

Sustainable supply chain management in a global context: the perspective of emerging economy suppliers

Sustainable supply chain management

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Abstract

Purpose – This paper aims to investigate how the extant literature on sustainable supply chain management (SSCM) empirically explores the perspective of emerging economy suppliers operating in global supply chains (GSCs). It thereby explains the role of emerging economy suppliers in determining the success of SSCM.

Design/methodology/approach – A systematic literature review of 41 empirical papers (published between 2007 and 2021) was conducted, involving both descriptive and thematic analyses.

Findings – The findings demonstrate that emerging economy suppliers have a key role in SSCM, given their use of positive feedback loops to proactively create remedies to surpass barriers using their collaboration mechanisms, and exploit authentic sustainability outcomes as reinforcements to drive further sustainability initiatives. The authors also demonstrate that suppliers are particularly focused on the cultural and institutional dimensions of sustainability. Finally, the authors provide an explanatory analytical framework to reduce the institutional distance between buyers and their global suppliers.

Research limitations/implications – This review identifies avenues for future research on the role of emerging economy suppliers in SSCM.



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Practical implications – Recognising remedies to surpass barriers and reinforcements to drive new actions can aid SSCM in GSCs and improve understanding between buyers and suppliers.

Social implications – The valorisation of cultural and institutional issues can lead to more responsible supplier interactions and improved sustainability outcomes in emerging economies.

Originality/value – This review only analyses the viewpoint of emerging economy suppliers, whereas prior SSCM reviews have focused on the buyer perspective. Thus, the authors reduce supplier invisibility and institutional distance between GSC participants.

Keywords Supplier perspective, Global supply chains, Sustainable supply chain management, Emerging economies, Developing economies, Systematic literature review

Paper type Literature review

1. Introduction

Global supply chain (GSC) studies have indicated that the majority of global suppliers are based in emerging economy countries (Koberg & Longoni, 2019; Mani et al., 2018), with these suppliers being responsible for many supply chain activities (Jia et al., 2018; Li et al., 2018; Liu et al., 2019). As sustainable supply chain management (SSCM) refers to managing supply chain flows according to various sustainability goals (Seuring & Müller, 2008), GSCs face specific SSCM-related challenges, including:

- emerging economy suppliers have a high impact on global emissions given that this is linked to the activities of extraction, production and manufacturing (Li et al., 2018);
- the requirements of sustainability are commonly stipulated by buyers from developed countries (Chen & Chen, 2019);
- the context where these suppliers operate contrasts with the context of their buyers (Park et al., 2018; Sancha et al., 2015; Zhu & Sarkis, 2007); and, consequently,
- there is a lack of comprehension from focal companies in developed countries on why some suppliers adopt sustainability initiatives successfully while others do not (Liu et al., 2019).

Hence, it becomes necessary to better understand the role of emerging economy suppliers in SSCM because it continues to be under-researched in the literature (Jia et al., 2018; León-Bravo et al., 2021). Within this context, we understand sustainability initiatives as actions to reduce global issues such as climate change, poverty, inequality and environmental degradation, as well as to promote peace and justice (United Nations, 2023). Specifically, there is a need to understand the perspective of emerging economy suppliers on how and why they implement sustainability initiatives and the factors that impact the success of these initiatives in the context of SSCM.

To develop this understanding of SSCM from the perspective of emerging economy suppliers, we used a systematic literature review method to provide a comprehensive understanding of what has been published to date and identify avenues for future research. This review makes an original contribution to the SSCM literature since prior reviews have either focused on the perspective of the buyer [e.g. Koberg & Longoni (2019), who analyse sustainability in GSCs focusing on governance mechanisms and supply chain configuration] and/or do not distinguish the perspectives being analysed [e.g. Jia, Zuluaga-Cardona, Bailey and Rueda (2018) who analyse SSCM in emerging economies]. In contrast, we focus entirely on the perspective of the emerging economy suppliers and ask the following research questions:

- RQ.* How does the extant literature on SSCM empirically explore the perspective of emerging economy suppliers operating in GSCs? Specifically:

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- (i). *How has this literature evolved?*
- (ii). *How do the main themes in this literature explain the role of emerging economy suppliers in SSCM?*

We justify this focus as the viewpoint of emerging economy suppliers is relevant because:

- they are historically silenced voices (Touboulic, McCarthy, & Matthews, 2020);
- they suffer the main consequences of climate change (Touboulic & McCarthy, 2020); and
- consumers and focal company managers remain broadly apart from these contextual challenges (Touboulic & McCarthy, 2020).

Hence, this research moves the spotlight from buyer companies based in developed countries to suppliers in emerging economy contexts with different needs, institutional environments, cultures and social-economic approaches (Fritz & Silva, 2018).

By focusing on emerging economy suppliers' perspectives, this paper contributes to the literature in three ways. Firstly, to the best of our knowledge, this review is the first to comprehensively understand the need for positive feedback loops for suppliers to either apply remedies to surpass existing barriers or reinforcements to drive new actions. Secondly, this study reveals that the sustainability initiatives of emerging economy suppliers rely on institutional and cultural issues, which deserve further attention from global buyers to increase awareness and change buyer-supplier relationships. And thirdly, our analysis generates an analytical framework that explains the main factors impacting the implementation and effectiveness of sustainability initiatives in GSCs. Understanding these factors may reduce the distance between buyers and suppliers, which influences SSCM (Busse, 2016) and otherwise causes misunderstandings and operational difficulties (Jia & Zsidisin, 2014).

This analytical framework summarises and explains how suppliers see their role in the context of SSCM in GSCs, and demonstrates that emerging economy suppliers play a vital role in the success of SSCM. Specifically, it illustrates how they perceive drivers, mechanisms and barriers together with remedies and reinforcements to impact the outcomes of their sustainability initiatives. In addition to our main contributions, throughout our analysis of the extant literature, we also highlight specific further avenues of research. Our analytical framework can be used to guide scholars in these further endeavours.

2. Theoretical background

In recent years, interest in SSCM has increased, especially concerning developing and emerging economy countries (Jia et al., 2018; Silva, Fritz, & Nunes, 2017). However, despite this growth, as mentioned by Pagell & Shevchenko (2014, p.1), "our present knowledge is not sufficient to create truly sustainable supply chains". Therefore, rather than simply considering the triple bottom line (TBL; Elkington, 2004), i.e. economic, environmental and social issues in SSCM (Seuring & Müller, 2008), there is a need to include other issues closely related to emerging/developing economies (León-Bravo et al., 2021). Therefore, this study explores an extended TBL concept (so-called TBL+) including five dimensions:

- (1) economic;
- (2) social;
- (3) environmental;

- (4) cultural; and
- (5) institutional (Fritz & Silva, 2018).

