributions of this study. Future researchers should conduct studies to address the gaps highlighted in the present. For example, the present study calls for theory-driven explanations for improvement in sustainability and thereby the SDGs. Particularly, in the wake of global challenges posed by the pandemic, industry-specific studies on the level of achievement in SDGs with SCC is have gained critical importance.

Second, this study also proposes a comprehensive framework for SCC that highlights the strategic fields of action essential for attaining the SDGs. Future scholars can refer to the framework presented here as they work to expand the domain of knowledge, specifically by aligning their efforts with the thematic foci of the literature. The detailed discussion offered here will play a significant role in expanding opportunities for scholars to conduct studies that aim to understand how specific actions promote the achievement of the SDGs. The present study highlights the importance of digitalisation tools to achieve SDGs. However, according to the deeper analysis presented in our SLR, the findings in this area remain mixed. For example, Di Vaio and Varriale (2020) argue that technological solutions like blockchain do not guarantee the achievement of the best performance in terms of sustainability. Scholars in this domain can work towards bringing about more clarity on the role of specific technologies in the achievement of SDGs.

Third, scholars can better understand the focus of existing research and particularly the challenges involved in SCC. Some of the main challenges identified here include developing performance evaluation criteria to measure the effectiveness of SCC mechanisms in achieving sustainability, which can be applied across different nodes of the SC; understanding the risks associated with such collaborations and identifying the policy initiatives necessary to realise these mechanisms' full potential. The study also underscores several important research questions for future scholars, including the need for an empirical examination of the challenges and risks involved in SCC. Thus, the present study establishes a future research agenda in this domain.

Fourth, the present study emphasises both the importance of SCC mechanisms and the drivers of the SCC process. Scholars can conduct inter- and intra-sectoral empirical research in this area to examine the appropriateness of such mechanisms and identify the steps necessary to strengthen the drivers that motivate stakeholders to engage in SCC.

Finally, in a fine-grained effort to develop the research profile of the extant studies, the present work also identifies the prominent methodologies, prolific journals, volume of publications and preeminent scholars in this domain.

7.2. Implications for practitioners

While moving from traditional to sustainable SCs, practitioners and policymakers must develop an in-depth understanding of the importance of SCC. The findings of this SLR will help the managers to take a better and holistic perspective of SCs and thereby manage them efficiently. The managers would also understand the mechanisms to effectively collaborate and contribute towards sustainability. The SLR specifically offers five practical implications.

First, practitioners who manage or participate in SCs must realise the crucial challenges that SCs involve, such as encouraging various SC players to engage in SCC efforts, selecting marketing devices that encourage consumer participation and assessing strategic initiatives, including digitalisation. Specifically, practitioners must realise that capitalising fully on the potential of SCC requires integrated SCs that firmly commit to sharing both knowledge and databases.

Second, by providing a detailed account of key actions areas and the important challenges that must be addressed, the present study synthesises the strategic fields of actions in which stakeholders associated with this transition should engage. By capitalising upon the findings of the present study, managers can focus on collaborative innovation, collaborative processes and product development as the key mechanisms driving SCC.

Third, the study also highlights critical themes, such as governance-related interventions for SCC. These themes can steer policymakers towards the development of guidelines and policies that address the issues related to contracts between collaboration partners. The study highlights the necessity of policy interventions that achieve sustainability by applying SCC principles, particularly in the food sector. In addition, this SLR suggests that policies should be framed to develop a digitalisation infrastructure that facilitates SCC and promotes the attainment of the SDGs.

Fourth, as evident from the literature, managers must devise time-bound procedures to effectively implement and monitor SCC objectives. The above analysis of the existing literature identifies some performance evaluation criteria for collaborative efforts. Managers must ensure the adequacy of measures to assess their initiatives.

Fifth, other emerging themes highlighted in the present study, such as the role of SCC in CSR, can help policymakers to critically assess the feasibility of these innovations. The vulnerability of SCs during the pandemic underscores the need for managers to utilise SCC to absorb shocks in the external environment. However, managers must also identify the appropriate mechanisms for implementing systemic changes to manage such disruptions.

Finally, managers should work to recognise the possible SC risks and fairness concerns that arise in SCC efforts.

7.3. Limitations and areas for future SLRs

Despite its valuable contributions, this study must also note its limitations. The first limitation of the present SLR is its sole inclusion of articles found in *WoS*, *Scopus* and *Google Scholar* and published in English language. Therefore, the authors understand that there is a possibility that they may have excluded a few relevant studies. This review also excluded book chapters and reports. Therefore, future studies can include book chapters and studies published in other languages studies and other academic databases. Second, the article search in this SLR was based on strictly defined inclusion and exclusion criteria. Therefore, it excluded studies focused on the technical aspects of digitalisation or biological or chemical processes. Third, scope and space constraints prevented the present study from offering a bibliometric analysis of the included articles. Fourth, this SLR did not attempt to analyse the statistical results of the empirical studies it reviewed. Future scholars could conduct metanalytic studies to address this limitation. Fifth, the present study acknowledges the role of knowledge management towards SC collaboration and subsequent outcomes. For example, it is argued that firms should manage dispersed knowledge in ecosystems strategically to improve their performance (de Gomes, 2021). However, a nuanced analysis of knowledge management literature, its interplay vis-à-vis SC collaboration and subsequent sustainability performance implications are beyond the scope of the present study. Future scholars can embark on this gap to develop interesting studies. Finally, the authors acknowledge that SCC practices for SCs differ between developed and developing countries as the focus has traditionally been on the economic aspects of sustainability in the developing countries. These variations in SC complexities have the potential to influence the implementation of

SCC practices, and future scholars should address the issues that are exclusive to emerging economies.

In spite of the limitations, the present study gives a nuanced account of the thematic foci and research gaps and will thus serve as a foundation for future studies therein.

CRediT authorship contribution statement

Chetna Chauhan: Writing – review & editing, Writing – original draft, Validation, Supervision, Methodology, Formal analysis, Data curation, Conceptualization. **Puneet Kaur:** Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing. **Rakesh Arrawatia:** Writing – review & editing, Writing – original draft, Validation, Supervision, Methodology, Conceptualization. **Peter Ractham:** Conceptualization, Methodology, Supervision, Writing – original draft, Writing – review & editing. **Amandeep Dhir:** Writing – review & editing, Writing – original draft, Formal analysis, Data curation, Conceptualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

Adhikari, A., & Bisi, A. (2020). Collaboration, bargaining, and fairness concern for a green apparel supply chain: An emerging economy perspective. *Transportation Research Part E: Logistics and Transportation Review.*. https://doi.org/10.1016/j.tre.2020.101863

Ahmed, W., Ashraf, M. S., Khan, S. A., Kusi-Sarpong, S., Arhin, F. K., Kusi-Sarpong, H., & Najmi, A. (2020). Analyzing the impact of environmental collaboration among supply chain stakeholders on a firm's sustainable performance. *Operations Management Research*. https://doi.org/10.1007/s12063-020-00152-1

Alkahtani, M., Khalid, Q. S., Jalees, M., Omair, M., Hussain, G., & Pruncu, C. I. (2021). E-agricultural supply chain management coupled with blockchain effect and cooperative strategies. *Sustainability (Switzerland)*. https://doi.org/10.3390/su13020816

