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Inhibitors and Facilitators of Social Sustainability Practices: A  
Systematic Literature Review of Manufacturing Company Supply  
Chains

CRANFIELD SCHOOL OF MANAGEMENT  
Logistics and Supply Chain Management

MSc in Logistics and Supply Chain Management  
Academic Year: 2024 – 2025

Supervisor: Prof. Michael Bernon  
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This thesis is submitted in partial fulfilment of the requirements for  
the degree of MSc in Logistics and Supply Chain Management  
(NB. Remove if the degree award is based solely on examination of the thesis)

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## **Academic Integrity Declaration**

I declare that:

- The thesis submitted has been written by me alone.
- The thesis submitted has not been previously submitted to this university or any other.
- That all content, including primary and/or secondary data, is true to the best of my knowledge.
- That all quotations and references have been duly acknowledged according to the requirements of academic research.

I understand that to knowingly submit work in violation of the above statement will be considered by examiners as academic misconduct.

## Abstract

**Research Purpose:** In a rapidly changing world, social sustainability in supply chains faces increasing complexity and is under heightened scrutiny. This thesis aims to identify the key enablers and barriers that influence the implementation of social sustainability within the supply chain context, thereby enabling manufacturing companies to design proactive strategies and maintain long-term competitiveness.

**Methodology:** A Systematic Literature Review (SLR) of sixty-eight peer-reviewed articles was conducted to examine the leading enablers and barriers to social sustainability in manufacturing supply chains.

**Findings:** The thesis finds eight barriers and six enablers to implementing social sustainability, with External Pressure Mechanisms being the most frequently cited enabler and Resource and Capability Building Constraints as the primary barrier. The analysis also reveals a dominant focus on procurement and manufacturing functions, with limited attention to logistics (including reverse logistics and recycling), product design, and customer service.

**Research Limitation:** The peer-reviewed academic literature, excluding practitioner insights and primary data, with a sole focus on manufacturing contexts, may overlook cross-sectoral considerations and limit its applicability.

**Contribution:** The thesis develops a structured framework that connects enablers, barriers, and supply chain functions within the context of social sustainability. It also highlights underrepresented areas, such as digital fairness, consumer well-being, and community engagement, providing direction for future research and practical improvement in managerial practice.

### Keywords:

Social Sustainability, Supply Chain Management, Enablers, Barriers, Manufacturing companies

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## List of Definitions

|                                                                                      |                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRI Standards (GRI, 2024)                                                            | The Global Reporting Initiative's sustainability reporting standards operationalise social responsibility principles (such as those in ISO 26000) into measurable indicators and disclosures.                                                                                                                                     |
| ISO 26000 (ISO, 2010)                                                                | The primary international guidance standard on social responsibility, outlining seven core subjects: human rights, labour practices, environment, fair operating practices, consumer issues, community involvement & development, and organisational governance.                                                                  |
| SCOR Digital Standard (SCOR DS) (ASCM, 2023)                                         | The Supply Chain Operations Reference Digital Standard framework categorises supply chain processes into seven areas: Plan, Source, Transform, Order, Fulfil, Return, and Orchestrate.                                                                                                                                            |
| Snowballing (Wohlin, 2014)                                                           | Snowballing is a supplementary literature search method used in systematic reviews. It involves examining the reference lists of selected papers (backward snowballing) to identify additional relevant studies that may not have been retrieved through database searches.                                                       |
| Sustainable Development (WCED, 1987)                                                 | Sustainable Development means Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.                                                                                                                                                                     |
| Sustainable Supply Chain Management (SSCM) (Seuring & Müller, 2008)                  | Sustainable Supply Chain Management involves managing the flow of materials, information, and cash across the supply chain while collaborating with partners to achieve economic performance, minimise environmental impact, and address social responsibilities.                                                                 |
| Systematic Literature Review (SLR) (Tranfield et al., 2003; Kitchenham et al., 2009) | A systematic literature review (SLR) is a rigorous, transparent, and replicable methodology for reviewing literature. Unlike narrative reviews, it not only compiles a structured summary of existing studies but also supports theory development and provides evidence-based guidance for practice by minimising research bias. |
| Systems Approach (Barbier, 1987; Holmberg & Sandbrook, 1992)                         | The systems approach views sustainable development as the convergence of three interlinked systems: environmental, economic, and social. Maximising goals in just one system may negatively                                                                                                                                       |

impact the others, potentially leading to the failure of sustainable development.

The Triple Bottom Line (TBL) (Elkington, 1997)

The triple bottom line is a sustainability framework that examines a company's social, environmental, and economic impact.

## List of Abbreviations

|         |                                                    |
|---------|----------------------------------------------------|
| AI      | Artificial Intelligence                            |
| CSO     | Chief Sustainability Officer                       |
| CSR     | Corporate Social Responsibility                    |
| DEI     | Diversity, Equity, and Inclusion                   |
| ESG     | Environmental, Social, Governance                  |
| GVC     | Global Value Chain                                 |
| MSMEs   | Micro, small, and medium-sized enterprises         |
| MT-SC   | Multi-Tier Supply Chain                            |
| NGOs    | Non-Governmental Organisations                     |
| RQ      | Research Question                                  |
| SA8000  | Social Accountability 8000                         |
| SCOR DS | Supply Chain Operations Reference Digital Standard |
| SLR     | Systematic Literature Review                       |
| SSCM    | Sustainable Supply Chain Management                |
| TBL     | Triple Bottom Line                                 |
| TMS     | Top Management Support                             |

# **1 Introduction**

## **1.1 Research Background**

According to the World Commission on Environment and Development (1987), sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Although introduced more than thirty years ago, this definition remains foundational across various sectors (Ruggerio, 2021). Since these sectors are connected to supply chain processes, sustainable development has also become a core principle in supply chain management.

In parallel, Barbier (1987) conceptualised sustainability through the systems approach, which views sustainable development as the interaction of three connected systems: environmental, economic, and social. This approach of maximising goals for just one system will have negative impacts on other systems, which can threaten sustainable development (Holmberg & Sandbrook, 1992).

While the systems approach offers a conceptual foundation, John Elkington (1997) reformulated the three-system model into the more applied and solutions-oriented Triple Bottom Line (TBL) framework, comprising People (social), Planet (environmental), and Profit (economic) for the business context. Later, Elkington (1998, 2018) further developed and refined this concept, expanding the original definition of sustainable development by providing a practical tool for corporate management (Clune & Zehnder, 2020). As illustrated in Figure 1-1, the TBL framework shows the interdependence of economic, environmental, and social sustainability within supply chains.



**Figure 1-1 Triple Bottom Line (TBL) Framework**

Source: Adapted from Elkington (1997)

Economic sustainability concerns a firm's long-term financial health and its broader impact on stakeholders, and environmental sustainability emphasises responsible resource and energy use to minimise ecological impact (Elkington, 1997). Social sustainability, in turn, is assessed through factors, such as human rights, labour conditions, and equity (Elkington, 1998).

Integrating sustainability into supply chain activities as part of a long-term strategy enables firms to develop more resilient processes and gain a competitive advantage (Carter & Rogers, 2008). The people-centric nature of supply chains involves internal employees, customers, logistics providers, and transport operators (Kasonde & Steele, 2017). Consequently, to ensure social sustainability in business operations, firms must view supply chains as essential leverage points for improvement (Mani et al., 2018). Prioritising community and customer well-being, rather than seeing them merely as profit sources, is more likely to develop stakeholder-oriented strategies that secure lasting differentiation and resilience (Fernando et al., 2022). At the same time, growing external and institutional pressures have pushed firms to prioritise sustainability (Najjar et al., 2020). Nevertheless, the social dimension remains the most complex, as systemic challenges related to labour rights, equity, and working conditions continue to create risks across supply chains (Alghababsheh & Galleary, 2022).

More specifically, Seuring and Müller (2008) define sustainable supply chain management (SSCM) as the management of material, information, and financial flows across the supply chain in collaboration with partners to achieve economic performance, reduce environmental impact, and address social responsibilities. This collaborative view recognises that sustainability challenges cannot be addressed in isolation (Carter & Rogers, 2008). Such a perspective provides a foundation for firms to design and implement sustainability-oriented strategies across supply chain operations.

In recent years, firms have faced rising concerns from social media, non-governmental organisations (NGOs), and customers, alongside more formal stakeholder requirements driven by corporate governance, regulatory frameworks, and investor expectations, which have further accelerated the shift toward SSCM (Seuring & Müller, 2008; Shekarian et al., 2022). Unlike environmental or economic aspects, social risks such as child labour, unfair wages, or unsafe working conditions are often deeply embedded in multi-tier supply chains (MT-SCs), seriously harming a firm's brand and credibility (Najjar et al., 2020). Such risks are evident in the apparel industry, where workers continue to endure long working hours, unsafe and exploitative factory conditions, and denial of union rights, which undermine social sustainability in global supply chains (Frenkel et al., 2022; Le, 2022). Growing stakeholder and consumer pressure means that transparency and ethical labour practices are now essential for maintaining trust (Najjar et al., 2020). Firms that successfully integrate social sustainability into supply chain strategies can gain a competitive advantage, strengthen stakeholder relationships, and contribute positively to both economic and societal well-being (Adegboyega Oyedijo et al., 2023; Najjar et al., 2020).

## **1.2 Problem Statement**

Sustainability is a central subject for organisations striving for future-oriented resilience and societal impact. Nevertheless, most research has focused on the economic and environmental dimensions, leaving the social dimension comparatively underexplored in global supply chains (Najjar et al., 2020; Alghababsheh & Galleary, 2022). This gap is most visible in the manufacturing

sector. Despite its leading role in global economic activity, it is often associated with poor labour conditions, inequality, and limited attention to employee well-being, but these social aspects remain less studied than environmental and economic ones (Afshari et al., 2022; Machado et al., 2022). Recent studies (Chiesa & Przychodzen, 2019) call for more rigorous quantitative methods and clearer conceptual foundations to broaden research on social sustainability across diverse sectors, geographical contexts, and supply chain tiers.

Consequently, there is a lack of comprehensive and up-to-date research that specifically investigates the internal and external factors that either enable or impede the effective implementation of these practices within the manufacturing sector. Existing literature emphasises environmental and economic sustainability, while the social dimension related to labour practices, equity, and community impact remains comparatively underexamined (Alghababsheh & Galleary, 2022; Najjar et al., 2020; Afshari et al., 2022; Sarkis, 2020). A systematic literature review is therefore needed to synthesise current knowledge, identify key enablers and barriers, and provide practical insights for researchers and practitioners working on socially responsible supply chain strategies.

## **1.3 Research Aims and Research Questions**

### **1.3.1 Aims**

This thesis aims to provide a comprehensive understanding of social sustainability in manufacturing supply chains by (1) identifying its main dimensions, (2) examining key enablers and barriers to adoption, and (3) analysing the impact on implementation and management. Firms are increasingly pressured to modify practices to comply with regulatory requirements, satisfy stakeholders, and remain competitive in the market.

### **1.3.2 Research Questions**

Given the increasing importance of social sustainability, it is essential to conduct thorough research and analyse the factors that affect its adoption. The following research questions (RQs) are proposed to address this gap and offer guidance for both academics and practitioners:

**RQ1:** What are the dimensions of social sustainability practices within the context of manufacturing supply chain operations?

**RQ2:** What are the key enablers and barriers of social sustainability practices in manufacturing supply chains, based on literature from 2021 to 2025?

**RQ3:** How do these identified enablers and barriers impact the implementation and management of social sustainability within the supply chains of manufacturing companies?

## **1.4 Scope of the Thesis**

This thesis investigates the manufacturing sector as the context for examining social sustainability in supply chains. Manufacturing makes a significant contribution to the global economy, serving as a core component of the product provision system (Abubakr et al., 2020), generating income, developing skills, and fostering integration into international markets (Buckley, 2009). In addition, the extensive and complex nature of the supply chain networks, along with the close association with significant social sustainability risks (Najjar et al., 2020), makes manufacturing companies a salient context for analysing the dimensions, enablers, and barriers of social sustainability practices.

The period from 2021 to 2025 was selected to reflect the most recent developments in manufacturing supply chains. In the post-COVID-19 period, the pandemic exposed systemic vulnerabilities and caused widespread disruptions, bringing resilience, social sustainability, and worker well-being to the forefront of both research and practice. This timeframe, therefore, provides a focused basis for analysing how manufacturing supply chains responded to these emerging challenges (Ivanov & Dolgui, 2020).

## 1.5 Structure of the Thesis

The thesis is structured into six chapters. Chapter 1 introduces the research background and the problems it addresses. Chapter 2 explains the methodology through a systematic literature review. Chapter 3 presents the descriptive findings derived from the selected literature. Chapter 4 explores the thematic findings. Chapter 5 discusses the implications of the findings, and Chapter 6 concludes the thesis by summarising the key insights and proposing directions for future research.

A summary of each chapter is provided in Table 1-1.

**Table 1-1 Summary of the Thesis Structure**

| Chapter Number | Header               | Main Content                                                                                              |
|----------------|----------------------|-----------------------------------------------------------------------------------------------------------|
| Chapter 1      | Introduction         | Research background, problem statement, aims, RQs and thesis structure                                    |
| Chapter 2      | Methodology          | Systematic literature review methodology and phases                                                       |
| Chapter 3      | Descriptive Findings | Descriptive overview of literature characteristics, patterns, and trends                                  |
| Chapter 4      | Thematic Findings    | Identification and analysis of key themes                                                                 |
| Chapter 5      | Discussion           | Interpretation of findings, comparison with existing literature, and implications for theory and practice |
| Chapter 6      | Conclusion           | Summary of findings and directions for future research                                                    |

## **2 Methodology**

### **2.1 Introduction**

Building on the research questions presented in Chapter 1, this thesis employs a Systematic Literature Review (SLR) to identify the enablers and barriers to social sustainability within manufacturing companies. Chapter 2 outlines the SLR methodology, followed by a detailed discussion of each key stage involved.

### **2.2 Systematic Literature Review (SLR)**

An SLR provides a rigorous, transparent, and replicable methodology for reviewing literature (Tranfield et al., 2003). Unlike traditional narrative reviews, it not only compiles a comprehensive and structured summary of the existing literature but also lays the solid base for theory development, delivering evidence-based guidance to support practical decision-making by minimising research bias (Tranfield et al., 2003; Kitchenham et al., 2009).

Given the RQs, an SLR is particularly suitable for identifying the enablers and barriers to social sustainability practices within manufacturing supply chains, ensuring methodological rigour and relevance for this study.

### **2.3 Systematic Literature Review Phases**

To maximise the breadth of literature coverage and support replicable research outcomes, the SLR process follows a series of clearly defined steps, typically grouped into five main phases: (1) planning, (2) searching, (3) screening, (4) extraction and synthesis, and (5) reporting (Pilbeam et al., 2012).

#### **2.3.1 Planning**

##### **2.3.1.1 Forming the Review Panel**

In line with guidance from Tranfield et al. (2003), this SLR was guided by my supervisor, Professor Michael Bernon, whose extensive expertise in supply chain management was instrumental in guiding the review process. Table 2-1 shows the panel composition.

**Table 2-1 Composition of the Review Panel**

| Professional             | Role              | Profile                                                                                                                                                                                                                                                                                                               |
|--------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Professor Michael Bernon | Thesis Supervisor | Former Associate Professor in Supply Chain Leadership at Cranfield University, with over two decades of experience in logistics and supply chain education, as well as executive programme development. He remains active in teaching and industry, and currently leads a start-up focused on digital twin solutions. |

### **2.3.1.2 Research Scope**

As described in Chapter 1, the research scope is the intersection of Social Sustainability, Core Supply Chain Functions in Manufacturing Companies and Enablers and Barriers. Figure 2-1 visually demonstrates these three core thematic areas, highlighting the specific focus of the thesis. Using a structured search protocol, comprising a search strategy, inclusion, and exclusion criteria (Davies and Crombie, 1998, as cited in Tranfield et al., 2003), ensures that only highly relevant studies were included during the literature selection review.

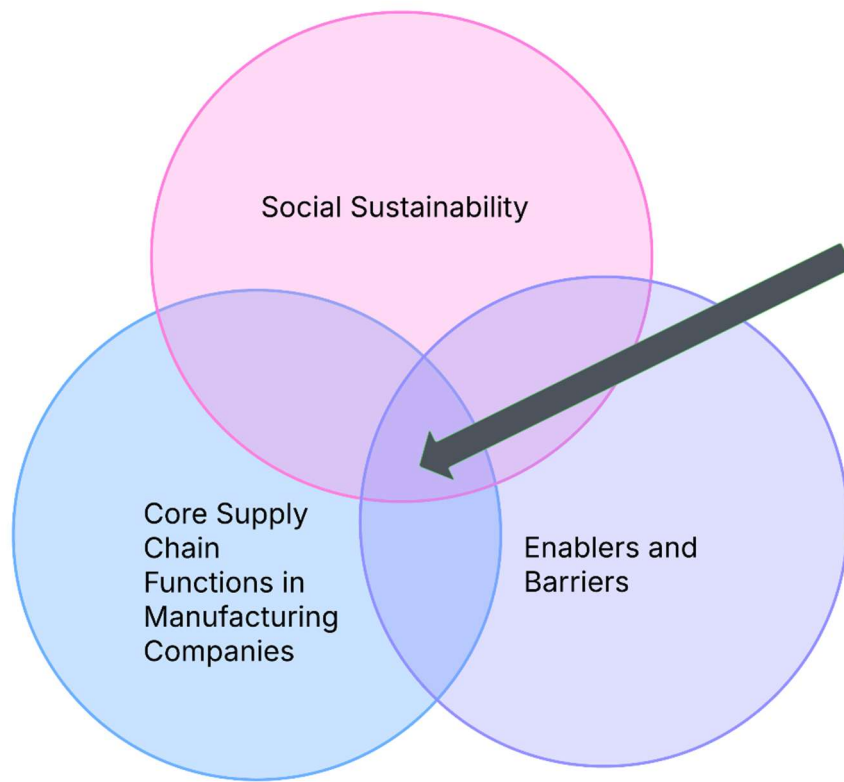


**Figure 2-1 Research Scope**

(Source: Author,2025)

### **2.3.2 Paper Search Strategy**

A systematic search uses predefined keywords and search strings (Tranfield et al., 2003). The keywords and corresponding search strings are presented in Table 2-2 and Table 2-3.

#### **2.3.2.1 Keywords and Search String**

The keywords found in pieces of literature contribute to the construction of search strings used in databases (Pilbeam et al., 2012).