Each TBL+ dimension is described below:

- *Economic sustainability* refers to the ability of organisations to generate positive financial/economic results (i.e. have capital flow and produce a constant long-term return) and promote economic growth/development (Magon et al., 2018; Vachon & Mao, 2008);
- *Social sustainability* refers to how organisations act to promote health and safety, support equality and workforce's well-being and generate people's skills and capabilities to reach the needs of current and future generations by caring about individuals, local community and social development beyond companies' boundaries (McKenzie, 2004; Stiglitz et al., 2010; Vachon & Mao, 2008);
- *Environmental sustainability* involves the rational and planned use of renewable and non-renewable natural resources by companies seeking to sustain global life-support systems (i.e. reducing consumption of natural resources and preferring natural regeneration, as in Goodland, 1995; Vachon & Mao, 2008);
- *Cultural sustainability* relates to concepts, values and language used to support solutions for environmental and social problems (Soini & Birkeland, 2014). This may include established traditions (e.g., indigenous ancestral practices) and local shared beliefs and values (Fritz & Silva, 2018; León-Bravo et al., 2021; Silva et al., 2021); and
- *Institutional sustainability* refers to support of sustainability policies to help organisational decision-making to balance economic, social and environmental interests (Pfahl, 2005). It also refers to regulatory and economic stability, the effectiveness of policy frameworks and the level of informality and corruption (Fritz & Silva, 2018; Hoskisson, Eden, Lau, & Wright, 2000; Silva, Silvestre, Ponte, & Cabral, 2021; Silvestre, 2015; Silvestre, Silva, Cormack, & Thome, 2020; Wright, Filatotchev, Hoskisson, & Peng, 2005; Wu & Jia, 2018).

The use of TBL+ as a framework of analysis is necessary due to the complexity attached to GSCs that comprise companies from diverse countries with differences in size, resources, profitability and bargaining power (Agyemang et al., 2018; Awasthi et al., 2018). In addition, managing sustainability in GSCs is more challenging than in local supply chains due to the peculiarities of countries and the more significant number of stakeholders involved (Agyemang et al., 2018; Awasthi et al., 2018; Koberg & Longoni, 2019). Despite the complexities of this context, companies still need to identify, evaluate and manage impacts and risks related to sustainability throughout the supply chain (Awasthi et al., 2018; Muñoz-Torres et al., 2018). This is essential in modern globalised markets, given that sustainability is increasingly becoming an important competitive advantage (Agyemang et al., 2018; Morais & Silvestre, 2018). Therefore, when crossing country borders, GSCs need to effectively inspire suppliers from emerging economies to adopt their sustainability priorities (Morais & Silvestre, 2018; Muñoz-Torres et al., 2018).

The relationship between SSCM and country development has been raised as an important issue for conducting research and better understanding how sustainability has been managed in emerging economies (Awasthi et al., 2018; Fritz & Silva, 2018; Jia et al., 2018; Silva et al., 2021). The role of suppliers is crucial to disseminate sustainability throughout GSCs (Azimifard et al., 2018; Guarnieri & Trojan, 2019). Therefore, identifying

supplier roles helps to better understand their reality and manage their engagement and reciprocity for sustainability in GSCs (Soundararajan & Brammer, 2018). This can avoid an excessive focus on assessing them and lead to new strategic relationships with these key partners through collaboration (Koberg & Longoni, 2019). Nevertheless, the previous literature on sustainability in GSCs that has focused on the mechanisms that lead to sustainability practices in emerging economy countries indicates that the main driver for companies in this context is the pressures by key stakeholders, mainly buyers, that assess suppliers using national and international standards, as well as certification rules (Jia et al., 2018). Thus, collaboration is less common in the research to date (Jia et al., 2018). However, where vertical/horizontal collaboration has been adopted as a mechanism for implementing SSCM initiatives, this has led to higher levels of sustainability-related performance (Jia et al., 2018; Koberg & Longoni, 2019). Therefore, collaboration among supply chain partners can facilitate important sustainability issues such as addressing the global problem of modern slavery in the supply chain (Benstead et al., 2018); reduce auditing/monitoring of supplier activities; and reduce costs and enable innovation (Yawar & Seuring, 2017). However, this type of global collaboration requires each partner to understand the context of all other parties.

Research to understand the context of companies in emerging economy countries has indicated that acting sustainably in GSCs can be a challenge mainly because their operational context has more barriers compared to developed countries (Awasthi et al., 2018; Jia et al., 2018; Liu et al., 2019; Park et al., 2018). These obstacles, also named *institutional voids*, include a lack or weak existence of institutions in terms of infrastructure, market instability, social inequalities and informality (Silva et al., 2021; Silvestre, 2015; Tanco et al., 2018). Institutional voids can affect companies' strategies and businesses due to their relevance for emerging/developing economies (Khanna & Palepu, 1997; Silvestre, 2015). Internally, these companies also face barriers related to weak organisational culture, lack of knowledge and lack of top-level management commitment to sustainability (Agyemang et al., 2018). Despite these barriers, suppliers in emerging economies have adopted sustainability initiatives, and, consequently, buyer and supplier sustainability performance has improved (Jia et al., 2018; Koberg & Longoni, 2019). In particular, suppliers have benefited through knowledge/technology from their international buyers (Jia et al., 2018; Liu et al., 2019) and built competencies enabling sustainability improvement for the entire GSC (Pereira et al., 2023). Thus, when buyers have obtained knowledge regarding their suppliers' local context, this facilitates the alignment of sustainability goals (Koberg & Longoni, 2019; León-Bravo et al., 2021). In addition, Jia et al. (2018) evidenced positive outcomes linked to improvement of operational practices and company reputation. Nonetheless, Jia et al. (2018) also argue that outcomes from sustainability initiatives remain under-researched in the literature, particularly those obtained by suppliers from emerging economy countries.