Alzoubi, H. M., Ahmed, G., Al-Gasaymeh, A., & Al Kurdi, B. (2020). Empirical study on sustainable supply chain strategies and its impact on competitive priorities: The mediating role of supply chain collaboration. *Management Science Letters*. https://doi.org/10.5267/j.msl.2019.9.008

Andres, B., & Marcucci, G. (2020). A Strategies Alignment Approach to Manage Disruptive Events in Collaborative Networks. *Sustainability, 12*(7), 2641. https://doi.org/10.3390/su12072641

Aray, Y., Veselova, A., Knatko, D., & Levchenko, A. (2020). Drivers for adoption of sustainability initiatives in supply chains of large Russian firms under environmental uncertainty. *Corporate Governance (Bingley)*. https://doi.org/10.1108/CG-02-2020-0048

Arshinder, K., Kanda, A., & Deshmukh, S. G. (2011). In *A review on supply chain coordination: coordination mechanisms, managing uncertainty and research directions* (pp. 39–82). Berlin, Heidelberg: Springer.

Asif, M. S., Lau, H., Nakandala, D., Fan, Y., & Hurriyet, H. (2020). Adoption of green supply chain management practices through collaboration approach in developing countries – From literature review to conceptual framework. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.124191

Awan, U., Kraslawski, A., & Huiskonen, J. (2018). Governing interfirm relationships for social sustainability: The relationship between governance mechanisms, sustainable collaboration, and cultural intelligence. *Sustainability (Switzerland)*. https://doi.org/10.3390/su10124473

Ball, D. R., & Deshmukh, A. (2013). A cooperative options-based strategy for coordinating supply chain and resource allocation decisions. *International Journal of Management and Decision Making, 12*(3), 259. https://doi.org/10.1504/IJMDM.2013.056459

Basiri, Z., & Heydari, J. (2017). A mathematical model for green supply chain coordination with substitutable products. *Journal of Cleaner Production. Elsevier B.V., 145*, 232–249. https://doi.org/10.1016/j.jclepro.2017.01.060

Benzidia, S., Makaoui, N., & Bentahar, O. (2021). The impact of big data analytics and artificial intelligence on green supply chain process integration and hospital environmental performance. *Technological Forecasting and Social Change*. https://doi.org/10.1016/j.techfore.2020.120557

Beske-Janssen, P., Johnson, M. P., & Schaltegger, S. (2015). 20 years of performance measurement in sustainable supply chain management – what has been achieved? *Supply Chain Management: An International Journal, 20*(6), 664–680. https://doi.org/10.1108/SCM-06-2015-0216

Burki, U., Ersoy, P., & Najam, U. (2019). Top management, green innovations, and the mediating effect of customer cooperation in green supply chains. *Sustainability (Switzerland)*. https://doi.org/10.3390/su11041031

do Canto, N. R., Bossle, M. B., Marques, L. and Dutra, M. (2020) 'Supply chain collaboration for sustainability: a qualitative investigation of food supply chains in Brazil', *Management of Environmental Quality: An International Journal*. doi: 10.1108/MEQ-12-2019-0275.

Cao, J., Zhang, X., & Zhou, G. (2016). Supply chain coordination with revenue-sharing contracts considering carbon emissions and governmental policy making. *Environmental Progress and Sustainable Energy*. https://doi.org/10.1002/ep.12246

Cao, Y., Tao, L., Wu, K., & Wan, G. (2020). Coordinating joint greening efforts in an agri-food supply chain with environmentally sensitive demand. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.123883

Carballo-Penela, A., Mateo-Mantecón, I., Alvarez, S., & Castromán-Diz, J. L. (2018). The Role of Green Collaborative Strategies in Improving Environmental Sustainability in Supply Chains: Insights from a Case Study. *Business Strategy and the Environment*. https://doi.org/10.1002/bse.2027

Chaudhary, S., Dhir, A., Ferraris, A., & Bertoldi, B. (2021). Trust and reputation in family businesses: A systematic literature review of past achievements and future promises. *Journal of Business Research*. https://doi.org/10.1016/j.jbusres.2021.07.052

Chauhan, C., Dhir, A., Akram, M. U., & Salo, J. (2021). 'Food loss and waste in food supply chains. *A systematic literature review and framework development approach', Journal of Cleaner Production.*. https://doi.org/10.1016/j.jclepro.2021.126438

Chen, J., & Huang, S. (2021). Evaluation model of green supply chain cooperation credit based on BP neural network. *Neural Computing and Applications*. https://doi.org/10.1007/s00521-020-05420-6

Cheon, S., & Deakin, E. (2010). Supply chain coordination for port sustainability lessons for new institutional designs. *Transportation Research Record*. https://doi.org/10.3141/2166-02

Chauhan, C., & Singh, A. (2018) 'Modeling green supply chain coordination: current research and future prospects', *Benchmarking: An International Journal*. Edited by S. Amol. Emerald Publishing Limited, 25(9), pp. 3767–3788. doi: 10.1108/BIJ-10-2017-0275.

Clarke, S. F., & Roome, N. J. (1995). Managing for Environmentally Sensitive Technology: Networks for Collaboration and Learning. *Technology Analysis & Strategic Management*. https://doi.org/10.1080/09537329508524204

Cloutier, C., Oktaei, P., & Lehoux, N. (2020). Collaborative mechanisms for sustainability-oriented supply chain initiatives: State of the art, role assessment and research opportunities. *International Journal of Production Research*. https://doi.org/10.1080/00207543.2019.1660821

Dania, W. A. P., Xing, K., & Amer, Y. (2019). Collaboration quality assessment for sustainable supply chains: Benchmarking. *Benchmarking: An International Journal, 26*(5), 1469–1498. https://doi.org/10.1108/BIJ-03-2018-0070

D., & Tranfield, D. (2009). Producing a systematic review. The Sage Handbook of Organizational Research Methods.review.', *The Sage handbook of organizational research methods*, pp. 671–689.

Dhaigude, A. S., Kapoor, R., Gupta, N., & Padhi, S. S. (2021). Linking supply chain integration to supply chain orientation and performance – a knowledge integration perspective from Indian manufacturing industries. *Journal of Knowledge Management, 25*(9), 2293–2315. https://doi.org/10.1108/JKM-01-2020-0064

Dhir, A., Talwar, S., Kaur, P., & Malibari, A. (2020). Food waste in hospitality and food services: A systematic literature review and framework development approach. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.122861

Donaldson, L. (2001) *The Contingency Theory of Organizations*. 2455 Teller Road, Thousand Oaks California 91320 United States: SAGE Publications, Inc. doi: 10.4135/9781452229249.

Dora, M. (2019). Collaboration in a circular economy: Learning from the farmers to reduce food waste. *Journal of Enterprise Information Management*. https://doi.org/10.1108/JEIM-02-2019-0062

Dubey, R., Gunasekaran, A., Childe, S. J., Luo, Z., Wamba, S. F., Roubaud, D. and Foropon, C. (2018) 'Examining the role of big data and predictive analytics on collaborative performance in context to sustainable consumption and production behaviour', *Journal of Cleaner Production*. doi: 10.1016/j.jclepro.2018.06.097.

