Ca' Foscari
University
of Venice

Master's Degree
in
Entrepreneurship
Double Degree Programme in Entrepreneurship
in connection with the University of Strasbourg

Final Thesis

DRIVERS AND OUTCOMES OF COMMUNICATING SUSTAINABILITY ON SUPPLY CHAIN

A SYSTEMATIC LITERATURE REVIEW

Supervisor
Ch. Prof. HINTERHUBER Andreas

Assistant supervisor
Ch. Prof. BALLARIN Francesco

Graduand
RIVIERE Margareth
Matriculation Number 899187

Academic Year
2023 / 2024

ABSTRACT

On this literature review, we focus on the communication of sustainability within supply chain, more precisely on its antecedents, and its consequences. This review analyzes findings from existing and empirical studies, and theoretical frameworks, identifying the key elements such as sustainability's impact on supply chain and all that it implies. Consequences include, among others, stakeholders' engagement and the evolution of managerial processes. Although some progresses were made, we still observe a significant gap on some concepts approached in this review, despite their positive impact on supply chain performance. This review highlights the evolution seen in the latest work, and the need of further research about those said concepts.

TABLE OF CONTENTS

1. INTRODUCTION

Sustainability has become one of the key issues of the last decade in the organizational world, and therefore in the supply chain, with strategic, economic, and environmental implications. Numerous studies and research projects have been carried out to date, covering different contexts. Globalization, for example, which has created highly complex supply chain (Ngo & al., 2023), or the Covid-19 pandemic and its unprecedented impact (Cotta & al., 2022), which is one of the most disruptive events of recent years. First of all, it is important to understand the key words around our subject, which will help us to better understand the next concepts developed.

The supply chain in an organization covers all the activities associated with the flow and transformation of goods, from raw materials stage to the final user (Seuring & Müller, 2008). For Lambert (2008), supply chain was ‘’the integration of key business processes from end-user through original suppliers, that provides products, services, and information that add value for customers and other stakeholders’’.

Almost 15 years later, this definition has not changed that much, but it has become more precise. The supply chain become then ‘’a set of three or more entities […] directly involved in the upstream and downstream flow of products, services […] and/or information from a source to a customer’’ (Siems & Seuring, 2021). In a context of supply chain, upstream corresponds to the earlier stages of a supply chain (suppliers, raw material, …), while downstream refers to the later stages (production, distribution, …).

Pushpamali & al. (2020) proposes another definition for the supply chain, in their paper in 2020: the supply chain consists of ‘’different individuals and organizations engaged in moving products, services, information, and finance upstream or downstream from a source to an end customer’’. Supply chain is a relatively constant area of business, with a clear objective that will not change. On the other hand, the related practices are intended to evolve over time.

Therefore, supply chain management (SCM) consists of the integration of those so-called activities (Seuring & Müller, 2008) in the global process of the organization, in order to achieve a sustainable competitive advantage, or can be defined as the process of planning, implementing and controlling the flow of raw material, finished goods, from the production to the final customer (Pushpamali et al., 2020).

During the 2010s, supply chain started to become a challenging task, with the sustainability goals and concerns on the rise. More specifically the social and environmental concerns, which are major trends in supply chain management (Panigrahi et al., 2019). More recently, and according to Pushpamali et al. (2020), being able to assess supply chain performance is ‘’a primary requirement for effective [supply chain management]’’.

In 1987, The Brundtland commission defined sustainability as:

a ‘’development that meets the needs of the present without compromising the ability of future generations to meet their needs”.

In general, definitions of sustainability include at least a consideration about environmental or economic concepts, and an intersection between social and environmental issues. (Carter & Rogers, 2008).

In recent years, many authors have attempted to define the field of sustainable supply chain management (SSCM). As a result, many definitions have been given. If we want to summary the main common point, we can state that SSCM is more focus on the environmental concerns, with the economic aspect sometimes neglected. SSCM is also defined as a set of actions added to existing supply chain management, and not as a field in its own right. In other words, SSCM involves adding the triple bottom line in general supply chain management (Siems & Seuring, 2021). According to (Seuring & Müller, 2008), ‘’supplier, […] and customers are linked by information, material and capital flow’’, which might be seen as a form of communication between the different parties involved in the general supply chain process and management. Communication is essential on a relationship, especially in an organizational context, and might be defined as one of the most effective relationship-building strategies across all the elements of a relationship (Qian et al., 2020).

We can therefore define two types of communication: formal and informal communication. Formal communication works more through written model and specific process, whereas informal communication is more spontaneous, personalized, to suit their interlocutor.

Communication might also be divided on four categories:

- Content, which refers ‘’to the message that is transmitted’’.
- Medium, or the ‘’method used to transmit information’’. This part of the definition might be the most important one, given that it involves critical issues on our paper.
- Feedback, which refers to ‘’two-way communication between two firms’’. As we are developing the subject on supply chain, which is an internal part of the organization, we should not focus on that part of the definition.
- Frequency.

Communication plays an important role in SSCM, with a direct impact on supply chain, and its processes, and in the end, on its performance. With its central role, it permits to avoid different kinds of problems and then, conflicts, to made it easier information sharing, and finally to allow a better risk management (Forslund et al., 2021).

This topic in particular is truly interesting because of the evolution of the domain, and the overall evolution of sustainability in the organizational world. According to Seuring and Müller (2008), ‘’sustainability and SCM [in the early 2010s] represent growing and important areas of research’’. This therefore leads us to ask two questions, which will take on the role of research questions:

What are the key antecedents and consequences of communicating sustainability practices in supply chain over the last 20 years?

How have those keys of communicating sustainability practices in supply chains evolved over the past 20 years?

How do these factors impact supply chain performance? And stakeholders' engagement?

The objective here is to take stock of the subject, and to extract relevant research elements. To do this, we will therefore review the articles and research dealing with the antecedents, which we can place in the 2000s. Subsequently, we will analyze the consequences, located rather in the 2010s. Finally, we will be able to observe the results and bring out new elements, allowing us to begin a discussion on the subject.

The subject of sustainability being relatively vast, with a fairly significant scope, it is important to define precise research criteria (see Methodology part), as well as limits. Talking about sustainable development seems to be inevitable, however, we are not going to be able to include all aspects of the Triple Bottom Line, at least not at the beginning of our research. The environmental and then social aspects are the most mentioned, leaving the economic aspect a little aside. Although interesting, the topic is not just about sustainability, but about communicating sustainability, in supply chain. That's why we will also make sure to stay in the area of the supply chain, although our subject can cover all of the company's services. Finally, it will be crucial to choose, during our discussion and therefore based on the research elements observed, where the consequences fall. On the company, the customers, the stakeholders?

2. RESEARCH METHODOLOGY

In order to carry out this review, we decided to follow the method for a systematic review. Systematic literature review permits to synthesize research findings (H. Snyder, 2019), by using predefined research criterias in order to identify, select and summarize studies about a specific subject. This type of review requires a particular research question, as we will need to provide evidence to corroborate those questions. Inclusion criterias might be defined in a first step (and exclusion criterias, if necessary). Those criterias can take the form of keywords.

In order to define the most relevant keywords, we might split our research into three categories: general understanding of the subject, antecedents and consequences of communicating sustainability in supply chain.

2.1. General understanding of the subject

The following keywords are the first used to collect and select relevant articles to conduct our review.

- Sustainability communication
- Sustainable supply chain
- Supply chain sustainability
- Green supply chain management

To select articles, we will first base the selection on the abstract and the conclusion. If these elements highlight interesting and relevant points, then we can read the introduction and then search for keywords within the article itself. After that second selection, an active reading of the article will be done. This method also applies to the two next research categories decided below.

2.2. Antecedents of communicating sustainability in supply chain

To determine a specific timeline is important in our case. When we are talking about antecedents, we might refer to research realized between 15 and 25 years ago. In other terms, the studies, literature review and other types of sources realized in the 2000s and before might be considered as the antecedents of the general field.
In order to find relevant evidence, we should also realize keyword research, this time with the following one:

- Drivers
- Factors (influencing sustainability practices)
- CSR – corporate social responsibility
- Stakeholder engagement

2.3. Consequences of communicating sustainability in supply chain

Given that we determined the timeline for the antecedents on the 2000s, we might determine the one for the consequences between the beginning of the 2010s and today.

Keywords are now:

- Impacts
- Outcomes
- Performance
- Consumer perception

Although the overall methodology remains the same, some adjustments were made when writing this review. As previously stated, we first focused on reading the abstract and conclusion in order to select the most relevant articles. Subsequently, our readings focused on the “Discussion” and “Limitations” sections of these articles or reviews in order to select the most interesting elements in our research.

Following the first results in our article search, an adjustment of the keywords was made.

Keywords are:

- Triple bottom line
- Manager’s role on supply chain
- CSR
- Stakeholders
- Consumer perception
- Greenwashing

For the sake of organizing the research, it was agreed that a chronological approach, at first, would be simpler and more effective. This approach best illustrates the evolution—or lack thereof, when applicable—of the supply chain, sustainability within companies, and sustainable communication, which are the key concepts we will be studying.To conduct this review, and to provide sufficient elements to discuss the subject, we will need to select a certain number of articles, reviews or research papers; between 60 and 80 at the start. Then, depending on the relevance of the elements found, we will extend our search, so as to reach the minimum of 150 references.

The diagram below (Figure 1) illustrates the method used for our research. We started by searching for the previously cited keywords on predefined databases, based on selection criteria also decided beforehand: reading the abstract, to identify the most relevant articles, followed by reading the introduction and conclusion, confirming or contradicting the first impression. Other criteria were added as we progressed, until we selected the most relevant articles for our study.

Figure 1: Literature research method

Please note that a large part of our articles come from academic journals specializing in supply chain, logistics, and all the issues surrounding these fields. Journals dealing with management, as well as sustainable development were also consulted. Table 1 lists these journals, and the number of references from each.

Table 1: listing of the main journals

Review	Number of articles
Journal of Operations Management	23
International Journal of Operations & Production Management	17
Supply Chain Management an International Journal	13
Production and Operations Management	11
Business Strategy and the Environment	10
Journal of Management Studies	8
Journal of Business Logistics	6
Journal of Cleaner Production	5
Harvard Business Review	5
British journal of management	4
International Journal of Physical Distribution & Logistics Management	4
Journal of Business Ethics	4
International Journal of Production Economics	4
Academy of Management Review	3
Business Process Management Journal	3
Academy of Management Journal	3
International Journal of Production Research	3
Journal of Supply Chain Management	3
Manufacturing & Service Operations Management	2
Journal of Business Research	2
Corporate Social Responsibility and Environmental Management	2
American Behavioral Scientist	2
Strategic Management Journal	2
International Business Review	2
Other reviews	52
Other references	14
Total	**207**

3. ANTECEDENTS AND DRIVERS OF SUSTAINABLE SUPPLY CHAIN

What we can notice about sustainability since the 2000s.

Since the emergence of the concept itself, numerous studies and research have been carried out on the subject, and therefore, numerous definitions and interpretations have been noted.

While leading this research, we can notice that each key elements of the subject started to evolve and change by itself, without being linked at the first place.

3.1. Communication on the supply chain

The importance of ‘’developing long-term relationship with […] suppliers’’. Prahinski and Benton (2004) started to become a major concept for firms and businesses during the 2000S. In fact, some studies highlighted the link between sustainable supply chains, specific communication strategies and supply chain performance.

Communication, as seen in the introduction, is essential and plays a major role on the organization development and performance in general.

We were already seeing the first effects of an efficient communication strategy within the supply chain, without mentioning the sustainable development side. A sufficient communication strategy ‘’positively influenced buyer-supplier relationship’’, according to the research led by Prahinski and Benton (2004). This type of communication also had an impact on the overall performance of the supply chain, so on the whole organization.

Integration of information sharing within the supply chain already was a ‘’[source] of supply chain improvement’’ (Zhou & Benton, 2007), while most companies were mainly focused on the efficiency of their production and therefore their performance. However, to achieve long-term performance, firms need to work on supply chain and information sharing at the same time. Information needs to circulate well between the different parties involved on supply chain, as suppliers, customers, and internal operations. In fact, Schroeder and Flynn (2001) have proved the impact of good processing information, and they even complete this affirmation by saying that some practices are directly related to delivery performance.

Information sharing is composed of three major elements (Zhou & Benton, 2007):

- Information sharing support technology, or how to support information sharing within the supply chain.
- Information content, or what is shared and for whom.
- Information quality, which measures ‘’the degree to which the information exchanged between organizations meets the needs of the organizations’’ (Petersen, 1999).

Before them, Neumann and Segev (1979) were already looking into the matter, and studied four information characteristics: content, accuracy, recency and frequency. (Note that this is the definition we used in our introduction to introduce communication.) For efficient management of supply chain, supply chain practices must be effective in theory, but especially in practice. Combined with information sharing, they both play different roles within the supply chain.

To standardize the supply chain, for instance, permits to help companies better ‘’leverage the information shared among [the] partners’’ (Zhou & Benton, 2007).

Something interesting to notice is that ‘’the importance of effective supply chain practices increases as the level of information sharing increases’’ (Zhou & Benton, 2007), hence the importance of considering these two practices together, and not separately.

3.2 Sustainability on supply chain

Already in 1997, supply chain was divided into two categories (Fisher, 1997):

- Efficient supply chains, with the standardization of product, in order to deploy more effective supply chains practices

- Responsive supply chains, where the flexibility is preferred rather than standardization

Zhou and Benton (2007) highlight in their studies that firms ‘’do not have to excel in all dimensions of supply chain processes in order to achieve superior delivery performance’’. In fact, it is better for a supply chain to focus on one thing at a time (implementing new practices, setting objectives, etc.), in order to be more effective in the long term, and to have a positive impact on the results and performance of the supply chain, and therefore of the company.

It is the early 2010s when companies are starting to realize the importance of green supply chain, and then green supplier management, as the environmental concerns begin to rise (Bai et al., 2010). We still have, at this point, a research gap on how organizations are able to manage green suppliers. Sustainable development brings then new challenges in terms of strategy, whether on the marketing or communication side. These areas then begin to be perceived and analyzed from a ‘’sustainability perspective’’ (Lewis & Stanley, 2012).

If we now start to look at the combination of the two concepts – supply chain and sustainability, so at the sustainable supply chain- we can start with a relatively simple definition; sustainable supply chain consists of the inclusion of sustainability in the supply chain process, within the organization. Already in 2007, ‘’consideration [was] given to the convergence of supply chains and sustainability’’ (Linton et al., 2007). That being said, we still had at this time ‘’more questions than answers’’ about sustainability’s integration on supply chains. In fact, we were on the early stage of the discussion about this field.

Sustainability then started to become a crucial and important subject. Concerns about the ecological aspects moved from ‘’local optimization […] to consideration of the entire

supply chain''. (Jayaraman et al., 2007). Again around 2007, still in the editorial conducted by Jayaraman et al. (2007), we began to assist to an ''increasing [of the] concerns over sustainability''.

One of the challenges that companies must overcome during these years is to identify the ''key drivers for integrating of environmental and SCM''. In other words, the task here will be to efficiently integrate the whole concept of sustainability of the organizational processes, and therefore on the supply chain management (Jayaraman et al., 2007).

As expected, firms play a crucial role on implementing sustainable development within their supply chain, even if it is still difficult to apply in practice. This implies additional challenges to be met, as well as the need for additional resources so that these practices can be properly integrated. The challenge is obviously to obtain results in the short term, but also and above all in the long term, so that these practices truly enter the definition of sustainable development (Matos & Hall, 2007).

Many practices have started to emerge, here are a few, developed by (Svensson, 2007):

- Corporate social responsibility, CSR.
- Supply chain environmental management.
- Green supply chain.
- Reverse logistic.
- Environmental management.
- ISO 14000-certifications.
- Etc.

Other practices also deserve some awareness:

- Ethical sourcing (Roberts, 2003).
- Green purchasing (Rao & Holt, 2005).
- Environmental purchasing (Min & Galle, 1997).
- Logistics social responsibility (Carter & Jennings, 2002).

So, following the emergence of new challenges, whether economic or ecological, organizations began to examine their supply chains processes, and how to adapt to them. In a first place, on a short-term period, some environmental practices will increase the costs, the time that these practices are anchored and that they generate positive results (Wu & Pagell, 2010).

Facing pressures from stakeholders, supply chain managers have to face the challenge to integrate new sustainable practices into their supply chain (Faisal, 2010). As challenges we can have:

- The centralization of certain aspects of production again, to be able to control problems with working conditions.
- The implementation of smaller deliveries, which will have a direct environmental impact.

Note that implementing new practices at a global level is more challenging, that's why it is better to solve these challenges and integrate these practices gradually. That being said, with some times, ambitious environmental objectives can come with concrete economic costs (Walley & Whitehead, 1994; Hoffman et al., 1999; Morris & Su, 1999). The problem here is that firms have to learn how to balance environmental concerns and business practices in this new dynamic, as complex as it is uncertain.

Environmental concerns are at the center of the broad framework of sustainability.

Here's the description of a sustainable business, according to the World Commission on Economic Development:

> Sustainable business is a business ''that meets the needs of the present without compromising the ability of future generations to meet their own needs'' (Secretary-General, WCED, 1987).

On this definition, we find the key dimensions of the triple bottom line defined by Elkington, 1998, which are: social, environmental and economic. Note that, on a supply chain context, we might refer to green supply chain management while talking about the environmental dimension of sustainability.

A more sustainable supply chain involves then some e-offs between the economic and environmental outcomes. One of the most difficult parts then is, how to manage all their changes and practices? The more complex is the supply chain, the more managers will be challenged. The problem is still the same; they are not alway aware of the environmental-related decisions, and yet they are the center of their implementation (Wu & Pagell, 2010).

As the environmental concerns are increasing, we assist at the creation of two concepts linked to sustainability:

- The sustainable agenda, which refers to ''the inter-relationship between industrial activities […] and climate change'' (Halldórsson & Kovács, 2010).
- The energy efficiency, where the energy refers to any usable source of power useful on industries.

The cost of energy is also starting to increase, and the consequences have a direct impact on supply chain performance and on the overall strategy. That, and the climate change are generating what we called supply chain disruptions (Halldórsson & Kovács, 2010). It will be the role of supply chain management to play in the transition caused by concerns about climate change and energy use, in order to reach a low-carbon economy. Industries also started to ask themselves, how will they tackle these new challenges, while environmental concerns continue to increase (Seitz & Wells, 2006)? Sustainability is not fixed, it evolves constantly, by improving the processes, management, understanding or knowledge (Bagheri & Hjorth, 2006). We went from the first environmental-friendly practices to the complete integration of the triple bottom line within the supply chain process, and the overall business strategy (Faisal, 2010).

Sustainability generated some benefits, as cost savings or market differentiation, but some firms have experimented some reputational damages, or the loss of market share, because of their inaction. Sustainability can lead to the creation of a competitive advantage (Faisal, 2010).

In order to check if those practices are successful, indicators are necessary, so the organizations will see which aspects of performance are affected or not, what need to be improved and which direction they should take in terms of strategy. The Overall Business Impact Assessment (OBIA) is one of them, defined by Clift, (2003). It allows to ‘’analyze the environmental and economic performance of supply chains’’. Sustainability leads to a different way of thinking for the companies, encouraging innovation and growth.

3.3. Supply chain integration and supply chain management

As we saw in the introduction, communication is an essential element for the proper functioning of the supply chain, it is also why supply chain integration (SCI) plays a key role within the organization. SCI is focused on relationships between the different partners and on ‘’managing [the] supply chain as a single system, rather than […] individually’’ (Flynn et al., 2009).

How does it work? As Flynn et al. (2009) defined it in their paper, SCI consists of ‘’examining collaborative relationships between a manufacturer and either its customers or suppliers’’, in order to optimize them and to create a more collaborative system within the supply chain.

Integration is ‘’the unified control of a number of successive or similar economic or especially industrial processes formerly carried on independently’’ (Flynn et al., 2009). As a consequence, SCI encourages the collaboration between the different partners within the organization, but this collaboration must be aligned with the company's overall strategy.