Some scholars argue that the studies that do investigate supplier sustainability have done so mainly from a buyer's perspective (Jia et al., 2018), and the specific literature about supplier sustainability predominantly relates to their selection and assessment by buyers (Kellner & Utz, 2019; Koberg & Longoni, 2019). This literature has, therefore, considered mainly North-Western domestic problems and not global challenges/barriers (Park et al., 2018), with a need for systematic analysis regarding the context of emerging economy suppliers' sustainability initiatives (Liu et al., 2019). Therefore, a gap exists in identifying how local information surrounding global suppliers could help make better decisions regarding SSCM in GSCs (Park et al., 2018). In particular, research from emerging economy suppliers' perspectives can support GSC managers and scholars in reducing the distance between buyers and suppliers. It is timely, therefore, to take stock of the current literature

understanding the perspective of emerging economy suppliers on SSCM as a guide for further empirical studies and to identify the critical gaps in our current understanding. To this end, this paper investigates this current understanding in detail using a systematic literature review and identifies avenues for further research, as described below.

3. Research method

To address the research questions, we used a systematic literature review method. This method is appropriate to the research aims as it enables a state-of-the-art analysis of extant studies in the emerging research area being investigated here by integrating the findings of all relevant articles collected in a specified manner (Seuring & Gold, 2012). This systematic review was undertaken using the following four-step process proposed by Seuring & Gold (2012):

- (1) material collection;
- (2) descriptive analysis;
- (3) category identification; and
- (4) material evaluation, as described below.

3.1 Material collection

Three databases were used to search for relevant articles: the Web of Science (WoS), Scopus and Ebsco. WoS was selected because it is one of the leading research databases in the international context and has a long-standing reputation in business literature (Dahlander & Gann, 2010). Scopus was chosen because it contains many articles from engineering studies (Siva et al., 2016) and, therefore, has the potential to identify articles relating to production and operations management. In addition, Ebsco was used to amplify the search further. The searches within these databases were unrestricted in terms of academic discipline, journals or dates of publication. The only general criteria used as filters were that the papers were classified as peer-reviewed articles and written in English. Although the searches did not restrict the publication date, the first paper appeared in 2007, with publications covering a period of 15 years, using the keywords:

- “supply chain*” AND
- “supplier*” AND
- “sustainab*” AND
- “developing countr*” OR “developing econom*” OR “emerging econom*” OR “emerging countr*” OR “global” OR “international” OR “export-oriented”.

A total of 41 (out of 521) articles were selected for detailed analysis. The criteria for exclusion at this point were: triplicate/duplicate papers in the searches due to the multiple combinations of keywords (256 out of 521) and fit of the paper to the research focus [i.e. the context that the study explores (Tranfield, Denyer, & Smart, 2003); 161 out of 265]. To better refine the theoretical framework in supply chain management reviews, it is crucial to analyse beyond the title and abstract (Durach et al., 2017). Thus, the abstract, introduction, research method and conclusion were evaluated to verify if the study data were obtained from the point of view of suppliers from emerging economy countries acting in GSCs. Furthermore, given that this research aim is to identify previous studies that gave voice to suppliers, we also analysed how the data was collected (e.g. interviews or questionnaires; Tranfield et al., 2003), ensuring that the suppliers themselves had provided the data and that they had been asked about their sustainability initiatives. Thus, other papers were excluded

because they (i) considered the buyers' perspective about their suppliers' sustainability initiatives (22); (ii) developed secondary data analysis (11) due to the lack of assurance of deeper investigation using the perspective of suppliers. This criterion relates to the aspect of research intervention suggested by Popay et al. (2006); (iii) analysed local supply chains instead of GSCs (4); (iv) analysed suppliers using data from both developed and emerging economies altogether (11); (v) were focused on mathematical modelling (9); or (vi) were developed as theoretical articles (6).

3.2 Descriptive analysis

To start the analysis, we first mapped the main characteristics of the articles, such as the evolution of publications over time and the journals in which they were published (Seuring & Gold, 2012). The following information was also, thus, identified and described: country of study (Jia et al., 2018), sector analysed (Zorzini et al., 2015), main contributions of study (Jia et al., 2018), data collection technique (Bossle et al., 2016), type of sustainability dimension studied (Touboulic & Walker, 2015) and theory used to support the study (Zorzini, Hendry, Hug, & Stevenson, 2015). In terms of sustainability, at this stage, the TBL dimensions (Elkington, 2004) were adopted as this has been the main approach adopted in the SSCM literature to date (Touboulic & Walker, 2015).

3.3 Category identification for thematic analysis

The main analysis was developed through deductive and inductive approaches using content analysis (Mayring, 2000; Seuring & Gold, 2012). As shown in Table 1, we used

Category of analysis	Definition	References
<i>Deductive categories</i>		
Internal drivers	Internal factors that motivate companies to engage in sustainable initiatives	Pagell and Wu (2009), Thong and Wong (2018)
External drivers	External factors that motivate or pressure companies to have sustainable initiatives	Thong and Wong (2018); Walker, Di Sisto and McBain (2008)
Mechanisms	Methods or approaches to ensure that companies are acting sustainably or strengthening their sustainability initiatives	Jia et al. (2018)
Internal barriers	Difficulties inherent to the companies regarding the adoption of sustainability	Busse et al. (2016); Walker et al. (2008)
External barriers	Difficulties related to the environment in which companies operate that impede their sustainability initiatives	Busse et al. (2016); Sajjad, Eweje and Tappin (2015); Walker et al. (2008)
Outcomes	Results obtained from sustainable performance according to triple bottom line plus dimensions (TBL+)	Fritz and Silva (2018)
<i>Inductive categories</i>		
Remedies	Strategies used by suppliers to reduce or overcome the effects of barriers	Busse et al. (2016)
Reinforcement	Actions resulting from outcomes providing feedback that incentivises continuity or improvement of sustainability initiatives (reinforcing the drivers)	Liu, Zhang and Ye (2019); Pagell and Wu (2009), Thong and Wong (2018)

Source: Table by authors

Table 1. Categories of analysis and respective definitions

multiple definitions to conduct a deductive encoding process (Simsek et al., 2021) according to four themes of analysis:

- (1) drivers;
- (2) barriers;
- (3) mechanisms; and
- (4) outcomes.

To better represent the main themes found in the papers analysed, we divided both drivers and barriers into two sub-themes: *internal* and *external* (Busse et al., 2016; Thong & Wong, 2018). In addition, the outcomes from sustainability initiatives were classified according to the TBL+ approach (Fritz & Silva, 2018), given that these additional themes (i.e. cultural and institutional) emerged during content analysis. Two other themes emerged from the inductive analysis but were also connected to the extant literature: *remedies* and *reinforcement*. The theme *remedies* first emerged from one of the analysed papers – Busse, Schleper, Niu & Wagner (2016). *Reinforcements* were also added to show a more dynamic process, as the analysis suggested that some suppliers had implemented more sustainability initiatives due to positive outcomes from prior sustainability initiatives (Thong & Wong, 2018).