**Table 2-2 Keywords and Synonyms List**

| <b>Keywords</b>             | <b>Synonyms</b>                                                                                                   |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------|
| Manufacturing               | producing, production                                                                                             |
| Procurement                 | purchase, buy, sourcing                                                                                           |
| Supply Chain                | value chain, demand chain, supply network                                                                         |
| Supply Chain Sustainability | sustainable supply chain, green supply chain, responsible supply chain, sustainability in supply chain management |
| Social Sustainability       | social responsibility, social equity, social well-being                                                           |
| Inhibitor                   | barrier, challenge, limiting factor                                                                               |
| Facilitator                 | enabler, contributor, support factor                                                                              |

**Table 2-3 Search String List**

| Number | Search Strings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | ("supply chain*" OR "value chain*" OR "supply network*" OR "demand chain*")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2      | ("Manufactur*" OR "Produc*" OR "Procur*" OR "Sour*" OR "Buy*" OR "Logistic*")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 3      | ("barrier*" OR "challeng*" OR "limiting factor*" OR "inhibitor*" OR "Hinder*")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4      | ("enable*" OR "Contribut*" OR "Support factor*" OR "facilitator*")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5      | ("Social Sustainability*" OR "Social equity" OR "Human Rights*" OR ("well-being" OR "wellbeing" OR "well being") OR "labo*r Rights" OR "Ethic*" OR "Modern slavery" OR "Forced labo*r" OR "Child labo*r" OR "Working condition*" OR "Occupational health and safety" OR "Worker safety" OR "Workplace safety" OR "Fair wage*" OR "Living wage*" OR "Fair trade" OR "Community impact*" OR "Local community*" OR "Indigenous right*" OR "Stakeholder engagement" OR "Diversity and inclusion" OR ("Non-discrimination" OR "Nondiscrimination" OR "Non discrimination") OR "Social Sustainability practice*") |

The search strings listed in Table 2-3 were subsequently used to locate relevant titles and abstracts containing these terms in scholarly (peer-reviewed) publications (Pilbeam et al., 2012).

### **2.3.2.2 Choice of Databases**

The selection of databases, ABI/Inform (ProQuest), EBSCO (Business Source Complete), and Scopus, was guided by recommendations from Cranfield University to maintain alignment with best practices for conducting systematic literature reviews. Table 2-4 displays details about each database.

**Table 2-4 Databases (adapted from [library.cranfield.ac.uk](https://library.cranfield.ac.uk))**

| <b>Databases</b>                          | <b>Description</b>                                                                                                                                                                                                                     |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ABI/Inform<br>(ProQuest)                  | Over 2,500 international business periodicals are available in the ABI/Inform Global, Trade and Industry, and Dateline databases, providing full-text coverage from 1971 to the present.                                               |
| EBSCO<br>(Business<br>Source<br>Complete) | A broad range of full-text and bibliographic databases designed for research, including Business Source Complete, E-Journals, eBook Collection, ERIC, GreenFile, MEDLINE, PsycINFO, and Regional Business News.                        |
| Scopus                                    | A comprehensive index encompassing publications from over 5,000 publishers across all areas of science, technology, medicine, and the social sciences. It has several functions that allow users to personalise it to their interests. |

(Source: Cranfield University Library. (n.d.). *Database descriptions*. Retrieved from <https://library.cranfield.ac.uk>)

### **2.3.2.3 Search Strategy**

The search strategy employed in this section describes the use of Boolean connectors (AND, OR), Wildcards (\*), language restrictions (English only), publication date range (2021–2025), and peer-reviewed articles only. This level of thoroughness is essential to confirm that the search process is trackable and replicable (Tranfield et al., 2003).

During the pilot phase, different combinations of the search strings were tried. It was found that the combination of 1, 2, and 5 (Supply Chain, Manufacturing, and Social Sustainability) produced the most relevant and comprehensive results, while avoiding duplication. This combination was chosen as the final search strategy. Search terms related to enablers and barriers (3 and 4) were intentionally excluded to avoid overly restricting the search results.

**Table 2-5 Combination of Search Strings**

| Number | Combination of Search Strings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1&2&5  | ("supply chain*" OR "value chain*" OR "supply network*" OR "demand chain*")<br>AND ("Manufactur*" OR "Produc*" OR "Procur*" OR "Sour*" OR "Buy*" OR "Logistic*") AND ("Social Sustainability*" OR "Social equity" OR "Human Rights" OR ("well-being" OR "wellbeing" OR "well being") OR "labo*r Rights" OR "Ethic*" OR "Modern slavery" OR "Forced labo*r" OR "Child labo*r" OR "Working condition*" OR "Occupational health and safety" OR "Worker safety" OR "Workplace safety" OR "Fair wage*" OR "Living wage*" OR "Fair trade" OR "Community impact*" OR "Local community*" OR "Indigenous right*" OR "Stakeholder engagement" OR "Diversity and inclusion" OR ("Non-discrimination" OR "Nondiscrimination" OR "Non discrimination") OR "Social Sustainability practice*") |

## 2.3.3 Screening

### 2.3.3.1 Inclusion/Exclusion Criteria

Setting clear inclusion and exclusion criteria is essential for a successful SLR. If these criteria are overly narrow, important studies might be missed. Conversely, overly broad criteria can lead to the inclusion of studies with different qualities and focuses, making synthesis more difficult and raising the risk of bias (Meline, 2006).

**Table 2-6 Inclusion and Exclusion Criteria**

| Criteria          | Inclusion Criteria                   | Exclusion Criteria                           | Rationale                                                                                   |
|-------------------|--------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------|
| Publication Year  | 2021-2025                            | Publications before 2021                     | Capture the most recent developments and trends, especially post-COVID-19 (2021–2025).      |
| Language          | English                              | Other languages                              | Maintain consistency and avoid misinterpretation due to translation issues.                 |
| Publication Type  | Academic journals                    | Books, newspapers, magazines, working papers | Use credible, academic sources for reliability.                                             |
| Availability      | Full-text access                     | No or restricted access                      | Allow comprehensive evaluation of studies by including only articles with full-text access. |
| Publication Stage | Final                                | Not the final stage                          | Include only complete and finalised research, avoiding incomplete or unverified findings.   |
| Peer Review       | Peer-reviewed                        | Non-Peer-reviewed                            | Ensure methodological quality and credibility of the included literature.                   |
| Relevance         | High relevance to the thesis subject | Low relevance to the thesis subject          | Focus on sources related to the thesis topic for alignment with research objectives.        |

### **2.3.3.2 Initial Screening**

An initial screening was conducted based on the inclusion and exclusion criteria presented in Table 2-6. Out of 2,720 articles, 520 duplicates were removed, and 2,200 documents were included for further review. This stage involved reviewing titles and abstracts to determine the potential relevance based on the predefined inclusion and exclusion criteria (Pilbeam et al., 2012). As a result, 2,090 documents were excluded, and 110 articles were retained for further in-depth assessment.

### **2.3.3.3 Secondary Screening and Quality Assessment**

This stage involved both a secondary screening of full texts and a systematic quality assessment based on predefined criteria (Table 2-7).

This thesis focuses on manufacturing supply chains, which face distinct social sustainability challenges, such as labour rights and working conditions (see Chapter 1, Section 1.1). Therefore, studies outside this context (e.g., retail or service sectors) were excluded.

The remaining 110 papers were further reviewed in detail. Of these, 11 full texts were excluded due to access issues or incomplete availability. At this stage, thirty-seven out of the ninety-nine accessible articles were excluded. The primary reasons for exclusion were an insufficient focus on social sustainability (21 studies), a lack of alignment with the manufacturing supply chain context (4 studies), and publication outside the defined timeframe (12 studies).

**Table 2-7 Quality Criteria (Adapted from Habib, 2012)**

| No.                   | 1                                                                                                                                                                                                     | 2                                                                                                                                                                           | 3                                                                                                                                                                                         |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Element to consider   | Relevance                                                                                                                                                                                             | Methodology                                                                                                                                                                 | Data / Evidence Quality                                                                                                                                                                   |
| <b>3-High</b>         | Comprehensive and highly relevant to the thesis topic, directly addressing social sustainability, manufacturing supply chains, or enablers/barriers.                                                  | Demonstrates intense methodological rigour with appropriate design, sampling, and procedures. Moreover, it applies to a valuable method or perspective relevant to the SLR. | Reliable, well-documented data supports strong conceptual evidence; sources and metrics are justified and clearly support the analysis of enablers/barriers, or the supply chain context. |
| <b>2-Medium</b>       | The publication provides moderately relevant information related to the thesis topic, touching on at least one key aspect (e.g., supply chain context, social sustainability), but not a central one. | The methodology is acceptable, with minor limitations, or it applies a perspective of limited value.                                                                        | Data is reliable with minor gaps or limited analysis support for enablers/barriers or supply chain context.                                                                               |
| <b>1-Low</b>          | The publication provides limited relevance to the thesis topic.                                                                                                                                       | The methodology shows several weaknesses that affect the reliability of the results.                                                                                        | Data/evidence is weak, poorly supported, or lacks sufficient detail for enablers/barriers or supply chain context.                                                                        |
| <b>0-Absence</b>      | The publication lacks sufficient relevance to the thesis topic.                                                                                                                                       | The study lacks a clear or valid methodological approach.                                                                                                                   | Data is unsupported or lacks credibility.                                                                                                                                                 |
| <b>Not applicable</b> | This element does not apply to this publication.                                                                                                                                                      | This element does not apply to this publication.                                                                                                                            | This element does not apply to this publication.                                                                                                                                          |

#### **2.3.3.4 Snowballing**

To complement the database searches and expand the coverage of relevant, valuable literature, backward snowballing was applied, which involved checking the reference lists of the articles that had already passed the initial screening.

This method has been recommended in the SLR methodology literature as a way of identifying additional relevant studies that may not have been captured through database searches (Wohlin, 2014). Only backward snowballing was applied in this study, as the aim was to include additional references cited in the initially selected papers.

Through the snowballing process, ten academic papers were selected. Four were excluded: three due to lack of social sustainability content and one because it was outside the manufacturing supply chain scope. The final review set included six studies. Overall, sixty-eight articles made up the final review.

## **2.3.4 Extraction and Synthesis**

### **2.3.4.1 Conducting Data Extraction**

According to Tranfield et al. (2003), data extraction forms function as a documented record of decisions made throughout the review and form the foundation for subsequent data synthesis.

**Table 2-8 Data Extraction Form Template**

|                      |                                            |  |
|----------------------|--------------------------------------------|--|
| Data Extraction Form |                                            |  |
| Descriptive Analysis |                                            |  |
| 1                    | Author of the article                      |  |
| 2                    | Title of the article                       |  |
| 3                    | Document name                              |  |
| 4                    | Journal title                              |  |
| 5                    | Date of publication                        |  |
| 6                    | Volume                                     |  |
| 7                    | Number                                     |  |
| 8                    | Page numbers                               |  |
| 9                    | Paper Type                                 |  |
| 10                   | Geographical Location                      |  |
| 11                   | Context/Industry                           |  |
| 12                   | Sample size                                |  |
| 13                   | Data collection method                     |  |
| 14                   | Method of data analysis                    |  |
| 15                   | Study Characteristics                      |  |
| 16                   | Key findings related to research questions |  |
| 17                   | Abstract                                   |  |
| 18                   | Key words                                  |  |
| Thematic Analysis    |                                            |  |
| 19                   | Organisation Field                         |  |
| Quality Assessment   |                                            |  |
| 20                   | Quality Appraisal Score                    |  |

(Source: Adapted from Habib, 2012)

In addition to the standardised data extraction form (Table 2-8), a customised Excel spreadsheet was used to record bibliographic details, methodological features, and coded information on enablers and barriers of social sustainability. This allowed systematic organisation and facilitated the thematic analysis presented in Chapter 4. The samples of the coding framework are provided in Appendices E and F.

## 2.4 Chapter Summary

This chapter covered the planning, searching, screening, and extraction phases of the SLR. The review began by defining the research scope and constructing search strings, followed by the selection of academic databases and the execution of search queries.

Screening occurred in two stages: an initial screening based on inclusion and exclusion criteria, and a secondary screening based on quality criteria. As a result, a total of sixty-eight papers were retained for final review in Figure 2-2.

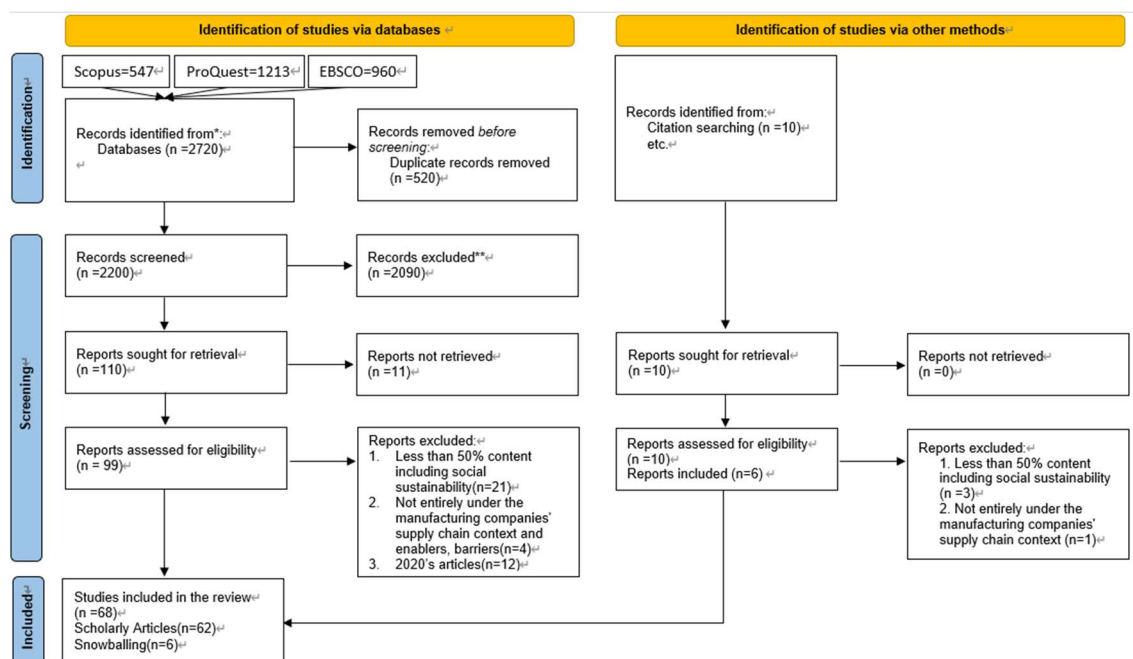


Figure 2-2 PRISMA Flow Diagram for Study Selection

(Source: Adapted from Page MJ et al., 2021)

Data were collected using a standardised form to ensure consistency. These studies underpin the analytical framework for the thematic synthesis and discussion in Chapters 3 and 4.

### 3 Descriptive Findings

Expanding upon the systematic screening process detailed in Chapter 2, this chapter does a descriptive analysis of the sixty-eight peer-reviewed articles. It categorises the literature by publication trends, geographical and sectoral focus, document types, research methodologies, and theoretical frameworks, offering a structured overview of the current research landscape.

#### 3.1 Chronological Distribution

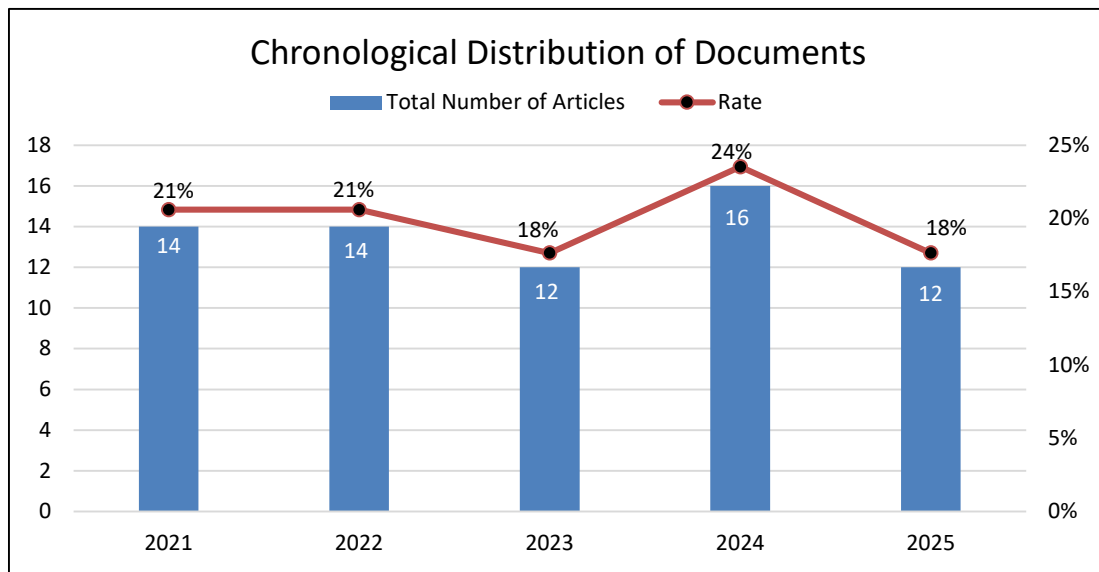


**Figure 3-1 Chronological Distribution of Selected Articles**

*Note.* Percentages may not total 100% due to rounding. Source: Author (2025)

As shown in Figure 3-1, the reviewed articles were published between 2021 and June 2025. The number of publications remained steady, averaging fourteen articles (20%, 40/68) per year from 2021 to 2023. In 2024, the number of publications increased slightly to sixteen (24%, 16/68). In 2025, the number dropped to twelve publications, although this figure only covers publications up to June, but is expected to rise by the end of the year.

This pattern suggests a sustained awareness of social sustainability in manufacturing supply chains, with a particular focus on both enablers and barriers to progress. As noted in Chapter 1, this increasing awareness reflects a

trend driven by heightened media scrutiny, evolving regulatory demands, and growing Environmental, Social, Governance (ESG) pressures from stakeholders (see Section 1.1). Overall, the publication trajectory mirrors a scholarly response to society's and business's changing demands for more ethical and socially responsible manufacturing practices.

Another point to note is that the consistent increase in publications indicates researchers are not merely exploring this subject occasionally. Instead, social sustainability has set itself as an ongoing and unignored aspect of supply chain research.

### **3.2 Geographical Distribution**

The global distribution map (Figure 3-2) reveals a strong focus on developing Asian countries, especially India, Bangladesh, China, Vietnam, and Pakistan, which account for more than 57% (39/68). These countries serve as central hubs for labour sourcing and manufacturing. This reflects the critical role of global manufacturing networks, which rely on large labour populations, historically lower wages, and comparatively looser labour regulations. These advantages have made them key destinations for multinational companies seeking outsourcing opportunities. While economically attractive, lower labour costs can imply inadequate living wages, excessive working hours, and the suppression of labour rights if not correctly managed, creating risks of exploitation.

In contrast, European countries such as the United Kingdom, Germany, and France (10%, 7/68) are more frequently referenced in relation to legal frameworks, compliance requirements, or buyer responsibilities within global supply chains. Africa and Latin America are less frequently studied, with Africa at 4% (3/68), South America at 3% (2/68), and North America (specifically Mexico) at 1% (1/68), totalling 8% (6/68). Representative countries include Kenya, Ghana, South Africa, Mexico, Colombia, and Brazil.

A significant subset of articles (24%, 16/68) adopts a global perspective, discussing issues that cut across multiple regions or industries rather than focusing on a single country. These papers emphasise cross-border

interdependencies and show that social sustainability challenges require coordinated international responses rather than isolated and localised solutions.