El Idrissi, M. D., Charkaoui, A., & Echchatbi, A. (2021). Multi Agent Approach for Environmental Customer Collaboration: Study Case in Automotive Spare Parts Sector. *Planning, 16*(3), 525–533.

Fawcett, S. E., Fawcett, A. M., Knemeyer, A. M., Brockhaus, S., & Webb, G. S. (2021). Overcoming the collaborative challenge: Commitment as a super-ordinate enabler of value co-creation. *International Journal of Physical Distribution and Logistics Management*. https://doi.org/10.1108/IJPDLM-12-2020-0390

Forin, S., Gossmann, J., Weis, C., Thylmann, D., Bunsen, J., Berger, M., & Finkbeiner, M. (2020). Organizational water footprint to support decision making: A case study for a german technological solutions provider for the plumbing industry. *Water (Switzerland)*. https://doi.org/10.3390/w12030847

Furumo, P. R., & Lambin, E. F. (2021). Policy sequencing to reduce tropical deforestation. *Global Sustainability*. https://doi.org/10.1017/sus.2021.21

Geng, R., Mansouri, A., Aktas, E., & Yen, D. A. (2019). An empirical study of green supplier collaboration in the Chinese manufacturing sector: The double-edged sword effect of guanxi. *Supply Chain Management*. https://doi.org/10.1108/SCM-03-2019-0135

Ghosh, A., Sarmah, S. P., & Jha, J. K. (2018). Collaborative model for a two-echelon supply chain with uncertain demand under carbon tax policy. *Sādhanā, 43*(9), 144. https://doi.org/10.1007/s12046-018-0899-6

Del Giudice, M., Chierici, R., Mazzucchelli, A., & Fiano, F. (2020). Supply chain management in the era of circular economy: The moderating effect of big data.

International Journal of Logistics Management. https://doi.org/10.1108/IJLM-03-2020-0119

de Vasconcelos Gomes, L. A., de Faria, A. M., Borini, F. M., Chaparro, X. A. F., Dos Santos, M. G., & Amaral, G. S. G. (2021) 'Dispersed knowledge management in ecosystems', *Journal of Knowledge Management*, 25(4), pp. 796–825. doi: 10.1108/JKM-03-2020-0239.

Gold, S., Seuring, S., & Beske, P. (2010). Sustainable supply chain management and inter-organizational resources: a literature review. *Corporate social responsibility and environmental management, 17*(4), 230–245.

Govindan, K., Aditi, Dhingra Darbari, J., Kaul, A. and Jha, P. (2021) 'Structural model for analysis of key performance indicators for sustainable manufacturer–supplier collaboration: A grey-decision-making trial and evaluation laboratory-based approach', *Business Strategy and the Environment*, p. bse.2703. doi: 10.1002/bse.2703.

Govindan, K., Jha, P. C., Agarwal, V., & Darbari, J. D. (2019). Environmental management partner selection for reverse supply chain collaboration: A sustainable approach. *Journal of Environmental Management*. https://doi.org/10.1016/j.jenvman.2018.11.088

Gunasekaran, A., Subramanian, N., & Rahman, S. (2015). Green supply chain collaboration and incentives: Current trends and future directions. *Transportation Research Part E: Logistics and Transportation Review, 74*, 1–10. https://doi.org/10.1016/j.tre.2015.01.002

Guo, Y., Yen, D. A., Geng, R., & Azar, G. (2021). Drivers of green cooperation between Chinese manufacturers and their customers: An empirical analysis. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2021.01.004

Gupta, A., Singh, R. K., & Mangla, S. K. (2021). Evaluation of logistics providers for sustainable service quality: Analytics based decision making framework. *Annals of Operations Research*. https://doi.org/10.1007/s10479-020-03913-0

Gurzawska, A. (2020). 'Towards Responsible and Sustainable Supply Chains – Innovation, Multi-stakeholder Approach and Governance', *Philosophy of. Management.*. https://doi.org/10.1007/s40926-019-00114-z

Halat, K., Hafezalkotob, A., & Sayadi, M. K. (2021). Cooperative inventory games in multi-echelon supply chains under carbon tax policy: Vertical or horizontal? *Applied Mathematical Modelling*. https://doi.org/10.1016/j.apm.2021.06.013

Hao, X., & Li, B. (2020). Research on collaborative innovation among enterprises in green supply chain based on carbon emission trading. *Science Progress*. https://doi.org/10.1177/0036850420916329

Haque, M., Paul, S. K., Sarker, R., & Essam, D. (2020). Managing decentralized supply chain using bilevel with Nash game approach. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.121865

He, J., Lei, Y., & Fu, X. (2019). 'Do consumer's green preference and the reference price effect improve green innovation? *A theoretical model using the food supply chain as a case', International Journal of Environmental Research and Public Health.*. https://doi.org/10.3390/ijerph16245007

Heydari, J., & Mosanna, Z. (2018). Coordination of a sustainable supply chain contributing in a cause-related marketing campaign. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2018.07.055

van Hille, I., de Bakker, F. G. A., Ferguson, J. E., & Groenewegen, P. (2020). Cross-Sector Partnerships for Sustainability: How Mission-Driven Conveners Drive Change in National Coffee Platforms. *Sustainability, 12*(7), 2846. https://doi.org/10.3390/su12072846

Hina, M., Chauhan, C., Kaur, P., Kraus, S., & Dhir, A. (2022). Drivers and barriers of circular economy business models: Where we are now, and where we are heading. *Journal of Cleaner Production. Elsevier Ltd, 333*, Article 130049. https://doi.org/10.1016/j.jclepro.2021.130049

Hofman, P. S., Blome, C., Schleper, M. C., & Subramanian, N. (2020). Supply chain collaboration and eco-innovations: An institutional perspective from China. *Business Strategy and the Environment, 29*(6), 2734–2754. https://doi.org/10.1002/bse.2532

Hong, J., Zheng, R., Deng, H., & Zhou, Y. (2019). Green supply chain collaborative innovation, absorptive capacity and innovation performance: Evidence from China. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2019.118377

Hosseini-Motlagh, S. M., Ebrahimi, S., & Jokar, A. (2021). Sustainable supply chain coordination under competition and green effort scheme. *Journal of the Operational Research Society*. https://doi.org/10.1080/01605682.2019.1671152

Hsueh, C. F. (2015). A bilevel programming model for corporate social responsibility collaboration in sustainable supply chain management. *Transportation Research Part E: Logistics and Transportation Review.*. https://doi.org/10.1016/j.tre.2014.11.006

Huang, X., Yang, S., & Shi, X. (2021). How corporate social responsibility and external stakeholder concerns affect green supply chain cooperation among manufacturers: An interpretive structural modeling analysis. *Sustainability (Switzerland)*. https://doi.org/10.3390/su13052518

Huq, F. A., & Stevenson, M. (2020). Implementing Socially Sustainable Practices in Challenging Institutional Contexts: Building Theory from Seven Developing Country Supplier Cases. *Journal of Business Ethics*. https://doi.org/10.1007/s10551-018-3951-x

Januardi, J., & Widodo, E. (2021). Response surface methodology of dual-channel green supply-chain pricing model by considering uncertainty. In *Supply Chain Forum: An International Journal* (Vol. 22, pp. 16–27). Taylor & Francis.