3.4 Material evaluation

The final list of papers analysed was organised in an Excel file, facilitating the findings' transparency (Seuring & Gold, 2012). The detailed list and results are available upon request. The main findings within each theme are defined as those evidenced at least three times in the sample of articles, thus, providing triangulation of evidence. Concerning internal validation, several rounds of analysis and categorisation were undertaken to ensure that all information presented in the selected articles was included. To ensure external validity, we presented the analysis results at an international conference on sustainable operations and supply chains so that other researchers and practitioners could both assess and comment on the review, as suggested by Seuring & Müller (2008).

4. Findings

This section presents the main results of the systematic literature review. Firstly, RQ(i) is addressed in sub-section 4.1 below with a descriptive presentation of the evolution of the publications. In addition, RQ(ii) is addressed in sub-section 4.2 (i.e. thematic analysis) to demonstrate all existing SSCM themes from a supplier perspective.

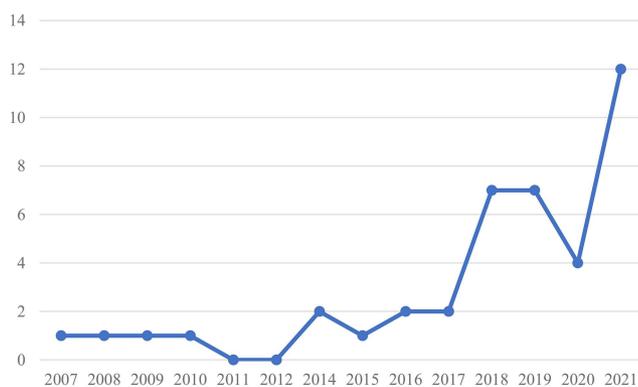
4.1 Descriptive analysis

To address the evolution of the literature, Figure 1 illustrates the recent growth in the number of publications per year. While the earliest article identified was published in 2007, most papers were published between 2018 and 2021, demonstrating this literature review's timeliness.

These publications were identified in a range of 24 different journals (Table 2), with the highest number of articles published in the Journal of Cleaner Production (5), International Journal of Production Economics (4), International Journal of Physical Distribution and Logistics Management (3), Journal of Business Ethics (3) and Supply Chain Management: An International Journal (3). For the majority of the journals, only one publication was identified, indicating that various journals (e.g. agroecology and sociology) have published

research relevant to this review. Therefore, this demonstrates that SSCM research is not limited to specific disciplines and may take a multi-disciplinary approach.

Regarding additional details about these publications, the Supplementary Table summarises further information for the sample. Nevertheless, it is important to highlight the countries and sectors of the suppliers identified in the analysis. Concerning countries, the suppliers studied were mostly located in Asia (30) in comparison to Latin America (7) and



Source: Figure by authors

Figure 1.
Evolution of publications over years

Journal	No. of articles
<i>Journal of Cleaner Production</i>	5
<i>International Journal of Production Economics</i>	4
<i>International Journal of Physical Distribution and Logistics Management</i>	3
<i>Journal of Business Ethics</i>	3
<i>Supply Chain Management: An International Journal</i>	3
<i>International Journal of Production Research</i>	2
<i>Journal of Operations Management</i>	2
<i>Sustainability</i>	2
<i>Social Responsibility Journal</i>	2
<i>Agroecology and Sustainable Food Systems</i>	1
<i>Clothing and Textiles Research Journal</i>	1
<i>Cogent Business and Management</i>	1
<i>Corporate Governance: The International Journal of Business in Society</i>	1
<i>International Journal of Operations and Production Management</i>	1
<i>International Journal of Sustainable Engineering</i>	1
<i>International Business Review</i>	1
<i>Journal of Agribusiness in Developing and Emerging Economies</i>	1
<i>Journal of Business Logistics</i>	1
<i>Journal of International Food and Agribusiness Marketing</i>	1
<i>Latin American Business Review</i>	1
<i>Progress in Industrial Ecology: An International Journal</i>	1
<i>Production and Operations Management Society</i>	1
<i>Rural Sociology</i>	1
<i>Sustainable Development</i>	1

Source: Table by authors

Table 2.
Distribution of articles in journals

Africa (4). Furthermore, an evolution was identified in our sample because, in the first years (2007–2014), only six papers were published [Asia (3), Latin America (2) and Africa (1)]. The second half of the sample (2015–2021) shows 35 publications, including Asia (27), Latin America (5) and Africa (2). Concerning sectors, the articles were based on studies of companies operating in a variety of sectors, but mainly in the clothing (14) and food (13) industries. In addition, some articles (8) analysed multiple industries in the same research.

In terms of sustainability dimensions, the extant literature highlights the scarcity of studies that investigate the social dimension in SSCM research (Silva et al., 2017; Allaoui et al., 2018); however, in this review, we have found that most of the articles studied social aspects either in isolation or linked to other TBL dimensions (see Supplementary Table). Thus, the review shows a shift of emphasis when studying a supplier perspective compared to prior reviews (mainly from a buyers perspective) that concluded that environmental and/or economic issues are more commonly studied (Seuring & Müller, 2008). This finding is significant given that these studies concern companies in emerging economies where social problems are more commonplace, and there is a lack of qualified workers (Silvestre, 2015). Furthermore, it acknowledges the importance of social sustainability in supply chains, which will later (sub-section 4.2) be aligned with institutional and cultural issues (Fritz & Silva, 2018). This result highlights one of the potential reasons to explain the distance between developed country buyers and emerging economy suppliers as it illustrates that sustainability management has a greater emphasis on additional sustainability elements (i.e. cultural and institutional dimensions). These findings indicate that in emerging economies, SSCM is very linked to local development and improvement of social conditions.

4.2 Thematic analysis

In answer to the second research question, the analysis below focuses on the following six main themes:

- (1) internal and external drivers;
- (2) mechanisms of sustainable action;
- (3) internal and external barriers evidenced in this context;
- (4) remedies (i.e. strategies to surpass barriers);
- (5) the main outcomes of sustainable action; and
- (6) reinforcements to drive new actions.

The overview of papers can be checked in the Supplementary Table.