After supply chain and sustainable supply chain, we need sustainable supply chain management. Supply chain management interest really started in the ealy 1990s (Svensson, 2007).

Gold et al. (2010) offers us this definition of supply chain management: supply chain management consist of ‘’the challenge of designing and managing a network of interdependent relationships developed and fostered though strategic collaboration’’. This management can be improved by ‘’engaging in deep partnership types of supply chain relationships’’.

Speaking of collaboration, which can be seen as a kind of communication, it is interesting to note that it is ‘’essential when supply chains aim at ensuring simultaneously economic, environmental and social performance’’ (Gold et al., 2010). Or, in other word, communication constitutes a critical point from the moment the Triple Bottom Line is involved. A first challenge is therefore to ‘’effectively incorporate sustainability issues into [the] supply chain management’’, and the overall strategy (Dey et al., 2019). For reminder, this concept is relatively new at this moment, which add difficulties for organizations and supply chains. A second challenge will ask the SCM to ‘’[design] and [manage] a network of independent relationships developed and fostered through strategic collaboration’’ (Gold et al., 2010).

ND: sustainability here has to be well understood in the overall sense of its definition, not just on the Triple Bottom line definition.

After that, some researchers started to focus on the integration of sustainability on the definition of supply chain management. Then, we have a new definition of sustainable supply chain management (SSCM), by Carter and Rogers (2008):

SSCM consists of a ‘’strategic, transparent integration and achievement of an organization's social, environmental, and economic goals in the systemic coordination of key inter-organizational business processes for improving the long-term economic performance of the individual company and its supply chains’’.

The fact that many concepts, with many definitions illustrates, firstly, the complexity of these said concepts. Secondly, it also shows that most supply chain personnel have different point of view about what sustainability really is when needed to be included on supply chains processes.

3.4. Supply chain agility

Supply chain agility is also a significant aspect of the supply chain within companies. By carrying out our research, we could see that this notion did not have a precise definition, at least not at that time. However, some researchers have provided a definition.

Agility might be defined as ‘’a construct with [some] strategic dimensions’’ (Gligor & Holcomb, 2012). Those dimensions concern the customer segment as much as the internal cooperation as much as the competitiveness of the firms. Those authors offer a more concise definition, namely the following one: agility is the capacity of a supply chain to ‘’rapidly respond to changes in market and customer demand’’. Important thing to remember, given that this ability to adapt and respond to different possible changes, whether internal or external, could not be more important for an effective integration of sustainability among supply chain.

Another definition, by Christopher et al. (2004), includes four characteristics that ‘’a supply chain must have to be agile […]: market sensitivity, network based, process integration and virtual capability’’.

Finally, Li et al. (2008) introduced a more general definition of supply chain agility, which is that supply chain agility is ‘’the result of integrating the supply chain’s alertness to changes’’. Those changes might be as much as internal than external, and might happen at any moment, depending of course on the global trends, disruptive elements, etc. Namely that there are enablers of supply chain integration: coordination, cooperation and communication - the latter being the one that interests us the most here. We can stop for a moment on the first two, certainly outside our subject but still important for the supply chain side.

Coordination in the context of supply chain agility consists of ‘’aligning actions supply chain members’’ and sharing ‘’information […] and knowledge’’ among the supply chain and the organization in general. The objective here is to ‘’provide an agile response to changes in their environment’’ (Gligor & Holcomb, 2012). The second element is the cooperation, which is a ‘’support for the alignment of interests across supply chain members’’. In other words, cooperation allows the maintenance of

relationships between the different parts of the company, while serving the interests of each. Finally, we have the communication, which is the one which interests us the most. Communication on supply chain is highly recognized as ‘’a potential enabler of supply chain agility’’. Communication, as we have already mentioned, plays a central role in the proper development and functioning of the supply chain within your organization. In fact, communication might ‘’[facilitate] the identification of complementary resources and capabilities’’ (Gligor & Holcomb, 2012).

For reminder, communication is ‘’the formal as well as informal sharing of meaningful and timely information between firms’’ (Gligor & Holcomb, 2012).

Communication is a ‘’basic enablers of supply chain management’’. If we go into more detail, we will be more focused on formal communication. The definition of formal communication is the following one, according to Johnson et al. (1994):

> ‘’Formal communication […] [is the] communication resulting from specified authority relationships and formal mechanisms for the coordination of work.’’

Needless to say again that communication is an important, if not a central ‘’relational element that impacts firm performance’’ (Stank et al., 1999). That being said, and as we have just seen, it is not the only factor in the proper functioning of the supply chain.

To sum up here, communication is a principal enabler of agility, and therefore might be an enabler within the supply chain itself, event if it does not work alone.

On the contrary of supply chain agility, we have the business environmental dynamism, which corresponds to the ‘’unpredictable changes in products, technologies, and demand for products in the market’’ (Miller & Friesen, 1983). Like the global trends or disruptions, those changes are difficult to predict, and also difficult to correct or anticipate after. Companies must be sufficiently flexible in their practices in order to react as best as possible to unforeseen events, whether on a large or small scale.

We also have organizational inertia, as an opposition of supply chain agility. Organizational inertia corresponds to ‘’the inability to enact change in the face of a changing external environment’’ (Miller and Friesen, 1980).

3.5. Stakeholders' importance

Since environmental and social issues are closely related, in a context of supply chain, stakeholders are suddenly involved in the decision process (Gladwin et al., 1995; Pagell and Wu, 2009).

Stakeholders can be defined as:

> ‘’Any group or individual who can affect or is affected by the achievement of the organization’s objectives’’ (Huq et al., 2016)

They can also be defined as:

Groups or individuals who ‘’have an interest in the action of an organization and […] the ability to influence it’’ (Savage et al., 1991)

Both definitions suggest a ‘’two-way relationship between the organization and its stakeholders’’ (Gao & Zhang, 2006).

Stakeholders have different priorities, depending on depending on their role, their area of expertise, their financial/personal involvement, etc. (Donaldson and Preston, 1995). And because of their divergence, trade-offs are inevitable (Hertwich et al., 2000).

Clarkson (1995) classified stakeholders into two groups:

- Primary stakeholders: investors, customers, suppliers.
- Secondary stakeholders: stakeholders who ‘’influence […] or are influenced […] by the corporation, but [who] are not engaged in transactions with the corporation and are not essential for its survival’’.

Later, Henriques and Sadorsky (1999) highlight four stakeholders' groups:

- Regulatory stakeholders: governments, informal networks.
- Organizational stakeholders: customers, suppliers, shareholders.
- Community stakeholders: environmental organizations, lobbies.
- Medias.

Wu and Pagell (2010) suggest it in their study; ‘’not all stakeholders can be satisfied all the time’’. And because it is subject to interpretation, stakeholders even exposed to the same information will differ about the best course of action (Hertwich et al., 2000). For all this to work properly, firms have to build a clear vision which will be fully understood, and accepted, by stakeholders. A strong relationship with stakeholders such as suppliers or customers first increases a firm’s ‘’ethical standing’’ (O’Higgins & Morgan, 2006), and then leads to increase the firm’s performance. Reporting also became an essential part of the process, in order to inform stakeholders about the progress of certain processes, the impacts on performance, etc. This also helps to highlight the objectives to be achieved and to monitor whether these objectives have been achieved by the supply chain management (Gao & Zhang, 2006).

Although stakeholders’ engagement is gaining more acceptance in the business environment, they are not always fully considered as individual who will process information, but they will be qualified as social subjects simply influencing each other perceptions. And despite stakeholders' pressures beginning to increase, some supply chains have not completely included sustainability throughout their processes (Koplin et al., 2007). It can be explained by the fact that implementing sustainability is a complex process. Considerable interest of corporate sustainability has appeared in the literature over the past decade.

A good understanding of all these concepts is essential to dealing with the subject as a whole. Indeed, during the research carried out, one observation emerged: many of them began to really develop during the same period - the 2000s - in a relatively individual way, before their interdependence was highlighted after a few years. This is

why it was interesting to return to these concepts first, because they are an integral part of the antecedents in this broad field that is the supply chain.

The various concepts mentioned above have therefore developed relatively independently over the last 20 years; relatively, because they end up coming together and complementing each other after a certain time, subsequently offering us the supply chain that we know and are familiar with today.

4. CONSEQUENCES AND OUTCOMES OF SUSTAINABLE COMMUNICATION

What we can observe from 2010 to today.

As we enter the 2010s, we see a new angle of research from authors and researchers. Supply chain has undergone various and significant transformation in recent years: the expansion of globalization, the covid-19 pandemic, new advancements in technology, development of production methods, etc. As for sustainability, let us recall the three fundamental dimensions: ecological, economic and social dimensions.

4.1. Sustainability on supply chain

Over the last three decades, challenges to integrate environmental and social issues within supply chain management never stop growing.

Sustainable supply chain management consists of a ‘’cooperative management of material, information, and capital flows among companies along the supply chain with a strategic focus on all three dimensions of the [triple bottom line]’’ (Nichols et al., 2019).

Or, in other words, in order to be considered sustainable, a supply chain has to ‘’perform well in all three dimensions of the triple bottom line’’ (Huq et al., 2016). As we are still in the early 2010s, this vision has received criticism, which illustrates the slow but certain evolution of perception of sustainability within the supply chain.

The push for more sustainable supply chains is an ongoing effort that is being mainstreamed (Winston, 2021), led by firms with higher market performance and greater managerial commitment to sustainability (Blome et al., 2013).

4.1.1. Triple bottom line and sustainable supply chain

Another question we can ask to ourselves is: how does supply chain sustainability orientation influence the Triple Bottom Line (TBL)? Because, and we talked about it earlier in this review, it will be really important for the organizations to align sustainability strategy, practices and performance (Miemczyk & Luzzini, 2019).

As sustainability definition include the elements of the triple bottom line (economic, ecologic, and social), we find those elements again on sustainable supply chain management.

Economic supply chain management involves an ‘’effort to enhance total (firm) value while reducing SC cost associated with the manner in which the firm conducts its business’’ (Closs et al., 2010).

Social supply chain management corresponds to the ‘’product- or process-related aspects of operations that affect human safety, welfare, and community development’’ (Klassen & Vereecke, 2012).

Environmental supply chain management includes sustainable and environment-friendly processes on the supply chain. It is, in general, the first aspect firms tend to focus on when we talk about sustainability, and the triple bottom line.

In any case, we can affirm, according to Miemczyk and Luzzini (2019)'s study, that prioritizing environmental and social sustainability have a positive impact on ‘’the target performance dimension’’.

However, we observe a difference between the influence of social, environmental and economic performance. A notable development is that now; while talking about the triple bottom line, we talk more about performance, rather than impact. Sustainability is above all a theoretical concept, which means it is difficult to translate into concrete practices.

It is really important that the three elements composing sustainability remain connected to each other, although until now some aspects have been neglected in favor of one or two others although until now some aspects have been neglected in favor of one or two others. Today more than ever, businesses are facing climate change and all the challenges that this entails.

Adaptation then became essential. Atasu et al. (2020) propose the following definition:

Adaptation ‘’involves adjusting how [companies] manage their supply chains, […] and measure and report on their impacts […] and regulatory changes related to climate change’’.

Adaptation is what we called a reactive approach, by focusing on the economic viability of the firm concerned (Matos et al., 2024).

Mitigation constitutes another important concept, developed this time by Atasu et al. (2020):

Mitigation consists of ‘’developing new products […] and services that support the transition to a low-carbon economy’’.

As drivers for supply chain mitigation, we have the usual regulatory pressures concerning climate change (Naumov et al., 2022), the demand for more green

products (Ghadge et al., 2019), or even eco-efficiency (cost savings thanks to emission reductions) (Dooley et al., 2019).

4.1.2. Skill and capability

Sustainability practices are now ‘’part of a firm’s capabilities’’ and have become an essential skill within the supply chain and companies more generally. More concretely, organizations have to be able to ‘’adjust to changes’’ (Kähkönen et al., 2018). The real challenge then is to know how to build a sustainable strategy, and to adapt to changes in the environment in which organizations operate.

We then speak of sustainable performance, which must be qualified by the definition of performance. Business performance is calculated based on profit, while sustainable performance is measured by the impact of the company in terms of ecology and social issues.

4.1.3. Green supply chain

According to Carter and Rogers (2008), green supply chain management corresponds to the ‘’strategic, transparent integration and achievement of an organization’s social environment [to improve] the long-term economic performance of the […] supply chain’’. Eco-centricity and traceability play a key role on the relationships between green supply chain, environmental performance, and cost efficiency (Cousins et al., 2019). Eco-centricity consists of an engagement towards the stakeholders, to achieve sustainability goals. Traceability evaluates firms’ level of knowledge about their products and their origin, from the original source to the end customer.

Investing in important levels of supply chain traceability has ‘’a positive effect on the association between [green supply chain management] and […] cost improvement’’ (Cousins et al., 2019) by providing necessary data to identify those costs. However, Cousins et al. (2019) noticed during their research that supply chain traceability could also have a ‘’negative moderating impact’’ on this relationship. A more positive rate of environmental performance is observed within the supply chain with low levels of traceability rather than supply chain with superior levels of traceability.

In terms of management, the authors suggest that managers may consider monitoring to achieve supply chain traceability as key competencies when ‘’[achieving] cost performance by improving [green supply chain management] practices’’ (Cousins et al., 2019).

4.1.4. Greenwashing

In order to take full advantage of their status as a sustainable supply chain, they must be able to highlight the practices implemented and be perceived as *environmental-friendly* by customers. However, be careful that these practices are not implemented solely to satisfy consumers. Otherwise, it is what is called *greenwashing*.

Orazi and Chan (2018) offer us a definition of corporate greenwashing:

Greenwashing consists of ‘’not walking the talk’’, or when a ‘’company's environmental claims [is] not substantiated by its actual activities’’, creating a gap between what is announced and what is actually implemented, and confusing stakeholders.

We first heard about greenwashing during the 80s, when the environmentalist Jay Westervelt used this term to describe some questionable practices held by hostels (Becker-Olsen & Potucek, 2013). Then, it started to widespread at the beginning of the 2000s, when multinationals were accused and found guilty of ‘’hiding their polluting activities behind green advertisements’’. And despite a positive change about environmental consciousness among society, greenwashing continues to increase (Kim & Lyon, 2011), and is becoming more and more sophisticated (Delmas & Burbano, 2011).

Greenwashing then started to be a fundamental topic of research. At the same time, governments also began to identify environmental issues and develop specific policies to fight greenhouse gas emissions, but also greenwashing by firms (Zhang, 2022b).

However, there is no real universal definition, and the term itself has experienced some modification since then (Seele & Gatti, 2015). This therefore explains why many definitions have been given over the years.

Then, greenwashing is also:

‘’An intentional communicative practice with the aim of deceiving stakeholders’’ (Teti et al., 2024)

Or,

An ‘’act of misleading consumers on environmental practices’’ (Delmas & Burbano, 2011)

Greenwashing can be linked to four other factors, as corporate performance, consumer attitudes, consumer reactions and finally, non-greenwashing practices (Teti et al., 2024). It defines the process to sell products as environmentally sustainable, but without sufficient evidence to claim it (Gualandris et al., 2021).

Despite the progress made in recent years, it is still difficult to know whether these measures are actually being put into practice, or whether they are still only theoretical. In this case, it can be considered greenwashing, especially when these practices are oversold by companies (Jacobs, 2014). This adds an additional difficulty when it comes to suppliers. Firms need to ensure that their suppliers are on the same page concerning sustainability, if they have the intention to claim they reached a certain level of sustainability. It is, in fact, complicated for a firm to confirm their upstream actors are really investing on sustainability processes, or if they are just pretending, or greenwashing it, with the sole objective of making higher profits (Dam & Petkova, 2014).

On June 2020, a response against greenwashing was given by the European parliament, through a consistent policy framework. The European Parliament have launched a consistent policy framework, on June 2020, in order to settle greenwashing

practices. The supply chain plays a significant role in implementing sustainable practices and against greenwashing, given that it is on the front line when it comes to these practices, acting as a bridge between the company, its suppliers and also its customers, i.e. consumers.

It has been shown that companies are among the biggest polluters, with activities generating high gas emissions. Things are possible to prevent environmental deterioration, as standardize environmental information disclosure, or undertake governance measures (Chen et al., 2020; Zhao and Chen, 2022; Zheng et al., 2020). The problem here is the information asymmetry between governments and companies, which lead companies to engage themselves in greenwashing practices, by embellishing information and creating a false ‘’eco-friendly image’’ (Yu et al., 2020). Companies generally choose to adopt a greenwashing behavior, because they are focus only on maximize profits, rather than improve their global sustainable behavior. Greenwashing is facilitated by internal factors, as the company's size, performance or strategy.

4.1.5. Economic sustainability and performance

Economic sustainability corresponds to ‘’the effort to enhance total value while reducing supply chain cost associated with the manner in which the firm conducts its business’’ (Closs, Speier, & Meacham, 2011). Managers continue to focus on the economic aspect, even though it has been proven that ecological and social aspects bring equivalent benefits when combined (Elkington, 2018).

In the same way as environmental and social performance, economic performance is a significant pillar of sustainability performance (Dey et al., 2019). Two types of outcomes have an impact on economic performance:

Economic outcomes, or ‘’the financial benefits through return on investment, reduction of cost, and business growth’’.

Operational outcomes, which is the relationship with sustainable performance, leading to economic performance.

Many studies on this topic have already been conducted, highlighting the financial consequences within companies, but very few have focused on the overall impact that sustainability has on the financial performance of the company. The fact is that they are under pressure to pursue environmental supply chain sustainability, while the financial impacts are unknown (Dam & Petkova, 2014).

4.1.6. Social sustainability

One development, or rather a non-development, observed by Kauppi and Hannibal (2017) is that the environmental aspect is always privileged over the social or economic side, when we talk about sustainable development. Just as we tend to privilege the economic aspect when we talk about performance. This can be explained by the fact that research which are focused on environmental sustainability often adopt a precise theory – for instance, stakeholders' perspective and why the firm is adopting such green practices – that can not be applied to social sustainability analysis.

Much research has focused on the environmental dimension of sustainability.
That being said, social sustainability began to attract the attention of researchers around 2016. From then, social management is becoming a new capability, where the firms are willing ‘’to improve [their] performance on human safety, welfare, [or] community development’’. Once again, we are talking about performance, not just impact as we used to qualify it a few years ago.

While environmental sustainability allows to ‘’capture resource use and impact on the […] environment’’, social sustainability considers ‘’health and well being of [workers]’’; importantly, these two concepts have a considerable impact on society. Social sustainability permit to ‘’[avoid] social failure, [to improve] employee’s […] health and welfare’’ (Huq et al., 2016). The scope of social performance can change over time, more or less dramatically, and is generally defined by current social expectations. That being said, more research is needed in that field, in order to better understand the strategic issues related, and how to implement them. And stakeholders are those whose pressure is able to play a ‘’prominent role’’.

It is important to keep in mind that the development of supply chain management is subject to uncertainties and ambiguities, which explains why it is still a very challenging sector. Pushpamali et al. (2020) specifies that once an environment-friendly practice is implemented on the supply chain, it has an impact on the overall supply chain performance. That’s why those practices, no matter which ones, should be well introduced, or it will negatively affect the overall performance.

4.1.7. Sustainability and performance

In order to reach performance, supply chains have to be efficient, cost-effective, but also agile, adaptable and aligned (Lee 2004). The latter is what we called triple-A supply chain, with:

- Agility, or the capacity to respond quickly to short-term or sudden changes, and handle disruptions. Agile supply chain share and use intelligence to respond to changes.
- Adaptability, or the capacity to adjust to the market. Adaptable supply chain requires a flexible network.
- Alignment, or the ability to create incentives to achieve better outcomes. Aligned supply chain need clearly defined roles and responsibilities to be efficient.

Erhun et al. (2021) studied the professor Lee’s study and set out to revisit the concepts he defined. In twenty years, many changes have been observed, regardless of the field of study or even the industry.

We then have a new triple-A supply chain:

- Agility become the capacity to respond to stakeholders' demand.
- Adaptability become the capacity to develop better ways to control the supply chain.
- Alignment become the ability to extend alignment to points further up and down on supply chain.