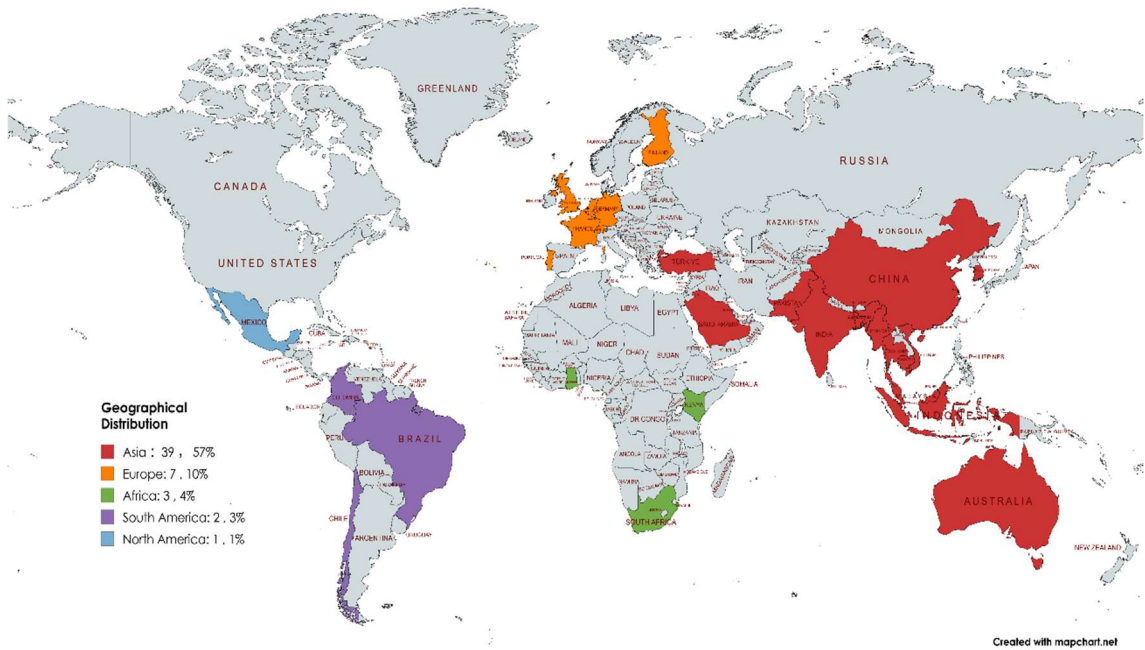


**Figure 3-2 Global Distribution**

*Note.* Percentages may not total 100% due to rounding. Source: Author (2025)

In summary, Asia consistently emerges as the primary sourcing region across all the reviewed literature, and supply chains overall remain global. This indicates that social sustainability practices need to be applied across the whole global supply chain to make a significant difference. Because research is concentrated in only a few regions, questions naturally arise about coverage, power relations, and whether the voices of workers in the most affected areas are being captured.

### 3.3 Sector Distribution

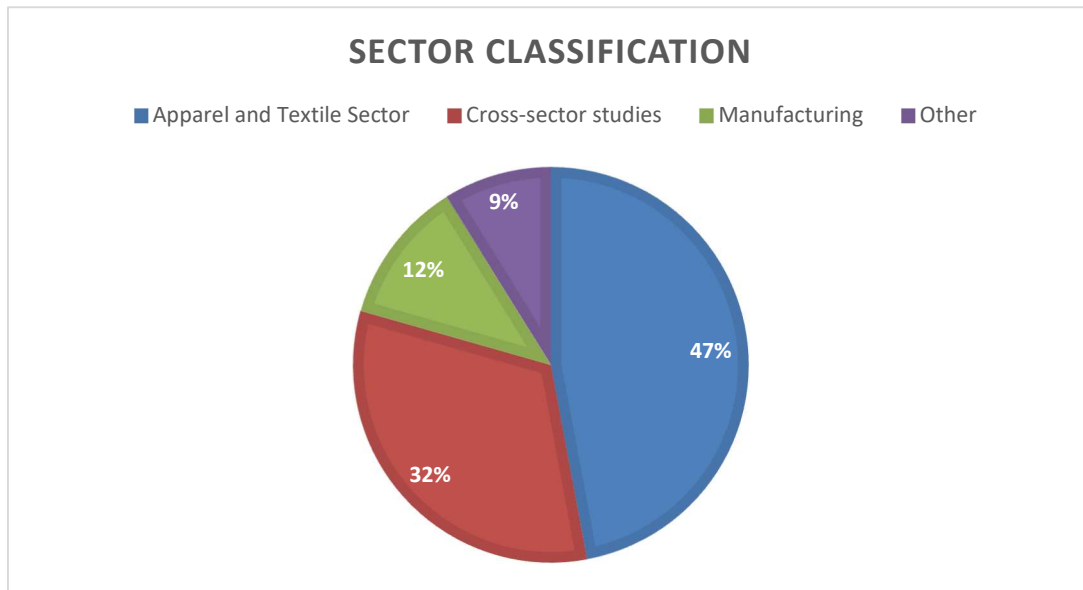


**Figure 3-3 Classification by Sector**

(Source: Author, 2025)

Figure 3-3 classifies the sectors of the reviewed journal articles. The majority (47%) is the Apparel and Textile Sector, which contains apparel manufacturing, garment, and textile industries. It gives a strong research interest in labour-intensive and globalised supply chains. This intense focus on apparel risks overlooking challenges unique to other industries; the understanding and discovery of social sustainability will be limited. Around one-third (32%) adopt a cross-sector approach, covering food and beverage, pharmaceuticals, and furniture. Compared with single-industry analyses, this approach offers a more nuanced view of social sustainability challenges and generates a broader supply chain extent.

However, the greater percentages of cross-sector industries suggest that researchers are beginning to acknowledge that social sustainability is not confined to clothing supply chains but is a universal challenge for manufacturing and production.

A further 12% of studies investigate the broader manufacturing sector beyond apparel and textiles. The remaining articles fall into the “Other” category, which includes the automotive, chemical, and energy industries, each of which has received limited academic attention.

### **3.4 Document Type**

All articles in the dataset were peer-reviewed and published in academic journals. These were retrieved from the databases ABI/Inform (ProQuest), EBSCO (Business Source Complete), and Scopus to ensure academic reliability and consistency, as indicated in Chapter 2.

Limiting the dataset to peer-reviewed journal publications ensured academic robustness and was therefore an appropriate method for this thesis. However, the value of grey literature and practitioner reports should be acknowledged, as they often provide faster, practice-oriented insights and innovative ideas that may not yet be captured in academic work. Future research could thus benefit from integrating alternative types of sources and gaining forward-looking perspectives.

### 3.5 Research Methodology

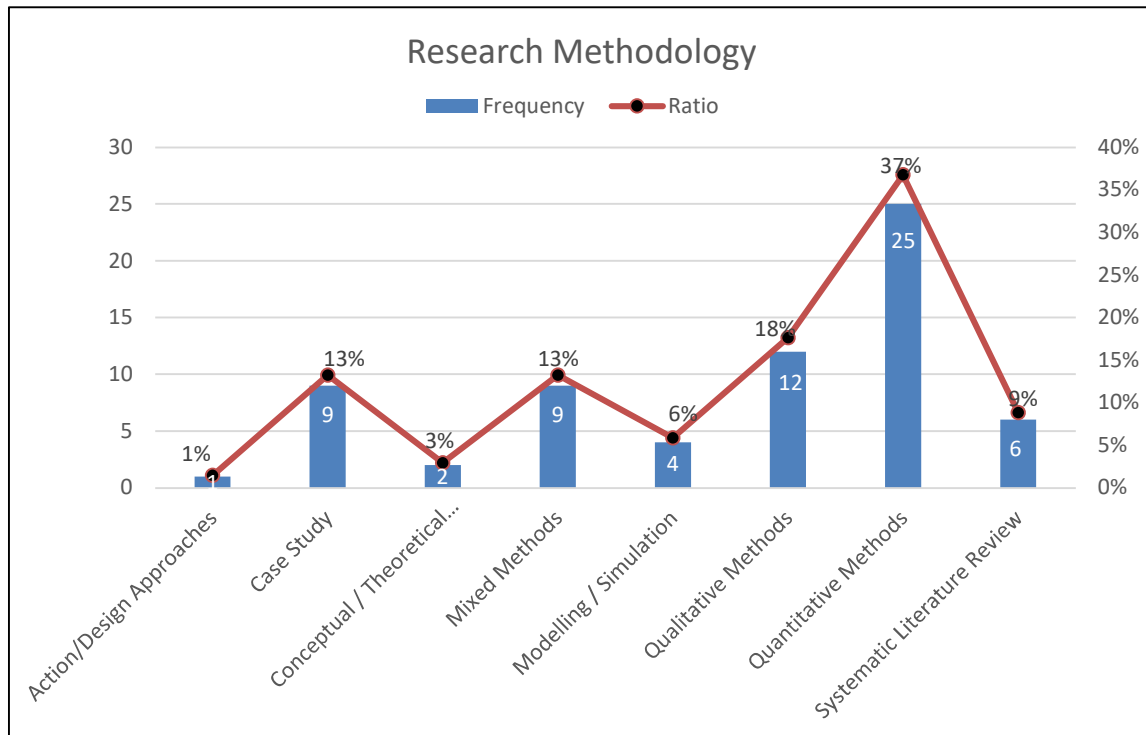


**Figure 3-4 Research Method Distribution**

(Source: Author, 2025)

The research methods used across the 68 articles were categorised into eight types (see Figure 3-4): Quantitative Methods (25 articles, 37%), Qualitative Methods (12 articles, 18%), Case Study (9 articles, 13%), Mixed Methods (9 articles, 13%), Systematic Literature Review (6 articles, 9%) and Modelling / Simulation (4 articles, 6%), Conceptual / Theoretical Research (2 articles, 3%), and Action/Design Approaches (1 article, 1%).

Given different weights, the discussion below places emphasis on the major approaches. Quantitative Methods, used in twenty-five articles, involve collecting and analysing numerical data to identify patterns, test hypotheses, and make predictions. In contrast, qualitative research methods were used in twelve articles, focusing on exploring meanings, experiences, and interpretations through non-numerical data. As Schoonenboom (2023) points out, quantitative data analysis can find new patterns; however, these are always related to existing variables. Qualitative data analysis can uncover new aspects that are hidden within the data.

A total of nine articles (13%) employed a Mixed-Methods approach, integrating both qualitative and quantitative techniques to provide a more comprehensive understanding of the phenomena studied (Schoonenboom, 2023).

Six reviewed articles (9%) adopt the SLR method to synthesise evidence related to specific research questions into balanced and unbiased insights, thereby enhancing rigour for academics and providing practitioners with a reliable evidence base (Nightingale, 2009; Tranfield et al., 2003). By consolidating the findings of the SLR, it is found that certain factors can function both as enablers and as barriers in manufacturing firms, which enriches academic understanding and contributes to practical decision-making in different contexts.

Furthermore, nine articles (13%) using the case study method allow researchers to maintain the holistic and meaningful aspects of real-life situations (Yin, R.K., 2009). Additionally, the case study approach is efficient for investigating complex or under-researched issues and developing new theories that can be assessed and supported with evidence, while combining multiple data sources to understand the 'why' and 'how' behind a process (Eisenhardt, 1989).

Overall, the methodological diversity is beneficial, as it enables a richer and more reliable understanding of comparable topics; however, it also makes it challenging to consolidate the findings into a clear conclusion due to different assumptions.

### 3.6 Theoretical Frameworks Used

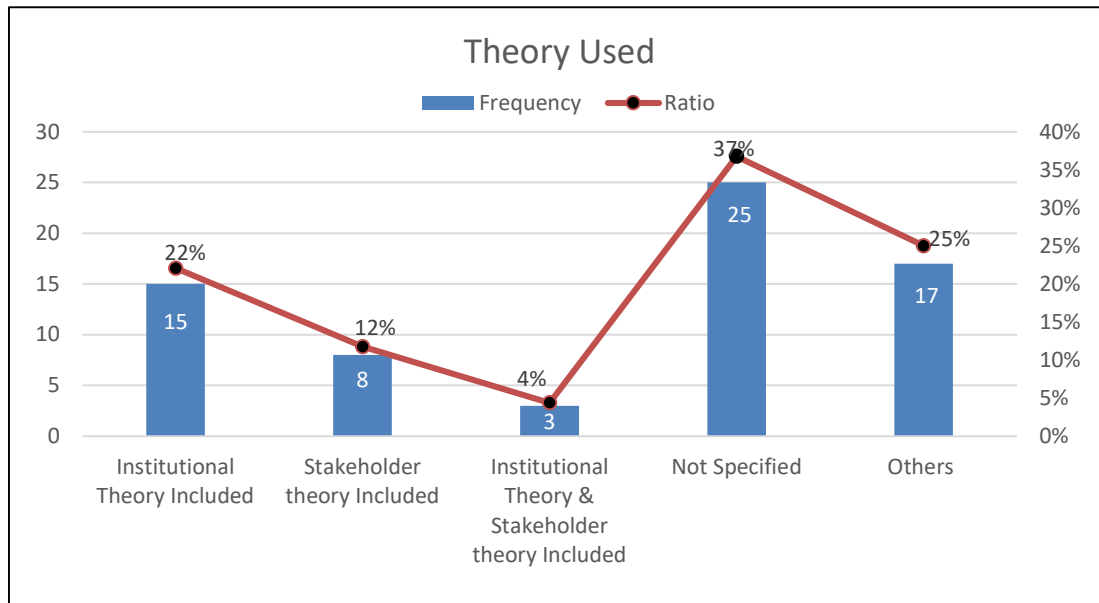


**Figure 3-5 Theory Used**

(Source: Author, 2025)

Among the sixty-eight reviewed articles, 25 (37%) did not explicitly apply any theoretical framework. The remaining forty-three articles (63%) incorporated different theories.

Institutional Theory was included most frequently (15 articles, 22%), either on its own or in combination with other theories. This reflects its value in explaining how firms' strategies and operations are shaped by external environments and institutional pressures (Scott, 1987; Gualandris & Kalchschmidt, 2014). Stakeholder Theory was also prominent, with eight articles (12%), while three papers (4%) explicitly combined the two. This pattern reflects a strong orientation toward explaining how external pressures, whether regulatory, normative, or stakeholder-driven, shape firms' adoption of social sustainability practices.

A further seventeen articles (25%) drew on a wide range of other frameworks, such as Agency Theory, Social Capital Theory, Resource Dependency Theory, and Game Theory. These less frequently used perspectives indicate attempts to capture relational, behavioural, or organisational dynamics that fall outside the dominant focus on external institutional and stakeholder influences.

As shown in Figure 3-5, the dominance of Institutional and Stakeholder theories, both of which focus on external drivers, implies that the literature has emphasised explaining why firms adopt social sustainability practices rather than how these practices are implemented in operations. This highlights both the value and the limitations of existing theorisation. While it explains adoption drivers, it provides fewer insights into the operational, context-specific challenges. These gaps are particularly relevant for Chapter 4, which examines how enablers and barriers manifest in practice and how different actors navigate them within manufacturing supply chains.

### **3.7 Chapter Summary**

This chapter reviewed sixty-eight peer-reviewed articles published between 2021 and 2025. Research output has remained steady, with a peak in 2024, and is geographically concentrated in Asian sourcing hubs and the consumption markets of developed countries. The Apparel and Textile sector remains a dominant research area, though cross-sector studies are growing.

Quantitative methods are most common, while mixed methods and case studies are increasingly applied to capture contextual complexity. Institutional and Stakeholder theories are most common, emphasising external pressures but leaving limited insight into operational challenges.

These findings lay the groundwork for Chapter 4. Building on this descriptive overview, the next chapter addresses RQ1 by identifying the dimensions of social sustainability practices, tackles RQ2 by finding the key enablers and barriers reported in the literature and explores RQ3 by analysing the implementation and management of social sustainability in manufacturing supply chains.

## 4 Thematic Findings

Extending from the descriptive findings in Chapter 3, Chapter 4 is structured into three major areas: (1) key enablers, (2) key barriers, and (3) the connection with supply chain functions and social sustainability domains. These areas are in line with RQ1 and RQ2 from Chapter 1 and reveal recurring patterns in the implementation of social sustainability within supply chains.

### 4.1 Enablers to Implementation

From the thematic analysis, six key enabler themes were summarised. These were E1: Top management and Ethical Orientation, E2: External Pressure Mechanisms, E3: Regulatory and Compliance Support Tools, E4: Collaborative Governance and Monitoring, E5: Capacity Building & Technological Support and E6: Organisational Fairness & Justice (See Table 4-1). Although these enablers are mentioned frequently in the literature, each is of importance in a context-dependent and unevenly distributed across supply chains.

**Table 4-1 Consolidation of Social Sustainability Themes - Enablers**

| Code                                          | Attributes                                                                           |
|-----------------------------------------------|--------------------------------------------------------------------------------------|
| E1: Top Management and Ethical Orientation    | Top Management Commitment, Ethical Orientation & Values                              |
| E2: External Pressure Mechanisms              | External Stakeholder Pressure, Institutional Pressure, Institutional / Legal Support |
| E3: Regulatory and Compliance Support Tools   | Social Compliance Tools / Certification, Auditing / Monitoring Mechanisms            |
| E4: Collaborative Governance and Monitoring   | Collaboration & Governance                                                           |
| E5: Capacity Building & Technological Support | Training / Capacity Building, Technology & Traceability                              |
| E6: Organisational Fairness & Justice         | Justice / Fairness                                                                   |

#### 4.1.1 Top Management and Ethical Orientation

In practice, the management team is responsible for directing a firm's development; therefore, top management support (TMS) plays a crucial role in

transforming external pressures into efficient and necessary actions within the supply chain (Zhou et al., 2024). Throughout the organisation's processes, the committed socially responsible actions can be incorporated into both strategic and daily operational decisions. When moral values align with performance objectives, practices such as transparency and information exchange are more likely to build stronger partnerships and seize a larger market share (Yaw Agyabeng-Mensah et al., 2025; Uttam et al., 2022).

It is through an ethical orientation in the organisation that social sustainability is strengthened, as more attention is given to human rights, fair labour practices, and community welfare (Picasso et al., 2021; Bubicz et al., 2021). The orientation that builds trust and forms the basis for collaboration, making it possible to conduct supplier assessments and invest in capacity building (Jia Jia Lim et al., 2022; Mathiyazhagan et al., 2021), even under institutional pressures (Guo & Wu, 2023). Ethical leadership helps reduce the risks of noncompliance with weak governance, financial constraints, and cultural tensions (Venkatesh et al., 2021; Yu et al., 2024). Such leadership also creates a governance environment in which social initiatives can be maintained across the supply chain. (Reyna-Castillo et al., 2023). However, TMS enables change, depending on management's willingness to prioritise social concerns and accept the trade-offs between slower short-term growth and higher operational costs.