Jimenez-Jimenez, D., Martínez-Costa, M., & Sanchez Rodriguez, C. (2019). The mediating role of supply chain collaboration on the relationship between information technology and innovation. *Journal of Knowledge Management, 23*(3), 548–567. https://doi.org/10.1108/JKM-01-2018-0019

Jug, A. (2020). Why Should Corporations Partner with Social Enterprises and Entrepreneurs? *IEEE Engineering Management Review*. https://doi.org/10.1109/EMR.2020.2976917

Kache, F., & Seuring, S. (2014). Linking collaboration and integration to risk and performance in supply chains via a review of literature reviews. *Supply Chain Management: An International Journal, 19*(5/6), 664–682. https://doi.org/10.1108/SCM-12-2013-0478

Kalkanci, B., Rahmani, M., & Toktay, L. B. (2019). The Role of Inclusive Innovation in Promoting Social Sustainability. *Production and Operations Management*. https://doi.org/10.1111/poms.13112

Kang, H., Jung, S. Y., & Lee, H. (2020). The impact of Green Credit Policy on manufacturers' efforts to reduce suppliers' pollution. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2019.119271

Khan, S. J., Dhir, A., Parida, V., & Papa, A. (2021). Past, present, and future of green product innovation. *Business Strategy and the Environment, 30*(8), 4081–4106. https://doi.org/10.1002/bse.2858

Khanra, S., Dhir, A., Islam, A. K. M. N., & Mäntymäki, M. (2020). Big data analytics in healthcare: A systematic literature review. *Enterprise Information Systems, 14*(7), 878–912. https://doi.org/10.1080/17517575.2020.1812005

Khurshid, A., Muzaffar, A., & Bhutta, M. K. S. (2021). Institutional pressures and supplier involvement: A perspective on sustainability. *Operations Management Research*. https://doi.org/10.1007/s12063-021-00181-4

Kim, C., & Shin, K. S. (2019). Developing fair investment plans to enhance supply chain visibility using cooperative games. *Sustainability (Switzerland)*. https://doi.org/10.3390/su11113209

Kim, S., Shin, N., & Park, S. (2020). Closed-loop supply chain coordination under a reward–penalty and a manufacturer's subsidy policy. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12229329

Kramer, M. P., Bitsch, L., & Hanf, J. (2021). Blockchain and its impacts on agri-food supply chain network management. *Sustainability (Switzerland)*. https://doi.org/10.3390/su13042168

Krishnakumar, J., Chan-Halbrendt, C., Radovich, T., Sullivan, P., & Love, K. (2009). Supply-demand integrated management model for effective farmer-buyer coordination: Case of the Hawaii avocado industry. *Journal on Chain and Network Science*. https://doi.org/10.3920/JCNS2009.x154

Krishnan, R., Yen, P., Agarwal, R., Arshinder, K., & Bajada, C. (2021). Collaborative innovation and sustainability in the food supply chain- evidence from farmer producer organisations. *Resources, Conservation and Recycling.*. https://doi.org/10.1016/j.resconrec.2020.105253

Kuiti, M. R., Ghosh, D., Basu, P., & Bisi, A. (2020). Do cap-and-trade policies drive environmental and social goals in supply chains: Strategic decisions, collaboration, and contract choices. *International Journal of Production Economics*. https://doi.org/10.1016/j.ijpe.2019.107537

Kuiti, M. R., Ghosh, D., Gouda, S., Swami, S., & Shankar, R. (2019). Integrated product design, shelf-space allocation and transportation decisions in green supply chains. *International Journal of Production Research*. https://doi.org/10.1080/00207543.2019.1597292

Kumar, A., Shrivastav, S., Adlakha, A., & Vishwakarma, N. K. (2020). Appropriation of sustainability priorities to gain strategic advantage in a supply chain. *International Journal of Productivity and Performance Management*. https://doi.org/10.1108/IJPPM-06-2020-0298

Kumar, G., & Goswami, M. (2019). Sustainable supply chain performance, its practice and impact on barriers to collaboration. *International Journal of Productivity and Performance Management*. https://doi.org/10.1108/IJPPM-12-2018-0425

Kumar, G., Meena, P., & Difrancesco, R. M. (2021). How do collaborative culture and capability improve sustainability? *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2021.125824

Kumar, G., Subramanian, N., & Maria Arputham, R. (2018). Missing link between sustainability collaborative strategy and supply chain performance: Role of dynamic capability. *International Journal of Production Economics*. https://doi.org/10.1016/j.ijpe.2018.05.031

Kumar, K., & Van Dissel, H. G. (1996). 'Sustainable collaboration: Managing conflict and cooperation in interorganizational systems', *MIS Quarterly. Management Information Systems.*. https://doi.org/10.2307/249657

Kuo, T. C., Chen, K. J., Shiang, W. J., Huang, P. T. B., Otieno, W., & Chiu, M. C. (2021). A collaborative data-driven analytics of material resource management in smart supply chain by using a hybrid Industry 3.5 strategy. *Resources, Conservation and Recycling.*. https://doi.org/10.1016/j.resconrec.2020.105160

Kushwah, S., Dhir, A., Sagar, M. and Gupta, B. (2019) 'Determinants of organic food consumption. A systematic literature review on motives and barriers', *Appetite*. Elsevier, 143(October 2018), p. 104402. doi: 10.1016/j.appet.2019.104402.

De La Poza, E., Merello, P., Barberá, A., & Celani, A. (2021). Universities' reporting on SDGs: Using the impact rankings to model and measure their contribution to sustainability. *Sustainability (Switzerland)*. https://doi.org/10.3390/su13042038

Larson, P. D. (2021). Security, sustainability and supply chain collaboration in the humanitarian space. *Journal of Humanitarian Logistics and Supply Chain Management*. https://doi.org/10.1108/JHLSCM-06-2021-0059

Lee, J., & Joo, H. Y. (2020). The impact of top management's support on the collaboration of green supply chain participants and environmental performance. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12219090

Li, G., Shi, X., Yang, Y., & Lee, P. K. C. (2020). Green co-creation strategies among supply chain partners: A value co-creation perspective. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12104305

Li, P., Rao, C., Goh, M., & Yang, Z. (2021). Pricing strategies and profit coordination under a double echelon green supply chain. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.123694

Li, Q., Zhang, Z., Rao, W., Xu, W., & Jiang, L. (2019). Green investment decisions in supply chains: A game model with complete information. *Information (Switzerland)*. https://doi.org/10.3390/info10060185

Liao, S. H., Hu, D. C., & Shih, Y. S. (2021). Supply chain collaboration and innovation capability: The moderated mediating role of quality management. *Total Quality Management and Business Excellence*. https://doi.org/10.1080/14783363.2018.1552515

Liao, W., & Wang, T. (2019). A novel collaborative optimization model for job shop production-delivery considering time window and carbon emission. *Sustainability (Switzerland)*. https://doi.org/10.3390/su11102781

Liu, B., & De Giovanni, P. (2019). Green process innovation through Industry 4.0 technologies and supply chain coordination. *Annals of Operations Research*, 1–36.