To include and maintain sustainable triple-A supply chain, firms need to innovate and rethink their process – this applies generally for all the sustainability practices to put in place. Firms also need to gain visibility concerning their upper-tier supplier's and reverse logistics activities, so they will be able to improve their sustainability performance. Those kinds of changes allow an alignment of supply chain's objectives and a better capacity for agility.

We can also measure supply chain performance by quantifying ''the effectiveness and efficiency of [a] supply chain using [specific and] appropriate […] methods'' (Acquaye et al., 2014). One of them can be benchmarking, which allow the identification of opportunities (Beamon, 1999), and the planning – which can be strategic, tactical, or operational – of objectives, actions and decisions (Gunasekaran et al., 2004). However, many companies are still unable to carry out these benchmarking activities, as they require specific approaches enabling them to measure their ''environmental performance and compare it with industry standards or competitor'' (Shaw et al., 2010).

Supply chain performance measurement be analyzed from different perspectives, such as:

- Focal firm perspective, or what is the impact on the performance of the company itself (Hubbard, 2006).
- Stakeholders' perspective, as the manufacturing, distribution and logistic perspective (Jain et al., 2011).
- Consumer perspective (Zhao et al., 2001).

Supply chain performance measurement is attracting growing interest from researchers, illustrating the growing importance of its impact on the supply chain, and therefore on the company.

The use of modern technologies can only facilitate the integration of sustainability within companies, and therefore supply chains. Some technologies as blockchain, or the Internet of Things (IoT). They enable real-time sharing and consulting of desired information. For example, consumers can have access to the environmental practices to which companies have committed, to the conformity of certain products by verifying certifications, practices related to recycling, etc. Be careful on one point, however, these technologies require a certain level of control, even in small structures. Full transparency, for example, must be accepted by all stakeholders (suppliers, buyers, etc.) in order to work, otherwise some information will still be blocked. We were able to see it with Goodio, who wanted to make their entire process transparent, by implementing blockchain technoloy to trace raw materials in its supply chain. However, some of their stakeholders (here, small farmers who work with them) could not include themselves in the process because they did not have the required technologies (Erhun et al., 2021).

As another challenge, and example of sustainable practices, there is carbon leakage. Kolk and Pinkse (2005) explain that some ''activities and sources of high emissions can be carried out elsewhere in the supply chain''. Thus, firms may ''subcontract certain high-emission activities and [so] reduce their own emissions''. Here again, new technologies and innovation play a key role in the implementation of carbon leakage.

Innovative suppliers provide more efficient solutions, as new materials, or technologies capabilities, to ‘’absorb the leakage and optimize supply chain emissions’’ (Song et al., 2023). However, supply chain and carbon leakage generate then a spillover effect, while the focal firm emissions decrease, the supplier emissions increase. (Song et al., 2023)

4.1.8. Reverse logistic

Reverse logistic activities are activities where ‘’a producer retrieves products and components to recycle, rebuild, or dispose of them properly’’ (Dowlatshahi, 2000). It allows the creation of value, tangible and intangible. Also, sustainable supply chain initiatives have a positive impact on a firm’s reverse logistic, which is a key point highlighted by managers. Despite all the advantages and positive impact sustainability might have on supply chain, a hidden side is still present. Some trade-offs will sometimes be necessary, especially on the economic area, and some tensions might be generated. Trade-offs, in that context, refer to situations where one or several sustainability elements are chosen over another sustainability element at their expense (Nunes et al., 2020). Strategies and actions linked to sustainability might generate unexpected results and unplanned or unforeseen consequences. Anticipate those outcomes generally concern risk management, or supply chain agility field (Matos et al., 2020). A concrete and recent example is Covid-19, where companies had to react urgently, readjust many of their processes and deal as much as possible with the consequences on their supply chain.

4.1.9. Sustainable supply chain - benefits and limits

Despite the challenges, achieving environmental sustainability has many benefits for companies (Dam & Petkova, 2014).

Environmental sustainability allows an access to new consumer segments and market, and then contributes to increasing revenue. Environmental sustainability also reduces risks for firms, and so costs linked to those risks – as fine and amends, lower sales due to reputation lost, changes in consumer behavior. Companies pursuing environmental sustainability enhance their resource ability and efficiency, by using less energy, water, materials in general. A higher productivity is observed within supply chain highlighting environmental sustainability, and employees tend to be more engaged on the company. A significant advantage is that such an approach offers companies access to certain financial aid.

That being said, environmental sustainability, according to Zhu and Sarkis (2004), also have some financial disadvantages. Indeed, firms sometimes need to make additional investments, in order to create or update processes and/or products – redesign, employee training, etc. Operational costs are also increasing, as environmentally friendly production require different safety standers and control. Companies must also take into account that some of their resources will be devoted to the development of environmentally sustainability within their supply chain, and that they will not be able to deploy them elsewhere.

4.2. Communication on supply chain

Communication techniques have continued to evolve over the last decade, and with them related practices. We are observing new practices within organizations, and therefore within the supply chain. One of them are the spillover effects. Spillover effects correspond to consequences of an action / event happening in one area and affecting another area. In the context of this review, spillover effects can be defined as ‘’the extent to which information provided in messages changes beliefs about attributes that are not mentioned in the messages’’ (Cotta et al., 2022). It goes without saying that such effects will have an impact on the perception on the consumer side. That is why they must be controlled, in order to avoid miscommunication. However, triple bottom line related information can lead to positive spillover effects, which can be beneficial to the firm (Nichols et al., 2019).

The key is to know how to control the information that the company is trying to communicate, in order to limit the undesirable effects, and to get the most out of it. Understanding how spillover effects work is essential, because it is ‘’linked to a range of outcomes’’, and might have some huge consequences on the whole supply chain process (Nichols et al., 2019). If we want to take a more concrete example of the evolution of practices, we can mention transparency. It is only recently that researchers have begun to look into transparency; until now, research has been relatively limited.

According to (Sodhi & Tang, 2019), transparency consists of:

‘’Proactively disclosing relevant information and engaging with consumers about upstream operations and the products sold to consumers’’.

By doing that, firms send a message of trust and openness about their environmental and social practices, which is generally well received by customers, and has a positive impact on the firm or brand reputations.

Schnackenberg and Tomlinson (2016) define it the following way:

Organizational transparency is ‘’the perceived quality of intentionally shared information from a sender’’.

Transparency is also a ‘’combination of visibility, meaning that the focal firm possesses material information about upstream and downstream operations, and the public disclosure of this information’’ (Chen et al., 2018; Sodhi & Tang, 2019; Swift et al., 2019)

Finally, Pagell and Wu (2009) tend to distinguish traceability from transparency:

- Traceability emphasizes ‘’the nature of information shared internally’’, while,
- Transparency concerns ‘’information shared externally’’.

To complete those definition, we can add that transparency is composed of three dimensions:

- Comprehensiveness, which refers to ‘’the amount of environmental information shared’’ (Villena & Dhanorkar, 2020). Suppliers undertake to disclose sufficient

information so that it is perfectly understandable by buyers. Otherwise, they will not be considered transparent.
- Accuracy, which corresponds to ‘’the supplier’s effort to provide carbon information that is reliable’’ (Villena & Dhanorkar, 2020).
- Public disclosure, which refers to ‘’a supplier’s publicly sharing relevant carbon information’’ (Villena & Dhanorkar, 2020). Stakeholders need to have access to information they want – that said, it only concerns the powerful stakeholders.

Supply chain transparency, well used, is a powerful strategic tool, generating trust from customers, but also pressures. Customers will have some expectations, expectations that the company will have to ensure (Mollenkopf et al., 2022). It is an important aspect of relationship-building with customers, and a significant aspect of sustainable supply chain as part of the organization’s strategy. Transparency includes mandatory reports to stakeholders, which engage them on the process. Their feedback secures the improvement of supply chain processes, and not only on a sustainable approach (Carter & Rogers, 2008).

Transparency includes not only reporting to stakeholders, but actively engaging stakeholders and using their feedback and input to both secure buy-in and improve supply chain processes. It is necessary to not forget that sustainability initiatives have to be interwoven with the corporate strategy of the firm, instead of separate programs which will lack of effectiveness and relevance (Shrivastava, 1995).

Information transparency affects corporate strategy, and a reduced transparency leads to greenwashing, in certain case – as profit-driven firms, which just want to make profits to the detriment of environment (Wu et al., 2020). Greenwashing is part of ‘’symbolic management’’, where companies proclaimed environmental commitments without implementing what is necessary to achieve potential objectives put in place. Greenwashing tends to appear as a selective disclosure. Firms choose to show their positive environmental achievements, and to hide the negative impacts they might have on the environment (Kim & Lyon, 2011; Marquis et al., 2016). Regulatory frameworks and social norms greatly influence tendencies towards greenwashing. The public focus, and so the market pressures, affect corporate greenwashing practices, making difficult the concealment of acts with negative consequences (Wang et al., 2024). Investors put pressure on companies over integration of environmental standards into Environmental, Social, and Governance (ESG) assessments on corporate greenwashing activities. How organizations will proceed in order to diffuse the right information constitutes another challenge. They will have to be prudent, because information can easily become out of control, and then suffer a spillover effect. Transparency, although positive in theory, can lead to undesirable consequences, such as the leaking of certain information, or the lack of control over its dissemination. This is because consumers will focus more on negative information, and also because negative news spread easier. This, for instance, can be qualified as a spillover effect (Dey et al., 2019).

This approach must be voluntary, otherwise it will be much less effective. Kalkanci et al. (2016) investigated the effects of ‘’mandatory or voluntary disclosure’’ about environmental impact by the supply chain. They proved that making disclosure mandatory can deter a firm’s efforts to ‘’measure and improve those impact’’.

Transparency can be encouraged, because of its benefits, but some practices can be dissuasive.

Chen et al. (2019)' study highlights those incentives for and deterrents to supply chain transparency:

- Increasing penalties (when necessary) for the revealed suppliers is incentive for transparency and beneficial for sustainability. Same things for increasing efficiencies of NGOs audit.
- Increasing penalties (when necessary) for brands considering revealing their supplier list is deterrent for transparency, but beneficial for sustainability only if this increase is modest and if brands exert efforts to monitor their suppliers' conformity. Otherwise, it will be detrimental.

Although their study focuses on the buyer side, the general public, policy lakers and NGOs also play a key role on supply chain transparency.

Speaking of NGOs, one of their actions might be to encourage boycott of firms and products which are considered problematic, with a negative impact on sustainability. This will help curb some disastrous practices while waiting for governments to put in place more stringent social and environmental regulations and sanctions. However, the limits of a boycott lie with consumers. Will they agree to no longer consume certain products, or use certain brands, which until now made their daily lives easier, despite their negative impact on the environment, among other things?

Companies are under increasing pressure to make their processes transparent, particularly their supply chain and their impact on the environment (Villena & Dhanorkar, 2020). We expect from them to report their environmental efforts and / or performance. Carbon transparency, for example, started becoming institutionalized by supply chain. It consists on a ''provision of high-quality carbon emission information to stakeholders'' (Hahn et al., 2015 ; Ott et al., 2017). The reasons for such transparency are strategic, operational, but also legal. Suppliers applying carbon transparency are more likely to be considered by the buyers, as the latter will be able to identify cost- and risk- opportunities in their supply chains.

Firms are interested in increasing their suppliers' carbon transparency for operational, strategic, and regulatory reasons. If suppliers are more transparent about their carbon emissions, buyers can benchmark their performance with competitors and identify cost- and risk-reduction opportunities in their supply chains. (Villena & Dhanorkar, 2020).This approach is of course beneficial for buyers, more than suppliers. Buyers are able to put pressure on suppliers to make their process transparent. Supplier respond to their demands, so they avoid their discontent.

There are three types of pressure exerted by buyers.

Coercive pressure

Suppliers are financially dependent on buyers, so it is quite easy for them to coerce higher transparency, under penalty of cancellation of their contract, for example.

Mimetic pressure

When peers decide to be more transparent, some suppliers cave in to the pressure and decide to do the same, even if it is not beneficial for them (DiMaggio & Powell, 1983).

Normative pressure

This pressure arises from a desire to meet industry expectations at the environmental level, or when industry leaders implement these practices (Delmas & Toffel, 2004 ; Heugens & Lander, 2009).

The objective for buyers is to minimize their impact on the environment, while maintaining a certain economic performance. In order to properly control the information, firms must organize it and use it effectively (Srinivasan & Swink, 2018). As an example of something possible in order to manage it well is or to reduce their information processing needs, or to increase their information processing capacity. If we want now to focus on communicating sustainability, we have, as a good example of communicating sustainability among an organization, and then their supply chain, the corporate social responsibility (CSR). CSR promotes the development of ethical and sustainable practices (Apaydin et al., 2020).

Since every industry is different, a CSR policy will not have the same impact, whether through their value chain activities, or their salient stakeholders. According to Apaydin et al. (2020), an organization should apply a CSR policy on activities in accordance with their core competencies.

The role of stakeholders is also crucial in the implementation of a CSR policy, given that they will not hesitate to express certain requests, in accordance with their values and what they want to bring to the company. We will discuss these two previous notions in detail later in our review.

Let's go back to communication for a moment, more precisely on corporate communications. Corporate communication occupies a central role in the process of reputation development. It permits to listen and understand the public expectations, and to cultivate good relations with the most important stakeholders (Van Riel and Fombrun, 2007; Hawabhay et al., 2009). Corporate communication contributes to the image building of the firm, which will be in one way or another evaluated and validated by stakeholders. However, reputation is still the most important, that’s why a well-directed communication process is necessary. Although reputation has an impact that is mostly external to the company, it is still important to include employees (Dutton and Dukerich, 1991).

Corporate communication is a support to organizations, by defining and spreading corporate identity and values. Internal communication allows employees to be aware of those identity and values, and to be able to identify and feel completely part of the company.

As expected, stakeholders play a role on building this reputation. By listening stakeholders’ expectations, firms become capable of expressing their history, identity, and strategy in accordance with their values, and satisfying stakeholders. (Van Riel and Fombrun, 2007)

Finally, associating stakeholder engagement with corporate reputation development offers two opportunities to firms (Romenti, 2010):

First, stakeholder engagement will reflect the companies' values and identity and spread it to others.

Second, this makes it easier to align stakeholders' expectations and organizational behavior.

4.3. Supply chain integration

Information and communication on supply chain processes can take different forms: traditional information technology, e-business, e-supply chain, etc, as it can be identified as a flow of information within the organization.

In the first part, we defined and explained what was supply chain integration, and how it worked. Supply chain integration can now be related as a form of communication, as Shee et al. (2018) used to define it in their paper: supply chain processes and integration consist of ''linking major business functions and business processes within and across firms into a cohesive and high-performing business model'', what can be connected with strategy and performance, in a certain way. The point will be then how to select ''the appropriate performance measures'', or the KPI. For instance, as supplier integration within the supply chain is really important, and has a huge impact on performance, the managers have to attentively choose how to measure their impact on performance.

Supply chain procurement also play a key role in sustainability. It allows sustainable development to take place on the supply chain, to formulate the strategy associated and to implement the useful processes and practices (Green et al., 1996).

Later, we realized it has become an ''increasingly important aspect of business operations'' (Kilonzi & Mwikali, 2022), as companies finally recognized the reel need to highlight social and environmental responsibility, in addition to economic performance.

Firms are able to implement procurement practices. Procurements' practices refer to:

''The processes and actions that organizations undertake to ensure that the products and services they procure are produced and delivered in a socially, economically, and environmentally responsible manner'' (Etse et al., 2021).

Among these procurement practices, we have two kinds of practices (Atarah et al., 2024): transparency and accountability. Those practices established trust and confidence in external networks and encourage a collaboration without fear and apprehension. The major key points in our context are to integrate sustainability criteria into the whole process, as supplier selection, purchasing decisions, or management (Ogunsanya et al., 2019; Wilhelm & Villena, 2021).

Adopting procurement practices contributes to the reduction of negative environmental impact, the promotion of social responsibility, and the creation of economics benefits for all stakeholders involved (Atarah et al., 2024). In other words, procurement

practices ease the integration of triple bottom line elements, and then sustainability, within the supply chain. Obviously, as Atarah et al. (2024) specify, the integration of these practices will be done differently and over a different period of time depending on whether we are in a developed or developing country.

4.4. Supply chain agility

We have already mentioned supply chain agility in our first part on antecedents, proof that it is a concept in constant evolution, and which deserves our interest. In fact, agility is one of the most ‘’salient issues of contemporary supply chain management’’ (Gligor et al., 2014).

As we defined it on the first part of this review, agility is the capacity of a supply chain to ‘’rapidly respond to changes in market and customer demand’’ (Gligor & Holcomb, 2012).

There are many examples of agility implications and effectiveness within the supply chain.

Agility actively contributes to the effectiveness of implementing strategy on SCM.

Agility is also a key concept to master and lead a superior performance, and this in an environment as stable as possible.

Firm’s which are able to quickly adjust their strategy are the most efficient ones and own a powerful competitive advantage. We can also observe a direct link between supply chain agility and cost efficiency, according to Gligor et al. (2014).

4.5. Supply chain resilience

Supply chain resilience consists of the ‘’ability to anticipate and prepare for disruptions and problems’’ within the organization’s supply chain. As an example of disruption, we obviously have the Covid-19 pandemic, which has impacted the entire world on all points, including companies and their supply chain. It’s ‘’preparing supply chain to handle disruptions before they actually occur’’ (Cotta et al., 2022).

Lately, firms were tasked to’’ensuring both the resilience and sustainability [within their] supply chain’’. Even though Cotta et al. (2022)’s paper had shown that both concepts ‘’have evolved independently of each other’’, it also showed that sustainability and resilience on supply chain are undoubtedly related to each other.

Other challenges come with the development of this aspect of the supply chain. The first one is to identify, to implement and finally to analyze the performance implications of those practices.

A second one could be to empirically examine supply chain resilience and supply chain sustainability practices simultaneously. As we saw earlier in this paper, for some authors, sustainability was included on the supply chain processes but was not seen as a real new field. This therefore adds a certain difficulty for companies and managers, who must then reconcile the different components in order to obtain a correct structure,

which always corresponds to the company's strategy, and which will later give positive results in terms of performance.

Let’s see this with some examples.

As examples of supply chain resilience practices, we have the ability to anticipate and respond to disruptions, by adopting proactive or reactive practices and policies (Cotta et al., 2022).

As examples of supply chain sustainability practices, we have the policies which allow the organization to ‘’achieve long-term economic viability, minimize negative environmental impacts, and eliminate threats to human welfare’’.

So, at the end, the goal is to reach sustainability in its entirety – so the Triple bottom line with economic, environmental and social aspects – while anticipating eventual disruptive or unforeseen events and respecting the company's objectives in terms of performance and strategy.

That said, in reality, these practices are rarely applied at the same time, and with similar importance, because of their difficulty in being managed properly within the same team. We can not find a lot of paper which linked those two practices, despite their relationship and their importance.

Cotta et al. (2022) deepens their analysis about this relationship. Relationship that they define as being ‘’mutually supportive’’, but also ‘’mainly conflictive’’.

Something that will impact this relationship is the perception of the manager. Their perception in general has a huge influence on the other organizational actors, so it has a similar effect within the supply chain. Managers play a key role within companies and will play an equally important role on the communication side. Their point of view is that they do not seem to perceive ‘’sustainability and resilience practices as having any interactive impact on supply chain performance’’. Which means that we can observe at the same time synergies and trade-offs.

Synergies might be observed between supply chain resilience and supply chain sustainability. For instance, when selecting suppliers, which can be chosen according to sustainability-related criterias – sustainability in its large sense. In that case, the organization will be able to work with certified suppliers, financially stable, and so not presenting any immediate risks for the firm. This therefore makes preventing potential risks much simpler.

Many scenarios are then possible for companies: ensuring that the entire production chain is kept in the same region, thus limiting transport-related risks and environmental impact; reducing this same production chain to the bare minimum, making risk prediction more obvious and less costly; improving employee well-being and retaining them in the company, thus reducing turnover and recruitment-related difficulties.