#### **4.1.2 External Pressure Mechanisms**

External pressures are one of the key enablers of social sustainability because external prompts firms to consider long-term economic and social objectives. Growing awareness among customers and employees, particularly during periods of market disruption, has been shown to influence the adoption of socially responsible practices (Mathiyazhagan et al., 2021). Government regulations and broader stakeholder demands are also cited as powerful forces encouraging companies to set sustainability strategies in the business (Guo & Wu, 2022). Evidence further suggests that when firms take regulations seriously and respond proactively to stakeholder demands, a competitive advantage can be gained by integrating sustainability into the business models (Wamalwa et al., 2025).

Companies realised that fulfilling ethical and legal responsibilities is essential for maintaining legitimacy in the market (Picasso et al., 2021). Practices like due diligence, often used to mitigate risks, can also improve overall supply chain efficiency (Samal & Jena, 2024). External pressures serve not just as constraints but also as opportunities for innovation (Hohn & Durach, 2022). Additionally, companies are increasingly engaging with social legislation and regulations, which boost awareness and encourage the adoption of responsible practices (Khan et al., 2021). External pressures do not guarantee good results, as firms may respond with symbolic compliance.

#### **4.1.3 Regulatory and Compliance Support Tools**

Audits, codes of conduct, and global value chain (GVC) governance frameworks serve as regulatory and compliance tools, providing structured solutions to tackle issues such as child labour, unsafe workplaces, and discrimination (Temur & Mertoglu, 2024; Castaldi et al., 2022). Beyond meeting legal requirements, these mechanisms can help build supplier capacity, improve the safety situation, and protect workers' rights (Temur & Mertoglu, 2024).

However, international buyers often require strict codes and third-party certifications to do business, which encourages suppliers to implement sustainability practices but may also lead to compliance fatigue (Nath et al., 2023; Castaldi et al., 2022; Bubicz et al., 2021). Governments add another layer by enforcing labour laws that require attention to wages and working conditions (Mathiyazhagan et al., 2021; Uttam et al., 2022). The effectiveness of audit-based governance continues to be debated; still, its prevalence and capacity to prevent the most serious violations explain why it remains a core role (Zhang et al., 2023; Castaldi et al., 2022). With context-specific governance, transparency, and accountability, monitoring is enhanced, and the possibility of narrowing institutional gaps and advancing the social dimension of global supply chains is much increased. However, the strong dependence on audits and certifications risks forming a costly collaboration, where firms concentrate on reaching the passing line rather than tackling underlying structural issues.

## 4.2 Barriers to Implementation

The SLR identified eight key barriers: B1: Resource and Capability Constraints, B2: Institutional & Governance Weakness, B3: Cultural Adaptation Barriers, B4: Systemic Labour Rights Challenges, B5: Collaboration Failure, B6: Transparency & Data Gaps, B7: Operational Environmental Complexity, and B8: Lack of Justice and Fairness in Organisations (See Table 4-2).

**Table 4-2 Consolidation of Social Sustainability Themes - Barriers**

| Code                                            | Attributes                                                                                                                                                                |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1: Resource and Capability Constraints         | Includes: Cost-related Barriers, Technological and Digital Capacity Gaps, Resource Constraints, Workforce Skills and Knowledge Gaps, Buyer- and Supplier-side Limitations |
| B2: Institutional & Governance Weakness         | Includes: Regulatory Fragmentation, Weak Institutional Infrastructure, Inconsistent Enforcement                                                                           |
| B3: Cultural Adaptation Barriers                | Includes: Cultural Misalignment, Local Resistance, Cross-cultural Misunderstanding                                                                                        |
| B4: Systemic Labour Rights Challenges           | Includes: Prevalence of Informal Labour, Poor Enforcement of Labour Laws, Lack of Worker Representation                                                                   |
| B5: Collaboration Failure                       | Includes: Lack of Coordination, Unclear Roles, Insufficient Communication Channels                                                                                        |
| B6: Transparency & Data Gaps                    | Includes: Lack of Traceability, Data Sharing Limitations, Information Gaps across Tiers                                                                                   |
| B7: Operational Environmental Complexity        | Includes: Multiple Jurisdictions, Supply Chain Fragmentation, Unstable Local Contexts                                                                                     |
| B8: Lack of Organisational Justice and Fairness | Includes: Unequal Treatment, Bias in Decision-making, Limited Access to Redress Mechanisms                                                                                |

The theme of Justice and Fairness appears both as an enabler (E6) and as a barrier (B8) across the literature. As an enabler, it is associated with fostering ethical cultures, establishing grievance mechanisms, and promoting participatory decision-making. Conversely, as a barrier, it refers to the absence or weakness of these elements, manifested through perceived bias or unequal treatment within supply chain organisations. This dual appearance reflects contrasting conditions reported in different studies.

#### **4.2.1 Resource and Capability Constraints**

Micro, small, and medium-sized enterprises (MSMEs) in developing economies often face severe financial and technical limitations. Unlike larger suppliers with the resources to meet social requirements, smaller firms struggle with limited capital, inadequate expertise, and weak institutional support (Uttam et al., 2022, 2024; Shaw et al., 2023). These constraints restrict investment in welfare, training, and monitoring, making firms vulnerable to poor labour practices. A lack of knowledge about sustainability standards and limited access to networks further reduce their capacity to cascade responsible practices across multi-tier chains (Wadood et al., 2022; Shaw et al., 2023).

Even when multinational buyers demand compliance, the associated costs are rarely shared. Suppliers are therefore pushed to choose between cutting expenses or opting for minimal compliance rather than substantive improvements (Alghababsheh et al., 2023; Bae et al., 2025). Regulatory gaps and the absence of meaningful government support speed this capability shortage. Collaborative relationships and social capital can help mitigate some constraints (Castaldi et al., 2022; Wamalwa et al., 2025). However, without stronger institutional and financial support, the burden falls disproportionately on the weaker party. This reveals a structural flaw: responsibility for social sustainability is global, but the means to achieve it are distributed unequally, creating conditions where “compliance” becomes a privilege for big companies or those with many resources.

#### **4.2.2 Institutional & Governance Weakness**

The absence of robust public systems, including effective regulation and uniform enforcement, undermines efforts to improve social outcomes (Alghababsheh et al., 2023). Consequently, brands and retailers frequently rely on private initiatives like audits or voluntary programs. However, while these issues are common, the underlying social problems remain unresolved (Alghababsheh et al., 2023).

The misuse of buyer power creates additional challenges. Price pressure from lead firms put more pressure on suppliers to reduce costs, often at the expense

of fair wages, workplace safety, or the elimination of child labour (Fontana et al., 2022; Alghababsheh et al., 2023). This imbalance results in “unrewarded commitment,” where suppliers that try to improve social practices are not sufficiently rewarded (Fontana et al., 2022).

Inconsistent enforcement and varying national standards hinder progress and make it hard to implement global initiatives consistently (Castaldi et al., 2022). Research also yields conflicting findings: some studies point out the positive effects, while others find little evidence to support improved outcomes (Uttam et al., 2024). The Rana Plaza collapse exposed the failings of both public and private governance, revealing systemic labour exploitation that neither could prevent (Frenkel et al., 2022). At its core, the issue is not simply weak governance, but fragmented systems that disperse responsibility and enable corporate avoidance of accountability.

#### **4.2.3 Collaboration Failure**

Collaboration between buyers and suppliers is promoted as essential for social sustainability; however, it falls short most of the time. Suppliers under buyer pressure are less inclined to improve social practices (Fontana et al., 2024). Where trust is weak, initiatives to enhance labour conditions and community welfare tend to remain superficial. “Audit fatigue” and perceived unfairness create incentives for opportunistic behaviour, undermining the intended good outcome (Lim et al., 2022). Cascading governance, where suppliers monitor the sub-suppliers, introduces complications, often yielding only “good-enough” compliance when requirements are inconsistent or unrealistic (Bae et al., 2025).

Another weakness lies in the misalignment of objectives across supply chain tiers. Divergent priorities and limited social capital deter firms from investing in collaboration due to uncertainty and a fear of exploitation (Nath et al., 2023; Alghababsheh & Galleary, 2020). Consequently, fragmented and fragile partnerships fail to address systemic issues (Khan et al., 2021). The current collaboration often resembles hierarchical control rather than equal partnerships, which raises questions about whether profound structural change can be driven by such capacity.

### 4.3 Relationship with social sustainability: supply chain functions and social sustainability domains

This section places the identified enablers and barriers (RQ2) within two dimensions to show how they interact with the operational scope of social sustainability practices (RQ1). Firstly, it draws upon the Association of Supply Chain Management's SCOR Digital Standard (ASCM, 2023) framework to assess the functional impacts. Secondly, it draws upon two globally recognised sustainability standards that define core domains and reporting practices.

#### 4.3.1 Implications of social sustainability on supply chain functions

The SCOR Digital Standard (ASCM, 2023) categorises supply chain activities into seven core processes: Plan, Source, Order, Transform, Fulfil, Return, and Orchestrate. However, the thesis adds a new category: Product Design & Innovation, which covers innovation-related sustainability activities (Lie et al., 2025).

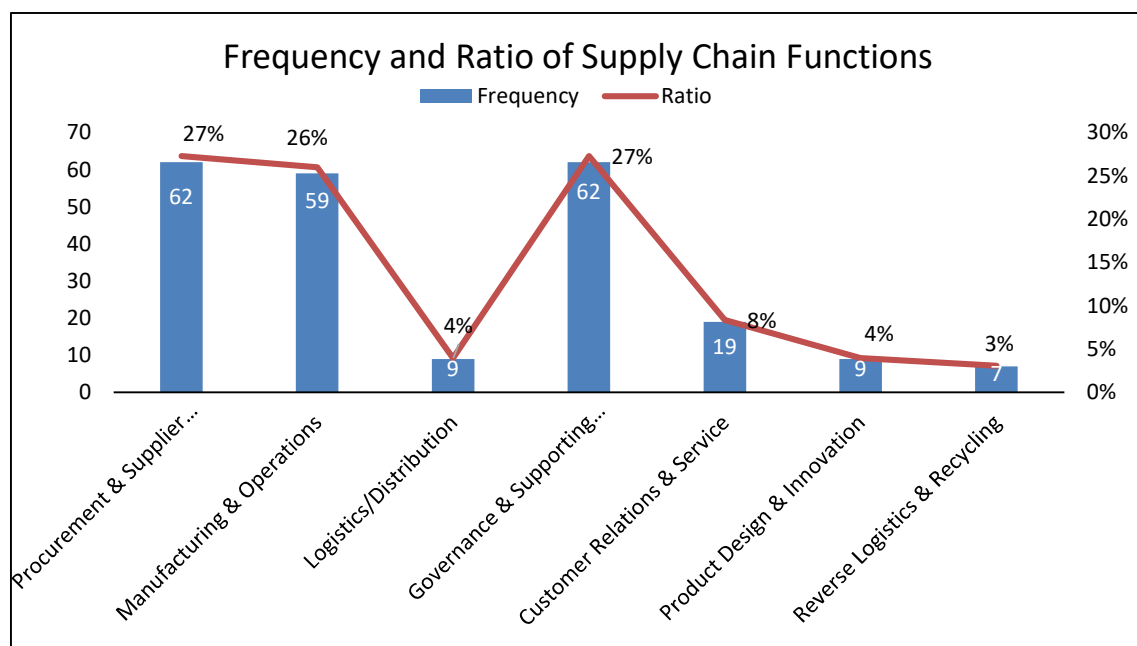


**Figure 4-1 Frequency and Ratio of Supply Chain Functions in Selected Literature**

Figure 4-1 shows the frequency and ratio with which each supply chain function is mentioned in the selected literature. Procurement & Supplier Management, Manufacturing & Operations, as well as Governance and Supporting functions,

are the most frequently discussed topics (approximately sixty citations each), indicating upstream and production stages are frequently discussed, where labour rights violations, unsafe working conditions, and power imbalances are most visible. In contrast, Logistics/Distribution, Customer Relations & Service, Product Design & Innovation and Reverse Logistics & Recycling remain comparatively neglected.

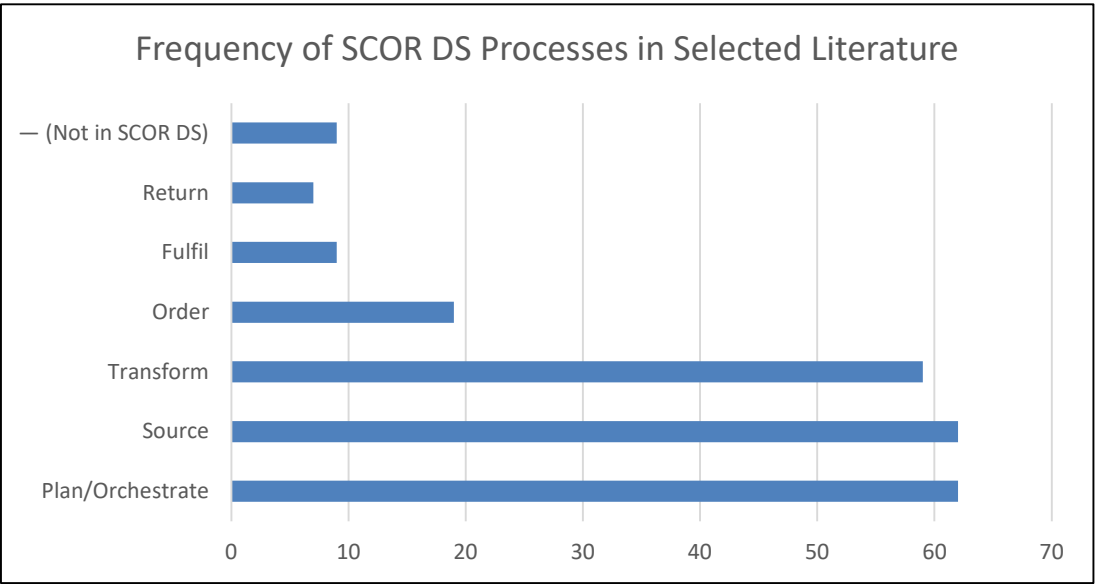


**Figure 4-2 Frequency of SCOR DS Processes in Selected Literature**

Figure 4-2 presents the frequency of SCOR DS Processes in the reviewed literature. Plan/Orchestrate, Source, and Transform account for the most frequent dimensions, while Order, Fulfil, and Return appear less often; the “Not in SCOR DS” bar reflects the additional Product Design & Innovation category introduced in this thesis.

**Table 4-3 SCOR DS Mapping With Supply Chain Functions**

| <b>SCOR DS Process</b> | <b>Functional Category in This Thesis</b> | <b>Frequency in Literature(n,%)</b> |
|------------------------|-------------------------------------------|-------------------------------------|
| Plan/Orchestrate       | Governance & Supporting Functions         | 62 (27%)                            |
| Source                 | Procurement & Supplier Management         | 62 (27%)                            |
| Transform              | Manufacturing & Operations                | 59 (26%)                            |
| Order                  | Customer Relations & Service              | 19 (8%)                             |
| Fulfil                 | Logistics / Distribution                  | 9 (4%)                              |
| Return                 | Reverse Logistics & Recycling             | 7 (3%)                              |
| — (Not in SCOR DS)     | Product Design & Innovation               | 9 (4%)                              |

Table 4-3 maps each function to its corresponding SCOR DS process and shows its frequency in the reviewed literature. This enables comparison between functions (Figure 4-1) and processes (Figure 4-2) and shows how academic discussions align with the SCOR framework and emphasise specific supply chain dimensions. The low frequency of certain functions in the literature does not necessarily imply lower importance; instead, it may reflect blind spots in current research priorities.

#### **4.3.2 Social Sustainability Domains**

To complement the functional analysis above, this section focuses on the domains of social sustainability, using ISO 26000 and the GRI Standards. ISO 26000, as the primary international guidance on social responsibility, outlines

seven core subjects that emphasise principles, stakeholder engagement, and broad areas of responsibility (ISO, 2010). In contrast, the GRI Standards translate these concepts into topic-specific disclosures with measurable indicators, making them suited for operationalising and reporting sustainability performance (Moratis & Cochiuș, 2011; Rasche et al., 2019). This integration provides a broad conceptual framework while also enabling the practical measurement of social sustainability in supply chains (see Table 4-4).

**Table 4-4 Social Sustainability Domains and Framework Sources**

| Domain                                       | ISO 26000 Core Subject                | GRI 2024 Topic Standards                                                                                                                                                                  |
|----------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Human Rights and Basic Dignity               | Human Rights                          | GRI 408 Child Labour; GRI 409 Forced or Compulsory Labour; GRI 412 Human Rights Assessment                                                                                                |
| Diversity, Equity, and Inclusion (DEI)       | Labour Practices / Human Rights       | GRI 405 Diversity and Equal Opportunity; GRI 406 Non-discrimination                                                                                                                       |
| Labour Conditions and Employment Development | Labour Practices                      | GRI 401 Employment; GRI 402 Labour/Management Relations; GRI 403 Occupational Health and Safety; GRI 404 Training and Education; GRI 407 Freedom of Association and Collective Bargaining |
| Community Engagement and Social Capital      | Community Involvement and Development | GRI 411 Rights of Indigenous Peoples; GRI 413 Local Communities                                                                                                                           |
| Ethics & Anti-corruption                     | Fair Operating Practices              | GRI 414 Supplier Social Assessment; GRI 415 Public Policy; GRI 419 Socioeconomic Compliance                                                                                               |
| Data Privacy and Digital Fairness            | Consumer Issues                       | GRI 418 Customer Privacy                                                                                                                                                                  |
| Product & Consumer Well-being                | Consumer Issues                       | GRI 416 Customer Health and Safety; GRI 417 Marketing and Labelling                                                                                                                       |

Source: Adapted from ISO 26000:2010 Guidance on Social Responsibility (ISO, 2010) and GRI Standards 2024 (GRI, 2024).

Table 4-4 links ISO 26000 and GRI Standards, showing how social sustainability domains are operationalised in the literature.