Liu, J., & Hu, C. (2020). Study on Green Supply Chain Cooperation and Carbon Tax Policy considering Consumer's Behavior. *Mathematical Problems in Engineering*. https://doi.org/10.1155/2020/4131936

Liu, Y., Wang, D. dong and Xu, Q. (2020) 'A supply chain coordination mechanism with suppliers' effort performance level and fairness concern', *Journal of Retailing and Consumer Services*. doi: 10.1016/j.jretconser.2019.101950.

Liu, Z., Zheng, X. X., Li, D. F., Liao, C. N., & Sheu, J. B. (2021). A novel cooperative game-based method to coordinate a sustainable supply chain under psychological uncertainty in fairness concerns. *Transportation Research Part E: Logistics and Transportation Review.*. https://doi.org/10.1016/j.tre.2021.102237

Lou, G., Lai, Z., Ma, H., & Fan, T. (2020). Coordination in a composite green-product supply chain under different power structures. *Industrial Management and Data Systems*. https://doi.org/10.1108/IMDS-10-2019-0532

Lu, C.-J., Yang, C.-T., & Yen, H.-F. (2020). Stackelberg game approach for sustainable production-inventory model with collaborative investment in technology for reducing carbon emissions. *Journal of Cleaner Production, 270*, Article 121963. https://doi.org/10.1016/j.jclepro.2020.121963

Luthra, S., & Mangla, S. K. (2018). When strategies matter: Adoption of sustainable supply chain management practices in an emerging economy's context. *Resources, Conservation and Recycling, 138*, 194–206. https://doi.org/10.1016/j.resconrec.2018.07.005

Ma, W., Zhang, R., & Chai, S. (2019). What Drives Green Innovation? A Game Theoretic Analysis of Government Subsidy and Cooperation Contract. *Sustainability, 11*(20), 5584. https://doi.org/10.3390/su11205584

Makkonen, H., Pohjola, M., Olkkonen, R. and Koponen, A. (2014) 'Dynamic capabilities and firm performance in a financial crisis', *Journal of Business Research*. Elsevier Inc., 67(1), pp. 2707–2719. doi: 10.1016/j.jbusres.2013.03.020.

Mangla, S. K., Bhattacharya, A., Yadav, A. K., Sharma, Y. K., Ishizaka, A., Luthra, S., & Chakraborty, R. (2021). A framework to assess the challenges to food safety initiatives in an emerging economy. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.124709

Mangla, S. K., Govindan, K., & Luthra, S. (2017). Prioritizing the barriers to achieve sustainable consumption and production trends in supply chains using fuzzy Analytical Hierarchy Process. *Journal of Cleaner Production, 151*, 509–525. https://doi.org/10.1016/j.jclepro.2017.02.099

Manteghi, Y., Arkat, J., Mahmoodi, A., & Farvaresh, H. (2021). Competition and cooperation in the sustainable food supply chain with a focus on social issues. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.124872

Marusak, A., Sadeghiamirshahidi, N., Krejci, C. C., Mittal, A., Beckwith, S., Cantu, J., … Grimm, J. (2021a). Resilient regional food supply chains and rethinking the way forward: Key takeaways from the COVID-19 pandemic. *Agricultural Systems, 190*, Article 103101.

Masi, A., Ciccullo, F., & Pero, M. (2021, June). Digitalizing agri-food supply chains to achieve Sustainable Development Goals: a systematic literature review. In *2021 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC)* (pp. 1–8). IEEE.

McAdam, R., Miller, K., & McSorley, C. (2019). Towards a contingency theory perspective of quality management in enabling strategic alignment. *International Journal of Production Economics*. https://doi.org/10.1016/j.ijpe.2016.07.003

Mehdikhani, R., & Valmohammadi, C. (2019). Strategic collaboration and sustainable supply chain management: The mediating role of internal and external knowledge sharing. *Journal of Enterprise Information Management*. https://doi.org/10.1108/JEIM-07-2018-0166

Melander, L. (2018). Customer and Supplier Collaboration in Green Product Innovation: External and Internal Capabilities. *Business Strategy and the Environment*. https://doi.org/10.1002/bse.2024

Melander, L., & Arvidsson, A. (2021). Introducing sharing-focused business models in the B2B context: Comparing interaction and environmental sustainability for selling, renting and sharing on industrial markets. *Journal of Business and Industrial Marketing*. https://doi.org/10.1108/JBIM-01-2020-0032

Meng, Q., Li, M., Liu, W., Li, Z., & Zhang, J. (2021). Pricing policies of dual-channel green supply chain: Considering government subsidies and consumers' dual preferences. *Sustainable Production and Consumption*. https://doi.org/10.1016/j.spc.2021.01.012

Mina, H., Kannan, D., Gholami-Zanjani, S. M., & Biuki, M. (2021). Transition towards circular supplier selection in petrochemical industry: A hybrid approach to achieve sustainable development goals. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.125273

Mondal, C., & Giri, B. C. (2020). Retailers' competition and cooperation in a closed-loop green supply chain under governmental intervention and cap-and-trade policy. *Operational Research*. https://doi.org/10.1007/s12351-020-00596-0

Negra, C., Remans, R., Attwood, S., Jones, S., Werneck, F., & Smith, A. (2020). Sustainable agri-food investments require multi-sector co-development of decision tools. *Ecological Indicators*. https://doi.org/10.1016/j.ecolind.2019.105851

Nematollahi, M., Hosseini-Motlagh, S. M., & Heydari, J. (2017). Coordination of social responsibility and order quantity in a two-echelon supply chain: A collaborative decision-making perspective. *International Journal of Production Economics*. https://doi.org/10.1016/j.ijpe.2016.11.017

Nematollahi, M., Hosseini-Motlagh, S. M., Ignatius, J., Goh, M., & Saghafi Nia, M. (2018). Coordinating a socially responsible pharmaceutical supply chain under periodic review replenishment policies. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2017.11.126

Nguyen, H. M., Onofrei, G., Truong, D., & Lockrey, S. (2020). Customer green orientation and process innovation alignment: A configuration approach in the global manufacturing industry. *Business Strategy and the Environment*. https://doi.org/10.1002/bse.2516

Ni, W., & Sun, H. (2019). The effect of sustainable supply chain management on business performance: Implications for integrating the entire supply chain in the Chinese manufacturing sector. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2019.05.384

Nielsen, I., Majumder, S., Szwarc, E., & Saha, S. (2020). Impact of strategic cooperation under competition on green product manufacturing. *Sustainability (Switzerland)*. https://doi.org/10.3390/su122410248

Nilsson-Lindén, H., Rosén, M., & Baumann, H. (2019). Product chain collaboration for sustainability: A business case for life cycle management. *Business Strategy and the Environment*. https://doi.org/10.1002/bse.2388

Noh, J., & Kim, J. S. (2019). Cooperative green supply chain management with greenhouse gas emissions and fuzzy demand. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2018.10.124

Oh, S., Moon, H. C., & Zhong, Y. (2020). Contingency management and supply chain performance in Korea: A covid-19 pandemic approach. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12239823

Omar, H. A. M. B. B., Ali, M. A. M. and Jaharadak, A. A. Bin (2019) 'Green supply chain integrations and corporate sustainability', *Uncertain Supply Chain Management*. doi: 10.5267/j.uscm.2019.3.001.