However, for this relationship to work as well in practice as it does in theory, trade-offs are necessary. Because the solutions implemented must always take into account the strategy implemented in the company and allow the latter to achieve its pre-set

objectives. We should then keep in mind the real capacities of the supply chain to face supply, demand and production uncertainties. Also, to reduce the production chain, and limit by the same occasion the greenhouse impact gas emission, can have consequences on the whole transportation system – slower, less agile, etc.

Not all scenarios involving this relationship allow a quick response to disruptions. Which, ultimately, can generate tensions within the company hierarchy itself, and interfere with their objectives on performance targets to reach. Note that this is quite an interesting paradox, given that this method is supposed to avoid any problem that could impact the company's objectives.

4.6. Stakeholders' engagement

Here is a reminder of stakeholders' definition:

> ‘’Any group or individual who can affect or is affected by the achievement of the organization’s objectives’’

Stakeholders play a key role within the organization in general, and even more in sustainability. They allow to implement social sustainable practices (Mitchell et al., 2015). The definition, as well as the categorization of stakeholders, has continued to evolve in just ten years.

Stakeholder types vary, depending on their interests: a firm’s success, positive impacts on supply chain, return on investment, etc. (Siems & Seuring, 2021).

Here again, and despite their importance, the understanding of stakeholders and how to manage them remains vague and under-explored. What we know till now is that they are still marginalized or ignored by traditional supply chains, or that they are seen as pressure groups (Siems & Seuring, 2021).

They can play roles, as observer, coordinator, counsellor, or partner. We can observe two types of stakeholders: reciprocal stakeholders and self-regarding stakeholders.

> Reciprocal stakeholders ensure that all parties have their interests met, while,

> Self-regarding stakeholders focus on their own interests first.

Although they are different and seem opposite, synergies are possible between them.

Once firms are able to develop a close relationship with their stakeholders – no matter who they are – they can also build a capacity to manage those relationships (Parmar et al., 2021), by communicating the important information, and when it’s necessary, negotiating with them (for this last point, it will depend of the type of stakeholders). The positive aspect of such a good relationship is the positive impact on performance, and they contribute to the value creation of the firm. And that’s so, because the firm’s and the stakeholders’ interest are, in reality, connected.

Stakeholder’s engagement plays a central role in the organization, and also within the supply chain.

However, stakeholder management is an important instrument in order to communicate with stakeholders. Companies can start to integrate them into internal decision-making, or organize on-going discussions with them, through two-way communication, so the company is informed about ‘’stakeholders’ requirements’’ and ease the ‘’process of meeting these requirements’’ (Siems & Seuring, 2021). Do not forget that a good stakeholder integration will lead to a better sustainability performance.

One of the major problems concerning the stakeholders is the lack of inclusion on the organizational process in general. This constitutes an issue because stakeholders play a major role on a firm well-being, and their lack of inclusion can lead to miscommunication between the different part of the firm.

If we remain in the context of supply chain, consumers are considered as parts of the stakeholders, so they have a a significant impact on the supply chain. Especially the impact of their opinions. This new issue has emerged in the last decade. Indeed, Nichols et al. (2019) defines consumers as being ‘’powerful stakeholders and major constituents of the supply chain’’. In fact, it was observed that some news about supply chain operations, related to the triple bottom line aspects, has a significant impact on consumer’s perception.

Consumer care about the production, as they care about the product, so it is important to well handled all the supply chain process and how the different information will be communicated through the customer.

A key role held by stakeholders is that they keep pressuring some manufacturers and supply chain about their impact on environment and, the main concern nowadays, climate (Jeong & Lee, 2022). Even if some manufacturers do not pay attention to these pressures, most of them are looking for ‘’factors that improve emissions reduction performance’’ (Adhikary et al., 2020; Dooley et al., 2019).

As one of the main stakeholders, consumers are still trying, and sometimes struggling to engage suppliers to reduce their negative impact on climate change. In reality, customers’ engagement in reducing environmental impact also have an impact on the supplier’s environmental efforts (Song et al., 2023).

With the evolution of stakeholders’ role, now customer is recognized as a ‘’powerful stakeholders, and a major constituent of the supply chain’’ (Ta, Esper, & Hofer, 2015). That means they now have access to operations or supply chain-related TBL news, which will have an impact on how firms and their products are evaluated. (Nichols et al., 2019). As it is still new, on the scale of the organizational world evolution, the extent of customer’s role is not well understood yet.

Stakeholders played a key role on this evolution, as the firms tried to adopt different kind of practices in accordance with their expectations (Gonzalez-Benito et al., 2011; Hall and Vredenburg, 2003). That’s why sustainable supply chain management research has focused the impact of those new implemented practices on their operations and performance in their supply chain (Awaysheh and Klassen, 2010; Vachon and Klassen, 2006). A key point to not forget is that new sustainable practices

must be aligned with the firm's strategy to generate a competitive advantage and have an impact on the firm performance (Gualandris et al., 2015).

Finally, stakeholders play a key role in the fight against greenwashing diffusion. They are supposed to, in case of greenwashing accusations, take radical measures and penalize the companies concerned. That said, some stakeholders, more precisely investors, do not really pay attention to greenwashing announcements by media, and they do not apply any sanctions, so the concerned companies do not have to modify their practices – they prefer focus on the economic and financial performance. In addition, some companies manage to go unnoticed, as the media and the market are not always able to identify bad practices, as demonstrated by Teti et al. (2024). It is indeed complicated for the market to identify all greenwashing practices, and without the intervention of investors, among others, this often has no consequences for the actions of companies.

Even if it seems a crucial part of the supply chain management, and the supply chain sustainability, consumers' role remains ''an under-researched topic area''. It remains interesting, however, to ask ''how does visibility into the triple bottom line performance of a firm's supply chain affect consumers' brand perceptions''.

4.7. Managerial implications

Several observations are possible in terms of management within the supply chain. Risk and risk management are considered as a recurring theme on sustainability literature (Carter & Rogers, 2008).

A company must not only change its practices, but it must also change its whole culture and mindset (Carter & Rogers, 2008). Carter and Rogers (2008) framework also indicate to supply chain managers a ''starting point for what is needed to develop SSCM practices'' in their supply chain.

Here are some examples (Porter & Kramer, 2006):

Managers can examine some parts of the logistics, as packaging use, safety, transportation impact, etc.

Managers can check the operations issues including emissions gas or energy use.

Managers can also intervene on after-sales services.

The role of managers within the supply chain itself has not changed a lot. Its mission is to include sustainability within their supply chain. They have to be aware of the global dynamics, and the competitions between supply chains (Song et al., 2023). We must keep in mind that suppliers often supply several companies, which generates rivalry between SCs, hence the key role of the manager in the inclusion of sustainability in the supply chain. And as they recognized managers's key role on environmental and social performance, firms started to include the place of sustainability within their strategy (Carter & Easton, 2011).

4.7.1. Corporate social responsibility (CSR)

Let us return to corporate social responsibility for a moment. Corporate social responsibility, or CSR, activities have without doubt, a positive impact on corporate financial performance (CFP), thanks to ‘’synergetic effects’’ (Apaydin et al., 2020). By extension, CSR activities impact positively firms’ performance.

CSR policy illustrates the presence of sustainability in companies. Firms tend to engage in different activities that ‘’appear to advance social, environmental, ethical [and] economic agenda’’ (Brammer & Walker, 2011; Hillman & Keim, 2001; Lyon & Maxwell, 2007; McWilliams et al., 2006 ; Preuss, 2009; Siegel & Vitaliano, 2007).

CSR is not only linked to strategy, but also a part of the strategy. Do not forget that the environmental and social practices highlighted on a CSR policy must be strategy driven. Sustainability and diversity are seen as an opportunity to encourage CSR. (Berenguer et al., 2024)

Within a company, this policy is mainly intended to disseminate these practices implemented by the company department concerned. This is a significant aspect of communication in the company, and for its effectiveness to remain, this policy must be carried out correctly by managers. CSR reports are useful to observe a firm’s progress along the different sustainability dimensions, and include data about the diversity within the company. They do not mandate specific actions, their role is to describe the issues related to environment and social, and their impact (Berenguer et al., 2024).

Corporate social responsibility is also intricately linked to corporate financial performance; we can even notice a positive relationship between both concepts. The main point is that CSR might be connected to the organization’s strategy, in order that its activities ‘’positively contribute to [the organization’s] performance’’, and so to the CFP.

Companies are finally realizing the importance of including their suppliers and buyers in their CSR policy and activities. As seen earlier, suppliers play a determining role in ‘’ensuring socially responsible practices throughout the supply chain’’ (Foerstl et al., 2014). Stakeholders' engagement behaviors, as defined by Jaakkola and Aarikka-Stenroos (2019), consists of an ‘’interactive resource contributions, such as information […], that go beyond what is fundamental to the core transaction’’. This definition is focused on the share of necessary resources required to achieve CSR objectives. Concretely, the CSR commitment of buyers is defined by their willingness and/or capacity to contribute resources - whatever their form - to a CSR issue addressed by a supplier (Peng et al., 2022). The means implemented by companies are often described as “instrumental” or even “strategic” in CSR literature (Y. Chen & Chen, 2019). As an example, stakeholders' management, and maintening good relationships with them are described as instrumental (Donaldson & Preston, 1995). In order to achieve the sustainable goals described on CSR policy, firms have to link their CSR activities with the other activities within the organization, and must be focused on the different aspects of organizational benefits, such as:

Financial paybacks, such as profit maximization, financial return on investment, etc.

Competitive advantage, visible in a product or service differentiation, for instance.

Risk mitigation, such as reducing impact on a firm reputation.

CSR policy refers to ‘’a firm’s social intentions declared in formal arguments […] with regard to social actions’’ (Mazboudi et al., 2020). But in reality, we often notice a gap between formal policies decided and put in place, and actual practices applied. This gap might be called *greenwashing*, or *decoupling*. Buyer engagement can thus be encouraged by the establishment of so-called instrumental motivations, and at the same time by the internalization of these CSR policies – as they improve their buyers’ dependence (Peng et al., 2022).

As always, managers’ role is significant on the smooth implementation of these practices. They should first acknowledge ‘’the strategic importance of CSR as an enabler of competitive advantage’’, and their impact on the supply chain performance. Then, they also need to realize it exists a link between their actions and CSR policies (Peng et al., 2022). Peng et al. (2022)’s findings suggest that suppliers’ trust is essential and make their CSR engagement stronger.

More than challenges, the implementation of these practices sometimes faces barriers, at three distinct levels, according to Garavan et al. (2010):

Individual-level barriers: they focus on the cognitions of decision makers and are generally psychological and/or behavioral.

Organizational-level barriers: they focus on issues such as organizational culture, inertia, interactions among employees, etc. They are more structural.

Institutional-level barriers: beyond the organization level, they include regulations or even beliefs perpetuated at an institutional level.

Human resource development activities in general are helpful to implement CSR and corporate sustainability activities. Communication processes again play a significant role into the integration and the smooth running if sustainability within the supply chain. It also allows to spread positive messages around CSR and corporate sustainability initiatives. Communication is again a useful way to identify some needs linked to sustainability, and it’s then easier for the services concerned (human resource department, supply chain managers, etc.) to adjust some changes (Garavan et al., 2010). Burchell & Cook (2006) highlited the importance of external communication as well as internal communication. Organizations often publish and share information about their advancement about sustainability, especially to their stakeholders. It shows that stakeholders engagement is particularly relevant concerning CSR and corporate sustainability.

4.7.2. Human resource management role

To include effectively sustainable principles and practices into a firm’s strategy is challenging and may require a certain number of resources. So that’s where human resources management (HRM) comes in, and more precisely sustainable human resources management.

Sustainable HRM is:

‘’The adoption of [human resources] strategy and practices that enable the achieving of financial, social, and ecological goals […] over a long-term horizon’’.

Their intervention is necessary due to the need for to ‘’prioritize organizational sustainability practices and enhance sustainability performance’’. HRM is essential for the proper functioning of organizations, and for the development of sustainable strategy, sustainable practices, and every new measure that will affect the stakeholders' decisions and the sustainability performance of the organization (Siems & Seuring, 2021). Their intervention and the implementation of some of those measures are undoubtedly part of their CSR policy.

HRM will also have the role of training managers, so they will be able to develop certain sustainability-oriented competencies. A good leadership combined to sustainable HRM practices will have a positive impact on sustainable and overall performance. It will also define sustainable-related objectives, promote sustainability, help to the knowledge by the share of platforms used for exchanging ideas, etc (Kutaula et al., 2024).

This service will also have the role of training managers in this.

Despite their significant contribution, and despite their positive impact on sustainability practices, they remain under-explored in the context of research.

The supply chain is not only a key element within a company, it also allows to companies to ‘’recognize the importance of sustainability-conscious behavior’’ (Siems & Seuring, 2021).

4.8. Entrepreneurship and innovation

Another recently developed way to encourage environmental sustainability, and then environmental collaboration on the entrepreneurial orientation. As a reminder, entrepreneurship consists of the search for and exploitation of opportunities. In this way, entrepreneurial firms' objectives are to still be competitive and relevant (Bouguerra et al., 2022).

Entrepreneurially oriented companies are ‘’more likely to set up mechanisms to facilitate effective communication with […] stakeholders and take joint actions against […] emerging environmental issues’’ (Bouguerra et al., 2022). This then implies that these companies are more open to change and environmental collaboration.

Below is the definition of environmental collaboration:

‘’An extent to which an organization cooperates with its suppliers on environmental goals, objectives and initiatives’’ (Bouguerra et al., 2022). Environmental collaboration is essential for the well-integration of environmental strategy within a company. They face enormous pressure from governments on environmental issues, that’s why sustainable development, and so sustainable supply chain became a priority, and this for almost ten years.

Environmental collaboration is not the only emerging concept within the organizations.

Sustainability-oriented innovation (SOI) not only ease the adoption of environmental practices, but it also includes the implementation of social practices (Dey et al., 2019).

Lean management is a more agile approach in entrepreneurship, allowing testing and changing processes, depending on the results or impacts. This tool is interesting and makes the integration of new practices easier.

In practice, it is easily observable that lean management practices, SOI and CSR are correlated, and might have an impact on economic performance, therefore on sustainable performance. However, this remains a hypothesis, given that little research has looked at the links between these concepts. Dey et al. (2019)'s paper starts to bridge those gaps, but further research is possible on this subject.

One thing is proven, lean management practices (LMP) combined to sustainable oriented innovation leads to a certain competitive advantage. Where LMP will improve the general business performance, SOI will help achieving higher sustainability through proper trade-off among economic, environmental and social criterias – or, in other words, on the whole TBL (Dey et al., 2019).

Just be careful, although complementary, LPM and SOI remain two different concepts, and therefore certain aspects will have a negative impact on the inclusion of certain innovations, for example.

Also, some commons points are observable between LMP and CSR – their transparency, their impact on strategy, or their involvement on strategy. Good management obviously leads to positive returns, and therefore to the creation of competitive advantage. As a limit of the whole process of implementing sustainable practices within a supply chain, we have the promotion of certain practices, to the detriment of others.

We see it when economic performance trumps environmental standards. Or when green innovations, which allow the development of environmental practices, put social issues aside.Although green innovation has a positive impact on performance, and constitutes a competitive advantage, supply chain managers – and participants in general – should also ‘’engage [their partners] in social responsibility’’, which sometimes does not receive enough attention from the companies. A. Wu and Li (2019)'s study suggests that particular investments are required to set up an efficient collaboration between the company, the stakeholders and all the participants of the supply chain.

In fact, sustainability constitutes a driver of innovation within our supply chain today.
Child (1972) emphasized that strategic decisions play a determining role on a business survival, and that strategic orientation constitutes a fundamental issue.
Manu and Sriram (1996) define strategic orientation as ‘’how an organization uses strategy to adapt and/or change aspects of its environment for a more favorable alignment’’. On a sustainable supply chain context, strategic orientation is primordial, because the implementation of sustainable practices requires specific resources and skills, organizational experts and special management (Saeed et al., 2014).

If we want to speak more concretely, we can look at two specific ecological strategic orientations (Hsu et al., 2016):

- Eco-reputation, or the ‘’stakeholder’s overall perception of a company’s effort on environmental protection’’.
- Eco-innovation, or the ‘’development of products and processes that […] account for concerns about […] environment in pursuit of the goal of sustainable development’’.

Both orientations can lead to the creation of sustainability initiatives. We easily notice that sustainable supply chain in inter-disciplinary.Ngo et al. (2023)’s study highlights various interesting elements, notably the risks that all these new methods can generate on the performance of the company. For instance, a customer-focused strategy could enhance the impacts of environmental risk exposures. But this study in particular does not take into account the potential impact of government regulations and policies on sustainable supply chain risks.

5. DISCUSSION

For nearly 30 years, the field of supply chain has been continuously evolving, adapting to various emerging challenges and the new practices being implemented or yet to be implemented. Among these challenges is sustainability, along with everything that comes with it: sustainable development, environmental concerns, societal changes, and the need to generate long-term profits. In our research, we first observed that the supply chain operates with a complex structure that organizations must be able to master effectively. Various aspects and concepts surrounding the supply chain have been explored, not only to understand its functioning but also to highlight the importance of sustainability within it. The role of communication has also been emphasized, due to its key part in successfully integrating the concept of sustainability within companies and, consequently, within the supply chain.

The authors cited generally agree on one major point: environmental issues have gained significant prominence over the past 30 years, and in most cases, these issues can no longer be ignored. Societal concerns will soon also emerge, particularly regarding working conditions, child labor, and the rising standard of living in many countries. However, not all agree on the practical emphasis placed on the environmental and social aspects of the Triple Bottom Line. The primary goal of a company, if it defines itself as such, is to generate profit and to grow economically. While environmental and social factors are integral and therefore essential parts of sustainable development, some companies too quickly set these two aspects aside. In any case, it largely depends on the will of the companies, although certain actors have the power to influence decision-making—this will be discussed further in this review.

Regardless, the majority of companies have decided to take the scientific community's recommendations on climate change, its environmental impacts, and the necessary changes to their processes, including their supply chain, seriously.

What was most interesting during this research was the noticeable evolution between the 2000s, when many foundations were laid in the field of supply chain as

well as sustainable development, and the 2010s, when we began to see the first results of these changes, which are still visible and impactful today. From our analysis, it is clear that the supply chain has had time to grow and evolve over the years, and the same goes for business communication. These two elements, which are central to our topic, developed independently but have since come together as companies have grown. In hindsight, sustainability—at least economically—was being built before we even fully defined what it involved. Long-term viability has always been the primary goal of businesses, as this viability drives their economic performance and, therefore, profit.

Various research studies have been conducted on what could be considered the basics, thus establishing a structure for supply chain in the literature, as well as for communication and sustainability. As we've seen in our research, and will continue to explore further, communication has always played a key role in both the supply chain and in business more broadly. The sharing, dissemination, and integration of information have long been challenges for companies. The subject is more complex than it may seem, with concepts continuing to evolve as businesses and new technologies advance. Communication is essential to the smooth functioning of supply chains and will play a crucial role in the development and integration of sustainability within them.

The integration of sustainability depends on the structure of each supply chain and the commitments already made by companies—although 20 years ago, few companies had real sustainable practices in place. Some authors emphasize that each supply chain—and by extension, each company—should focus on one element at a time for greater short- and long-term efficiency. Although awareness around sustainable development and environmental issues is growing, “we still have an important research gap in the literature.” The research and opinions of authors diverge regarding the importance of the topic and its impact in the coming years. It is also challenging to find articles and research topics that connect the various concepts we've developed earlier in this review. The subject of sustainability within the supply chain was, at that time, still vague and underexplored compared to the 2010s. Many unanswered questions emerged during this period: What will the impact on company performance be? How can the three pillars of the Triple Bottom Line be balanced so that the supply chain remains profitable while addressing social and economic challenges? How can all stakeholders, from suppliers to buyers, be included in a sustainable way? What will be the consequences for the role of stakeholders? Companies' concerns grew as they grappled with identifying and implementing the main key drivers.