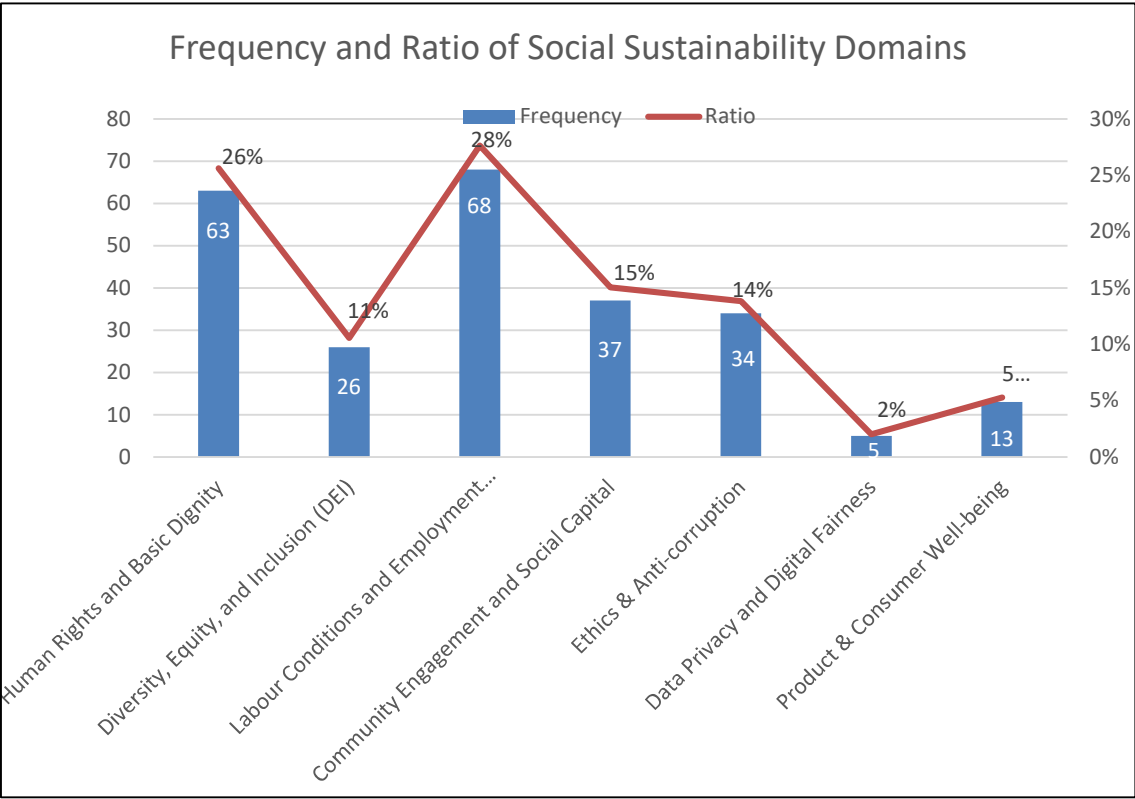


Figure 4-3 Frequency and Ratio of Social Sustainability Domains in Selected Literature

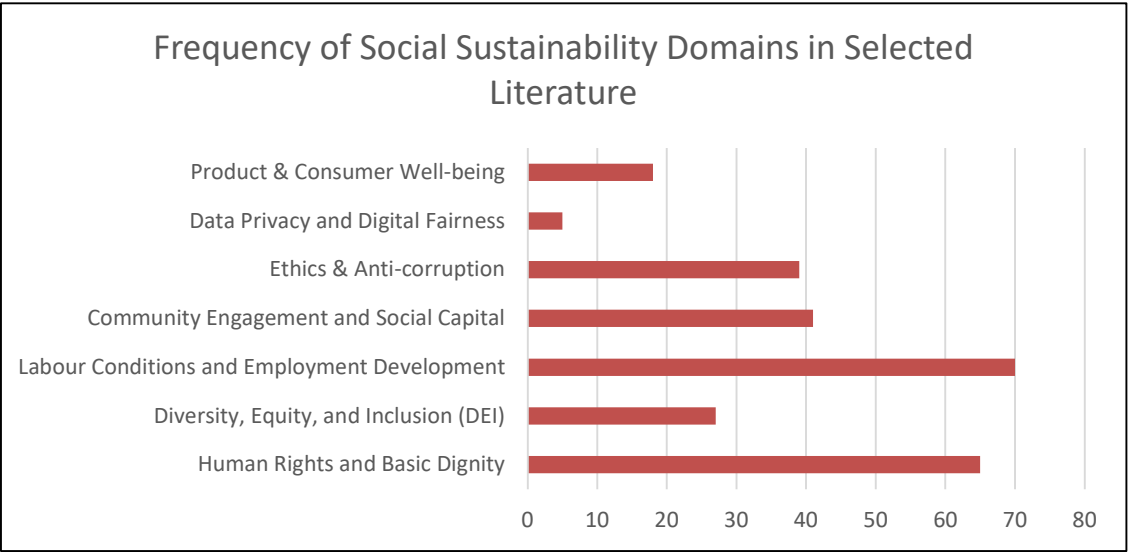


Figure 4-4 Frequency of Social Sustainability Domains in Selected Literature

As shown in Figures 4-3 and 4-4, Human Rights, Labour Conditions, and Community Engagement are the most frequently discussed topics. This highlights a strong research focus on core issues of labour and human welfare within supply chains. At the same time, Product & Consumer Well-being and Data Privacy are far less frequently discussed in the reviewed literature. This imbalanced distribution in domains can draw the attention of scholars and practitioners, enabling them to engage with these areas as early as possible.

#### **4.4 Chapter Summary**

This chapter summarises the key themes of enablers, barriers, and their connections to supply chain functions and social sustainability domains. While procurement, manufacturing, and governance are extensively discussed in existing literature, areas like logistics (including reverse logistics and recycling), customer relations, and product design receive comparatively less focus. Similarly, human rights and labour conditions receive strong attention, whereas data privacy and consumer well-being are neglected. These disparities highlight structural challenges, blind spots, and underexplored areas, setting the stage for Chapter 5.

## **5 Discussion**

This chapter builds upon the thematic findings from Chapter 4 to discuss the broader implications across supply chain functions and social sustainability domains. It connects the identified patterns with managerial relevance and explores the practical, structural, and contextual factors that influence implementation.

### **5.1 More Barriers than Enablers: A Dynamic Perspective**

According to the analysis in Sections 4.1 and 4.2, there are eight barriers and six enablers. This numerical gap creates a structural imbalance, as firms face more difficulties than support when trying to apply social sustainability in complex supply chain settings.

However, having more barriers than enablers does not automatically mean failure. Instead, this imbalance offers a distinct perspective on the significance of understanding the conditional and dynamic nature of the situation. For instance, “Justice and Fairness in Organisations” appears in the literature both as an enabler (E6) and as a barrier (B8). As an enabler, it is associated with an ethical culture, complaint systems, and shared decision-making; as a barrier, it reflects the absence of such systems, often seen in unfair treatment or weak rules for accountability. This dual coding suggests that enablers and barriers are not permanent; instead, they depend on the context and change across organisational structures under different conditions.

This perspective is further supported by Amin et al. (2022), whose simulation findings demonstrate that variables, such as Trust and Cooperation or Top Management Support, may function as either enablers or barriers, contingent upon organisational readiness, internal capacity, and external complexity. These results emphasise that the influence of any factor is not static, but highly situational. This view aligns with the broader thesis that structural barriers, under the right conditions, may be reframed as strategic levers for implementation.

Castillo et al. (2023) support this perspective, finding that enablers and barriers often overlap, influenced by the degree to which managers are committed and the effectiveness of institutional arrangements. As further noted by Castillo et al. (2023), top management commitment and internal alignment are essential for promoting socially sustainable practices across supplier networks in developing markets, such as Mexico, Colombia, and Chile. Without such support, even effective compliance systems or tools for collaboration may end up as surface-level actions instead of real change.

Zhang and Chen (2023) offer additional validation. They show that the success of audit- or cooperation-based approaches depends on how these practices align with suppliers' local frameworks and routines. This supports the idea that enablers and barriers exist on a spectrum, influenced not only by how tools are designed but also by managerial awareness, company culture, and systemic readiness. This dynamic understanding of enablers and barriers sets the stage for examining overlooked functional areas in supply chains.

## **5.2 Beyond Procurement: The Overlooked Role of Downstream Functions**

Procurement and manufacturing usually receive most attention when reviewing social sustainability. This bias has existed for a long time in both research and practice, where social risks are primarily linked to supplier labour conditions, ethical sourcing, and regulatory issues. Nevertheless, this focus on upstream activities creates gaps in downstream and supporting areas (logistics/distribution, reverse logistics, customer service, and product design), which are part of supply chain functions but receive less scrutiny.

Castillo et al. (2023) show that logistical conditions and cultural orientation indirectly boost socially sustainable supply chain outcomes by enhancing supplier performance. Logistics, often viewed as a purely operational function, has a direct impact on social outcomes through its influence on working conditions in transportation, warehousing, and last-mile delivery (Fernando et al., 2022). Specific concerns include driver wages and excessive working hours, which can lead to fatigue and safety risks, and the adequacy of workplace protections for

warehouse staff (Samal & Jena, 2024). The widespread use of subcontractors further complicates accountability, as third-party providers may not follow the same labour standards as focal firms (Bubicz et al., 2021). Beyond the operational challenges, the rapid spread of drones and autonomous vehicles could lead to further job losses, increased unemployment among workers, and the reconfiguration of community spaces (Nurgaliev et al., 2023).

Customer service is often overlooked in social sustainability research, where most studies focus on supplier wages, safety, or labour rights while leaving consumer-facing practices on the sidelines (Nair & Thankamony, 2021; Khan et al., 2021). Policies related to complaints, returns, or digital-only access can be disadvantageous for elderly or low-connectivity groups. Labour abuses are obvious and therefore become the hot topics for media and regulatory bodies (Cao et al., 2023). By contrast, evaluating fairness in customer service is harder to measure than wages or working hours (Reyna-Castillo et al., 2023). In addition, consumer voices are fragmented and seldom generate the same pressure on firms as contractual enforcement does in supplier relationships (Wadood et al., 2022).

The reason these functions are ignored partly reflects how companies prioritise social concerns. As discussed in Chapter 4, firms tend to concentrate on issues with high operational visibility or regulatory risk, while less tangible concerns, such as community involvement or consumer well-being, are set aside (Villena, 2020; Castaldi et al., 2022). In such contexts, downstream teams are perceived as having limited responsibility, even though their practices exert a measurable influence on social outcomes. Moreover, Malakar et al. (2025) note that emerging domains such as digital fairness, consumer data protection, and community equity lack institutionalised frameworks and recognised benchmarks. This absence of standards makes integration into daily operations complicated and discourages firms from embedding such concerns into performance metrics or KPI systems.

Product design and innovation provide an illustrative example of these overlooked areas. When most studies emphasise environmental and economic

dimensions such as life-cycle analysis and eco-efficiency (Pack et al., 2019; Delaney et al., 2022), design decisions strongly affect accessibility for marginalised groups, the safety of end-users, and the cultural appropriateness of products. They also reshape labour conditions by influencing assembly complexity, material choices, and ergonomic requirements (Bubicz et al., 2021; Guo & Wu, 2022). Additionally, product design decisions affect broader supply chain practices, including customer management, information sharing, and standardisation (Mathiyazhagan et al., 2023). Specifically, in the clothing industry, design and quality choices operate as strategic controls that determine supplier selection and sourcing, with direct implications for worker welfare (Bubicz et al., 2021). Product responsibility, covering safety standards and transparency, is equally vital for protecting both workers and consumers (Guo & Wu, 2022). Moreover, sustainable product innovation influences consumer preferences, enhances brand reputation, and indirectly promotes fair labour practices (Jabeen et al., 2025). Scholars further argue that aligning social-welfare logics into design and management can reduce risks, while socially oriented product and process redesign improves supplier conditions and overall social sustainability performance (Vanpoucke et al., 2023; Najjar et al., 2024).

### **5.3 Departmental Priorities and Goal Alignment**

Within companies, departments have their own targets and KPIs; if social sustainability is not included among them, its weight will vary among departments. Jaganjac et al. (2024) noted that sustainability knowledge is unevenly trained or delivered across departments; managers are often familiar with reporting frameworks, but frontline staff may lack awareness, particularly on social issues. In the absence of shared KPIs and consistent communication, departments operate in silos.

Each department interprets social sustainability through its own lens. Human Resources focuses on employee development, reward systems, work–life balance, health and safety practices, and participative decision-making to achieve positive human and social outcomes alongside economic goals (Kramar, 2014). Procurement frames it in terms of ethical sourcing and supplier compliance.

Manufacturing concentrates on labour conditions on the shop floor, while logistics addresses risks in transport and delivery. Senior management prioritises cost efficiency and speed, often resulting in trade-offs where social and environmental responsibilities are compromised, highlighting the inherent conflicts between short-term economic goals and long-term sustainability (Hahn et al., 2010).

Such differences often cause goal conflict (Pullman et al., 2009); a procurement team may push suppliers to adopt strict standards, while marketing or sales must answer client questions on labour practices. Without coordination, such asymmetry can generate inefficiency, misunderstanding, reputational risks, or even contradictory practices.

Implementation also relies on leadership and organisational culture. Venkatesh et al. (2021) emphasise the influence of middle managers whose ethical orientation can either reinforce or undermine top-level commitments. Senior managers may make strong statements on social responsibility, but fragmented authority and unclear accountability often restrict follow-through. Furthermore, evaluating executive performance can be directly tied to the management team's career, which strengthens managers' motivation and accountability for social sustainability implementation.

In fashion supply chains, for instance, the values and vision of top management play a decisive role in determining how social sustainability is realised, particularly when strategic vision and departmental practices are misaligned, even well-established tools, such as supplier codes of conduct, risk being applied only symbolically (Köksal & Strähle, 2021).

These dynamics resonate with established theories. Stakeholder theory (Freeman, 1984) stresses the need for alignment across internal and external actors to fulfil social obligations, while dynamic capabilities theory (Teece et al., 1997) argues that firms must reconfigure the coordination mechanisms as institutional norms and social demands evolve. In practice, however, the barrier is not the absence of frameworks but the misalignment of priorities across roles and functions. Conflicting objectives, departmental boundaries, and power asymmetries hinder the integration of social sustainability, suggesting that the

challenge is less in developing new standards than in addressing how organisational routines and responsibilities affect implementation (Köksal & Strähle, 2021). Establishing cross-functional working groups can break down departmental silos so that information can be shared, and goal alignment among distinct functions (such as HR, procurement, manufacturing, and marketing) can be achieved. This ensures that social sustainability is treated as an integrated corporate objective for every department. Furthermore, most of the literature concluded the existence of conflicts without exploring structural solutions, leaving a gap between identifying problems and proposing ways to overcome them.

## **5.4 The Two-sided Role of External Pressures**

External institutional and stakeholder pressures exert a strong influence on firms' commitment to socially responsible practices. These pressures can have both positive aspects by encouraging improvements, and negative aspects by driving superficial compliance.

On the one hand, external pressures encourage the broader use of global standards and accountability frameworks. Certification schemes, for example, Social Accountability 8000(SA8000), give suppliers incentives to improve labour practices, build reputation, and align with the Sustainable Development Goals (SDGs) (Turzo et al., 2024). Similarly, normative pressures have motivated firms to adopt safety and health practices that have improved both resilience and social outcomes during the COVID-19 pandemic (El Baz et al., 2023). Multi-stakeholder initiatives also help reduce audit repetition and promote shared learning, showing that collective approaches can turn pressure into opportunities for building capabilities (Castaldi et al., 2023).

On the other hand, the same pressures can also create unintended consequences. Köksal and Strähle (2021) show how combined demands for low prices, short lead times, and strict standards place heavy strain on suppliers, limiting their ability to make real improvements. Audit systems, though designed as safeguards, often cause fatigue and drive firms toward short-term box-ticking (Cao et al., 2024). Evidence from SA8000 further shows that coercive compliance can lead to falsified records rather than better working conditions (Turzo et al.,

2024). This questions the idea in institutional theory that coercive and normative pressures always lead firms to align truly; in many cases, they only create surface-level similarity without real change in practices.

The effect of these pressures depends on the local context. Where enforcement is weak, global compliance systems may conflict with local norms, creating what Castaldi et al. (2023) refer to as institutional misfit. Suppliers in such settings may resist or only partially implement external demands. However, not all informal norms are obstacles: *guanxi* in China, for example, shows how local cultural ties can support socially sustainable supply chain practices (Zhang et al., 2024). The contrast between misfit and cultural support highlights that external pressures are only effective under certain conditions.

Worker-driven supply chain governance shows another way forward. It treats workers and local stakeholders as active participants rather than passive recipients and suggests that sustainability may depend more on bottom-up involvement than on top-down control (Reinecke & Donaghey, 2021). External pressures are neither good nor bad; the impact depends on local contexts and whether they value capability building. This challenges institutional theory's assumption of automatic alignment and emphasises the need to move from top-down control toward more worker-driven governance.

## **5.5 Compliance Fatigue and Emerging Supply Chain Risks**

In buyer-driven global supply chains, suppliers bear most of the labour and compliance responsibilities and often lack bargaining power over prices or other terms in contracts (Shaw et al., 2023; Nath et al., 2023). This imbalance makes compliance fatigue a systemic risk and reduces the willingness of suppliers to pursue long-term improvements.

Suppliers encounter overlapping standards, strict schedules, and frequent audits; most of these buyers' demands come without alignment of cost-sharing. As a result, suppliers tend to get "passing checks" rather than taking meaningful actions for improvement (Shaw et al., 2023). For example, many factories adjust paperwork and procedures only during inspection weeks. Smaller suppliers, with

limited resources, often respond through minimal compliance, trade-offs, or avoidance, resulting in symbolic rather than genuine practices (Uttam et al., 2024). Over time, compliance becomes a form of reputational insurance instead of driving systemic reform (Hohn & Durach, 2023).

This fatigue amplifies risks. Operationally, audits disrupt production and drain resources. Financially, repeated audits and lower margins threaten cash flow (Shaw et al., 2023). Reputationally, symbolic compliance is highly vulnerable. For instance, Nike's sweatshop scandal in the 1990s and Boohoo's 2020 UK labour controversy illustrate how weak practices can trigger consumer backlash and market losses (Picasso et al., 2023). Moreover, Social, and legal risks continue to exist, as inadequate practices can lead to labour disputes or sanctions related to modern slavery (Nath et al., 2024).

Addressing compliance fatigue requires more than audits. First, purchasing practices must change. H&M's pilot of longer lead times enabled suppliers to invest in worker safety and training, improving both quality and delivery. Such cases show the value of cost-sharing and flexibility (Shaw et al., 2023). Second, performance metrics should go beyond checklist compliance. They need to reward capacity building and continuous improvement (Guo & Wu, 2023). Additionally, information exchange and digital tools, such as blockchain or shared audit platforms, can reduce duplication and connect social practices to market value (Agyabeng-Mensah, 2025).

Critically, unless buyer–supplier relations shift from cost minimisation to shared responsibility, compliance programmes will stay fragile. The key question is this: will global brands continue to treat compliance as a tick-box exercise, or will they transform it into a strategic asset for resilience and competitive advantage?

## **5.6 Conceptual Framework: Mapping Social Sustainability Implementation Pathways**

The conceptual framework presented in Figure 5-1 consolidates the discussion and findings across this chapter and maps how social sustainability is implemented in supply chains. It shows that implementation is not a static or

linear process, but rather a dynamic and cyclical system where external drivers, internal mechanisms, and mediating factors continuously interact and reshape one another. The framework illustrates how these dynamics lead to both strategic and social outcomes, while also revealing potential risks and challenges.