Pan, X., Pan, X., Song, M., & Guo, R. (2020). The influence of green supply chain management on manufacturing enterprise performance: Moderating effect of collaborative communication. *Production Planning and Control*. https://doi.org/10.1080/09537287.2019.1631457

Peng, Y., Dong, M., Li, X., Liu, H., & Wang, W. (2021). Cooperative optimization of shore power allocation and berth allocation: A balance between cost and environmental benefit. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.123816

Pérez-Mesa, J. C., Piedra-Muñoz, L., Galdeano-Gómez, E., & Giagnocavo, C. (2021). Management strategies and collaborative relationships for sustainability in the agrifood supply chain. *Sustainability (Switzerland)*. https://doi.org/10.3390/su13020749

Pohlmann, C. R., Scavarda, A. J., Alves, M. B., & Korzenowski, A. L. (2020). The role of the focal company in sustainable development goals: A Brazilian food poultry supply chain case study. *Journal of Cleaner Production. Elsevier Ltd, 245*, Article 118798. https://doi.org/10.1016/j.jclepro.2019.118798

Qu, S., Yang, H., & Ji, Y. (2021). Low-carbon supply chain optimization considering warranty period and carbon emission reduction level under cap-and-trade regulation. *Environment, Development and Sustainability.*. https://doi.org/10.1007/s10668-021-01427-8

Ramanathan, U., Bentley, Y., & Pang, G. (2014). 'The role of collaboration in the UK green supply chains: An exploratory study of the perspectives of suppliers, logistics and retailers', *Journal of Cleaner Production. Elsevier Ltd, 70*, 231–241. https://doi.org/10.1016/j.jclepro.2014.02.026

Rane, S. B., Thakker, S. V., & Kant, R. (2020). Stakeholders' involvement in green supply chain: A perspective of blockchain IoT-integrated architecture. *Management of Environmental Quality: An International Journal.*. https://doi.org/10.1108/MEQ-11-2019-0248

Rangelov, M., Dylla, H., Mukherjee, A., & Sivaneswaran, N. (2021). Use of environmental product declarations (EPDs) of pavement materials in the United States of America (U.S.A.) to ensure environmental impact reductions. *Journal of Cleaner Production.*. https://doi.org/10.1016/j.jclepro.2020.124619

Ranjan, A., & Jha, J. K. (2019). Pricing and coordination strategies of a dual-channel supply chain considering green quality and sales effort. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2019.01.297

Raut, R. D., Mangla, S. K., Narwane, V. S., Dora, M., & Liu, M. (2021). Big Data Analytics as a mediator in Lean, Agile, Resilient, and Green (LARG) practices effects on sustainable supply chains. *Transportation Research Part E: Logistics and Transportation Review.*. https://doi.org/10.1016/j.tre.2020.102170

Rong, L., & Xu, M. (2020). Impact of revenue-sharing contracts on green supply chain in manufacturing industry. *International Journal of Sustainable Engineering*. https://doi.org/10.1080/19397038.2019.1709105

Rout, C., Paul, A., Kumar, R. S., Chakraborty, D., & Goswami, A. (2020). Cooperative sustainable supply chain for deteriorating item and imperfect production under different carbon emission regulations. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.122170

Santos, M. J., Martins, S., Amorim, P., & Almada-Lobo, B. (2021). A green lateral collaborative problem under different transportation strategies and profit allocation methods. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.125678

dos Santos, R. R., & Guarnieri, P. (2021). Social gains for artisanal agroindustrial producers induced by cooperation and collaboration in agri-food supply chain. *Social Responsibility Journal*. https://doi.org/10.1108/SRJ-09-2019-0323

Shao, X.-F., Liu, W., Li, Y., Chaudhry, H. R., & Yue, X.-G. (2021). Multistage implementation framework for smart supply chain management under industry 4.0. *Technological Forecasting and Social Change, 162*, Article 120354. https://doi.org/10.1016/j.techfore.2020.120354

Shen, Y., Shen, K., & Yang, C. (2019). A production inventory model for deteriorating items with collaborative preservation technology investment under carbon tax. *Sustainability (Switzerland)*. https://doi.org/10.3390/su11185027

Shi, W., & Weber, M. (2021). The impact of entrepreneurs' prior experience and communication networks on perceived knowledge access. *Journal of Knowledge Management, 25*(5), 1406–1426. https://doi.org/10.1108/JKM-05-2020-0365

Shin, N., & Park, S. (2021). Supply chain leadership driven strategic resilience capabilities management: A leader-member exchange perspective. *Journal of Business Research, 122*, 1–13. https://doi.org/10.1016/j.jbusres.2020.08.056

Shin, N., Park, S. H., & Park, S. (2019). Partnership-based supply chain collaboration: Impact on commitment, innovation, and firm performance. *Sustainability (Switzerland)*. https://doi.org/10.3390/su11020449

Shoukohyar, S., & Seddigh, M. R. (2020). Uncovering the dark and bright sides of implementing collaborative forecasting throughout sustainable supply chains: An exploratory approach. *Technological Forecasting and Social Change*. https://doi.org/10.1016/j.techfore.2020.120059

Silva, M. E., Dias, G. P., & Gold, S. (2021). Exploring the roles of lead organisations in spreading sustainability standards throughout food supply chains in an emerging economy. *International Journal of Logistics Management*. https://doi.org/10.1108/IJLM-05-2020-0201

Silva, M. E., & Figueiredo, M. D. (2020). Practicing sustainability for responsible business in supply chains. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2019.119621

Song, J., Li, F., Wu, D. D., Liang, L. and Dolgui, A. (2017) 'Supply chain coordination through integration of innovation effort and advertising support', *Applied Mathematical Modelling*. Elsevier Inc., 49, pp. 108–123. doi: 10.1016/j.apm.2017.04.041.