4.2.1 External and internal drivers. The main *external drivers* identified in our analysis were buyers' stipulating requirements, pressures by stakeholders and local government regulations (see details in the Supplementary Table). Buyer's stipulated requirements included certification adoption in 11 articles. In the further pursuit of buyer stipulated requirements, some studies emphasised the importance of suppliers participating in the establishment of SC sustainability strategies (Paper 21; Paper 22). However, the suppliers' perception of justice prevented them from understanding buyer requirements as a motivation to be more sustainable (Paper 21). When they do not fully understand the targets for these requirements and how they can benefit from them, they consider such requirements unfair. Pressures by the local community, NGOs/other stakeholders were evidenced as a result of tragedies or instances of slave labour gaining prominence in the media (Paper 28; Paper 13).

The main *internal drivers* identified were organisational strategic orientation towards sustainability, improvement of competitiveness and top management commitment to sustainability goals (see details in the Supplementary Table). For example, companies in the clothing industry in Vietnam experienced increased social sustainability awareness after the Rana Plaza incident in Bangladesh in 2013 (Paper 13). Thus, a new organisational strategic orientation emerged as a consequence of this social tragedy, as it pushed them to act more sustainably. Furthermore, the importance of sustainability goals was also found in the coffee producer context, as their internal aim for adopting certifications was to increase company learning (Paper 23). Thus, we found some internal and external drivers, which were inherently linked to each other, given that internal changes towards their implementation of sustainability initiatives were often motivated by external events.

The drivers evidenced above are similar to those presented by [Jia et al. \(2018\)](#); however, new insights were identified due to our focus on the supplier perspective. For example, national regulations strongly affected suppliers and acted as an additional driver. Scholars argue that in emerging economies the national governmental laws on environmental impact and labour rights are less strict and lack regulatory enforcement ([Morais & Silvestre, 2018](#); [Silva et al., 2021](#); [Silvestre, 2015](#)). However, from the suppliers' perspective, we conclude that local government regulations act as regulatory pressure. Therefore, future research is needed to understand how, when and why local regulation drives emerging economy suppliers to adopt more sustainability initiatives.

4.2.2 Mechanisms. Mechanisms refer to how suppliers act sustainably (see the Supplementary Table). Suppliers commonly adopted three mechanisms:

- (1) collaboration with SC members and other stakeholders such as universities, research centres and NGOs;
- (2) sustainability certifications programmes; and
- (3) other formal governance mechanisms.

In some cases, all three mechanisms were studied together since they have close connections. Sustainability certification programmes were spotted in this review as an action to access developed country markets (Paper 4; Paper 23; Paper 9; Paper 11; Paper 3; Paper 13; Paper 35, Paper 36; and Paper 41). For example, Paper 9, studying Mexican suppliers, evidenced that export-oriented businesses need to implement sustainability certification programmes because not having certifications can hinder market entry. Paper 35 and Paper 23 evidenced the relevance of these certification programmes as guides for implementing sustainability initiatives. Most papers scanned suggest that suppliers believe that certification programmes are the primary tool to act sustainably, which also links with how buyers evaluate them (Paper 4; Paper 23; Paper 28; Paper 13; Paper 24; and Paper 9).

Research has also shown that this sustainability certification programme mechanism is often linked to collaboration, as it is often how suppliers learn (Paper 35, Paper 36). Hence, the collaboration that leads to successful accreditation has been an important mechanism for suppliers to ensure that their sustainability initiatives are acceptable to their buyers (Paper 7; Paper 12). In addition, training and raising the awareness of employees towards sustainability has been shown to be a key means of changing employee culture (Paper 25) as well as being a requirement of certifications (Paper 13).

Other formal governance mechanisms were identified to enable sustainability (e.g. Nespresso AAA programme of sustainable quality studied in Paper 4), which stipulate buyer requirements that suppliers need to follow to improve the supply chain relationship and strengthen trust and transparency throughout the supply chain. In addition, the

analysed studies revealed the importance of non-traditional supply chain actors (i.e. NGOs, research centres and universities) to support supplier sustainability initiatives as these actors help to strengthen the supply chain relationships. Thus, a better understanding of the role of these non-traditional supply chain actors in emerging economy suppliers' sustainability is required. Sometimes, these governance mechanisms start informally and later become formal to strengthen the relationships between organisations (Paper 4), and, in some cases, these mechanisms are guided by certifications and go on to further improve management/efficiency (Paper 23; Paper 36; Paper 37).

Other studies consider mechanisms to include the assessment/involvement of sub-suppliers (Paper 29; Paper 31; Paper 32; and Paper 41). Thus, this review emphasises the need to study sustainability beyond the first tier to diffuse sustainability initiatives in other supply chain tiers. Based on these findings, future research needs to investigate when and how emerging economy suppliers use these mechanisms and how this affects sustainability in GSCs. For instance, this focus on sub-supplier involvement with sustainability actions provides a multi-tier perspective on GSCs to discover when suppliers disseminate sustainability. The use of these mechanisms reveals new approaches for GSCs in which buyers are not only concerned about certification requirements, but also identify how their suppliers change their sustainability initiatives.

4.2.3 Barriers. Barriers were categorised into *internal* and *external* barriers (see details in the Supplementary Table). Firstly, lack of manager knowledge was the main *internal barrier* evidenced. This barrier weakened buyer–supplier relationships and affected the suppliers' reputation regarding sustainability (Paper 13). Secondly, non-monetary costs, such as changing mentalities and cultures, can also act as an internal barrier to change (Paper 2 and Paper 5). Thirdly, financial constraints act as internal barriers, occurring when sustainability-related adaptations/improvements demand high investments and suppliers do not receive additional payment for making these changes (Paper 5 and Paper 11). For example, the transition to organic production by South African grape and wine producers was costly due to a lack of knowledge leading to a gradual implementation through trial and error (Paper 1), acting as a long-term investment for which there was no immediate payback.

In terms of *external barriers*, the contextual differences between buyers and suppliers (Silva et al., 2021; Silvestre, 2015) were evidenced in a significant number of studies. These differences included institutional and cultural settings that impact supplier operations (Silva et al., 2021). In particular, some studies suggest that suppliers have complained that a lack of buyers' understanding of these differences leads buyers to impose sustainability requirements that do not correspond to the suppliers' context. For example, supplier managers have been found to argue that their employees want to do overtime to gain additional payments, but this contravenes certification/buyer rules on the number of hours of overtime allowed per day (Paper 5). In addition, Paper 8 and Paper 13 signalled that linguistic, geographical and cultural differences between buyers and suppliers could disrupt the negotiation process and working practices. For example, Paper 8 suggests that linguistic distance affects communication leading to inefficiencies in transmitting messages and loss of meaning. Their evidence indicates that supplier managers often prefer to send emails rather than have calls due to difficulties using buyer languages. Hence, sustainability efforts in supply chains may be hampered by misunderstandings.

Another external barrier identified was the sustainability requirements imposed by buyers. Although we often find these requirements in the literature as drivers for sustainability (see Berardi & Brito, 2015), in our analysis, they were also identified as barriers in multiple articles because of the imposition element. For example, Paper 21 evidenced that when focal buyers simply impose codes of conduct for their suppliers

without supporting them or asking for suppliers' commitment, these codes/standards act only as a wish list. Thus, the authors of Paper 21 evidenced buyer's imposition of a code of conduct as an obstacle to supplier engagement with sustainability. This confirms that some requirements can work as barriers because they are not connecting buyers and suppliers properly, suppliers do not understand how to achieve these requirements or they are not achievable in some emerging economy contexts.

Weak national legislation and poor oversight in emerging economies acts as a barrier to supplier sustainability initiatives (Paper 19; Paper 32; and Paper 31). Lack of government support was also evidenced as a barrier in some studies, with Paper 17 concluding that supportive government tactics are more effective than punitive tactics. Local corruption was evidenced as an additional barrier to supplier sustainability because the outcome of government inspections is commonly influenced by bribes (Paper 5). Hence, suppliers have avoided the consequences of breaking the law through corruption (Paper 13). These barriers are very closely related to the institutional voids presented in Section 2, which influence the dynamic of GSCs.

In summary, this research presents the following additional items to the literature in terms of barriers faced by emerging economy suppliers:

- contextual differences between buyers and suppliers;
- unsupported sustainability requirements imposed by buyers; and
- non-monetary costs of training/monitoring of changes.

Our study, therefore, provides a fuller understanding of the barriers faced by suppliers in emerging economy countries. Recognising these barriers becomes important as it enables companies to develop strategies to overcome them and to consider the role of various stakeholders and other supply chain agents in improving SSCM (Jia et al., 2018). Thus, future research should explore how buyers can support emerging economy suppliers to face these barriers to improve the supply chain's sustainability.

4.2.4 Outcomes. The analysis of positive outcomes was developed according to the TBL+ perspective as follows:

Economic sustainability relates to some specificities of certification programmes triggering economic outcomes. For instance, supplier power to decide product prices was evidenced only when products were differentiated, such as by being organic (Paper 1; Paper 23). These outcomes are linked to the abovementioned barrier because most suppliers cannot take this decision as buyers require certifications/standards and stipulate the price to pay for products.

Social sustainability outcomes were highlighted as they were associated with improving employee well-being (Paper 1, Paper 2, Paper 5, Paper 6, Paper 13, Paper 34 and Paper 41). For instance, suppliers indicated reduced absenteeism and employee turnover, which led to reduced workforce-related costs (Paper 2).

Environmental sustainability impacted supplier operations because these outcomes are related to reducing the use of natural resources within their production processes (Paper 3, Paper 7 and Paper 12). In addition, an outcome identified that related directly to the agriculture sector was the improvement in water and soil use (Paper 12 and Paper 3).

Cultural sustainability aspects were identified in terms of how increased sustainability understanding and awareness of managers and employees now influence the company daily operations (Fritz & Silva, 2018). For example, Paper 13 evidenced changes in the concepts applied in the SC processes as a result of worker sustainability training – for example, leading to improvements in buyer/supplier communication and a reduction of tensions due

to their different cultural settings. In addition, Paper 7 found improvements in worker awareness and perception of the link between food safety and sustainability. This affected the shared beliefs and values.

Institutional sustainability outcomes were discussed in a considerable number of papers in terms of the institutional environment elements affecting business processes (Paper 1, Paper 2, Paper 5, Paper 7, Paper 10, Paper 13, Paper 14, Paper 15, Paper 19, Paper 22, Paper 23 and Paper 36). Particularly, some papers showed that suppliers gained a better reputation for tackling poor quality policy frameworks as a result of these suppliers gaining visibility, legitimacy and reliability in doing business due to certifications (Paper 23 and Paper 13). Buyers feel more secure regarding supplier performance and the quality of processes and products when they have these governance mechanisms (Paper 7 and Paper 5). Institutional outcomes have been vital in terms of GSCs sustainability management.

These findings increase our understanding of the advantages of SSCM since they do not focus on economic, social and environmental dimensions alone but also include cultural and institutional outcomes (Fritz & Silva, 2018). Previous literature argued for the need for outcomes beyond the traditional TBL (Silva et al., 2021; Silvestre, 2015; Wu & Jia, 2018) for SSCM. Our study particularly reveals how sustainability dimensions have been crucial for emerging economy suppliers and their positive contribution to generating reinforcement feedback (sub-section 4.2.6). In particular, this review shows that the literature suggests that within an emerging economy context, institutional outcomes include improved supplier organisational processes leading to improved reputation in the international market/GSC. Thus, future research should further explore suppliers' and sub-suppliers' institutional and cultural dimensions to understand how they act sustainably according to these dimensions and the resulting outcomes.

4.2.5 Remedies. In contrast to other reviews, we identified the existence of remedies as positive feedback actions developed by companies to create strategies to surpass barriers related to their sustainability initiatives. These remedies were classified as strengthening of partnerships, close communication with other suppliers and intensification of sustainability knowledge sharing. Remedies are consciously planned management efforts to mitigate obstructive effects associated with one or more barriers (Paper 8). They represent internal planning on surpassing barriers and becoming more sustainable based on their needs and lack of knowledge. Remedies are commonly developed by suppliers without the influence of buyers (i.e. they are actions to remedy supplier losses or weaknesses). Thus, by analysing the papers, we found that when emerging economy suppliers face barriers (mainly a lack of sustainability knowledge to achieve buyer/certification/legislation requirements), these remedies were applied: strengthening of partnerships (Paper 2, Paper 8, Paper 10, Paper 22, Paper 35 and Paper 36), close communication with other suppliers (Paper 19, Paper 7, Paper 35 and Paper 36) and intensification of sustainability knowledge sharing (Paper 7, Paper 10, Paper 12, Paper 19, Paper 35 and Paper 36).

Remedies involve, therefore, a localised way to solve problems. For example, partnerships with local research institutions support actions for sustainability (Paper 35 and Paper 36). Specifically, Paper 36 identified strong horizontal collaboration among supplier members of a cooperative developed through partnerships with universities, research institutions and NGOs. This remedy was used to surpass barriers, such as lack of knowledge, sustainability requirements imposed by buyers and to reduce contextual differences. In this sense, the stronger inter-organisational relationship contributed to reducing structural inefficiencies along supply chains (Paper 12 and Paper 40) and protected relationship-specific investments (Paper 8 and Paper 22).

Analysing remedies emerged as an important contribution of our review. It demonstrates the need for further analysis of these remedies to better understand how suppliers and sub-suppliers in emerging economies have faced and mitigated barriers to sustainability. This perspective demonstrates a clear recognition of bottom-up actions from suppliers towards GSC activities. Future studies could address remedies in specific sectors and relate barriers to specific supplier strategies to overcome them worldwide. For example, further studies could support a greater understanding of strategic remedies that reduce the distance between buyers and suppliers and reduce institutional voids, that is, conditions that challenge the management of supply chains in emerging economies in terms of lack of infrastructure, social inequalities, corruption etc. (Wu & Jia, 2018; Silvestre, 2015). Given that the existence of institutional voids hampers the development of sustainability initiatives, such research has the potential to have a powerful impact on the field of SSCM.

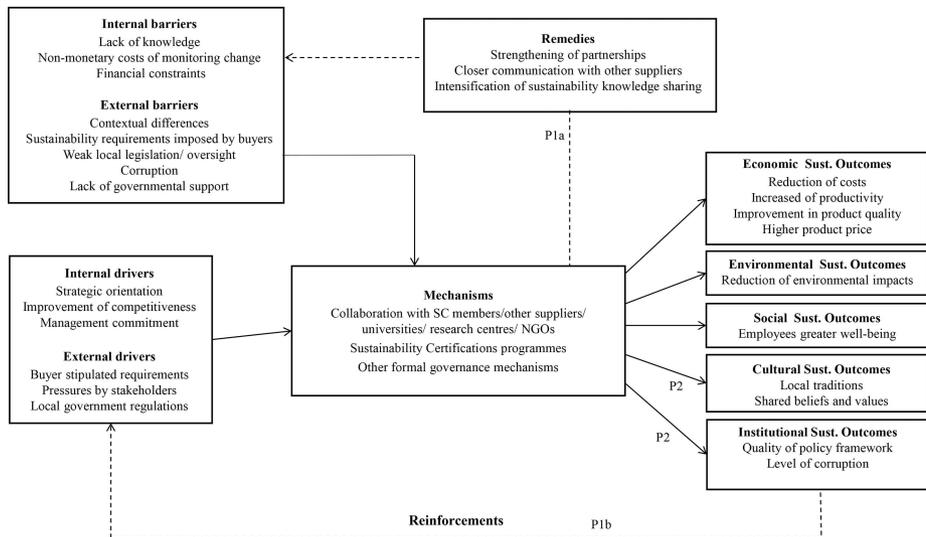
4.2.6 Reinforcements: outcomes as new drivers. Other positive feedback actions are related to reinforcements. The findings indicate that feedback resulting from suppliers' sustainability outcomes acts as a motivating factor to reinforce or further develop sustainability drivers. This happens because when suppliers receive positive outcomes from their sustainability initiatives, this reinforces/drives them to make further sustainability-related changes. For instance, the evidenced outcomes can generate improvements in processes that turn into new drivers (e.g. reduced losses resulting from collaboration lead to strengthening this collaboration) for more sustainability initiatives (Paper 12 and Paper 17). In addition, Paper 21 found that when buyers recompense suppliers for their sustainability outcomes, this reinforces new drivers for their sustainability initiatives. The authors of Paper 21 also found that suppliers were motivated by their positive perception regarding justice and rewards associated with their relationship with buyers. Finally, continuous improvement projects also acted as new drivers for sustainability because companies aimed at further improving their scores on certification programmes (Paper 23).

Identifying feedback as reinforcements for new drivers for sustainability initiatives provides a more dynamic interaction between factors related to emerging economy suppliers. Further studies should investigate the flow of information to understand a more dynamic interaction between reinforcements and drivers, especially to identify nuances related to internal and external drivers for SSCM.

5. Discussion

The findings above explain how the literature on SSCM from the perspective of emerging economy global suppliers has evolved over time – this is an important contribution as it responds to several calls to better understand SSCM from the perspective of these suppliers (León-Bravo et al., 2021). To open doors for future research based on our review, we propose the framework below, which links the factors affecting the sustainability initiatives of emerging economy global suppliers (Figure 2). This analytical framework revealed drivers, barriers and mechanisms aligned with the existing literature on GCSs and with prior SSCM literature reviews from the perspective of developed countries (Jia et al., 2018; Koberg & Longoni, 2019); however, we make three additional theoretical contributions to the literature as a result of our thematic analysis. Firstly, to the best of our knowledge, this is the first review to explain how emerging economy suppliers exploit positive feedback loops in the context of their sustainability initiatives. Secondly, we explain how institutional and cultural issues impact the role of emerging economy suppliers involved in SSCM. Thirdly, we contribute by explaining the extant literature understanding of the perception of emerging economy suppliers on their SSCM role, which can aid in reducing the institutional distance between these suppliers and their buyers in GSCs.

Figure 2.
Linking the factors
impacting the
sustainability
initiatives of
emerging economy
suppliers



Source: Figure by authors

Our findings suggest that emerging economy global suppliers have developed positive feedback actions in the context of their sustainability initiatives. These positive feedback actions were either related to *remedies* to overcome the effects of existing barriers or *reinforcements* that exploited sustainability outcomes to support new drivers for sustainability initiatives (Figure 2). These results refer to our first theoretical contribution, as we systematically show the relevance of remedies and reinforcement as suppliers' positive feedback actions to act towards SSCM. During the analysis of our sample, on the one hand, remedies emerged to represent the ability of suppliers to surpass their difficulties to operate sustainably (Benstead et al., 2018; Jia et al., 2018; Koberg & Longoni, 2019). Thus, improving inter-organisational relationships worked as a source to enhance partnerships, communication and sustainability knowledge sharing.

Furthermore, reinforcements emerged to strengthen existing strategies and initiatives by showing the benefits of working sustainably. For example, environmental sustainability outcomes with less harm to nature (Liu et al., 2019) can potentially lead to new drivers. This indicates that for these emerging economy suppliers, operating sustainably and having positive outcomes that they believe make an authentic difference in their context strengthens the way they continue improving their sustainability initiatives. Based on our results, a set of propositions emerged:

- P1a.* Emerging economy global suppliers proactively generate remedies to surpass barriers related to their sustainability initiatives when this is enabled by mechanisms involving collaboration.
- P1b.* Sustainability outcomes act as reinforcements that boost drivers for sustainability initiatives when emerging economy global suppliers perceive these outcomes to be authentic in benefitting their context.