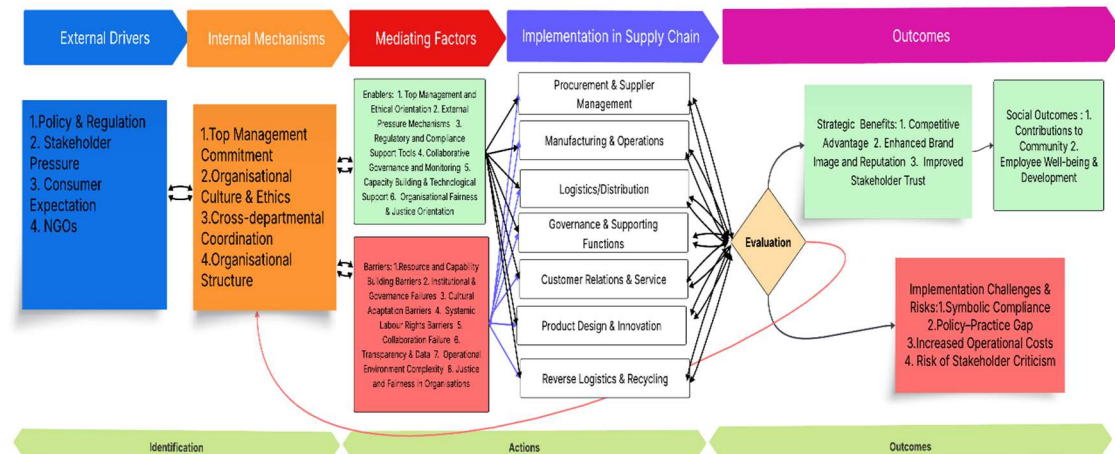


**Figure 5-1 Conceptual Framework**

(Source: Author, 2025)

As shown in Figure 5-1, external drivers (e.g., policy, stakeholder pressures, consumer expectations, NGOs) function as triggers. However, their impact depends on internal mechanisms like leadership commitment, organisational culture, structural arrangements, and cross-departmental coordination. External and Internal factors do not act in a simple sequence. Instead, they influence each other continuously, and changes in one area may trigger shifts in another. Mediating factors that operate as both enablers and barriers also play a dual role in these interactions. For instance, managerial capability, institutional stability, and technological support may reinforce implementation when they exist, but they can also hinder progress when absent. Moreover, enablers and barriers can shift over time. What functions as an enabler under supportive conditions may turn into a barrier when resources decline, and barriers may transform into enablers when corrective measures are taken.

Implementation translates these dynamics into supply chain functions. While procurement and manufacturing remain central, overlooked areas such as

logistics, product design, customer relations, and reverse logistics also have an impact on labour conditions, consumer well-being, and broader outcomes.

The outcomes are thus classified into Strategic benefits (e.g., competitive advantage, enhanced reputation, stakeholder trust) and social outcomes (e.g., improved worker well-being, community contributions), which coexist with risks such as policy–practice gaps and rising costs.

Finally, the evaluation stage evolves into a continuous improvement process. It starts with a review, then updates the identification of enablers and barriers, and adjusts necessary actions within internal structures or supply chain functions. The outcomes are then monitored and fed back into earlier stages of the process, allowing priorities and practices to be revised. The cycle then restarts, forming a closed loop that dynamically links identification, action, evaluation, and re-adjustment and makes firms with strong capabilities in social sustainability.

Previous frameworks are too static and fail to capture the dynamic features. My framework shows that the exact element can function as an enabler in one setting but as a barrier in another. Recognising this duality is crucial for developing strategies that are more flexible and grounded.

## **5.7 Digital Fairness, Consumer Well-being, and Community Engagement: The Neglected Pillars**

Digital technologies allow companies to verify ethical sourcing, monitor labour standards, and build consumer trust by improving supply chain transparency (Agrawal et al., 2021; Montecchi et al., 2021, as cited in Malakar et al., 2025). Nonetheless, the use in social sustainability remains underexplored in research. Major obstacles include concerns about data privacy, excessive costs for infrastructure, a lack of skills, and misuse or excessive surveillance (Malakar et al., 2025).

As Malakar et al. (2025) point out, digital tools improve traceability and visibility, but may create unfamiliar problems through excessive surveillance, digital exclusion, or unclear algorithmic decisions; issues that connect to new debates on digital fairness, such as data justice and the right to control one's own

information, remain absent from mainstream sustainability audits and corporate assessments. Without closer monitoring of up-to-date technological developments, both scholars and practitioners risk lagging in addressing these evolving risks.

Product and Consumer Well-being, as well as Community Engagement, are also less studied. In contrast, the ISO 26000 and GRI standards stress that firms should take responsibility for consumers and local communities. However, few studies examine these areas in detail. As a result, the importance of these aspects is not a key focus for companies in implementing social sustainability. Although Community Engagement is not the least frequently discussed domain, it is rarely linked with logistics, customer service, or product innovation. This exposes a gap in research that pays attention to visible labour issues while undervaluing fewer tangible aspects of social sustainability, which may be equally decisive in building trust and long-term legitimacy.

## **5.8 Practical Implication**

The findings from Chapter 4 suggest that social sustainability in MT-SCs chains results from the interaction between formal structures (e.g., compliance frameworks, governance) and relational dynamics (e.g., trust, stakeholder collaboration). These intertwined factors frame the discussion of practical implications and new challenges.

In today's fast-changing world, the global landscape has become increasingly volatile due to ongoing wars, political transitions, economic sanctions, and climate-related disasters. These geopolitical disruptions, as external pressures, have intensified, affecting global transportation networks and supply chain continuity, and posing unexpected operational challenges for multinational companies (Smyrnov et al., 2025). In such uncertain environments, financial stability and risk mitigation often take precedence. While social sustainability, lacking short-term measurable returns, is quite often downgraded in decision-making.

From a managerial perspective, firms must proactively identify as many social risks as possible, especially in lower-tier or outsourced operations that are beyond direct oversight. In an era of tighter regulation and digital transparency, symbolic compliance or reliance on first-tier certifications is no longer adequate. Contextual challenges, such as changing labour laws, institutional gaps, or geopolitical disruptions, force firms to allocate strategic resources wisely and create contingency plans that meet social standards under pressure.

For supply chain managers and Chief Sustainability Officers (CSOs), this thesis creates a framework that brings a holistic perspective on social sustainability. It enables the management team to develop coordinated strategies, anticipate structural barriers, and design targeted interventions. The framework also supports the identification of high-risk functions and detects where risks are most likely to occur. Importantly, these elements do not operate in isolation; instead, they interact with one another, and their interplay can amplify or mitigate risks and change outcomes in separate ways. This requires a broad perspective, with managers viewing the supply chain as a system and understanding how decisions in one area can influence results in another. Beyond compliance and reporting, firms are encouraged to integrate social responsibility across all supply chain functions.

Because departments function separately, there is a convincing cross-functional integration models that embed social KPIs into daily operations, which means moving social responsibility from isolated Corporate Social Responsibility (CSR) teams to an organisation-wide issue involving procurement, logistics, design, HR, and customer service.

Theoretically, such models are grounded in stakeholder integration and institutional alignment, ensuring internal consistency with external expectations. They not only resolve goal conflicts but also strengthen organisational legitimacy in a context of increasing social accountability. As firms engage more deeply in social SSCM, the underlying enablers tend to shift from risk-based incentives toward more value-based, stakeholder-oriented motivations (Hohn & Durach, 2022). Recognising this evolution helps align internal practices with external

expectations in a more sustainable manner (Hohn & Durach, 2022). However, the managerial guidance in the literature assumes that social sustainability can be standardised through universal tools, overlooking how political, cultural, and economic differences impact feasibility. Effectiveness depends less on homogeneity across contexts and more on context-sensitive adaptation and the readiness of local resources.

## **5.9 Chapter Summary**

This chapter presents a critical discussion of the dynamics underlying the implementation of social sustainability in supply chains. Section 5.1 highlighted that enablers and barriers are context-dependent rather than fixed. Section 5.2 showed that downstream and support functions (e.g., logistics, customer service, and product design) remain underexplored. Section 5.3 revealed that weak interdepartmental links reduce coherence and create goal conflicts. Sections 5.4 and 5.5 discussed how external pressures, if not locally embedded, risk driving symbolic compliance. Section 5.6 presented a conceptual framework mapping these interactions. Section 5.7 drew attention to neglected pillars such as digital fairness, consumer well-being, and community engagement. Overall, the chapter argued that success depends less on adopting universal tools than on achieving alignment and integration across internal and external factors.

## **6 Conclusion**

### **6.1 Summary of Key Findings**

This thesis explored the implementation of social sustainability within supply chains by analysing sixty-eight peer-reviewed articles. It marks the ongoing barriers and enablers, as well as an imbalance between them. Many issues remain unresolved due to internal misalignment, supplier power disparities, and symbolic compliance. Attention remains concentrated on upstream functions, while other areas, including logistics, design, and service, are frequently overlooked. Additionally, topics like digital fairness, consumer well-being, and community engagement are less well-studied, leaving conceptual and practical gaps that limit both scholarly understanding and managerial action. The findings also demonstrate that organisational culture, stakeholder collaboration, and the readiness of operating environments are central to achieving meaningful social outcomes.

### **6.2 Theoretical Contributions**

This thesis advances theory on social sustainability in the supply chain context through an SLR.

The findings challenge the traditional understanding of enablers and barriers and redefine these elements as dynamic, context-dependent factors rather than fixed categories. It shows that factors like organisational justice or external pressure can either facilitate or inhibit the progress of social sustainability, depending on organisational readiness, institutional context, and relational dynamics. This aligns with a contingency-based theory of implementation in social supply chain management.

Additionally, the thesis broadens the area of traditional priority on procurement and manufacturing. It also shows that logistics, product design, and customer service are equally important in shaping social outcomes. Compliance fatigue, meanwhile, should be understood as a systemic governance challenge rather than a narrow operational issue. This systemic perspective contributes to theory

by reframing SSCM as an organisation-wide responsibility rather than a siloed function.

At the same time, the thesis expands the theoretical boundaries of social sustainability by including digital fairness, consumer well-being, and community engagement. These additions expose the limitations of current SSCM theory and create new pathways for more inclusive and context-aware research.

### **6.3 Practical Contributions**

In addition to its theoretical contributions, the thesis offers practical implications for managers, policymakers, and supply chain practitioners.

Firms should incorporate social sustainability into all departments, not just the upstream supply chain network. Building a supportive organisational culture and encouraging stakeholder collaboration can decrease misalignment and promote actual social sustainability impact. Managers are also advised to include worker feedback, community views, and digital fairness into the decision-making processes, enhancing both legitimacy and long-term resilience.

Moreover, the fragmented or weak regulatory environments worsen the power imbalances between suppliers and buyers. Implementing policy frameworks that promote transparency, worker involvement, and accountability throughout global value chains can reduce these risks. Specifically, supporting standardised social metrics and digital traceability systems would facilitate more consistent monitoring and assessment across different industries and regions.

The importance of utilising advanced technologies, for example, blockchain and AI, is to enhance efficiency and information alignment. Transparent data-sharing platforms can empower vulnerable groups, such as workers in high-risk industries, and build greater community trust, so that firms can be recognised as credible actors in promoting social sustainability. Furthermore, cross-sector collaboration initiatives are essential for addressing complex systemic issues, such as compliance fatigue and fragmented governance, which cannot be resolved by a single organisation alone. The effectiveness of these measures depends on how sound policies are implemented and monitored over time. Without adequate

enforcement and follow-up, even the most perfect frameworks risk remaining symbolic.

## **6.4 Limitations of the Thesis**

This thesis has four main limitations. First, the findings are based on a selection of sixty-eight peer-reviewed articles, focused on the manufacturing sectors (e.g., apparel, textiles) in developing countries. Service industries (e.g., logistics, retail) and regions with strong regulatory institutions (e.g., the EU, North America) are underrepresented, which limits the generalisability of the findings.

Furthermore, although the articles are from publications from 2021 to 2025, the study periods are 1 to 5 years earlier than the publication date; therefore, the updated social sustainability is not entirely evident from the available sources. The emerging issues (e.g., geopolitical conflicts affecting labour standards) are not systematically captured.

Third, the thesis relies solely on an SLR, which does not include primary data or practitioner perspectives. As such, it may overlook emerging practices or undocumented challenges occurring in real-world supply chain contexts.

Finally, unlike environmental or economic sustainability (e.g., carbon footprint), social sustainability lacks clear quantitative metrics or financial indicators. Vague constructs like "community engagement" or "digital fairness" are often inconsistently defined and measured across studies, making it more challenging to compare and evaluate them.

## **6.5 Future Challenges and Research Directions**

This section also addresses RQ3, which asked about the future challenges and research directions for implementing social sustainability in supply chains.

Based on the review, future research should prioritise cross-regional studies that investigate how institutional environments shape the implementation and effectiveness of social sustainability initiatives. Comparative analyses across diverse regulatory, cultural, and economic contexts can clarify which approaches

are practical under specific conditions, generating actionable insights for global companies.

Another priority is the development of reliable metrics and data-driven tools to assess social impact. Without clear indicators, firms struggle to track progress, benchmark performance, or justify investments in socially responsible initiatives. Emerging frameworks that integrate worker voice, community well-being, and governance transparency would strengthen implementation. Simultaneously, advanced technologies can reinforce these efforts by enhancing traceability, accountability, and inclusivity across different supply chain functions, especially in high-risk sectors like agriculture and apparel (Khan et al., 2021). Nevertheless, the social applications remain insufficiently studied. To deepen the study, future research could therefore pursue more cross-sectoral and cross-regional investigations to examine how these technologies can be adopted into various supply chain contexts.

Lastly, future interdisciplinary research that combines political science, sociology, and data science is needed to address institutional weaknesses, ensure workers' rights, and strengthen fairness. As the TBL framework emphasises (Elkington, 1997), economic, environmental, and social pillars are interdependent; overlooking one dimension, such as through weakened environmental policies (Daly & Press, 2025), can indirectly erode labour standards and community well-being. Closer collaboration with practitioners and affected communities is also necessary to capture the lived experiences that are often missing from formal data. Researchers must pay closer attention to dynamic risks and uncertainties, including geopolitical conflicts, climate disruptions, and sudden supply chain breakdowns, which are increasingly shaping the landscape of social sustainability.

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# Appendices

## Appendix A: Ethical Approval Letter



24 June 2025

Dear Wei

Reference: CURES/25750/2025

Project ID: 28537

Title: Supply chain sustainability at a crossroad

Thank you for your application to the Cranfield University Research Ethics System (CURES).

**We are pleased to inform you that your CURES application, reference CURES/25750/2025 has been reviewed. You may now proceed with the research activities you have sought approval for.**

If you have any queries, please contact CURES Support.

We wish you every success with your project.

Regards,

CURES Team

## Appendix B: Quality Assessment List

| Tracking No. | Article                            | Relevance | Methodology | Data / Evidence Quality | Score |
|--------------|------------------------------------|-----------|-------------|-------------------------|-------|
| 1            | (Nath et al., 2023)                | 3         | 3           | 3                       | 3.0   |
| 2            | (Hammer, 2023)                     | 3         | 2.5         | 2.5                     | 2.7   |
| 3            | (Zhou et al., 2024).               | 3         | 3           | 3                       | 3.0   |
| 4            | (Temur & Mertoglu, 2024)           | 3         | 3           | 3                       | 3.0   |
| 6            | (Shen et al., 2024)                | 3         | 2.5         | 3                       | 2.8   |
| 7            | (Yaw Agyabeng-Mensah et al., 2025) | 3         | 3           | 2.5                     | 2.8   |
| 8            | (Shaw et al., 2023)                | 3         | 3           | 3                       | 3.0   |
| 9            | (Neha Uttam et al., 2024)          | 3         | 3           | 3                       | 3.0   |
| 11           | (Fontana et al., 2022)             | 3         | 3           | 3                       | 3.0   |
| 13           | (Picasso et al., 2021)             | 3         | 2           | 3                       | 2.7   |
| 14           | (Alghababsheh et al., 2023)        | 3         | 3           | 3                       | 3.0   |
| 15           | (Jia Jia Lim et al., 2022)         | 3         | 3           | 3                       | 3.0   |
| 16           | (Malakar et al., 2025)             | 3         | 3           | 2.5                     | 2.8   |
| 17           | (Yu et al., 2024)                  | 3         | 3           | 2.5                     | 2.8   |
| 18           | (Bae et al., 2024)                 | 3         | 3           | 3                       | 3.0   |
| 19           | (Mathiyazhagan et al., 2021)       | 3         | 3           | 2.5                     | 2.8   |
| 20           | (Uttam et al., 2022)               | 3         | 3           | 3                       | 3.0   |
| 21           | (Jia et al., 2022)                 | 3         | 2.5         | 2.5                     | 2.7   |
| 23           | (Jia et al., 2021)                 | 3         | 3           | 3                       | 3.0   |
| 24           | (Frenkel et al., 2022)             | 3         | 3           | 3                       | 3.0   |
| 25           | (Le, 2022)                         | 3         | 3           | 3                       | 3.0   |
| 26           | (Hasle & Vang, 2021)               | 3         | 3           | 2.5                     | 2.8   |
| 27           | (Tsalidis et al., 2021)            | 3         | 3           | 2.5                     | 2.8   |

| Tracking No. | Article                                  | Relevance | Methodology | Data / Evidence Quality | Score |
|--------------|------------------------------------------|-----------|-------------|-------------------------|-------|
| 28           | (Bubicz et al., 2021)                    | 3         | 2           | 3                       | 2.7   |
| 30           | (Venkatesh et al., 2021)                 | 3         | 3           | 3                       | 3.0   |
| 36           | (Guo & Wu, 2022)                         | 3         | 3           | 2.5                     | 2.8   |
| 38           | (Zhang & Chen, 2023)                     | 3         | 3           | 3                       | 3.0   |
| 40           | (Hohn & Durach, 2022)                    | 3         | 3           | 3                       | 3.0   |
| 41           | (Reyna-Castillo et al., 2023)            | 2.5       | 3           | 3                       | 2.8   |
| 42           | (Wadood et al., 2022)                    | 3         | 3           | 3                       | 3.0   |
| 43           | (Trost et al., 2022)                     | 2.5       | 3           | 2.5                     | 2.7   |
| 46           | (Bag et al., 2022)                       | 3         | 3           | 2.5                     | 2.8   |
| 47           | (Lucy Simani Wamalwa et al., 2025)       | 2.5       | 3           | 3                       | 2.8   |
| 48           | (Md. Abdul Moktadir & Ren, 2025)         | 3         | 3           | 2.5                     | 2.8   |
| 49           | (Samal & Jena, 2024)                     | 2.5       | 3           | 2.5                     | 2.7   |
| 51           | (Lotfi & Walker, 2024)                   | 3         | 3           | 2.5                     | 2.8   |
| 52           | (Jabeen et al., 2025)                    | 3         | 3           | 3                       | 3.0   |
| 53           | (Madushan Madhava Jayalath et al., 2024) | 3         | 3           | 2                       | 2.7   |
| 54           | (Vanpoucke & Klassen, 2023)              | 3         | 3           | 3                       | 3.0   |
| 55           | (Zimmermann et al., 2025)                | 3         | 3           | 3                       | 3.0   |
| 56           | (Khan et al., 2021)                      | 3         | 3           | 3                       | 3.0   |
| 59           | (Pimenta et al., 2021)                   | 2.5       | 3           | 2.5                     | 2.7   |
| 60           | (Distelhorst & McGahan, 2021)            | 3         | 3           | 3                       | 3.0   |
| 62           | (van Hoek & Udesen, 2023)                | 3         | 2.5         | 3                       | 2.8   |
| 63           | (Felbermayr et al., 2024)                | 3         | 3           | 3                       | 3.0   |
| 64           | (Tanaka, 2023)                           | 3         | 3           | 2.5                     | 2.8   |