Sooksai, T., Nammakhunt, A., Hiranphaet, A., & Sinthukhammoon, K. (2020). 'Supply chain social capital and supply chain performance: The mediating role of supply chain integration and sustainability', *International Journal of Supply Chain. Management.*

Sousa, R., & Voss, C. A. (2008). Contingency research in operations management practices. *Journal of Operations Management, 26*(6), 697–713. https://doi.org/10.1016/j.jom.2008.06.001

Stekelorum, R., Laguir, I., & Elbaz, J. (2020). Cooperation with international NGOs and supplier assessment: Investigating the multiple mediating role of CSR activities in SMEs. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.04.001

Su, J., Li, C., Zeng, Q., Yang, J., & Zhang, J. (2019). A green closed-loop supply chain coordination mechanism based on third-party recycling. *Sustainability (Switzerland)*. https://doi.org/10.3390/su11195335

Swami, S., & Shah, J. (2013). 'Channel coordination in green supply chain management', *Journal of the Operational Research Society*. *Nature Publishing Group, 64*(3), 336–351. https://doi.org/10.1057/jors.2012.44

Taleizadeh, A. A., Alizadeh-Basban, N., & Sarker, B. R. (2018). Coordinated contracts in a two-echelon green supply chain considering pricing strategy. *Computers and Industrial Engineering*. https://doi.org/10.1016/j.cie.2018.07.024

Taleizadeh, A. A., Niaki, S. T. A., & Alizadeh-Basban, N. (2021). Cost-sharing contract in a closed-loop supply chain considering carbon abatement, quality improvement effort, and pricing strategy. *RAIRO - Operations Research*. https://doi.org/10.1051/ro/2020072

Taleizadeh, A. A., Noori-Daryan, M., & Sana, S. S. (2020). Manufacturing and selling tactics for a green supply chain under a green cost sharing and a refund agreement. *Journal of Modelling in Management*. https://doi.org/10.1108/JM2-01-2019-0016

Talwar, S., Talwar, M., Kaur, P., & Dhir, A. (2020). Consumers' resistance to digital innovations: A systematic review and framework development. *Australasian Marketing Journal. Elsevier Ltd, 28*(4), 286–299. https://doi.org/10.1016/j.ausmj.2020.06.014

Tarigan, Z. J. H., Tanuwijaya, N. C. and Siagian, H. (2020) 'DOES TOP MANAGEMENT ATTENTIVENESS AFFECT GREEN PERFORMANCE THROUGH GREEN PURCHASING AND SUPPLIER COLLABORATION?', *Academy of Strategic Management Journal*.

Thongrawd, C., Ploenhad, J., Jandasang, K., & Nampinyo, A. (2019). 'The mediating role of monitoring and collaborative green supply chain in the relationship between environmental drivers and environmental performance', *International Journal of Supply Chain. Management.*

Tirkolaee, E. B., Mardani, A., Dashtian, Z., Soltani, M., & Weber, G. W. (2020). A novel hybrid method using fuzzy decision making and multi-objective programming for sustainable-reliable supplier selection in two-echelon supply chain design. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2019.119517

Toptal, A., Özlü, H., & Konur, D. (2014). Joint decisions on inventory replenishment and emission reduction investment under different emission regulations. *International Journal of Production Research, 52*(1), 243–269. https://doi.org/10.1080/00207543.2013.836615

Trujillo-Gallego, M., & Sarache, W. (2019). An integral GSCM index for assessment of environmental performance in manufacturing companies. *Benchmarking*. https://doi.org/10.1108/BIJ-11-2018-0352

Tseng, M. L., Tran, T. P. T., Wu, K. J., Tan, R. R., & Bui, T. D. (2020). Exploring sustainable seafood supply chain management based on linguistic preferences: Collaboration in the supply chain and lean management drive economic benefits. *International Journal of Logistics Research and Applications*. https://doi.org/10.1080/13675567.2020.1800608

Turken, N., & Geda, A. (2020). Supply chain implications of industrial symbiosis: A review and avenues for future research. *Resources, Conservation and Recycling, 161*, Article 104974. https://doi.org/10.1016/j.resconrec.2020.104974

Di Vaio, A., & Varriale, L. (2020). Blockchain technology in supply chain management for sustainable performance: Evidence from the airport industry. *International Journal of Information Management*. https://doi.org/10.1016/j.ijinfomgt.2019.09.010

Vandchali, H. R., Cahoon, S., & Chen, S. L. (2021). The impact of power on the depth of sustainability collaboration in the supply chain network for Australian food retailers. *International Journal of Procurement Management*. https://doi.org/10.1504/IJPM.2021.113487

Veleva, V., & Bodkin, G. (2018). Corporate-entrepreneur collaborations to advance a circular economy. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2018.03.196

Wang, L., & Song, Q. (2020). Pricing policies for dual-channel supply chain with green investment and sales effort under uncertain demand. *Mathematics and Computers in Simulation*. https://doi.org/10.1016/j.matcom.2019.08.010

Wang, S. Y., & Choi, S. H. (2020). Pareto-efficient coordination of the contract-based MTO supply chain under flexible cap-and-trade emission constraint. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2019.119571

Wang, W., Zhang, Y., Zhang, W., Gao, G., & Zhang, H. (2021). Incentive mechanisms in a green supply chain under demand uncertainty. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.123636

Wei, D. (2020). Modeling and simulation of a multi-agent green supply chain management system for retailers. *Journal Europeen des Systemes Automatises*. https://doi.org/10.18280/jesa.530414

Whitehead, K., Zacharia, Z., & Prater, E. (2019). Investigating the role of knowledge transfer in supply chain collaboration. *International Journal of Logistics Management*. https://doi.org/10.1108/IJLM-07-2017-0184

Whitelock, V. G. (2019). Multidimensional environmental social governance sustainability framework: Integration, using a purchasing, operations, and supply chain management context. *Sustainable Development*. https://doi.org/10.1002/sd.1951

Wiengarten, F., & Longoni, A. (2015). A nuanced view on supply chain integration: A coordinative and collaborative approach to operational and sustainability performance improvement. *Supply Chain Management*. https://doi.org/10.1108/SCM-04-2014-0120

Wijewickrama, M. K. C. S., Chileshe, N., Rameezdeen, R., & Ochoa, J. J. (2021). Information sharing in reverse logistics supply chain of demolition waste: A systematic literature review. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.124359

Wong, C. Y., Boon-itt, S., & Wong, C. W. Y. (2021). The contingency effects of internal and external collaboration on the performance effects of green practices. *Resources, Conservation and Recycling, 167*, Article 105383. https://doi.org/10.1016/j.resconrec.2020.105383

Wu, S., Yao, X., & Wu, G. (2020). Environmental Investment Decision of Green Supply Chain considering the Green Uncertainty. *Complexity*. https://doi.org/10.1155/2020/8871901

Xia, L., & He, L. (2014). Game Theoretic Analysis of Carbon Emission Reduction and Sales Promotion in Dyadic Supply Chain in Presence of Consumers' Low-Carbon Awareness. *Discrete Dynamics in Nature and Society, 2014*, 1–13. https://doi.org/10.1155/2014/837376

Xia, W., Li, B., & Yin, S. (2020). A prescription for urban sustainability transitions in China: Innovative partner selection management of green building materials industry in an integrated supply chain. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12072581

Xiao, Y., Yang, S., Zhang, L., & Kuo, Y. H. (2016). Supply chain cooperation with price-sensitive demand and environmental impacts. *Sustainability (Switzerland), 8*(8). https://doi.org/10.3390/su8080716

Xie, J., Li, J., Liang, L., Fang, X., Yang, G., & Wei, L. (2020). Contracting Emissions Reduction Supply Chain Based on Market Low-Carbon Preference and Carbon Intensity Constraint. *Asia-Pacific Journal of Operational Research*. https://doi.org/10.1142/S0217595920500037

Xing, G., Xia, B., & Guo, J. (2019). Sustainable cooperation in the green supply chain under financial constraints. *Sustainability (Switzerland)*. https://doi.org/10.3390/su11215977

Xu, X., He, P., Xu, H., & Zhang, Q. (2017). Supply chain coordination with green technology under cap-and-trade regulation. *International Journal of Production Economics*. https://doi.org/10.1016/j.ijpe.2016.08.029

Yadav, G., Luthra, S., Jakhar, S. K., Mangla, S. K., & Rai, D. P. (2020). A framework to overcome sustainable supply chain challenges through solution measures of industry 4.0 and circular economy: An automotive case. *Journal of Cleaner Production. Elsevier Ltd, 254*, Article 120112. https://doi.org/10.1016/j.jclepro.2020.120112

Yang, F., Kong, J., Liu, T., & Ang, S. (2020). Cooperation and coordination in green supply chain with R&D uncertainty. *Journal of the Operational Research Society*. https://doi.org/10.1080/01605682.2020.1848359

Yang, L. (2013). Theoretical discussion for supply chain coordination mechanisms of decentralized decision structure. In *International Conference on Advanced Mechatronic Systems* (pp. 674–677). https://doi.org/10.1109/ICAMechS.2013.6681727

Yang, M., & Gong, X. (2021). Optimal decisions and Pareto improvement for green supply chain considering reciprocity and cost-sharing contract. *Environmental Science and Pollution Research*. https://doi.org/10.1007/s11356-021-12752-w

Yang, Z., & Lin, Y. (2020). The effects of supply chain collaboration on green innovation performance: An interpretive structural modeling analysis. *Sustainable Production and Consumption*. https://doi.org/10.1016/j.spc.2020.03.010

Yen, Y. X. (2018). Buyer–supplier collaboration in green practices: The driving effects from stakeholders. *Business Strategy and the Environment*. https://doi.org/10.1002/bse.2231

Yin, S., Zhang, N., Li, B., & Dong, H. (2021). Enhancing the effectiveness of multi-agent cooperation for green manufacturing: Dynamic co-evolution mechanism of a green technology innovation system based on the innovation value chain. *Environmental Impact Assessment Review*. https://doi.org/10.1016/j.eiar.2020.106475

Yoon, J., Song, J. M., Choi, J. H., & Talluri, S. (2020). Joint Sustainability Development in a Supply Chain. *Decision Sciences*. https://doi.org/10.1111/deci.12501

Yoon, S., & Jeong, S. (2017). Effects to implement the open-innovation coordinative strategies between manufacturer and retailer in reverse supply chain. *Journal of Open Innovation: Technology, Market, and Complexity*.. https://doi.org/10.1186/s40852-017-0054-3

Yu, S., & Hou, Q. (2021). Supply Chain Investment in Carbon Emission-Reducing Technology Based on Stochasticity and Low-Carbon Preferences. *Complexity*. https://doi.org/10.1155/2021/8881605

Yu, Y., Zhang, M., & Huo, B. (2019). The impact of supply chain quality integration on green supply chain management and environmental performance. *Total Quality Management and Business Excellence*. https://doi.org/10.1080/14783363.2017.1356684

Yu, Y., Zhou, S., & Shi, Y. (2020). Information sharing or not across the supply chain: The role of carbon emission reduction. *Transportation Research Part E: Logistics and Transportation Review*.. https://doi.org/10.1016/j.tre.2020.101915

Zhang, C. T., & Wang, Z. (2021). Production mode and pricing coordination strategy of sustainable products considering consumers' preference. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2021.126476

Zhang, F., Zhang, Z., Xue, Y., Zhang, J., & Che, Y. (2020). Dynamic Green Innovation Decision of the Supply Chain with Innovating and Free-Riding Manufacturers: Cooperation and Spillover. *Complexity*. https://doi.org/10.1155/2020/8937847

Zhang, R., Ma, W., Si, H., Liu, J., & Liao, L. (2021). Cooperative game analysis of coordination mechanisms under fairness concerns of a green retailer. *Journal of Retailing and Consumer Services*. https://doi.org/10.1016/j.jretconser.2020.102361

Zhang, Z., & Yu, L. (2021). Dynamic optimization and coordination of cooperative emission reduction in a dual-channel supply chain considering reference low-carbon effect and low-carbon goodwill. *International Journal of Environmental Research and Public Health*. https://doi.org/10.3390/ijerph18020539

Further reading

Ciccullo, F., Cagliano, R., Bartezzaghi, G., & Perego, A. (June 2020). (2021) 'Implementing the circular economy paradigm in the agri-food supply chain: The role of food waste prevention technologies', *Resources. Conservation and Recycling. Elsevier, 164*, Article 105114. https://doi.org/10.1016/j.resconrec.2020.105114

El Idrissi, M. D., Charkaoui, A., & Echchatbi, A. (2020). Multi agent approach for environmental customer collaboration. *International Journal of Advanced Trends in Computer Science and Engineering*. https://doi.org/10.30534/ijatcse/2020/162942020

Kumar Mangla, S., Börühan, G., Ersoy, P., Kazancoglu, Y., & Song, M. (2021). Impact of information hiding on circular food supply chains in business-to-business context. *Journal of Business Research*. https://doi.org/10.1016/j.jbusres.2021.06.013

Li, Q., Kang, Y., Tan, L., & Chen, B. (2020). Modeling formation and operation of collaborative green innovation between manufacturer and supplier: A game theory approach. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12062209

Liu, A., Zhang, Y., Luo, S., & Miao, J. (2020). Dual-channel global closed-loop supply chain network optimization based on random demand and recovery rate. *International Journal of Environmental Research and Public Health*. https://doi.org/10.3390/ijerph17238768

Ma, C. (2020). Comparison of Cooperation Modes in a Two-Period Closed-Loop Supply Chain System considering Green Manufacturing. *Mathematical Problems in Engineering*. https://doi.org/10.1155/2020/9202370

Marusak, A., Sadeghiamirshahidi, N., Krejci, C. C., Mittal, A., Beckwith, S., Cantu, J., … Grimm, J. (2021b). Resilient regional food supply chains and rethinking the way forward: Key takeaways from the COVID-19 pandemic. *Agricultural Systems*. https://doi.org/10.1016/j.agsy.2021.103101

Papa, A., Mazzucchelli, A., Ballestra, L. V., & Usai, A. (2021). The open innovation journey along heterogeneous modes of knowledge-intensive marketing collaborations: A cross-sectional study of innovative firms in Europe. *International Marketing Review*. https://doi.org/10.1108/IMR-03-2021-0109

Di Vaio, A., Palladino, R., Hassan, R., & Escobar, O. (2020). Artificial intelligence and business models in the sustainable development goals perspective: A systematic literature review. *Journal of Business Research*. https://doi.org/10.1016/j.jbusres.2020.08.019

Wakiyama, T., Lenzen, M., Faturay, F., Geschke, A., Malik, A., Fry, J., & Nansai, K. (September 2018). (2019) 'Responsibility for food loss from a regional supply-chain perspective', *Resources. Conservation and Recycling. Elsevier, 146*, 373–383. https://doi.org/10.1016/j.resconrec.2019.04.003

Zhang, F., Chen, J., & Zhu, L. (2021). How Does Environmental Dynamism Impact Green Process Innovation? A Supply Chain Cooperation Perspective. *IEEE Transactions on Engineering Management*, 1–14. https://doi.org/10.1109/TEM.2020.3046711

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