This gave rise to new challenges for companies, proving that these questions were already being raised in a context quite different from what we know today. Among these challenges was the centralization of certain aspects of production, allowing supply chains to better control their production processes and related social issues, such as working conditions. Some companies opted to reduce their delivery chains, focusing instead on environmental impact, which would be reduced by this practice. However, there is no indication that these two practices were implemented simultaneously. This ties back to our earlier point that supply chains would do well to focus on one task at a time, to avoid wasting time and investments. That said, this illustrates the difficulty companies face in reconciling multiple aspects of the TBL simultaneously, as its three pillars complement one another. The phased integration of sustainability practices, in

hindsight, proved to be strategic for companies and their supply chains due to the significant costs required to implement more sustainable ways of operating.
The early years are thus crucial for supply chains, which must make informed investment decisions to ensure long-term sustainability. This is how they are able to incorporate sustainability into their supply chain and create SSCs. We then move from the gradual implementation of eco-friendly practices to the more complete inclusion of the entire TBL. Among these practices are the establishment of CSR policies and the development of a green SC. Another key aspect we observed during our research is the critical role of supply chain managers.

Managers are the primary intermediaries between the company's leadership and employees working in various departments—specifically, in this case, supply chain employees. They have several key roles, including communicating leadership's decisions and ensuring the proper implementation of agreed-upon measures. They must also take into account stakeholders' recommendations, although at this stage, their input is not always fully leveraged.

We are witnessing the development of two concepts that will become key in the future, namely "the sustainable agenda" and "energy efficiency." The "sustainable agenda," as we have seen, refers to the relationship between existing industrial activities and the effects of climate change. This represents one of the greatest challenges for supply chains, which in this case have no choice but to comply with the agenda. We are at a turning point in the evolution of the supply chain, as climate and environmental concerns are fully integrated into companies' decision-making processes regarding their production chains, which will undoubtedly affect their overall performance and long-term viability. A key factor to consider is the energy efficiency of supply chains, or how companies will utilize the available energy sources. The integration of sustainability processes will significantly impact the choice of energy sources—whether fossil fuels or renewables—depending on their environmental impact and the costs involved.

The supply chain plays a central role in ensuring a successful transition to more eco-friendly practices, as it is the department most affected by these practices and their consequences. Other departments (marketing, finance, etc.) will later adapt to these changes in terms of external communication, investments, or strategy. Sustainability in business is not a fixed concept; it evolves along with economic, environmental, and social changes in society, as well as with companies. For some, this evolution represents a competitive advantage to be considered and leveraged. However, at this point, there are few indicators that can prove this. Supply chains, and by extension companies, will only see concrete results after several years of changes and investments before realizing a tangible impact on their market position and performance.

Beyond sustainability, other practices had to be developed by supply chains to ensure viable technical and economic growth. The implementation of SCI shows that collaboration and communication are key to a well-functioning supply chain. Communication, typically facilitated by managers, is crucial to the successful implementation of changes. Simply introducing new processes is not enough to see results; effective management is required, which not all companies can provide at the outset. The SSC is still a new concept and remains unfamiliar terrain for supply chains.

Another concept developed to better consolidate the supply chain as we know it is "agility." Supply chain agility is seen as a key element, enabling faster and more efficient responses to changes, whether minor or disruptive. The integration of sustainability, which, as we recall, is a complex and constantly evolving field, introduces its share of unpredictability and unforeseen events. Managers and employees must be perfectly coordinated in implementing their actions while maintaining good relationships, which are essential to the smooth operation of a company and its supply chain. Finally, communication is key, as information sharing is vital in this context. In fact, communication is one of the main "enablers of agility."
Outside of these new concepts, which are essential for understanding the supply chain and integrating sustainability into business processes, there is also the role of stakeholders. We've already discussed the role of managers, so now let’s focus on stakeholders. Stakeholders include buyers, suppliers, consumers, and investors. Each has a different role but holds a central place in companies' decisions. However, this role was not always taken seriously, particularly in the 2000s.

It is essential to understand what motivated companies to reconsider their practices, beyond environmental concerns and required societal changes. Stakeholders have gained new interest in the literature, with researchers delving deeper into their role and impact. They must be able to understand and align with the company's vision to invest. Although their involvement hasn't always been fully recognized, it remains essential and necessary, as stakeholders are now an integral part of the decision-making process in every company. In the context we are studying, they are best positioned to exert sufficient pressure on companies to integrate sustainable practices in both the business and its supply chain—here, it is the consumers who wield that power.

In drafting our first part, we chose to focus on the chronology of events, listing the key elements and their status at a more or less precise moment. As explained earlier, this approach offered a clearer view of the situation, particularly if we wanted to analyze the evolution of the field, whether positive or negative. As a result, the research and analysis of the outcomes are all the more relevant, as this method allows for a real comparison.

That being said, it was possible to adopt a different perspective, which we can briefly outline. This perspective is organized on three different levels: individual, organizational, and institutional.

At the individual level, we find everything related to the human contribution to the company, with the personal and psychological characteristics of each person forming the organization, along with all the socio-demographic data involved. This level mainly concerns stakeholders, key actors in the supply chain, even though their role was highlighted later compared to other aspects. Although final decisions lie with companies, stakeholders possess a power that should not be underestimated, though it remains underutilized. They have the ability to financially penalize companies that do not meet their commitments, either by stopping investments or through public opinion.

On the organizational side, we find everything related to the company’s culture, its strategy, and the skills within it. The inclusion of sustainability largely depends on the companies themselves, and their ability to manage such changes, whether on a human, material, or financial level. Corporate culture, among other things, will

undoubtedly impact the communication processes within the company as well as the integration of more sustainable practices. Several factors come into play here: does the company promote change, and evolving mindsets, or is it focused solely on performance and financial results?

Lastly, if we focus on a more institutional level, where laws, regulations, and governments wield their power, we observe the emergence of different, but no less difficult, challenges for the supply chain. Unlike the organizational level, where companies had control over their processes and could choose to incorporate desired practices as they saw fit, this is no longer the case when governments get involved. Companies must then be able to comply with these laws and regulations, when necessary, while still maintaining their economic viability. In this context, supply chain agility becomes a significant advantage.

During the 2010s, a new research perspective began to emerge among scholars, highlighting the significant evolution of the entire supply chain. Sustainability and its associated concepts have continuously developed, transitioning from what could be considered an experimental phase to a more practical one.

Performance is no longer solely measured by economic indicators; environmental and social factors are now also taken into account. These new indicators come with an additional requirement: they must align with the company's existing strategy and objectives, which can sometimes present a challenge. At this stage, we are no longer simply talking about performance but rather about impact. With the emphasis on sustainable performance, sustainability is no longer just an isolated concept awkwardly integrated into existing processes. It has become a real skill that supply chains must master to differentiate themselves from competitors and maintain their advantages and influence with buyers and suppliers. This constitutes a genuine competitive advantage that companies cannot afford to overlook.

The term "green supply chain" soon emerged to describe the inclusion of environmental sustainability. Two practices are studied as key drivers of the green supply chain: eco-centricity and traceability. Eco-centricity involves a commitment to stakeholders, who are playing an increasingly important role in the supply chain, while traceability ensures that suppliers' practices align with the environmental criteria set by companies. While these practices are positive, they can also have negative impacts. With stakeholders gaining more power, engagement with them can either be risky or insufficient. Finding the right balance, while aligning with the company's strategy and managing the costs involved, is crucial for the success of the green supply chain. Traceability also has its limits, as it is challenging to monitor all supplier activities without scaring them off or encouraging them to falsify their practices simply to maintain their contracts with companies. Vigilance is required in these areas by companies, managers, and stakeholders alike.

Greenwashing is an evident limitation of sustainable communication. As we have studied, this phenomenon spread rapidly over the past decade and has proven difficult to control. Alongside the green supply chain, economic sustainability has developed, meaning that economic performance should result from the implementation of sustainable practices, regardless of the required investments. Social sustainability, though sometimes neglected, has regained interest in recent years. The social aspect

is crucial for companies, as it directly affects the people running the structure, from directors to employees, managers, and stakeholders. More research is needed on this subject, as it is too important to overlook.

Including the three pillars of the TBL (Triple Bottom Line) in performance objectives is not enough; concrete results are expected to ensure that sustainability is respected. Sustainable performance must be effective on all fronts, ensuring a return on investment for companies and involved stakeholders. To achieve this, specific needs in terms of innovation are required, whether through technical innovations, the implementation of new production or distribution methods, improved management techniques, or the accuracy of performance measurement tools. A relevant analysis can be conducted from three different perspectives: the company's, through the results obtained (sales results, revenue, etc.), the stakeholders', based on the objectives to be achieved, and finally, the consumers', where opinions and sentiments come into play.

The rise of new technologies has provided a significant advantage, explaining the rapid evolution of some practices. Their use is now essential due to their effectiveness, diversity, and ease of use. However, it is important to keep in mind that some studies are beginning to emerge on the negative energy and environmental impacts of these new technologies. Nevertheless, during the 2010s, they significantly contributed to the development of the supply chain, the dissemination of environmental and social concerns in our society, and thus facilitated the inclusion of better practices within companies and their supply chains. In terms of communication, new techniques have also emerged, thanks to the rise of new technologies. It is now easier to disseminate information, although it is not necessarily easier to control; quite the opposite. Many spillover effects are observed when the information delivered does not correspond to the intended message, or when another idea emerges from a specific message. These effects are, by definition, unintentional, difficult to control, and can lead to serious consequences for companies. Therefore, it is crucial for companies and their supply chains to pay close attention to what they wish to share, how they go about it, and the unintended messages that may arise, along with the associated consequences.

Communication can also be a very powerful marketing tool, highlighting a better brand image, and therefore an interesting competitive advantage, allowing them to differentiate themselves from their competitors and stand out on the market, targeting consumers. whose environmental issues are important to them. Similarly, clear communication about the implementation of regulations can reassure investors, who might be scared off by these regulations. In this way, supply chains avoid legal problems and maintain trust with their stakeholders.

At the same time, a new practice emerged: transparency—an approach that, in a way, accompanies the previously mentioned traceability. Transparency within a company is a powerful tool, capable of generating trust among consumers and other stakeholders. It also allows stakeholders to apply pressure on supply chains, potentially leading to changes in practices that do not align with a suitable sustainability policy. Transparency also helps reduce greenwashing, with supply chains committing to the dissemination of reliable and verified information that aligns with what is truly happening within the production chain. However, transparency does not simplify the control of information. It provides a certain level of control over the communicated information, allowing

supply chains to manage what type of information is released and when, without alarming stakeholders. However, perfect control over communication does not exist, and companies can become victims of their own strategy, particularly due to spillover effects.

Pressure is not only felt on the company's side of the supply chain; it can—and should—also be applied to the rest of the supply chain, particularly buyers and suppliers. Applying pressure on buyers to meet the sustainability requirements set by companies forces them to find solutions to minimize their environmental impact while maintaining economic stability. Conversely, little pressure is still applied to suppliers, especially when they hold more power within the supply chain. Yet, it is essential to include both buyers and suppliers in this process of integrating sustainability into the supply chain, as both actors play central roles, and their lack of cooperation will inevitably affect the overall performance of the supply chain.

When it comes to internal communication, we find CSR policies, which exemplify corporate communication and demonstrate the presence of a sustainability policy within the company. Additionally, SCI (Supply Chain Integration) is evolving to become a form of communication within supply chains. In addition to integrating the desired practices, it connects these practices with other members of the company and, most importantly, the supply chain. Coupled with SC procurement, it facilitates the integration of sustainability into the supply chain, with the three pillars of the TBL being considered and integrated more or less equally—this level of detail varies depending on the company.

The effectiveness of supply chain agility has been demonstrated multiple times and has, unexpectedly, become linked to other concepts within the supply chain, evolving into a more detailed and effective practice. SC resilience involves anticipating known or predictable problems for companies, while supply chain agility helps manage unforeseen events. However, these two elements complement each other in practice, enabling the integration and dissemination of sustainable practices while minimizing potential negative consequences. These four previously mentioned concepts complement each other, although they did not emerge simultaneously or for this specific purpose. However, their role in integrating and maintaining sustainability in companies is increasingly important and fascinating to observe.

Moreover, the role of stakeholders is gaining importance within the supply chain, to the point where they are now considered an integral part of the supply chain. They are represented by different types of people, each playing different roles—observer, advisor, investor. Therefore, companies have a vested interest in maintaining a close and stable relationship with their stakeholders, recognizing that their engagement is more beneficial than initially thought. Consumers—stakeholders in their own right—are also gaining influence, with their impact stemming from their actions and words. Their opinions matter more than ever, with social media facilitating the communication and sharing of these opinions. Citizen actions, boycotts, or even negative reviews quickly reach companies, influencing their decision-making, particularly in a context where health and the environment are key societal concerns. Their inclusion, in one way or another, in the companies' decision-making process also helps curb greenwashing. Combined with transparency practices, it becomes increasingly difficult

and risky for supply chains to misrepresent their environmental and sustainability impact.

CSR policies, as has been demonstrated, have a direct impact on performance through their involvement in ensuring the profitability of the supply chain and, by extension, the company. It is important to remember that the CSR policy is an integral part of the company's strategy, along with all the social and environmental objectives set in advance. It also contributes to the dissemination of these practices, their challenges, and the results to the rest of the company. The sharing and analysis of results is a critical part of the process to remember, as proper feedback enables the improvement of the implemented practices and processes. Linking CSR practices to other practices and objectives within the company becomes a competitive advantage that companies should maintain and preserve.

Companies are also becoming aware of the need to involve their buyers and suppliers in their decision-making processes regarding sustainability. Buyers and suppliers play a central role in the smooth functioning of the supply chain, so it is logical to include them in discussions related to sustainable development and sustainability in general. Companies have tended to neglect their suppliers on this front more than their buyers—the latter being the first to face pressure from companies to modify their practices. This also ties into stakeholder engagement, which must be natural for companies to continue generating long-term profit while fulfilling their commitments.

It is worth noting that barriers to integrating these practices can be encountered at the three different levels we saw earlier:

- At the individual level: Decision-makers are, above all, human beings with emotions, complex psychology, and sometimes unpredictable behaviors in the face of change. In fact, human are unpredictable, and so their behaviors. This is a key element to take into account before making any decisions, as the individual is the one we have to convince in we want them to apply the practices within the supply chain.
- At the organizational level: This relates to the company's culture, employee relationships, etc. The reasons here are primarily structural, and so will depend of each organization. There are no fixed rules, and some processes and procedures will certainly need to be renegotiated.
- At the institutional level: The establishment and enforcement of rules and laws decided by authorities and governments to promote sustainability. However, this does not mean that the process will be easier; on the contrary, it adds additional challenges as governments strive to limit abuses. One more challenge is that regulations might be unpredictable and eventually difficult to handle by organizations.

At some point, the huge difference between the organizational level and the other two is that, in the first case, they have power on themselves. That’s means they do not have constraints or deadlines, or immediate consequences on their actions. On the other hand, the individual level is as unpredictable as the institutional level.

Human resource management ensures the proper functioning of management techniques within the various departments of the company. This department oversees

the training of these teams, in line with the established practices and objectives, and ensures the smooth operation of the hierarchical structure.

One final indicator and outcome observed in our research is the role of entrepreneurship—or intrapreneurship. Since this field focuses on identifying and exploiting development opportunities, it proves to be an especially effective tool for integrating sustainability into businesses. Incorporating such practices can be complex, especially within a detailed, pre-defined plan, but entrepreneurship encourages and supports innovation. However, it is essential to ensure that the integration of certain practices does not come at the expense of others' development.

Sustainability is a key driver of innovation, offering supply chains numerous opportunities for growth and evolution. It is an interdisciplinary field that can be applied to every department of a company, or any player involved in the supply chain.
The integration of sustainable practices undoubtedly has a significant impact on company performance, particularly economic performance. Higher investments are required to adopt and implement these new sustainable practices. Therefore, companies must achieve greater economic performance to cover these investments, ensuring long-term viability while meeting the previously established objectives.

Concretely, this managerial aspect is evident in the vast majority of articles studied on this topic. Many authors emphasize their involvement in implementing new practices, whether related to sustainability or not. Managers are true pillars for companies, and this at multiple levels. They manage the teams in place and are responsible for addressing individual issues and expectations. They also serve as a bridge between the various departments of the organization, as well as with some stakeholders (buyers or suppliers). Managers play a crucial role when it comes to establishing a communication strategy, being among the first to disseminate information and ensure its proper distribution. Finally, their role is more than central in the inclusion of sustainable practices and in their proper implementation. As previously demonstrated, their central position within the organization is an advantage for these tasks, as managers possess the necessary skills for such responsibilities.

There is a noticeable adherence to rigor in existing research, whether in literature reviews or quantitative and qualitative surveys conducted. The results are mostly highly relevant, providing a clear view of the supply chain and its evolution over the past three decades. Generally, none of the articles studied so far in this review contradicted one another, demonstrating consistency within the field and related research. However, this applies primarily to the topic of the supply chain alone.
Indeed, few studies to date have successfully linked all the different concepts together, despite the fact that, upon analysis, many appear complementary. It would be beneficial to see more in-depth studies on the long-term impact of stakeholders on supply chain performance.

We also observe that there is little to no follow-up over time, as studies mainly focus on a specific industry or geographic area at a given moment. As a rapidly evolving field, continuous tracking would have provided more insight into this evolution. That being said, capturing a snapshot at a specific, even pivotal, moment remains valuable, offering reliable comparison tools for subsequent studies.

Despite a wide variety of articles on the subject and a remarkable level of rigor from the authors, there remain a few areas that are either unexplored or underexplored. First and foremost is the issue of greenwashing, which is still rarely examined in depth in the literature. This presents an opportunity for new research, with potentially highly interesting results given the complexity and challenges surrounding this topic.
Exploring greenwashing more thoroughly could provide valuable insights, especially as it has become a growing concern in the context of sustainability and corporate practices. Its intricacies and the fine line between genuine sustainability efforts and deceptive practices make it a critical area for further investigation.

Among potential future research topics, the use of new technologies for sustainable communication could be an intriguing area to explore. New technologies have seen significant growth between 2000 and 2020, yet they remain underutilized by companies and, by extension, supply chains. While production chains have automated certain aspects of their operations (such as using ERP systems), there are still untapped opportunities that could facilitate the integration, dissemination, and monitoring of sustainability practices within companies. For instance, technologies could precisely identify the components of certain products through databases, enabling quick assessments of their environmental impacts and facilitating their removal from production lines if necessary.

The intervention of artificial intelligence (AI) also presents a promising avenue for future research. AI could offer more effective responses to environmental challenges and even propose tailored solutions based on the specific needs and resources — financial or human — of the concerned company. Additionally, AI possesses predictive capabilities that could help establish forecasts or scenarios regarding the potential risks that supply chains might face with the introduction of new practices. Given that risk management is a key topic within companies, a deeper investigation into this subject could provide valuable insights for future developments.

Moreover, certain already-explored subjects warrant further attention. We still know too little about the consequences associated with greenwashing, despite this concept being identified for the first time in the 1990s. Although mentioned in most recent studies, focusing specifically on greenwashing—its development within companies and the resulting consequences—remains a worthwhile endeavor. However, conducting such research poses challenges, as companies may not openly disclose their practices outside formal frameworks. Additionally, insufficient data currently exists, which may hinder the development of this topic as a standalone area of study.

Another potential topic of discussion concerns the availability of resources. The excessive consumption of non-renewable resources inevitably raises significant concerns within supply chains, which fear resource depletion, as well as among consumers, who are more worried about the environmental consequences and the potential impact this could have on the future. Government intervention to regulate the use of these resources is possible but may be complicated by the involvement of concerned companies or lobbying efforts. A paradox in this case is that the development and evolution of the concept of sustainability within supply chains has only made this concept more complex, making it harder to understand. As a result, it becomes challenging for governments to intervene, especially without the active cooperation of companies.

Another gap in the literature on sustainable communication is the intervention of governments, the consequences of their actions and their real impact on the performance of the company. We have discussed the role of institutions, over which the company has no power, except to agree to decisions taken at the regional or national level. However, institutions play a key role in the implementation of sustainable practices, being those with the power to make certain practices mandatory, or to control others. Laws govern working conditions, the conformity of raw materials, or the control of production chains so that they comply with the standards in force. From a certain point of view, we could see these laws and regulations as being obstacles to the development of companies, but this is difficult to affirm without proof. It would therefore be interesting to ask the question, how do companies manage to adapt their processes to the laws in force? Like greenwashing, are diversions considered by some companies?

Conversely, transparency would likely be easier to analyze, given that this practice is already common in many organizations. Unlike greenwashing, companies might be less hesitant to share data and results related to transparency initiatives. Nevertheless, the challenge would likely lie in addressing the potential negative consequences this transparency could have, particularly on overall company performance. Is it truly beneficial to know everything?

Finally, further exploration of the role of stakeholders would be beneficial. Understanding how they operate, their interests, and how they contribute to the integration of sustainability within companies—and ultimately to overall performance—raises many questions. These questions have often been touched upon in numerous articles without in-depth exploration or connection to the relevant sustainability issues.

Table 2 summarizes the key findings of our research and suggest more gaps and future research on the various concepts explored.

This research offers a systematic review of current literature, highlighting the key elements of the subject, while allowing the identification of gaps and future research topics. This research topic can however be developed further, highlighting certain key elements and having a significant impact on the supply chain, related processes, as well as the place of sustainability, which is becoming increasingly important within supply chains.

In conclusion, we wondered what the antecedents and main consequences of sustainable communication in supply chains over the last 20 years were, their evolution over time as well as their impact on performance, or the commitment of stakeholder. We note, through this analysis, that the field of supply chain is a complex subject, the workings of which have been explored and analyzed in recent years. An evolution is visible, the field having changed enormously in a few years, while knowing how to keep solid foundations, and will have had a significant impact on performance in business. More than on the results themselves, this evolution will have called into question years of practices and will have illustrated the need to evolve at the same time as social and environmental issues. This last point will play a significant role in the engagement of stakeholders in the decision-making process of companies - and supply chains - and in their impact on sustainable development in companies.

This review will have allowed a different approach to the subject, trying to analyze the link between the different key concepts analyzed, and their importance in the proper functioning of the company's strategy, a strategy that inevitably has repercussions on performance.

Table 2: main key findings, limitations and further possible research

Key findings	Existing literature results	Gaps/limitations	Future research
Sustainable supply chain	Antecedents: first research on the subject, few things in place but a first awareness on the part of companies Outcomes: inclusion of sustainability in processes	Many practices and concepts involved, but little research concretely linking them	Further analysis on a long-term period, in several industries
Sustainable communication	Definition of communication and its role in business and in supply chains Tool for sharing and disseminating sustainable practices, sharing information	Lack of involvement of new technologies and their impact on current processes	Inclusion of new technologies and impact on supply chain performance
Supply chain integration	‘’Examining collaborative relationships between a manufacturer and either its customers or suppliers’’, in order to optimize them and to create a more collaborative system within the supply chain enables the integration of new processes within the supply chain - here, sustainable practices Outcome: essential element of the supply chain	Lack of perspective on the importance on sustainable supply chain	Comparison across multiple industries, on a longer-term period

Table 2 (continued)

Key findings	Existing literature results	Gaps/limitations	Future research
Agility	Capacity of a supply chain to ‘’rapidly respond to changes in market and customer demand’’ Significant process to integrate into the supply chain in the face of changes in society (in economic, social or environmental terms)	Limited concept by definition, tool to be used in collaboration with others – supply chain resilience and adaptation	Further research on the efficiency of supply chain agility against disruptive elements
Stakeholders	Definition and role of stakeholders Lack of importance given on the supply chain, despite their impact evolution to become a key element of the supply chain	Importance neglected over a certain period lack of integration in the supply chain role sometimes still limited despite the demonstration of their impact	Impact of stakeholder’s engagement toward the supply chain Role on generation of positive performance Importance given to sustainable practices and how they contribute to it
Sustainability as a capabilities	Skill to master, generator of competitive advantages	How to harness sustainability and make it a hard-to-copy skill	Sustainability as a competitive advantage and as a differentiating element
Performance	Sustainability and its impact on economic performance – need of investments Impact on ecological performance, after the setting of environmental objectives – same with social performance	Lack of results on long-term impact	Long-term observations and observations of developments
Greenwashing	Multiples definitions on literature when a ‘’company's environmental claims [is] not substantiated by its actual activities’’ Relatively old concept but new interest	Lack of overall results, difficult to verify with companies, lack of concrete examples	Investigation into practices, their implementation and their impact on the results of the supply chain concerned

Table 2 (continued)

Key findings	Existing literature results	Gaps/limitations	Future research
Managerial implications	Key role of the manager, impact on supply chain performance, evolution of their role	Lack of perspective on their impact appears as a result in many research studies, but few concise syntheses	Review of their evolution within the supply chain, status of their impact and the evolution of their role, if it exists
Corporate social responsibility	Promotion of the development of ethical and sustainable practices Form of internal communication Set up the sustainable objectives within the firm	Can in some cases help or contribute to greenwashing communication tool but need proof of real involvement	Impacts and limits of CSR
Entrepreneurship and innovation	Entrepreneurial orientation encourages sustainable projects Implementation of sustainable practices also encourages innovation, development, and growth	Involvement of new technologies in the search for innovation Do supply chains really want to evolve their processes and embark on an entrepreneurial dimension	How can opportunity research and exploitation facilitate the integration of sustainability?

6. CONCLUSION

The objective of this review was to provide a clear overview of the results obtained from previous research and studies, aiming to connect the concepts together in order to identify synergies, complementarities, or conversely, points of divergence regarding the impact of sustainability on the supply chain and its implications. This review highlighted the critical role of sustainable communication within supply chains, through a more in-depth analysis of supply chain operations, followed by the integration of sustainability. Among the key antecedents are the fundamentals of the supply chain, as well as its capacity to manage risks and disruptive events, while trying to adapt to societal changes at multiple levels (social, environmental, legal, economic). The role of stakeholders began to grow in importance, despite a lack of seriousness on the part of some companies, at least in the beginning. The analysis of these antecedents allowed us to observe the rising importance of sustainable communication, a key factor in the successful integration of these new practices. Looking at the consequences, which represent the initial results of the efforts made, we can affirm that they are considerable: properly conducted sustainable communication creates a competitive advantage, maintains consumer trust, and impacts the overall efficiency of the supply chain, including suppliers and buyers. Managerial implications must also be taken into account, as the role of the manager, though evolving, has remained key to the smooth functioning of the supply chain and the integration of sustainability.

A positive evolution can be observed, whether in the functioning of the supply chain, its transformation towards a more sustainable production and distribution chain, or in the related sustainable communication techniques. Numerous changes have been noted over the past few years, demonstrating the supply chain's interest in adapting its practices to the challenges of our society while remaining economically viable and continuing to contribute to the company's performance. This performance benefits from the positive impacts of including sustainability within companies, although additional investments are sometimes required to maintain it. Finally, stakeholder engagement has become a new issue for supply chains, which have acknowledged the importance of this engagement for their development and its impact on overall performance. It is important to note that stakeholder engagement must be aligned with the company's strategy, which then defines the financial, ecological, and social objectives. That being said, stakeholders also have the power to influence these objectives, making the collaboration complex but essential for implementing the company's strategy.

The inclusion of sustainable practices has, of course, played a significant role in reshaping the practices that drive the supply chain, highlighting efficient resources and minimizing environmental impacts on the supply chain, and vice versa. These practices have also impacted the relationships between companies and suppliers, encouraging collaboration based on trust and communication, where each party can reap benefits. Transparency and traceability are practices that we have developed and are more than reliable tools to strengthen stakeholder trust, as they are increasingly concerned about environmental and social issues. Risk management is also affected, as the inclusion of new sustainable practices entails a serious consideration of risks and a need to anticipate potential unforeseen events as much as possible. Focusing on sustainable practices also offers opportunities for innovation and encourages supply chains to mobilize new technologies in their processes of ecological and sustainable transformation. These factors resonate with consumers, influencing their purchasing decisions and their commitment to the companies involved. Prioritizing sustainability enhances brand image and fosters consumer loyalty towards companies with a clear and sensible mission. Finally, the integration of sustainable practices has encouraged the development of CSR policies, which are true drivers of sustainability within companies and their economic, social, and environmental engagement. Incorporating sustainable factors into supply chains provides organizations with long-term viability while contributing to social and environmental expectations without negatively impacting their economic performance.

In the context of sustainable development and the evolution of the supply chain, sustainable communication would play a central role for several reasons. It encourages transparency in the supply chain, not only from the companies' side but also from the suppliers and buyers, facilitating more effective collaboration. Effective communication fosters a climate of trust and encourages the engagement of other stakeholders as well. It promotes behavioral changes among employees based on the sustainable decisions made by the company, highlighting the importance of these decisions. Communication also encourages knowledge sharing and transmission, which could be another avenue for future research. Regarding risk management, communication is an excellent means of responding effectively to risks while maintaining stakeholder trust. Finally, sustainable communication allows for the sharing of performance indicators, providing a clear and precise understanding of performance, its evolution, and any

adjustments needed to meet the established objectives. In summary, communication helps build a climate of trust and has a strong impact on the overall effectiveness of the supply chain. Without a good communication strategy, whether internal or external, companies risk lacking coherence and, consequently, minimizing their impact.

More than just an evolution, we have a clearer view of the influence that this evolution of the supply chain has had on itself, the companies, and the other actors in the supply chain over the years. In the context of this study, the influence is positive, leading to increased awareness and real changes in the business world and in the daily management of supply chains.

However, certain aspects of the subject remain unexplored, such as the long-term impact of implementing a sustainable communication strategy, the consequences of stakeholder engagement, or the contribution of new technologies to sustainable communication, as well as the overall development of the supply chain. It would be interesting for future research to focus on these topics. In addition to other literature reviews, it would be valuable to conduct a quantitative or qualitative survey, depending on the case, over a longer time period than what has been done before, to observe the effects of certain topics in the long term.

Not only does this review open up potential research topics, but it has also demonstrated that the subject is of growing interest to researchers in the field. Different research methods could be employed, such as collecting and analyzing quantitative data or obtaining more detailed results through qualitative surveys. As previously mentioned, topics such as communication techniques, the role of new technologies, or even artificial intelligence, as well as deeper research into greenwashing, are worth exploring. Some authors have chosen to focus on specific industries, like the textile industry or new technologies, or to target a specific geographic area. A new area of interest for research would be to expand the range of industries studied, to provide a clear and concise comparison between different industries and thus different companies.

The drafting of this review has allowed us to juxtapose various concepts studied in the past, which turn out to be complementary after a more thorough analysis. Connecting communication, sustainability, and the supply chain is both relevant and highly complex. A good understanding of the supply chain field is therefore essential, in addition to the importance of grasping the challenges related to sustainable development and its integration into companies' processes and decision-making. These studies have thus enabled us to better understand the ins and outs of sustainability, the challenges associated with its better integration into the supply chain, and the role of communication within all of this.

Much more than a trend, as it was perceived at the beginning, sustainable communication has become a critical need within today's organizational environment. Stakeholders demand greater transparency and accountability from companies, while companies realize and accept that implementing sustainable communication promotes the integration of sustainable practices in their processes and production chains. Promoting dialogue with suppliers, consumers and investors helps to strengthen the trust that these stakeholders have in the company, and for the latter to gain credibility. Thus, companies favoring communication around sustainable development give

themselves a significant competitive advantage and contribute to better resource management and awareness of environmental and climate concerns. It is therefore imperative for organizations to invest in sustainable communication strategies, which align with their strategy and objectives in terms of sustainable development, while remaining vigilant in the face of market developments, which never stop.

REFERENCES

Acquaye, A., Genovese, A., Barrett, J., & Koh, S. L. (2014). Benchmarking carbon emissions performance in supply chains. *Supply Chain Management an International Journal*, *19*(3), 306–321. https://doi.org/10.1108/scm-11-2013-0419

Adhikary, A. &. S. a. &. D. K. S. &. J. J. (2020). Impact of buyer-supplier network complexity on firms' greenhouse gas (GHG) emissions: An empirical investigation. *ideas.repec.org.* https://ideas.repec.org/a/eee/proeco/v230y2020ics0925527320302243.html

Ahluwalia, R., Unnava, H. R., & Burnkrant, R. E. (2001). The moderating role of commitment on the spillover effect of marketing communications. *Journal of Marketing Research*, *38*(4), 458–470. https://doi.org/10.1509/jmkr.38.4.458.18903

Apaydin, M., Jiang, G. F., Demirbag, M., & Jamali, D. (2020). The Importance of Corporate Social Responsibility Strategic Fit and Times of Economic Hardship. *British Journal of Management*, *32*(2), 399–415. https://doi.org/10.1111/1467-8551.12402

Ashby, A., Leat, M., & Hudson-Smith, M. (2012). Making connections: a review of supply chain management and sustainability literature. *Supply Chain Management an International Journal*, *17*(5), 497–516. https://doi.org/10.1108/13598541211258573

Atarah, B. A., Mustapha, A., Nyaaba, P., & Damoah, O. B. O. (2024). Sustainable procurement practices and female entrepreneurs: Insights from a developing country. *Business Strategy & Development*, *7*(3). https://doi.org/10.1002/bsd2.421

Atasu, A., Corbett, C. J., Huang, X., & Toktay, L. B. (2020). Sustainable Operations Management Through the Perspective of Manufacturing & Service

Operations Management. *Manufacturing & Service Operations Management*, *22*(1), 146–157. https://doi.org/10.1287/msom.2019.0804

Awaysheh, A., & Klassen, R. D. (2010). The impact of supply chain structure on the use of supplier socially responsible practices. *International Journal of Operations & Production Management*, *30*(12), 1246–1268. https://doi.org/10.1108/01443571011094253

Bagheri, A., & Hjorth, P. (2006). A FRAMEWORK FOR PROCESS INDICATORS TO MONITOR FOR SUSTAINABLE DEVELOPMENT: PRACTICE TO AN URBAN WATER SYSTEM. *Environment Development and Sustainability*, *9*(2), 143–161. https://doi.org/10.1007/s10668-005-9009-0

Bai, C., Sarkis, J., & Wei, X. (2010). Addressing key sustainable supply chain management issues using rough set methodology. *Management Research Review*, *33*(12), 1113–1127. https://doi.org/10.1108/01409171011092176

Becker-Olsen, K., & Potucek, S. (2013). Greenwashing. In *Springer eBooks* (pp. 1318–1323). https://doi.org/10.1007/978-3-642-28036-8_104

Berenguer, G., Lorenzo, N. C., & De Tejada Cuenca, A. S. (2024). The State of Supplier Diversity Initiatives by Large Corporations: The New Sustainable Supply Chain? *Production and Operations Management*. https://doi.org/10.1177/10591478241240123

Beske, P., & Seuring, S. (2014). Putting sustainability into supply chain management. *Supply Chain Management an International Journal*, *19*(3), 322–331. https://doi.org/10.1108/scm-12-2013-0432

Blome, C., Hollos, D., & Paulraj, A. (2013). Green procurement and green supplier development: antecedents and effects on supplier performance. *International*

Journal of Production Research, *52*(1), 32–49. https://doi.org/10.1080/00207543.2013.825748

Bouguerra, A., Hughes, M., Cakir, M. S., & Tatoglu, E. (2022). Linking Entrepreneurial Orientation to Environmental Collaboration: A Stakeholder Theory and Evidence from Multinational Companies in an Emerging Market. *British Journal of Management*, *34*(1), 487–511. https://doi.org/10.1111/1467-8551.12590

Brammer, S., & Walker, H. (2011). Sustainable procurement in the public sector: an international comparative study. *International Journal of Operations & Production Management*, *31*(4), 452–476. https://doi.org/10.1108/01443571111119551

Breslin, D., & Gatrell, C. (2020). Theorizing through Literature Reviews: The Miner-Prospector Continuum. *Organizational Research Methods*, *26*(1), 139–167. https://doi.org/10.1177/1094428120943288

Burchell, J., & Cook, J. (2006). It's good to talk? Examining attitudes towards corporate social responsibility dialogue and engagement processes. Business Ethics: A European Review, 15, 154-170.

Carter, C. R., & Easton, P. L. (2011). Sustainable supply chain management: evolution and future directions. *International Journal of Physical Distribution & Logistics Management*, *41*(1), 46–62. https://doi.org/10.1108/09600031111101420

Carter, C. R., & Jennings, M. M. (2002). LOGISTICS SOCIAL RESPONSIBILITY: AN INTEGRATIVE FRAMEWORK. *Journal of Business Logistics*, *23*(1), 145–180. https://doi.org/10.1002/j.2158-1592.2002.tb00020.x

Carter, C. R., & Rogers, D. S. (2008). A framework of sustainable supply chain management: moving toward new theory. *International Journal of Physical Distribution & Logistics Management*, *38*(5), 360–387. https://doi.org/10.1108/09600030810882816

Chen, H., Daugherty, P. J., & Landry, T. D. (2009). SUPPLY CHAIN PROCESS INTEGRATION: a THEORETICAL FRAMEWORK. *Journal of Business Logistics*, *30*(2), 27–46. https://doi.org/10.1002/j.2158-1592.2009.tb00110.x

Chen, I. J., & Paulraj, A. (2004). Towards a theory of supply chain management: the constructs and measurements. *Journal of Operations Management*, *22*(2), 119–150. https://doi.org/10.1016/j.jom.2003.12.007

Chen, S., Liu, W., & Song, H. (2019). BROADBAND INTERNET, FIRM PERFORMANCE, AND WORKER WELFARE: EVIDENCE AND MECHANISM. *Economic Inquiry*, *58*(3), 1146–1166. https://doi.org/10.1111/ecin.12854

Chen, S., Zhang, Q., & Zhou, Y. (2018). Impact of Supply Chain Transparency on Sustainability under NGO Scrutiny. *Production and Operations Management*, *28*(12), 3002–3022. https://doi.org/10.1111/poms.12973

Chen, S., Zhang, Q., & Zhou, Y. (2019). Impact of Supply Chain Transparency on Sustainability under NGO Scrutiny. *Production and Operations Management*, *28*(12), 3002–3022. https://doi.org/10.1111/poms.12973

Chen, Y., & Chen, I. J. (2019). Mixed sustainability motives, mixed results: the role of compliance and commitment in sustainable supply chain practices. *Supply Chain Management an International Journal*, *24*(5), 622–636. https://doi.org/10.1108/scm-10-2018-0363

Child, J. (1972). Organizational Structure, environment, and Performance: the role of Strategic choice. *Sociology*, *Vol. 6, No. 1*. https://www.jstor.org/stable/42851133

Christopher, M., Lowson, R., & Peck, H. (2004). Creating agile supply chains in the fashion industry. *International Journal of Retail & Distribution Management*, *32*(8), 367–376. https://doi.org/10.1108/09590550410546188

Clarkson, M. B. E. (1995). A Stakeholder Framework for Analyzing and Evaluating Corporate Social Performance. *Academy of Management Review*. https://www.scirp.org/reference/referencespapers?referenceid=2477664

Clift, R. (2003). Metrics for supply chain sustainability. *Clean Technologies and Environmental Policy*, *5*(3–4), 240–247. https://doi.org/10.1007/s10098-003-0220-0

Closs, D. J., Speier, C., & Meacham, N. (2010). Sustainability to support end-to-end value chains: the role of supply chain management. *Journal of the Academy of Marketing Science*, *39*(1), 101–116. https://doi.org/10.1007/s11747-010-0207-4

Cotta, D., Klink, L., Alten, T., & Madhoon, B. A. (2022). How do supply chain managers perceive the relationship between resilience and sustainability practices? An exploratory study. *Business Strategy and the Environment*, *32*(6), 3737–3751. https://doi.org/10.1002/bse.3325

Cousins, P. D., Lawson, B., Petersen, K. J., & Fugate, B. (2019). Investigating green supply chain management practices and performance. *International Journal of Operations & Production Management*, *39*(5), 767–786. https://doi.org/10.1108/ijopm-11-2018-0676

Dam, L., & Petkova, B. (2014). The impact of environmental supply chain sustainability programs on shareholder wealth. *International Journal of Operations & Production Management*, *34*(5), 586–609. https://doi.org/10.1108/ijopm-10-2012-0482

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, *54*(1), 64–87. https://doi.org/10.1525/cmr.2011.54.1.64

Delmas, M., & Toffel, M. W. (2004). Stakeholders and environmental management practices: an institutional framework. *Business Strategy and the Environment*, *13*(4), 209–222. https://doi.org/10.1002/bse.409

Dev, N. K., Shankar, R., Zacharia, Z. G., & Swami, S. (2021). Supply chain resilience for managing the ripple effect in Industry 4.0 for green product diffusion. *International Journal of Physical Distribution & Logistics Management*, *51*(8), 897–930. https://doi.org/10.1108/ijpdlm-04-2020-0120

Dey, P. K., Malesios, C., De, D., Chowdhury, S., & Abdelaziz, F. B. (2019). The Impact of Lean Management Practices and Sustainably-Oriented Innovation on Sustainability Performance of Small and Medium-Sized Enterprises: Empirical Evidence from the UK. *British Journal of Management*, *31*(1), 141–161. https://doi.org/10.1111/1467-8551.12388

DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*. https://www.jstor.org/stable/2095101?origin=crossref

Donaldson, T., & Preston, L. (1995a). *The Stakeholder Theory of the Corporation: Concepts, evidence, and Implications*. https://www.semanticscholar.org/paper/The-Stakeholder-Theory-of-the-Corporation%3A-and-Donaldson-Preston/f1d01e96a30365181f5e2989f15b633ce6235f91

Donaldson, T., & Preston, L. (1995b). *The Stakeholder Theory of the Corporation: Concepts, evidence, and Implications*. https://www.semanticscholar.org/paper/The-Stakeholder-Theory-of-the-Corporation%3A-and-Donaldson-Preston/f1d01e96a30365181f5e2989f15b633ce6235f91

Dooley, K. J., Pathak, S. D., Kull, T. J., Wu, Z., Johnson, J., & Rabinovich, E. (2019). Process network modularity, commonality, and greenhouse gas emissions. *Journal of Operations Management*, *65*(2), 93–113. https://doi.org/10.1002/joom.1007

Dowlatshahi, S. (2000). Developing a theory of reverse logistics. *INFORMS Journal on Applied Analytics*, *30*(3), 143–155. https://doi.org/10.1287/inte.30.3.143.11670

DuHadway, S., Carnovale, S., & Kannan, V. R. (2018). Organizational Communication and Individual Behavior: Implications for Supply Chain Risk Management. *Journal of Supply Chain Management*, *54*(4), 3–19. https://doi.org/10.1111/jscm.12182

Dutton, J. E., & Dukerich, J. M. (1991). Keeping an eye on the mirror: Image and Identity in Organizational adaptation. *Academy of Management Journal*, *34*(3), 517–554. https://doi.org/10.5465/256405

Editors, N. (2016). Social Entrepreneurship as a Norm? *Journal of Management Studies*, *53*(4), 608–609. https://doi.org/10.1111/joms.12204

Elkington. (1998). *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*. Wiley.com. https://www.wiley.com/en-gb/Cannibals+with+Forks%3A+The+Triple+Bottom+Line+of+21st+Century+Business-p-9781841120843

Elsbach, K. D., & Van Knippenberg, D. (2020). Creating High-Impact Literature Reviews: An argument for 'Integrative reviews.' *Journal of Management Studies*, *57*(6), 1277–1289. https://doi.org/10.1111/joms.12581

Erhun, F., Kraft, T., & Wijnsma, S. (2021). Sustainable Triple-A supply chains. *Production and Operations Management*, *30*(3), 644–655. https://doi.org/10.1111/poms.13306

Etse, D., McMurray, A., & Muenjohn, N. (2021). Comparing sustainable public procurement in the education and health sectors. *Journal of Cleaner Production*, *279*, 123959. https://doi.org/10.1016/j.jclepro.2020.123959

Faisal, M. N. (2010). Sustainable supply chains: a study of interaction among the enablers. *Business Process Management Journal*, *16*(3), 508–529. https://doi.org/10.1108/14637151011049476

Feng, Y., & Zhu, Q. (2024). How do customers' environmental efforts diffuse to suppliers: the role of customers' characteristics and suppliers' digital technology capability. *International Journal of Operations & Production Management*, *44*(9), 1676–1706. https://doi.org/10.1108/ijopm-08-2023-0668

Fisher, M. (1997, March 27). *What is the right supply chain for your product?* Harvard Business Review. https://hbr.org/1997/03/what-is-the-right-supply-chain-for-your-product

Flynn, B. B., Huo, B., & Zhao, X. (2009). The impact of supply chain integration on performance: A contingency and configuration approach. *Journal of Operations Management*, *28*(1), 58–71. https://doi.org/10.1016/j.jom.2009.06.001

Foerstl, K., Azadegan, A., Leppelt, T., & Hartmann, E. (2014). Drivers of supplier sustainability: Moving beyond compliance to commitment. *Journal of Supply Chain Management*, *51*(1), 67–92. https://doi.org/10.1111/jscm.12067

Forslund, H., Björklund, M., & Ülgen, V. S. (2021). Challenges in extending sustainability across a transport supply chain. *Supply Chain Management an International Journal*, *27*(7), 1–16. https://doi.org/10.1108/scm-06-2020-0285

Freeman, R. E. (2010). *Strategic Management*. https://doi.org/10.1017/cbo9781139192675

Gao, S. S., & Zhang, J. J. (2006). Stakeholder engagement, social auditing and corporate sustainability. *Business Process Management Journal*, *12*(6), 722–740. https://doi.org/10.1108/14637150610710891

Garavan, T. N., Heraty, N., Rock, A., & Dalton, E. (2010). Conceptualizing the Behavioral Barriers to CSR and CS in Organizations: A Typology of HRD Interventions. *Advances in Developing Human Resources*, *12*(5), 587–613. https://doi.org/10.1177/1523422310394779

Ghadge, A., Wurtmann, H., & Seuring, S. (2019). Managing climate change risks in global supply chains: a review and research agenda. *International Journal of Production Research*, *58*(1), 44–64. https://doi.org/10.1080/00207543.2019.1629670

Gladwin, T. N., Kennelly, J., & Krause, T.-S. (1995). Shifting Paradigms for Sustainable Development Implications for Management Theory. Academy of Management Review, 20, 874-907. - References - Scientific Research Publishing. (n.d.). https://www.scirp.org/reference/referencespapers?referenceid=3441914

Gligor, D. M., Esmark, C. L., & Holcomb, M. C. (2014). Performance outcomes of supply chain agility: When should you be agile? *Journal of Operations Management*, *33–34*(1), 71–82. https://doi.org/10.1016/j.jom.2014.10.008

Gligor, D. M., & Holcomb, M. C. (2012). Antecedents and Consequences of Supply Chain Agility: Establishing the Link to Firm Performance. *Journal of Business Logistics*, *33*(4), 295–308. https://doi.org/10.1111/jbl.12003

Glover, J. (2020). The dark side of sustainable dairy supply chains. *International Journal of Operations & Production Management*, *40*(12), 1801–1827. https://doi.org/10.1108/ijopm-05-2019-0394

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. https://doi.org/10.1002/csr.207

González-Benito, J., Lannelongue, G., & Queiruga, D. (2011). Stakeholders and environmental management systems: a synergistic influence on environmental imbalance. *Journal of Cleaner Production*, *19*(14), 1622–1630. https://doi.org/10.1016/j.jclepro.2011.05.013

Green, K., Morton, B., & New, S. (1996). Purchasing and environmental management: interactions, policies and opportunities. *ideas.repec.org*. https://ideas.repec.org/a/bla/bstrat/v5y1996i3p188-197.html

Gualandris, J., Klassen, R. D., Vachon, S., & Kalchschmidt, M. (2015). Sustainable evaluation and verification in supply chains: Aligning and leveraging accountability to stakeholders. *Journal of Operations Management*, *38*(1), 1–13. https://doi.org/10.1016/j.jom.2015.06.002

Gualandris, J., Longoni, A., Luzzini, D., & Pagell, M. (2021). The association between supply chain structure and transparency: A large-scale empirical study. *Journal of Operations Management*, *67*(7), 803–827. https://doi.org/10.1002/joom.1150

Gunasekaran, A., Patel, C., & McGaughey, R. E. (2004). A framework for supply chain performance measurement. *International Journal of Production Economics*, *87*(3), 333–347. https://doi.org/10.1016/j.ijpe.2003.08.003

Haddaway, N. R., Bethel, A., Dicks, L. V., Koricheva, J., Macura, B., Petrokofsky, G., Pullin, A. S., Savilaakso, S., & Stewart, G. B. (2020). Eight problems with literature reviews and how to fix them. *Nature Ecology & Evolution*, *4*(12), 1582–1589. https://doi.org/10.1038/s41559-020-01295-x

Hahn, R., Reimsbach, D., & Schiemann, F. (2015). Organizations, climate change, and transparency. *Organization & Environment*, *28*(1), 80–102. https://doi.org/10.1177/1086026615575542

Hall, J., & Vredenburg, H. (2003, October 15). *The challenges of innovating for sustainable development*. MIT Sloan Management Review. https://sloanreview.mit.edu/article/the-challenges-of-innovating-for-sustainable-development/

Halldórsson, Á., & Kovács, G. (2010). The sustainable agenda and energy efficiency. *International Journal of Physical Distribution & Logistics Management*, *40*(1/2), 5–13. https://doi.org/10.1108/09600031011018019

Hawabhay, B. B., Abratt, R., & Peters, M. (2009). The role of corporate communications in developing a corporate brand image and reputation in Mauritius. *Corporate Reputation Review*, *12*(1), 3–20. https://doi.org/10.1057/crr.2009.4

Henriques, I., & Sadorsky, P. (1999). *The relationship between environmental commitment and managerial perceptions of stakeholder importance*. https://www.semanticscholar.org/paper/The-Relationship-Between-Environmental-Commitment-Henriques-Sadorsky/cf3106c01a80a610f09caf687b6c8bbb5d7fcb75

Hertwich, E. G., Hammitt, J. K., & Pease, W. S. (2000). A theoretical Foundation for Life-Cycle assessment. *Journal of Industrial Ecology*, *4*(1), 13–28. https://doi.org/10.1162/108819800569267

Heugens, P. P. M. a. R., & Lander, M. W. (2009). Structure! Agency! (And other quarrels): A Meta-Analysis of Institutional Theories of Organization. *Academy of Management Journal*, *52*(1), 61–85. https://doi.org/10.5465/amj.2009.36461835

Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: what's the bottom line? *Strategic Management Journal*, *Vol. 22, No. 2*. https://www.jstor.org/stable/3094310

Hoffman, A. J., Gillespie, J. J., Moore, D. A., Wade-Benzoni, K. A., Thompson, L. L., & Bazerman, M. H. (1999). A Mixed-Motive perspective on the economics versus

environment debate. *American Behavioral Scientist*, *42*(8), 1254–1276. https://doi.org/10.1177/0002764299042008002

Hsu, C., Tan, K., & Zailani, S. H. M. (2016). Strategic orientations, sustainable supply chain initiatives, and reverse logistics. *International Journal of Operations & Production Management*, *36*(1), 86–110. https://doi.org/10.1108/ijopm-06-2014-0252

Hubbard, G. (2006). Measuring organizational performance: beyond the triple bottom line. *Business Strategy and the Environment*, *18*(3), 177–191. https://doi.org/10.1002/bse.564

Huo, B., Han, Z., & Prajogo, D. (2016). Antecedents and consequences of supply chain information integration: a resource-based view. *Supply Chain Management an International Journal*, *21*(6), 661–677. https://doi.org/10.1108/scm-08-2015-0336

Huq, F. A., Chowdhury, I. N., & Klassen, R. D. (2016). Social management capabilities of multinational buying firms and their emerging market suppliers: An exploratory study of the clothing industry. *Journal of Operations Management*, *46*(1), 19–37. https://doi.org/10.1016/j.jom.2016.07.005

Jaakkola, E., & Aarikka-Stenroos, L. (2019). Customer referencing as business actor engagement behavior – Creating value in and beyond triadic settings. *Industrial Marketing Management*, *80*, 27–42. https://doi.org/10.1016/j.indmarman.2018.06.014

Jacobs, B. W. (2014). Shareholder value effects of voluntary emissions reduction. *Production and Operations Management*, *23*(11), 1859–1874. https://doi.org/10.1111/poms.12201

Jain, S., Triantis, K. P., & Liu, S. (2011). Manufacturing performance measurement and target setting: A data envelopment analysis approach. *European*

Journal of Operational Research, *214*(3), 616–626. https://doi.org/10.1016/j.ejor.2011.05.028

Jayaraman, V., Klassen, R., & Linton, J. D. (2007). Supply chain management in a sustainable environment. *Journal of Operations Management*, *25*(6), 1071–1074. https://doi.org/10.1016/j.jom.2007.01.016

Jeong, S., & Lee, J. (2022). Environment and Energy? The impact of environmental management systems on energy efficiency. *Manufacturing & Service Operations Management*, *24*(3), 1311–1328. https://doi.org/10.1287/msom.2021.1057

Johnsen, L. C., Voigt, G., & Weimann, J. (2019). The Effect of Communication Media on Information Sharing in Supply Chains. *Production and Operations Management*, *29*(3), 705–724. https://doi.org/10.1111/poms.13134

Johnson, J. D., Donohue, W. A., Atkin, C. K., & Johnson, S. (1994). Differences between formal and informal communication channels. *Journal of Business Communication*, *31*(2), 111–122. https://doi.org/10.1177/002194369403100202

Kähkönen, A., Lintukangas, K., & Hallikas, J. (2018). Sustainable supply management practices: making a difference in a firm's sustainability performance. *Supply Chain Management an International Journal*, *23*(6), 518–530. https://doi.org/10.1108/scm-01-2018-0036

Kalkanci, B., Ang, E., & Plambeck, E. L. (2016). Strategic disclosure of social and environmental impacts in a supply chain. In *Springer series in supply chain management* (pp. 223–239). https://doi.org/10.1007/978-3-319-30094-8_13

Kauppi, K., & Hannibal, C. (2017). Institutional pressures and sustainability assessment in supply chains. *Supply Chain Management an International Journal*, *22*(5), 458–472. https://doi.org/10.1108/scm-01-2017-0004

Khan, A., Muttakin, M. B., & Siddiqui, J. (2012). Corporate Governance and Corporate Social Responsibility Disclosures: Evidence from an Emerging Economy. *Journal of Business Ethics*, *114*(2), 207–223. https://doi.org/10.1007/s10551-012-1336-0

Khizar, H. M. U., Iqbal, M. J., Khalid, J., & Adomako, S. (2022). Addressing the conceptualization and measurement challenges of sustainability orientation: A systematic review and research agenda. Journal of Business Research, 142, 718–743. https://doi.org/10.1016/j.jbusres.2022.01.029

Kilonzi, F., & Mwikali, M. A. (2022). Factors affecting adoption of green procurement practices in energy sector in Kenya. *African Tax and Customs Review*.

Kim, E., & Lyon, T. P. (2011). Strategic environmental disclosure: Evidence from the DOE's voluntary greenhouse gas registry. *Journal of Environmental Economics and Management*, *61*(3), 311–326. https://doi.org/10.1016/j.jeem.2010.11.001

Klassen, R. D., & Vereecke, A. (2012). Social issues in supply chains: Capabilities link responsibility, risk (opportunity), and performance. *International Journal of Production Economics*, *140*(1), 103–115. https://doi.org/10.1016/j.ijpe.2012.01.021

Kolk, A., & Pinkse, J. (2005). Business Responses to climate change: Identifying emergent strategies. *California Management Review*, *47*(3), 6–20. https://doi.org/10.2307/41166304

Koplin, J., Seuring, S., & Mesterharm, M. (2007). Incorporating sustainability into supply management in the automotive industry – the case of the Volkswagen AG. *Journal of Cleaner Production*, *15*(11–12), 1053–1062. https://doi.org/10.1016/j.jclepro.2006.05.024

Kutaula, S., Chowdhury, S., Gillani, A., Budhwar, P. S., & Dey, P. K. (2024). Linking HRM with Sustainability Performance Through Sustainability Practices: Unlocking the Black Box. *British Journal of Management*. https://doi.org/10.1111/1467-8551.12861

Lambert, M. (2008). *Supply chain Management: processes, partnerships, performance*.

Lee, H. L. (2004). The triple-A supply chain. Harvard business review, 82(10), 102-113.

Lewis, H., & Stanley, H. (2012). Marketing and Communicating Sustainability. In *Springer eBooks* (pp. 107–153). https://doi.org/10.1007/978-0-85729-988-8_3

Li, X., Chung, C., Goldsby, T. J., & Holsapple, C. W. (2008). A unified model of supply chain agility: the work-design perspective. *The International Journal of Logistics Management*, *19*(3), 408–435. https://doi.org/10.1108/09574090810919224

Linton, J. D., Klassen, R., & Jayaraman, V. (2007). Sustainable supply chains: An introduction. *Journal of Operations Management*, *25*(6), 1075–1082. https://doi.org/10.1016/j.jom.2007.01.012

Lyon, T. P., & Maxwell, J. W. (2007). Corporate Social Responsibility and the Environment: A Theoretical perspective. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1011793

Macchion, L., Moretto, A., Caniato, F., Danese, P., & Vinelli, A. (2020). Static supply chain complexity and sustainability practices: A multitier examination. *Corporate Social Responsibility and Environmental Management*, *27*(6), 2679–2691. https://doi.org/10.1002/csr.1992

Manu, F. A., & Sriram, V. (1996). Innovation, marketing strategy, environment, and performance. *Journal of Business Research*, *35*(1), 79–91. https://doi.org/10.1016/0148-2963(95)00056-9

Marquis, C., Toffel, M. W., & Zhou, Y. (2016). Scrutiny, Norms, and Selective Disclosure: A Global Study of Greenwashing. *Organization Science*, *27*(2), 483–504. https://doi.org/10.1287/orsc.2015.1039

Matos, S., & Hall, J. (2007). Integrating sustainable development in the supply chain: The case of life cycle assessment in oil and gas and agricultural biotechnology. *Journal of Operations Management*, *25*(6), 1083–1102. https://doi.org/10.1016/j.jom.2007.01.013

Matos, S. V., Schleper, M. C., Gold, S., & Hall, J. K. (2020). The hidden side of sustainable operations and supply chain management: unanticipated outcomes, trade-offs and tensions. *International Journal of Operations & Production Management*, *40*(12), 1749–1770. https://doi.org/10.1108/ijopm-12-2020-833

Matos, S. V., Schleper, M. C., Hall, J. K., Baum, C. M., Low, S., & Sovacool, B. K. (2024). Beyond the new normal for sustainability: transformative operations and supply chain management for negative emissions. *International Journal of Operations & Production Management*, *44*(13), 263–295. https://doi.org/10.1108/ijopm-06-2024-0487

Mazboudi, M., Sidani, Y. M., & Ariss, A. A. (2020). Harmonization of firm CSR policies across national contexts: Evidence from Brazil & Sweden. *International Business Review*, *29*(5), 101711. https://doi.org/10.1016/j.ibusrev.2020.101711

McWilliams, A., Siegel, D. S., & Wright, P. M. (2006). Corporate Social Responsibility: strategic implications*. *Journal of Management Studies*, *43*(1), 1–18. https://doi.org/10.1111/j.1467-6486.2006.00580.x

Meehan, J., & Bryde, D. (2011). Sustainable procurement practice. *Business Strategy and the Environment*, *20*(2), 94–106. https://doi.org/10.1002/bse.678

Melville, N. P. (2010). Information Systems Innovation for environmental sustainability. *MIS Quarterly*. https://www.jstor.org/stable/20721412

Menguc, B., Auh, S., & Ozanne, L. (2009). The Interactive Effect of Internal and External Factors on a Proactive Environmental Strategy and its Influence on a Firm's Performance. *Journal of Business Ethics*, *94*(2), 279–298. https://doi.org/10.1007/s10551-009-0264-0

Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., & Zacharia, Z. G. (2001). DEFINING SUPPLY CHAIN MANAGEMENT. *Journal of Business Logistics*, *22*(2), 1–25. https://doi.org/10.1002/j.2158-1592.2001.tb00001.x

Miemczyk, J., & Luzzini, D. (2019). Achieving triple bottom line sustainability in supply chains. *International Journal of Operations & Production Management*, *39*(2), 238–259. https://doi.org/10.1108/ijopm-06-2017-0334

Miller, D., & Friesen, P. H. (1980). Momentum and revolution in organizational adaptation. *Academy of Management Journal*, *23*(4), 591–614. https://doi.org/10.5465/255551

Miller, D., & Friesen, P. H. (1983). Strategy-making and environment: The third link. *Strategic Management Journal*, *4*(3), 221–235. https://doi.org/10.1002/smj.4250040304

Min, H., & Galle, W. P. (1997). Green Purchasing Strategies: Trends and implications. *International Journal of Purchasing and Materials Management*, *33*(2), 10–17. https://doi.org/10.1111/j.1745-493x.1997.tb00026.x

Mitchell, R. K., Van Buren, H. J., Greenwood, M., & Freeman, R. E. (2015). Stakeholder Inclusion and Accounting for Stakeholders. *Journal of Management Studies*, *52*(7), 851–877. https://doi.org/10.1111/joms.12151

Mollenkopf, D. A., Peinkofer, S. T., & Chu, Y. (2022). Supply chain transparency: Consumer reactions to incongruent signals. *Journal of Operations Management*, *68*(4), 306–327. https://doi.org/10.1002/joom.1180

Morris, M. W., & Su, S. K. (1999). Social psychological obstacles in environmental conflict resolution. *American Behavioral Scientist*, *42*(8), 1322–1349. https://doi.org/10.1177/00027649921954886

Naumov, S., Keith, D. R., & Sterman, J. D. (2022). Accelerating vehicle fleet turnover to achieve sustainable mobility goals. *Journal of Operations Management*, *69*(1), 36–66. https://doi.org/10.1002/joom.1173

Neumann, S., & Segev, E. (1979). A case study of user evaluation of information characteristics for systems improvement. *Information & Management*, *2*(6), 271–278. https://doi.org/10.1016/0378-7206(79)90025-9

Ngo, V. M., Quang, H. T., Hoang, T. G., & Binh, A. D. T. (2023). Sustainability-related supply chain risks and supply chain performances: The moderating effects of dynamic supply chain management practices. *Business Strategy and the Environment*. https://doi.org/10.1002/bse.3512

Nichols, B. S., Stolze, H., & Kirchoff, J. F. (2019). Spillover effects of supply chain news on consumers' perceptions of product quality: An examination within the triple bottom line. *Journal of Operations Management*, *65*(6), 536–559. https://doi.org/10.1002/joom.1033

Nunes, M. F., Park, C. L., & Paiva, E. L. (2020). Can we have it all? Sustainability trade-offs and cross-insurance mechanisms in supply chains.

International Journal of Operations & Production Management, *40*(9), 1339–1366. https://doi.org/10.1108/ijopm-12-2019-0802

Ogunsanya, O. A., Aigbavboa, C. O., Thwala, D. W., & Edwards, D. J. (2019). Barriers to sustainable procurement in the Nigerian construction industry: an exploratory factor analysis. *International Journal of Construction Management*, *22*(5), 861–872. https://doi.org/10.1080/15623599.2019.1658697

O'Higgins, E. R., & Morgan, J. W. (2006). Stakeholder salience and engagement in political organisations. *Society and Business Review*, *1*(1), 62–76. https://doi.org/10.1108/17465680610643355

Orazi, D. C., & Chan, E. Y. (2018). "They did not walk the green talk!:" How information specificity influences consumer evaluations of disconfirmed environmental claims. *Journal of Business Ethics*, *163*(1), 107–123. https://doi.org/10.1007/s10551-018-4028-6

Ott, C., Schiemann, F., & Günther, T. (2017). Disentangling the determinants of the response and the publication decisions: The case of the Carbon Disclosure Project. *Journal of Accounting and Public Policy*, *36*(1), 14–33. https://doi.org/10.1016/j.jaccpubpol.2016.11.003

Pagell, M., & Shevchenko, A. (2014). Why Research in Sustainable Supply Chain Management Should Have no Future. *Journal of Supply Chain Management*, *50*(1), 44–55. https://doi.org/10.1111/jscm.12037

Pagell, M., & Wu, Z. (2009). BUILDING a MORE COMPLETE THEORY OF SUSTAINABLE SUPPLY CHAIN MANAGEMENT USING CASE STUDIES OF 10 EXEMPLARS. *Journal of Supply Chain Management*, *45*(2), 37–56. https://doi.org/10.1111/j.1745-493x.2009.03162.x

Panigrahi, S. S., Bahinipati, B., & Jain, V. (2019). Sustainable supply chain management. *Management of Environmental Quality an International Journal*, *30*(5), 1001–1049. https://doi.org/10.1108/meq-01-2018-0003

Parmar, B. L., Wicks, A. C., & Freeman, R. E. (2021). Stakeholder Management & The Value of Human-Centred Corporate Objectives. *Journal of Management Studies*, *59*(2), 569–582. https://doi.org/10.1111/joms.12716

Patriotta, G. (2020). Writing impactful review articles. *Journal of Management Studies*, *57*(6), 1272–1276. https://doi.org/10.1111/joms.12608

Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, *29*(4), 101717. https://doi.org/10.1016/j.ibusrev.2020.101717

Peng, Y., Zhang, X., Van Donk, D. P., & Wang, C. (2022). How can suppliers increase their buyers' CSR engagement: the role of internal and relational factors. *International Journal of Operations & Production Management*, *42*(2), 206–229. https://doi.org/10.1108/ijopm-06-2021-0387

Petersen, K. J. (n.d.). *The effect of information quality on supply chain performance: An interorganizational information system perspective - ProQuest*. https://www.proquest.com/openview/3c77a9bec443223766fa51fad40ee16f/1?pq-origsite=gscholar&cbl=18750&diss=y

Porter, M. E., & Kramer, M. R. (2006, December). *Strategy and Society: The link between competitive advantage and corporate social responsibility*. Harvard Business Review. https://hbr.org/2006/12/strategy-and-society-the-link-between-competitive-advantage-and-corporate-social-responsibility

Post, C., Sarala, R., Gatrell, C., & Prescott, J. E. (2020). Advancing Theory with Review Articles. *Journal of Management Studies*, *57*(2), 351–376. https://doi.org/10.1111/joms.12549

Prahinski, C., & Benton, W. (2004). Supplier evaluations: communication strategies to improve supplier performance. *Journal of Operations Management*, *22*(1), 39–62. https://doi.org/10.1016/j.jom.2003.12.005

Preuss, L. (2009). Addressing sustainable development through public procurement: the case of local government. *Supply Chain Management an International Journal*, *14*(3), 213–223. https://doi.org/10.1108/13598540910954557

Pullman, M. E., & Dillard, J. (2010). Values based supply chain management and emergent organizational structures. *International Journal of Operations & Production Management*, *30*(7), 744–771. https://doi.org/10.1108/01443571011057326

Pushpamali, N., Agdas, D., Rose, T. M., & Yigitcanlar, T. (2020). Stakeholder perception of reverse logistics practices on supply chain performance. *Business Strategy and the Environment*, *30*(1), 60–70. https://doi.org/10.1002/bse.2609

Qian, C., Seuring, S., Wagner, R., & Dion, P. A. (2020). Personal and organizational level relationships in relational exchanges in supply chains – a bottom-up model. *Supply Chain Management an International Journal*, *26*(1), 32–47. https://doi.org/10.1108/scm-12-2019-0441

Rao, P., & Holt, D. (2005). Do green supply chains lead to competitiveness and economic performance? *International Journal of Operations & Production Management*, *25*(9), 898–916. https://doi.org/10.1108/01443570510613956

Roberts, S. (2003). Supply chain specific? Understanding the patchy success of ethical sourcing initiatives. *Journal of Business Ethics*, *44*(2), 159–170. https://doi.org/10.1023/a:1023395631811

Roethlein, C., & Ackerson, S. (2004). Quality communication within a connected manufacturing supply chain. *Supply Chain Management an International Journal*, *9*(4), 323–330. https://doi.org/10.1108/13598540410550073

Romenti, S. (2010). Reputation and stakeholder engagement: an Italian case study. *Journal of Communication Management*, *14*(4), 306–318. https://doi.org/10.1108/13632541011090428

Saeed, N. T., Sharifi, H., & Ismail, H. S. (2014). A study of contingency relationships between supplier involvement, absorptive capacity and agile product innovation. *International Journal of Operations & Production Management*.

Savage, G. T., Nix, T. W., Whitehead, C. J., & Blair, J. D. (1991). Strategies for assessing and managing organizational stakeholders. *Academy of Management Perspectives*, *5*(2), 61–75. https://doi.org/10.5465/ame.1991.4274682

Schnackenberg, A. K., & Tomlinson, E. C. (2016). Organizational transparency. *Journal of Management*, *42*(7), 1784–1810. https://doi.org/10.1177/0149206314525202

Schroeder, R., & Flynn, B. B. (2001). *High performance manufacturing : global perspectives*. https://www.semanticscholar.org/paper/High-performance-manufacturing-%3A-global-Schroeder-Flynn/69512b89953f253650d806ef1bc5e025cc66c43b

Secretary-General, U. (1987, August 4). *Report of the World Commission on Environment and Development :: note /: by the Secretary-General.* United Nations Digital Library System. https://digitallibrary.un.org/record/139811?ln=fr&v=pdf

Seele, P., & Gatti, L. (2015). Greenwashing revisited: In search of a Typology and Accusation-Based Definition incorporating legitimacy strategies. *Business Strategy and the Environment*, *26*(2), 239–252. https://doi.org/10.1002/bse.1912

Seitz, M. A., & Wells, P. E. (2006). Challenging the implementation of corporate sustainability. *Business Process Management Journal*, *12*(6), 822–836. https://doi.org/10.1108/14637150610710954

Seles, B. M. R. P., De Sousa Jabbour, A. B. L., Jabbour, C. J. C., & Dangelico, R. M. (2016). The green bullwhip effect, the diffusion of green supply chain practices, and institutional pressures: Evidence from the automotive sector. *International Journal of Production Economics*, *182*, 342–355. https://doi.org/10.1016/j.ijpe.2016.08.033

Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, *16*(15), 1699–1710. https://doi.org/10.1016/j.jclepro.2008.04.020

Shaw, S., Grant, D. B., & Mangan, J. (2010). Developing environmental supply chain performance measures. *Benchmarking an International Journal*, *17*(3), 320–339. https://doi.org/10.1108/14635771011049326

Shee, H., Miah, S. J., Fairfield, L., & Pujawan, N. (2018). The impact of cloud-enabled process integration on supply chain performance and firm sustainability: the moderating role of top management. *Supply Chain Management an International Journal*, *23*(6), 500–517. https://doi.org/10.1108/scm-09-2017-0309

Shrivastava, P. (1995). The role of Corporations in achieving Ecological Sustainability. *Academy of Management Review*, *Vol. 20, No.4*. https://www.jstor.org/stable/258961

Siegel, D. S., & Vitaliano, D. F. (2007). An empirical analysis of the strategic use of corporate social Responsibility. *Journal of Economics & Management Strategy*, *16*(3), 773–792. https://doi.org/10.1111/j.1530-9134.2007.00157.x

Siems, E., & Seuring, S. (2021). Stakeholder management in sustainable supply chains: A case study of the bioenergy industry. *Business Strategy and the Environment*, *30*(7), 3105–3119. https://doi.org/10.1002/bse.2792

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Sodhi, M. S., & Tang, C. S. (2019a). Research opportunities in supply chain transparency. *Production and Operations Management*, *28*(12), 2946–2959. https://doi.org/10.1111/poms.13115

Sodhi, M. S., & Tang, C. S. (2019b). Research opportunities in supply chain transparency. *Production and Operations Management*, *28*(12), 2946–2959. https://doi.org/10.1111/poms.13115

Song, S., Dong, Y., Kull, T., Carter, C., & Xu, K. (2023). Supply chain leakage of greenhouse gas emissions and supplier innovation. *Production and Operations Management*, *32*(3), 882–903. https://doi.org/10.1111/poms.13904

Song, S., Lian, J., Skowronski, K., & Yan, T. (2023). Customer base environmental disclosure and supplier greenhouse gas emissions: A signaling theory perspective. *Journal of Operations Management*. https://doi.org/10.1002/joom.1272

Srinivasan, R., & Swink, M. (2018). An Investigation of Visibility and Flexibility as Complements to Supply Chain Analytics: An Organizational Information Processing Theory Perspective. *Production and Operations Management*, *27*(10), 1849–1867. https://doi.org/10.1111/poms.12746

Stank, T. P., Goldsby, T. J., & Vickery, S. K. (1999). Effect of service supplier performance on satisfaction and loyalty of store managers in the fast food industry. *Journal of Operations Management*, *17*(4), 429–447. https://doi.org/10.1016/s0272-6963(98)00052-7

Supply Chain Quality Integration: Antecedents and Consequences. (2014, February 1). IEEE Journals & Magazine | IEEE Xplore. https://ieeexplore.ieee.org/document/6589198/

Svensson, G. (2007). Aspects of sustainable supply chain management (SSCM): conceptual framework and empirical example. *Supply Chain Management an International Journal*, *12*(4), 262–266. https://doi.org/10.1108/13598540710759781

Swift, C., Guide, V. D. R., & Muthulingam, S. (2019). Does supply chain visibility affect operating performance? Evidence from conflict minerals disclosures. *Journal of Operations Management*, *65*(5), 406–429. https://doi.org/10.1002/joom.1021

Ta, H., Esper, T., & Hofer, A. R. (2015). Business-to-Consumer (B2C) collaboration: Rethinking the role of consumers in supply chain management. *Journal of Business Logistics*, *36*(1), 133–134. https://doi.org/10.1111/jbl.12083

Teti, E., Etro, L. L., & Pausini, L. (2024). Does greenwashing affect Company's stock Price? Evidence from Europe. *International Review of Financial Analysis*, *93*, 103195. https://doi.org/10.1016/j.irfa.2024.103195

Vachon, S., & Klassen, R. D. (2006). Extending green practices across the supply chain. *International Journal of Operations & Production Management*, *26*(7), 795–821. https://doi.org/10.1108/01443570610672248

Van Riel, C. B., & Fombrun, C. J. (2007). *Essentials of Corporate Communication: Implementing practices for effective reputation Management*. Routledge.

Villena, V. H., & Dhanorkar, S. (2020). How institutional pressures and managerial incentives elicit carbon transparency in global supply chains. *Journal of Operations Management*, *66*(6), 697–734. https://doi.org/10.1002/joom.1088

Villena, V. H., & Gioia, D. A. (2018). On the riskiness of lower-tier suppliers: Managing sustainability in supply networks. *Journal of Operations Management*, *64*(1), 65–87. https://doi.org/10.1016/j.jom.2018.09.004

Vishwanathan, P., Van Oosterhout, H., Heugens, P. P. M. a. R., Duran, P., & Van Essen, M. (2019). Strategic CSR: a concept building Meta-Analysis. *Journal of Management Studies*, *57*(2), 314–350. https://doi.org/10.1111/joms.12514

Walley, N., & Whitehead, B. (1994, June 1). *It's not easy being green*. Harvard Business Review. https://hbr.org/1994/05/its-not-easy-being-green

Wang, Y., Hu, F., & Wang, Y. (2024). Analyst coverage and greenwashing: Evidence from Chinese A-Share listed corporations. *International Review of Economics & Finance*, *94*, 103423. https://doi.org/10.1016/j.iref.2024.103423

Wieland, A., Stevenson, M., Melnyk, S. A., Davoudi, S., & Schultz, L. (2023). Thinking differently about supply chain resilience: what we can learn from social-ecological systems thinking. *International Journal of Operations & Production Management*, *43*(1), 1–21. https://doi.org/10.1108/ijopm-10-2022-0645

Wilhelm, M. M., Blome, C., Bhakoo, V., & Paulraj, A. (2015). Sustainability in multi-tier supply chains: Understanding the double agency role of the first-tier supplier. *Journal of Operations Management*, *41*(1), 42–60. https://doi.org/10.1016/j.jom.2015.11.001

Wilhelm, M., & Villena, V. H. (2021). Cascading sustainability in multi-tier supply chains: When do Chinese suppliers adopt sustainable procurement? *Production and Operations Management*, *30*(11), 4198–4218. https://doi.org/10.1111/poms.13516

Winston, A. (2022). Sustainable business went mainstream in 2021. Harvard Business Review.

Wu, A., & Li, T. (2019). Gaining sustainable development by green supply chain innovation: Perspectives of specific investments and stakeholder engagement. *Business Strategy and the Environment*, *29*(3), 962–975. https://doi.org/10.1002/bse.2410

Wu, Y., Zhang, K., & Xie, J. (2020). Bad greenwashing, good greenwashing: corporate social responsibility and information transparency. *Management Science*, *66*(7), 3095–3112. https://doi.org/10.1287/mnsc.2019.3340

Wu, Z., & Pagell, M. (2010). Balancing priorities: Decision-making in sustainable supply chain management. *Journal of Operations Management*, *29*(6), 577–590. https://doi.org/10.1016/j.jom.2010.10.001

Xu, T., Sun, Y., & He, W. (2024). Government digitalization and corporate greenwashing. *Journal of Cleaner Production*, *452*, 142015. https://doi.org/10.1016/j.jclepro.2024.142015

Yu, E. P., Van Luu, B., & Chen, C. H. (2020). Greenwashing in environmental, social and governance disclosures. *Research in International Business and Finance*, *52*, 101192. https://doi.org/10.1016/j.ribaf.2020.101192

Zhang, D. (2022a). Environmental regulation and firm product quality improvement: How does the greenwashing response? *International Review of Financial Analysis*, *80*, 102058. https://doi.org/10.1016/j.irfa.2022.102058

Zhang, D. (2022b). Environmental regulation, green innovation, and export product quality: What is the role of greenwashing? *International Review of Financial Analysis*, *83*, 102311. https://doi.org/10.1016/j.irfa.2022.102311

Zhao, L., & Chen, L. (2022). Research on the Impact of Government Environmental Information Disclosure on Green Total Factor Productivity: Empirical Experience from Chinese Province. *International Journal of Environmental Research and Public Health*, *19*(2), 729. https://doi.org/10.3390/ijerph19020729

Zhao, M., Dröge, C., & Stank, T. P. (2001). THE EFFECTS OF LOGISTICS CAPABILITIES ON FIRM PERFORMANCE: CUSTOMER-FOCUSED VERSUS INFORMATION-FOCUSED CAPABILITIES. *Journal of Business Logistics*, *22*(2), 91–107. https://doi.org/10.1002/j.2158-1592.2001.tb00005.x

Zheng, Y., Ge, C., Li, X., Duan, X., & Yu, T. (2020). Configurational analysis of environmental information disclosure: Evidence from China's key pollutant-discharge listed companies. *Journal of Environmental Management*, *270*, 110671. https://doi.org/10.1016/j.jenvman.2020.110671

Zhou, H., & Benton, W. (2007). Supply chain practice and information sharing. *Journal of Operations Management*, *25*(6), 1348–1365. https://doi.org/10.1016/j.jom.2007.01.009

Zhu, Q., & Lai, K. (2019). Enhancing supply chain operations with extended corporate social responsibility practices by multinational enterprises: Social capital perspective from Chinese suppliers. *International Journal of Production Economics*, *213*, 1–12. https://doi.org/10.1016/j.ijpe.2019.02.012

Zhu, Q., & Sarkis, J. (2004). Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises. *Journal of Operations Management*, *22*(3), 265–289. https://doi.org/10.1016/j.jom.2004.01.005

Zhu, Q., Sarkis, J., & Lai, K. H. (2012). Examining the effects of green supply chain management practices and their mediations on performance improvements.

International Journal of Production Research, *50*(5), 1377–1394. https://doi.org/10.1080/00207543.2011.571937