| Tracking No. | Article                         | Relevance | Methodology | Data / Evidence Quality | Score |
|--------------|---------------------------------|-----------|-------------|-------------------------|-------|
| 66           | (Veerendra Anchan et al., 2024) | 3         | 3           | 3                       | 3.0   |
| 68           | (Najjar et al., 2024)           | 2.5       | 3           | 2.5                     | 2.7   |
| 69           | (Le, 2022)                      | 3         | 3           | 2.5                     | 2.8   |
| 72           | (Strand et al., 2023)           | 3         | 3           | 3                       | 3.0   |
| 74           | (Jamal El Baz et al., 2023)     | 3         | 3           | 2.5                     | 2.8   |
| 75           | (Turzo et al., 2024)            | 3         | 3           | 3                       | 3.0   |
| 81           | (Bellingan et al., 2023)        | 3         | 3           | 2.5                     | 2.8   |
| 82           | (Zhang et al., 2023)            | 3         | 3           | 3                       | 3.0   |
| 83           | (Cao et al., 2023)              | 2.5       | 3           | 2.5                     | 2.7   |
| 87           | (Castaldi et al., 2022)         | 3         | 3           | 3                       | 3.0   |
| 88           | (Chanani et al., 2022)          | 3         | 3           | 2.5                     | 2.8   |
| 89           | (McGaughey et al., 2021)        | 3         | 3           | 2.5                     | 2.8   |
| 94           | (Antolin et al., 2021)          | 3         | 3           | 3                       | 3.0   |
| 96           | (Stevenson, 2021)               | 3         | 3           | 2.5                     | 2.8   |
| 97           | (Caro et al., 2020)             | 3         | 3           | 3                       | 3.0   |
| 101          | (Reinecke & Donaghey, 2020)     | 3         | 3           | 3                       | 3.0   |
| New1         | (Fernando et al., 2022)         | 2.5       | 3           | 2.5                     | 2.7   |
| New4         | (Nair & Thankamony, 2021)       | 3         | 3           | 2.5                     | 2.8   |
| New7         | (Köksal & Strähle, 2021)        | 3         | 3           | 3                       | 3.0   |
| New8         | (Morais & Barbieri, 2022)       | 3         | 3           | 2.5                     | 2.8   |
| New9         | (Nath & Eweje, 2021)            | 3         | 3           | 3                       | 3.0   |
| New 10       | (Silva et al., 2021)            | 3         | 3           | 3                       | 3.0   |

## Appendix C: Sector Classification

| Tracking No. | Keywords of sectors                                                       | Classification             |
|--------------|---------------------------------------------------------------------------|----------------------------|
| 1            | Apparel manufacturing industry                                            | Apparel and Textile Sector |
| 2            | Apparel manufacturing industry                                            | Apparel and Textile Sector |
| 3            | Manufacturing sector                                                      | Manufacturing              |
| 4            | textile factories                                                         | Apparel and Textile Sector |
| 6            | Apparel manufacturing industry and Textile Industry                       | Apparel and Textile Sector |
| 7            | manufacturing supply chains                                               | Manufacturing              |
| 8            | textile manufacturing (tier-2), clothing manufacturing (tier-1) and brand | Apparel and Textile Sector |
| 9            | manufacturing sector: Food、Mechanic、Energy、Plastic                        | Cross-sector studies       |
| 11           | Apparel manufacturing industry                                            | Apparel and Textile Sector |
| 13           | Electric、Mechanical、Transportation                                        | Cross-sector studies       |
| 14           | Apparel manufacturing industry                                            | Apparel and Textile Sector |
| 15           | manufacturing                                                             | Manufacturing              |
| 16           | Textile,Leather,Sports,Small-scale Engineering                            | Cross-sector studies       |

| Tracking No. | Keywords of sectors                                                                                                   | Classification             |
|--------------|-----------------------------------------------------------------------------------------------------------------------|----------------------------|
| 17           | Chinese manufacturing industry: Electronics, Industrial Machinery、 Chemical、 Food and Beverage Industry、 Textile etc. | Cross-sector studies       |
| 18           | Apparel manufacturing industry and electronics industries                                                             | Cross-sector studies       |
| 19           | automotive firms                                                                                                      | Other                      |
| 20           | MSME,;Machinery & Equipment,Plastics,Food,Pharmaceuticals,Home Décor,Energy,Tobacco                                   | Cross-sector studies       |
| 21           | Homeware,Accessories,Electronics                                                                                      | Cross-sector studies       |
| 23           | Apparel manufacturing industry                                                                                        | Apparel and Textile Sector |
| 24           | garment export factories                                                                                              | Apparel and Textile Sector |
| 25           | garment industry                                                                                                      | Apparel and Textile Sector |
| 26           | ready-made garment industry                                                                                           | Apparel and Textile Sector |
| 27           | Chemical Process Industry                                                                                             | Other                      |
| 28           | Apparel manufacturing industry: Adidas、 Nike、 Inditex、 H&M、 GAP                                                       | Apparel and Textile Sector |
| 30           | apparel manufacturing industry                                                                                        | Apparel and Textile Sector |
| 81           | Textiles,plastic products, etc.                                                                                       | Apparel and Textile Sector |

| Tracking No. | Keywords of sectors                                                                                                                                                     | Classification             |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 82           | Export-oriented manufacturers in machinery, electronics, and apparel sectors                                                                                            | Manufacturing              |
| 83           | manufacturing and extractive-related firms in the S&P 500 and FTSE 350                                                                                                  | Manufacturing              |
| 87           | garment and footwear manufacturing                                                                                                                                      | Apparel and Textile Sector |
| 88           | Apparel manufacturing industry/ Ready-Made Garments                                                                                                                     | Apparel and Textile Sector |
| 89           | Chemical (Sanofi, L'Oréal) ,Food and Beverage Industry (LVMH, Pernod Ricard) ,Optical and Electronic Equipment (Essilorluxottica, Schneider Electric) ,Fashion (Kering) | Cross-sector studies       |
| 94           | garment manufacturing                                                                                                                                                   | Apparel and Textile Sector |
| 96           | garment industry                                                                                                                                                        | Apparel and Textile Sector |
| 97           | Apparel manufacturing industry                                                                                                                                          | Apparel and Textile Sector |
| 101          | garment manufacturing industry                                                                                                                                          | Apparel and Textile Sector |
| 36           | manufacturing companies                                                                                                                                                 | Manufacturing              |
| 38           | Apparel manufacturing industry and footwear manufacturers                                                                                                               | Apparel and Textile Sector |
| 40           | Apparel, Food, Electronics, chemical                                                                                                                                    | Cross-sector studies       |
| 41           | manufacturing sector, 48.4%                                                                                                                                             | Manufacturing              |

| Tracking No. | Keywords of sectors                                                              | Classification             |
|--------------|----------------------------------------------------------------------------------|----------------------------|
| 42           | Apparel manufacturing industry and Textile Industry                              | Apparel and Textile Sector |
| 43           | manufacturing companies( e.g. Automotive)                                        | Manufacturing              |
| 46           | automotive parts manufacturing industry                                          | Other                      |
| 47           | Agricultural Processing, Food Processing, Cement Manufacturing                   | Cross-sector studies       |
| 48           | Energy                                                                           | Other                      |
| 49           | The automotive, logistics, pharmaceutical, and information technology industries | Cross-sector studies       |
| 51           | Garment Sector                                                                   | Apparel and Textile Sector |
| 52           | Textile                                                                          | Apparel and Textile Sector |
| 53           | Apparel manufacturing industry                                                   | Apparel and Textile Sector |
| 54           | the smartphone industry                                                          | Other                      |
| 55           | textile sector                                                                   | Apparel and Textile Sector |
| 56           | chemical, agri-food, textile)                                                    | Cross-sector studies       |
| 59           | automotive, food, electronics, electrical appliances, chemicals, and apparel.    | Cross-sector studies       |

| Tracking No. | Keywords of sectors                                                                               | Classification             |
|--------------|---------------------------------------------------------------------------------------------------|----------------------------|
| 60           | Garments,Toys,Home Décor,Cookware                                                                 | Cross-sector studies       |
| 62           | Bayer pharmaceutical and life sciences                                                            | Cross-sector studies       |
| 63           | Yes ,Food and Beverage Industry、 Textile and Leather、 Metal and Non-metal Materials Manufacturing | Cross-sector studies       |
| 64           | Apparel manufacturing industry                                                                    | Apparel and Textile Sector |
| 66           | Cement Manufacturing                                                                              | Other                      |
| 68           | Food,chemical,texture                                                                             | Cross-sector studies       |
| 69           | garment industry                                                                                  | Apparel and Textile Sector |
| 72           | Textiles, Apparel, Food & Agriculture, Construction                                               | Cross-sector studies       |
| 74           | Automotive, Chemical、 Pharmaceutical、 Electronics、 Metal processing and fabrication               | Cross-sector studies       |
| 75           | Apparel manufacturing industry and textile industry                                               | Apparel and Textile Sector |
| New1         | Electronics (42.4%) 、 Food and Beverage Industry (15.3%) 、 Automotive (14.6%)                     | Cross-sector studies       |
| New4         | manufacturing and energy                                                                          | Cross-sector studies       |
| New7         | Apparel manufacturing industry                                                                    | Apparel and Textile Sector |

| Tracking No. | Keywords of sectors                                                     | Classification             |
|--------------|-------------------------------------------------------------------------|----------------------------|
| New8         | Agro 1、 Agro 2, Cosmetics 1、 Cosmetics 2,Natural Gas, Paper & Cellulose | Cross-sector studies       |
| New9         | apparel                                                                 | Apparel and Textile Sector |
| new 10       | clothing industry                                                       | Apparel and Textile Sector |

## Appendix D: Methodology Classification

| Tracking No. | Keywords of Methodology                                                                                                          | Final                  |
|--------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1            | a qualitative research design+semi-structured interview                                                                          | Qualitative Methods    |
| 2            | Case study method and comparative analysis                                                                                       | Case Study             |
| 3            | empirical study + Questionnaires + PLS-SEM                                                                                       | Quantitative Methods   |
| 4            | Questionnaires were administered to 280 participants, and path analysis was conducted using SPSS v28 and SPSS Amos v26 programs. | Quantitative Methods   |
| 6            | Game Theoretical Modelling                                                                                                       | Modelling / Simulation |
| 7            | Survey data were collected from 262 managers +PLS-SEM                                                                            | Quantitative Methods   |
| 8            | SLR+ Questionnaires+DEMATEL                                                                                                      | Mixed Methods          |
| 9            | Qualitative Research: semi-structured interviews + Qualitative Study + Thematic Analysis                                         | Qualitative Methods    |
| 11           | a qualitative method design based on fieldwork and original interviews                                                           | Qualitative Methods    |
| 13           | SLR + Taxonomy development, Cluster Analysis, Multiple Regression, ANOVA                                                         | Quantitative Methods   |
| 14           | survey+PLS-SEM                                                                                                                   | Quantitative Methods   |
| 15           | Strategy-Structure-Performance (SSP) + Social Exchange Theory (SET),+ SPSS PROCESS                                               | Quantitative Methods   |
| 16           | survey data collected from 250 experts, PLS-SEM                                                                                  | Quantitative Methods   |
| 17           | Quantitative Methods + Hypothesis Testing + SEM+ Bootstrapping + moderated regression analysis                                   | Quantitative Methods   |
| 18           | semi-structured interviews, document analysis, and Gioia                                                                         | Qualitative Methods    |
| 19           | Total Interpretive Structural Modelling (TISM) + MICMAC                                                                          | Modelling / Simulation |
| 20           | qualitative study, Stakeholder Theory                                                                                            | Qualitative Methods    |
| 21           | case study, interview, abductive reasoning)                                                                                      | Qualitative Methods    |
| 23           | Multi-case Study, Boundary Spanning) + Social Capital Theory                                                                     | Case Study             |

| Tracking No. | Keywords of Methodology                                                                           | Final                             |
|--------------|---------------------------------------------------------------------------------------------------|-----------------------------------|
| 24           | Mixed Methods                                                                                     | Mixed Methods                     |
| 25           | qualitative multiple case study                                                                   | Case Study                        |
| 26           | Action Research + design science                                                                  | Action/Design Approaches          |
| 27           | S-LCA 1 (Performance Reference Point, PRP )                                                       | Quantitative Methods              |
| 28           | qualitative analysis                                                                              | Qualitative Methods               |
| 30           | Qualitative+Qualitative: a fuzzy Decision-Making Trial and Evaluation Laboratory method (DEMATEL) | Mixed Methods                     |
| 81           | digital diaries from 466 workers in four factories, Qualitative Methods, Quantitative Methods     | Mixed Methods                     |
| 82           | empirical data collected in three waves from 205 Chinese manufacturers, PLS-SEM                   | Quantitative Methods              |
| 83           | Quantitative Methods, Qualitative Methods                                                         | Mixed Methods                     |
| 87           | Questionnaires+OLS                                                                                | Quantitative Methods              |
| 88           | mixed methods: Worker Voice+FGD+interview                                                         | Mixed Methods                     |
| 89           | comparative case study                                                                            | Qualitative Methods               |
| 94           | Quantitative research                                                                             | Quantitative Methods              |
| 96           | Viewpoint Paper: using news reports and other secondary data sources                              | Conceptual / Theoretical Research |
| 97           | Empirical Study                                                                                   | Quantitative Methods              |
| 101          | Conceptual/Theoretical Paper+case illustrations                                                   | Conceptual / Theoretical Research |
| 36           | Fuzzy AHP + Fuzzy DEMATEL + Fuzzy VIKOR                                                           | Quantitative Methods              |
| 38           | Quantitative Empirical Research+SEM+Regression Model                                              | Quantitative Methods              |
| 40           | Systematic Literature Review: middle-range theorising                                             | Systematic Literature Review      |
| 41           | Partial Least Squares Structural Equation Modelling (PLS-SEM)                                     | Quantitative Methods              |

| Tracking No. | Keywords of Methodology                                                                                                                                            | Final                        |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 42           | quantitative research                                                                                                                                              | Quantitative Methods         |
| 43           | Literature review                                                                                                                                                  | Systematic Literature Review |
| 46           | Covariance-Based SEM, CB-SEM                                                                                                                                       | Quantitative Methods         |
| 47           | Quantitative research +PLS-SEM+ Questionnaires                                                                                                                     | Quantitative Methods         |
| 48           | PSILCA ,TrFS-LBWA + TrFS-MABAC                                                                                                                                     | Modelling / Simulation       |
| 49           | Survey-based research + Partial Least Squares Structural Equation Modelling (PLS-SEM)                                                                              | Quantitative Methods         |
| 51           | Qualitative study+interviews                                                                                                                                       | Qualitative Methods          |
| 52           | Qualitative,semi-structured interviews,                                                                                                                            | Qualitative Methods          |
| 53           | Qualitative Research+in-depth interviews+ field observation                                                                                                        | Mixed Methods                |
| 54           | Comparative case study, Triangulation,                                                                                                                             | Case Study                   |
| 55           | Quantitative study, Design Science + Mixed Methods                                                                                                                 | Mixed Methods                |
| 56           | mixed methods: multi-method approach → Fuzzy Delphi → models (TOPSIS)                                                                                              | Mixed Methods                |
| 59           | SLR+bibliometrics+content analysis                                                                                                                                 | Systematic Literature Review |
| 60           | quantitative study+PLS-SEM                                                                                                                                         | Quantitative Methods         |
| 62           | longitudinal single case study+content analysis                                                                                                                    | Case Study                   |
| 63           | legal and policy analysis、SLR、Simulated data (ASCII ) +General equilibrium modelling (Wolfmayr et al., 2023)                                                       | Modelling / Simulation       |
| 64           | quantitative research: using firm survey data, multiple regression analysis (OLS), fixed effects, and heterogeneity regressions (by export market classification). | Quantitative Methods         |
| 66           | Quantitative Methods: SWARA (Step-wise Weight Assessment Ratio Analysis) + WASPAS (Weighted Aggregated Sum Product Assessment)                                     | Quantitative Methods         |
| 68           | Fuzzy-set Qualitative Comparative Analysis (FsQCA) + +Complex Adaptive Systems (CASs)                                                                              | Qualitative Methods          |
| 69           | Qualitative Case Study+interview+secondary literature + factory visiting                                                                                           | Qualitative Methods          |

| Tracking No. | Keywords of Methodology                | Final                        |
|--------------|----------------------------------------|------------------------------|
| 72           | Systematic Literature Review, SLR      | Systematic Literature Review |
| 74           | Questionnaires+ PLS-SEM                | Quantitative Methods         |
| 75           | Systematic Literature Review           | Systematic Literature Review |
| New1         | Quantitative research methods: PLS-SEM | Quantitative Methods         |
| New4         | Systematic Literature Review, SLR      | Systematic Literature Review |
| New7         | Qualitative multiple-case study        | Case Study                   |
| New8         | Multiple Case Study                    | Case Study                   |
| New9         | multiple case study                    | Case Study                   |
| new 10       | multiple case study                    | Case Study                   |