Secondly, we found a significant influence of institutional and cultural issues on the sustainability initiatives of emerging economy global suppliers. By using the TBL+ framework

(Fritz & Silva, 2018), different sustainability outcomes were mapped. However, special attention was given to the institutional dimension (Silva et al., 2021; Silvestre, 2015). Several papers were interested in poor-quality government policy frameworks and how suppliers can gain legitimacy to influence them when they become certified by global buyers. We also found certification essential to cope with institutional influences on suppliers' operations (e.g. Paper 13 and Paper 23). The cultural dimension was also identified as it relates to local traditions (Fritz & Silva, 2018; León-Bravo et al., 2021) and shared beliefs and values (Silva et al., 2021). These results are vital to demonstrating that within GSCs, sustainability targets cannot be limited to the three TBL dimensions as traditionally defined. Instead, taking the supplier's perspective, other concerns also affect how they respond to SSCM. This illustrates for buyers, mainly in developed countries, the need to enhance incentive requirements and develop new needs and targets (represented in our analytical framework as drivers) and suggests that SSCM initiatives that consider these additional dimensions are more likely to be successful. Thus, the second proposition states that:

P2. SSCM in a GSC context succeeds more often when drivers lead to mechanisms that lead to positive institutional and cultural outcomes.

Finally, our findings provide insights into reducing the institutional distance between buyers and suppliers, as our thematic analysis explains how emerging economy suppliers perceive their role within SSCM. The proposed framework (Figure 2) presents the relationship between the drivers that motivate supplier sustainability initiatives, their mechanisms of action for sustainability initiatives, the barriers to adopting these initiatives, the remedies (strategies to cope with barriers) and the reinforcements (outcomes acting as new drivers). Understanding these links can help to reduce the distance between buyers and suppliers in different institutional and cultural settings. In addition, as claimed by León-Bravo, Jaramillo-Villacres & Silva (2021), more attention needs to be given to supplier priorities, competences and resources, which are often overlooked by buyers of GSCs. Based on these reflections, we open doors for future research in this context as we show throughout the findings section how each of these elements leads to reduced institutional distance.

6. Conclusions

In this study, we have demonstrated how the literature that empirically captures the perceptions of emerging economy global suppliers explains their role within SSCM in GSCs. Our results provide theoretical implications, as explained in the previous section. In addition, *managerial implications* were identified by this research. Specifically, this paper contributes by demonstrating how global suppliers manage sustainability and how positive feedback actions motivate both new sustainability strategies and a way to surpass barriers. Therefore, on the one hand, managers in supplier companies should explore how to exploit these feedback actions to strengthen their sustainability initiatives in GSCs. For example, a constant barrier identified was the lack of (sustainability) knowledge. Therefore, these managers can use these feedback actions (such as greater levels/more types of collaboration as a result of successful collaboration) to improve their knowledge and reduce their dependence on buyers in this regard. On the other hand, managers of buyer companies should use these feedback actions as a path to better support their suppliers. For example, they should try to better understand which of the existing sustainability outcomes motivate suppliers, and this understanding can then impact the SSCM external and internal drivers.

Still regarding managerial implications, our results on the relevance of the cultural and institutional sustainability dimensions provide new insights to managers of both supplier and buyers companies. Specifically, these insights suggest that managers should increase

their awareness of how to obtain authentic benefits for sustainability initiatives throughout the GSC, thereby improving global performance as well as that of the emerging economy context. Moreover, managers should strengthen existing drivers to give additional support for mechanisms that lead to positive outcomes on all TBL+ sustainability dimensions in the entire supply chain. This action would improve SSCM in GSCs and reduce the distance between buyer and supplier contexts.

Some *policy implications* also emerged from this study. In particular, the findings demonstrated the importance of considering institutional and cultural settings as part of SSCM. Therefore, policymakers should develop policies to reinforce national regulations that protect their local cultural practices and also improve company competitiveness and sustainability, thereby aiding economic transactions with international buyers. This research also revealed the relevance of public policies to support research institutions, NGOs and universities, as they have an essential role in promoting global supplier sustainability initiatives. Finally, social implications emerge as this study highlighted how to manage sustainability involving emerging economies' suppliers effectively. Specifically, our findings show the role of employee well-being and the maintenance/improvement of local cultures in emerging economy suppliers. Thus, people in these places will benefit when GSC members pay greater attention to these elements.

A limitation of this study is that we did not find evidence of negative outcomes of SSCM from the perspective of the emerging economy suppliers, as no such outcomes were highlighted in the analysed literature. Future research should validate our theoretical contributions focusing on understanding the role of local government regulations and how research institutions can contribute to supplier sustainability in emerging economies; investigating the influence of cultural aspects surrounding supplier sustainability initiatives and the impact of these aspects in this context; exploring how GSC members have used remedies to surpass barriers to sustainability; and identifying the influence of reinforcements to strengthen positive sustainability outcomes in GSCs (i.e. how these benefits have reinforced sustainability initiatives). Further empirical studies should investigate these points in different GSCs, comparing country and industry contexts. Finally, it is necessary to increase research on how emerging economy suppliers have been involved in local social and institutional sustainability initiatives and how they include their buyers in these initiatives.

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Supplementary materials

Supplementary materials of this article can be found online.

Author contributions: Michele Morais O. Pereira: conceptualization (Lead), methodology (Equal), investigation (Lead), formal analysis (Lead), validation (Equal), writing – original draft (Lead), writing – review & editing (Equal); Linda C. Hendry: conceptualization (Supporting), methodology (Supporting), formal Analysis (Supporting), Validation (Equal), writing – original draft (Supporting), writing – review and editing (Equal); Minelle E. Silva: conceptualization (Supporting), methodology (Supporting), formal analysis (Supporting), validation (Equal), writing – original draft (Supporting), writing – review and editing (Equal); Marilia Bonzanini Bossle: conceptualization (Supporting), methodology (Supporting); formal analysis (Supporting), writing – review and editing (Supporting); Luiz Marcelo Antonialli: conceptualization (Supporting), methodology (Supporting), Writing – review and editing (Supporting).

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Data availability statement

The authors confirm that the data supporting the findings of this study are available within the article and its supplementary materials.

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