## Appendix E: Enablers Consolidation Examples

| Article                            | Content                                                                                                                                 | Category                         |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| (Nath et al., 2023)                | Third-party Auditing                                                                                                                    | Auditing / Monitoring Mechanisms |
| (Zhou et al., 2024).               | Organizational culture                                                                                                                  | Ethical Orientation & Values     |
| (Shen et al., 2024)                | Demand Uncertainty                                                                                                                      | Technology & Traceability        |
| (Yaw Agyabeng-Mensah et al., 2025) | Sustainability Information Exchange                                                                                                     | Collaboration & Governance       |
| (Yaw Agyabeng-Mensah et al., 2025) | Invest in technological capabilities                                                                                                    | Technology & Traceability        |
| (Yaw Agyabeng-Mensah et al., 2025) | Performance-based motives                                                                                                               | Top Management Commitment        |
| (Yaw Agyabeng-Mensah et al., 2025) | Morally induced motives                                                                                                                 | Ethical Orientation & Values     |
| (Yaw Agyabeng-Mensah et al., 2025) | Provide policies such as tax rebates.                                                                                                   | Institutional / Legal Support    |
| (Shaw et al., 2023)                | NA                                                                                                                                      | NA                               |
| (Reinecke & Donaghey, 2020)        | While elected worker participation committees are mandatory under the Bangladesh Labour Law.                                            | Institutional / Legal Support    |
| (Guo & Wu, 2022)                   | An evaluation framework is developed to quantify the performance.                                                                       | Top Management Commitment        |
| (Guo & Wu, 2022)                   | As customers play a critical role in an SC, the interaction with customers is a key characteristic to improve SC social sustainability. | External Stakeholder Pressure    |

| Article                            | Content                                                                                                                                                                                                                                                                                                         | Category                                |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| (Zhang & Chen, 2023)               | Aside from the upstream provider, these unfortunate events negatively impacted on several other businesses. Several studies have shown the interconnectedness of the three factors and the possible financial benefits that can result from adopting environmental and social undertakings (Tang et al., 2022). | Training / Capacity Building            |
| (Hohn & Durach, 2022)              | Social SSCM development may be incited by the firms' investors who demand social SSCM based on moral considerations or for risk mitigation reasons.                                                                                                                                                             | Ethical Orientation & Values            |
| (Reyna-Castillo et al., 2023)      | Significant moderations of orientation and culture on social sustainability performance                                                                                                                                                                                                                         | Ethical Orientation & Values            |
| (Wadood et al., 2022)              | Firms also willingly share knowledge regarding the tasks performed and projects undertaken to improve social sustainability.                                                                                                                                                                                    | Training / Capacity Building            |
| (Bag et al., 2022)                 | The moderating effect of perceptions of organisational justice and big data analytical intelligence on the relationship between collaborative buyer–supplier relationships and supplier social sustainability is also statistically significant.                                                                | Justice / Fairness                      |
| (Lucy Simani Wamalwa et al., 2025) | a framework for regulating supplier behaviour through code of conduct certifications                                                                                                                                                                                                                            | Social Compliance Tools / Certification |

| Article                   | Content                                                                                                                                                            | Category                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| (Samal & Jena, 2024)      | Understanding how regulatory requirements influence organisations within the SCDD framework offers insight into how coercive forces shape due diligence practices. | Institutional Pressure                  |
| (Khan et al., 2021)       | Transparency-based relationship with external actors                                                                                                               | Justice / Fairness                      |
| (Fernando et al., 2022)   | The OHSAS 18000 certificate can guide the firms to comply with occupational safety and health.                                                                     | Social Compliance Tools / Certification |
| (Nair & Thankamony, 2021) | Information technology adaptation, collaboration and other supply chain management initiatives help in creating transparency and fair-trade opportunities.         | Technology & Traceability               |
| (Morais & Barbieri, 2022) | Collaboration on core issues can be highlighted as a direct mechanism                                                                                              | Collaboration & Governance              |
| (Nath & Eweje, 2021)      | These pressures are stemming from the buyers' codes of conduct, regulators' legal obligations and third-party auditors' assessment requirements.                   | External Stakeholder Pressure           |
| (Silva et al., 2021)      | Senior executives support blockchain in the organisation                                                                                                           | Top Management Commitment               |

## Appendix F: Barriers Consolidation Examples

| Article                            | Content                                                                                                                                        | Category                                               |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| (Shen et al., 2024)                | Monopsony Power                                                                                                                                | Asymmetries in Power & Information                     |
| (Shen et al., 2024)                | High Living Wage Standard                                                                                                                      | Living wage challenges                                 |
| (Shen et al., 2024)                | Supply Chain Coordination Failure, Stakeholder Misalignment                                                                                    | Stakeholder Engagement and Alignment Issues            |
| (Yaw Agyabeng-Mensah et al., 2025) | Weak regulatory enforcement                                                                                                                    | Enforcement Gaps and Weak Institutional Implementation |
| (Yaw Agyabeng-Mensah et al., 2025) | Institutional gaps                                                                                                                             | Institutional Enforcement and Capacity Gaps            |
| (Yaw Agyabeng-Mensah et al., 2025) | Lack of trust / collaboration                                                                                                                  | Trust & Power Issues                                   |
| (Shaw et al., 2023)                | High implementation cost, Lack of financial assistance from government and trade bodies                                                        | Cost-related Barriers                                  |
| (Shaw et al., 2023)                | Lack of consumer awareness                                                                                                                     | Knowledge / Education Gaps                             |
| (Shaw et al., 2023)                | Lack of training and education on social sustainability to the managers and supervisors                                                        | Skills and Knowledge Gaps in the Workforce             |
| (Shaw et al., 2023)                | Lack of strict implementation of government laws and regulations                                                                               | Regulatory / Legal Issues                              |
| (Shaw et al., 2023)                | Lack of policy on social sustainability, Lack of unified norms of social sustainability, Lack of appropriate measures of social sustainability | Governance and Institutional Barriers                  |

| Article                     | Content                                                                                                                                                                                                                             | Category                                      |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| (Shaw et al., 2023)         | Lack of policy on social sustainability in the organizational of positive perception towards social sustainability among all internal actors in the organizational of commitment of top management, Lack of pressure from investors | Lack of Management Commitment                 |
| (Castaldi et al., 2022)     | Cooperation-based governance only works if embedded in supportive institutions                                                                                                                                                      | Collaboration & Coordination Deficits         |
| (Castaldi et al., 2022)     | Power asymmetries are more pronounced in GVCs                                                                                                                                                                                       | Asymmetries in Power & Information            |
| (Reinecke & Donaghey, 2020) | Workers have interests independent of those of management and the organisation, and thus, these interests need independent representation.                                                                                          | Lack of Justice and Fairness in Organisations |
| (Guo & Wu, 2022)            | The absence of managerial decision-making tools considering social sustainability in the SC system                                                                                                                                  | Measurement & Impact Assessment Challenges    |
| (Zhang & Chen, 2023)        | An audit-based governance scheme, which uses regular factory inspections to exert unidirectional, top-down pressure on sellers to incorporate social sustainability strategies into their day-to-day operations                     | Strategic Non-compliance                      |
| (Wadood et al., 2022)       | monitoring costs and lack of order render formal governance less effective                                                                                                                                                          | Audit and Certification Challenges            |

| Article                            | Content                                                                                                                                                                    | Category                                    |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| (Wadood et al., 2022)              | These resource-constrained, barely self-sufficient, SMEs lack the knowledge and expertise required to innovate, engage in research and development, and become sustainable | Resource Constraints                        |
| (Wadood et al., 2022)              | Contractual governance loses its effectiveness due to weak institutional enforcement                                                                                       | Institutional Enforcement and Capacity Gaps |
| (Wadood et al., 2022)              | the higher uncertainty coupled with the difficulty in measuring, monitoring, and anticipating partner behaviour.                                                           | Contextual and Regulatory Uncertainty       |
| (Bag et al., 2022)                 | Firms that do not use big data analytical technologies, on the other hand, fail to strengthen relationships with their partners.                                           | Digital Capacity Gaps                       |
| (Bag et al., 2022)                 | Buyers think that suppliers must establish higher procedural justice.                                                                                                      | Buyer-side Limitations                      |
| (Lucy Simani Wamalwa et al., 2025) | High initial capital costs                                                                                                                                                 | Cost-related Barriers                       |
| (Lucy Simani Wamalwa et al., 2025) | Face barriers to adopting such tools due to limited access to digital infrastructure.                                                                                      | Technological Capacity Gaps                 |
| (Lucy Simani Wamalwa et al., 2025) | Supplier knowledge gaps and resource constraints pose hidden barriers that multinational corporations' strategies.                                                         | Supplier-side Limitations                   |
| (Lucy Simani Wamalwa et al., 2025) | Weak institutional frameworks                                                                                                                                              | Lack of institutional support               |
| (Lucy Simani Wamalwa et al., 2025) | Concerns about opportunistic behaviour.                                                                                                                                    | Trust & Power Issues                        |

| Article                                  | Content                                                                                                                                                                                                          | Category                                     |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| (Md. Abdul Moktadir & Ren, 2025)         | Decision- making based on subjective judgment and objective data often suffers from uncertainty and vagueness during the evaluation process of indicators and alternatives)+the number of criteria exceeds nine. | Data & Transparency Issues                   |
| (Samal & Jena, 2024)                     | Suppliers may resort to unethical activities.                                                                                                                                                                    | Supplier-side Limitations                    |
| (Samal & Jena, 2024)                     | Robust implementation of this regulatory framework within organizations requires a strategic response to government mandates.                                                                                    | Implementation & Operationalization Hurdles  |
| (Jabeen et al., 2025)                    | The most critical challenge is the financial burden of the transition.                                                                                                                                           | Cost-related Barriers                        |
| (Madushan Madhava Jayalath et al., 2024) | Language or cultural differences, and psychological stresses of forced labour can impede detection.                                                                                                              | Cultural Adaptation & Local Context Mismatch |
| (Madushan Madhava Jayalath et al., 2024) | Lack of knowledge, shorter lead times, cost and competitive pressures lead suppliers to be disoriented from being sustainable, which cause social issues.                                                        | Buyer-side Limitations                       |
| (Vanpoucke & Klassen, 2023)              | While CF was very transparent in terms of procedures and rules, the company provided less visibility on specific suppliers and actions in its supply chain                                                       | Data & Transparency Issues                   |
| (Zimmermann et al., 2025)                | People (within and outside the companies) have shown some resistance to change                                                                                                                                   | Resistance to Social Sustainability          |

| Article                       | Content                                                                                                                                                                                                                                                        | Category                                       |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| (Khan et al., 2021)           | Resource limitation                                                                                                                                                                                                                                            | Resource Constraints                           |
| (Khan et al., 2021)           | Shortage of social skills                                                                                                                                                                                                                                      | Skills and Knowledge Gaps in the Workforce     |
| (Khan et al., 2021)           | Poor policies and regulations                                                                                                                                                                                                                                  | Regulatory / Legal Issues                      |
| (Khan et al., 2021)           | Lack of social concerns)+Lack of social, organizational harmony+Lack of social interest of policy entrepreneurs                                                                                                                                                | Governance and Institutional Barriers          |
| (Khan et al., 2021)           | Low quality of community involvement)+Low quality of community involvement+Cultural mismatch with suppliers in different locations                                                                                                                             | Cultural Adaptation & Local Context Mismatch   |
| (Khan et al., 2021)           | Lack of coordination and collaboration)+Communication and feedback barriers+Lack of customer support+Communication barriers with customer+Low quality of suppliers' involvement                                                                                | Collaboration & Coordination Deficits          |
| (Khan et al., 2021)           | Changing business environment                                                                                                                                                                                                                                  | Contextual Volatility / External Dynamism      |
| (Distelhorst & McGahan, 2021) | Employers with socially irresponsible practices face higher levels of worker turnover than employers without these practices. Yet high worker turnover is more tolerable for these firms because their systems of manufacturing rely on unspecialized employee | Labor Governance and Social Structure Barriers |

| Article                   | Content                                                                                                                                                                                | Category                                      |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
|                           | contributions and ready replacement of workers.                                                                                                                                        |                                               |
| (van Hoek & Udesen, 2023) | Limited coverage of sustainability impact areas                                                                                                                                        | Lack of Standardization & Harmonization       |
| (van Hoek & Udesen, 2023) | Weakly embedded into decision making                                                                                                                                                   | Lack of Management Commitment                 |
| (van Hoek & Udesen, 2023) | Putting it all on suppliers                                                                                                                                                            | Lack of Justice and Fairness in Organizations |
| (van Hoek & Udesen, 2023) | Too generic, risk of ambiguity                                                                                                                                                         | Cultural and Contextual Barriers              |
| (Felbermayr et al., 2024) | Large companies have up to 10,000 suppliers and up to 100,000 customers. The exposure is particularly high for small open economies.                                                   | Supply Chain Structural Complexity            |
| (Tanaka, 2023)            | However, no such relationship is observed for exporting to Asian countries, such as Japan and Korea, suggesting that rewards for complying with labor standards differ across markets. | Contextual and Regulatory Uncertainty         |
| (Najjar et al., 2024)     | Auditing costs are likely to increase.                                                                                                                                                 | Cost-related Barriers                         |
| (Najjar et al., 2024)     | Cultural differences and lack of regulations are pressing challenges in global supply networks.                                                                                        | Cultural and Contextual Barriers              |

| Article                   | Content                                                                                                                                                     | Category                                    |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| (Najjar et al., 2024)     | The effectiveness of audits to detect social sustainability issues has also been questioned.                                                                | Audit and Certification Challenges          |
| (Najjar et al., 2024)     | However, in developing countries, regulations are not strictly enforced, and mock compliance is rife.                                                       | Strategic Non-compliance                    |
| (Le, 2022)                | Workers are concerned about many other wage-related matters.                                                                                                | Living wage challenges                      |
| (Nair & Thankamony, 2021) | This strong reflection of the employees reflects firms themselves and explains why few firms are actively involved in this social issue.                    | Implementation & Operationalization Hurdles |
| (Morais & Barbieri, 2022) | A group of suppliers does not accept to be influenced in terms of social demands.                                                                           | Resistance to Social Sustainability         |
| (Silva et al., 2021)      | Therefore, there is a need for more attention from executive bodies and policymakers to improve the situation of information technology in these countries. | Technological Capacity Gaps                 |

## Appendix G: Data Extraction Example 1

|    |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 01 | Author of the article                      | Jia Jia Lim // Jing Dai // Antony Paulraj                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 02 | Title of the article                       | Collaboration as a structural aspect of proactive social sustainability: the differential moderating role of distributive and procedural justice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 03 | Document name                              | Jia Jia Lim et.al, 2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 04 | Journal title                              | International Journal of Operations & Production Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 05 | Date of publication                        | 2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 06 | Volume                                     | 42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 07 | Number                                     | 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 08 | Page numbers                               | 1817-1852                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 09 | Paper Type                                 | Research paper                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 10 | Geographical Location                      | China                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 11 | Context/Industry                           | manufacturing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 12 | Sample size                                | 215                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 13 | Data collection method                     | Survey data collected from manufacturing companies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 14 | Method of data analysis                    | The proposed hypotheses are evaluated using multiple linear regression models as well as the PROCESS macro within SPSS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 15 | Study Characteristics                      | This study collected survey data from 215 manufacturing companies in China to investigate how a proactive social strategy motivates firms to collaborate with suppliers on social sustainability initiatives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 16 | Key findings related to research questions | (1) A proactive social strategy could motivate firms to collaborate with suppliers on joint social activities, and (2) social collaboration with suppliers can have a significant positive effect on both social and operational performance. The moderation results suggest that distributive justice has a differential effect on the collaboration-performance link. Particularly, distributive justice strengthens the relationship between social collaboration and operational performance, while it weakens the relationship between social collaboration and social performance. Surprisingly, procedural justice did not have a significant moderating effect on the social collaboration-performance link.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 17 | Abstract                                   | <p>Purpose: This paper aims to adopt the strategy-structure-performance (SSP) framework to explore how proactive social strategy could motivate firms to collaborate with suppliers on social sustainability initiatives, and how such collaborative efforts could unlock a win-win opportunity for both noneconomic (social performance) and economic (operational performance) performance. Additionally, drawing on the tenets of the social exchange theory, the different moderating effects of distributive justice and procedural justice on the social collaboration-performance relationship are also examined.</p> <p>Design/methodology/approach: This study uses survey data collected from 215 manufacturing companies in China. The proposed hypotheses are evaluated using multiple linear regression models as well as the PROCESS macro within SPSS.</p> <p>Findings: The results suggest that (1) a proactive social strategy could motivate firms to collaborate with suppliers on joint social activities and (2) social collaboration with suppliers can have a significant positive effect on both social and operational performance. The moderation results suggest that distributive justice has a differential effect on the collaboration-performance link. Particularly, distributive justice strengthens the relationship between social collaboration and operational performance, while it weakens the relationship between social collaboration and social performance. Surprisingly, procedural justice did not have a significant moderating effect on the social collaboration-performance link.</p> <p>Originality/value: This paper extends the SSP framework to the social sustainability context by not only stressing the importance of proactivity in managing sustainability but also revealing collaboration as a structural aspect that could achieve superior performance benefits. This study also contributes to sustainable supply chain literature by exploring the moderating roles of justice elements. © 2022, Emerald Publishing Limited.</p> |
| 18 | Key words                                  | Social sustainability, Distributive justice, Procedural justice, Strategy-structure-performance, Social exchange theory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 19 | Organization Field                         | Manufacturing sector (China)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 20 | Quality Appraisal Score                    | 3/3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Appendix H: Data Extraction Example 2

|    |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 01 | Author of the article                      | Syed Abdul Rehman Khan // Karim Zkik, Amine Belhadi // Sachin S. Kamble                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 02 | Title of the article                       | Evaluating barriers and solutions for social sustainability adoption in multi-tier supply chains                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 03 | Document name                              | Khan et al., 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 04 | Journal title                              | International Journal of Production Research                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 05 | Date of publication                        | 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 06 | Volume                                     | 59                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 07 | Number                                     | 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 08 | Page numbers                               | 3378-3397                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 09 | Paper Type                                 | Research Article                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 10 | Geographical Location                      | Africa and Asia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 11 | Context/Industry                           | Chemical, Agri-food, and Textile multi-tier supply chains                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 12 | Sample size                                | 71                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 13 | Data collection method                     | Questionnaire survey                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 14 | Method of data analysis                    | Hybrid multi-criteria decision-making approach                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 15 | Study Characteristics                      | This study investigates the barriers and solutions for implementing social sustainability in multi-tier supply chains in developing country contexts. It identifies thirty barriers grouped into six stakeholder categories (suppliers, customers, communities, internal stakeholders, governments, and sub-suppliers) and evaluates seventeen potential solutions. Using feedback from seventy-one managers across Africa and Asia, the study applied a hybrid HFS-CPT-VIKOR methodology to prioritize barriers and rank the most effective solutions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 16 | Key findings related to research questions | The study found that the most critical barriers to adopting social sustainability in multi-tier supply chains and the most effective solutions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 17 | Abstract                                   | Multi-tier sustainable supply chain management (MT-SSCM) is increasingly attracting a great deal of interest in academia and practice. However, attention to social sustainability has been limited, and the initiatives of implementing social sustainability, especially in low-tier suppliers in supply chains, are facing enormous barriers and obstacles. The central aim of this paper is to investigate the obstacles that hinder the adoption of social sustainability in the multi-tier supply chain (MT-SC) and prioritise the most effective solutions to promote the adoption of this critical concept. Therefore, we based an extensive literature review on identifying the most relevant barriers and solutions to social sustainability adoption in MT-SC. Moreover, we propose a hybrid and multi-context methodology based on hesitant fuzzy sets (HFS), cumulative prospect theory (CPT) along with VIKOR to identify the most prominent barriers and solutions for three supply-chain sectors, i.e. chemical, agri-food, and textile. The results indicate that solutions to social sustainability in MT-SC are sensitive to the supply chain sector. However, there is a general trend toward adopting emerging technologies and openness and transparency-based relationships with the external environment. Managers could use these results to redirect their strategies to promote social sustainability, particularly in low-tier suppliers in under-developed countries. |
| 18 | Key words                                  | Multi-tier supply chain; social sustainability; hesitant fuzzy sets; cumulative prospect theory; VIKOR;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 19 | Organization Field                         | Multi-tier supply chains in developing countries (Chemical, Agri-food, Textile sectors)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 20 | Quality Appraisal Score                    | 3/3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |