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Third-Party Sustainability Certifications in Supplier Selection: Institutional Pressures and Decision Criteria in Finnish Manufacturing Firms

An Analysis of Supplier Governance Documents in Finnish Manufacturing

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Muhammad Hashaam Zaheer

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Abstract

In this study, the role of third-party sustainability certifications and other assurance processes in supplier selection processes of manufacturing companies in Finland is investigated. The study seeks to solve the issue that environmental, social and governance issues can happen outside the focus company, particularly within suppliers, subcontractors and lower-order producers, in which buyers are unable to directly oversee human-rights performance, environmental management, traceability and labour practices. Certification and assurance tools can alleviate information asymmetry, act as aids to due diligence, and as a communication of legitimacy, but can also serve as partial signals, compliance devices, or symbolic governance mechanisms in this context.

The research is based on four manufacturing companies in Finland (Metso, Valmet, KONE and Outokumpu) that have readily accessible supplier-facing documents in English. It adopts a secondary research design that involves a systematic review of literature and a directed document analysis. The literature review merged work on sustainable supply chain management, sustainable purchasing, signalling theory, institutional theory and third-party assessment and sustainable supplier selection. Document analysis involved the deduction coding of 8 supplier-facing documents: supplier codes, procurement pages and documents relating to the sustainable supply-chain. The results revealed that sustainability is rarely presented as a standalone assurance by suppliers in their certification programs. Rather, it is part of a broader governance framework consisting of supplier codes, self-assessment, audit, assessments like EcoVadis, declarations of CMRT, expectations based on ISO 14001, SBTi commitments, sanctions screening, risk indices, traceability documentation and corrective actions. Their strongest position is threshold based: Suppliers are only considered acceptable if they satisfy the minimum sustainability, compliance and documentation criteria. Evidence of certification as a "supplier differentiator" is limited. The study concludes that third-party sustainability certifications can be understood as "governed signals" in Finnish manufacturing supplier selection. They also make supplier expectations visible, auditable, and institutionally legitimate; however, they are deficient in terms of a broader verification, traceability, risk screening, supplier capability and accountability.

Keywords Third-party sustainability certification; supplier selection; sustainable supply chain management; Finnish manufacturing firms; institutional pressure; signalling theory; supplier governance; responsible sourcing; document analysis; sustainability assurance.

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Symbols and abbreviations

Abbreviations

AIRS	Alert Index for Responsible Sourcing
CAHRA	Conflict-Affected and High-Risk Area
CASP	Critical Appraisal Skills Programme
CBAM	Carbon Border Adjustment Mechanism
CMRT	Conflict Minerals Reporting Template
CO_2	Carbon Dioxide
CSR	Corporate Social Responsibility
CSDDD	Corporate Sustainability Due Diligence Directive
DOI	Digital Object Identifier
EFRAG	European Financial Reporting Advisory Group
ESG	Environmental, Social and Governance
ESRS	European Sustainability Reporting Standards
EU	European Union
EUDR	European Union Deforestation Regulation
GDPR	General Data Protection Regulation
GPC	General Purchase Conditions
ILO	International Labour Organization
ISO	International Organization for Standardization
MCDM	Multi-Criteria Decision Making
MNC	Multinational Corporation
NGO	Non-Governmental Organization
NIS2	Network and Information Security Directive 2
OECD	Organisation for Economic Co-operation and Development
PDF	Portable Document Format
PICOC	Population, Intervention, Comparison, Outcomes and Context
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RoHS	Restriction of Hazardous Substances
RQ	Research Question
SBTi	Science Based Targets initiative
SEM	Structural Equation Modelling
SLR	Systematic Literature Review
SPC	Special Purchase Conditions
SRSD	Socially Responsible Supplier Development
SSCM	Sustainable Supply Chain Management
TDi	TDi Sustainability / The Dragonfly Initiative
UNGPs	United Nations Guiding Principles on Business and Human Rights

1 Introduction

1.1 Background to Research

Many of the most significant environmental and social impacts of production occur outside the focal company, particularly among suppliers, subcontractors and lower-tier producers. These actors are essential for cost, quality and delivery performance, but they are often less visible to buyers (Linton, Klassen and Jayaraman, 2007; Carter and Rogers, 2008; Seuring and Müller, 2008).

This is challenging because supplier sustainability is not always directly observable. While a buyer a buyer can confidently compare price, lead time and technical capability, they are still likely to be uncertain about human rights due diligence, environmental management systems, upstream traceability and labour conditions. In these settings, organisations often rely not only on direct verification, but also on proxies, assurances and third-party evidence. Sustainability certifications from third parties have therefore gained a larger role as governance tools that seem to help to lessen the information asymmetry and create a 'signal of conformity', while also signalling process discipline and legitimacy (Connelly et al., 2011; Kauppi, Hannibal and Bryde-Evens, 2025). This explains why certifications have become increasingly important in supplier governance. They are transferable, shareable and relatively easy to communicate across organisational boundaries, making them attractive to buyers who need to evaluate suppliers under conditions of limited visibility.

However, the growing use of certificates should not be mistaken for consensus on the role of certification itself. A certification can be used as a minimum legitimacy requirement, pushing out suppliers who do not meet the minimum standards. It can be used as a differentiating factor affecting supplier selection. Similarly, it can also serve as a symbolic means of conveying a sense of responsibility without significantly altering the procurement trade-offs. In the existing literature, all three interpretations are supported, thus

certification does not seem to be a stable variable but an organizationally contested device (Terlaak and King, 2006; Egels-Zandén, 2007; Soundararajan and Brown, 2016; Kauppi, Hannibal and Bryde-Evens, 2025). This confusion is significant because what certification becomes is dependent on what role it fills.

The broader regulatory and reporting landscape has accentuated the issue. Formal disclosure and due diligence expectations are becoming a force influencing supplier-related sustainability governance in Europe. The Corporate Sustainability Due Diligence Directive entered into force in July 2024 and established a due-diligence framework for adverse human-rights and environmental impacts linked to companies' operations and value chains, although its implementation timetable and scope should be interpreted cautiously, as the European Commission's Omnibus I package, proposed in February 2026, introduced significant amendments including a narrowed company-size threshold and a revised phase-in timeline that substantially reduced the original directive's reach (European Commission, 2026; EUR-Lex, 2024). As part of this, the European Sustainability Reporting Standards have already increased the relevance of structured sustainability disclosure, including matters relating to value-chain (EFRAG, 2026). While these changes do not dictate what every company must do in procurement, they make requirements that face suppliers even more important in terms of being auditable. Analytically, third-party certifications are important at these times, as they can enable companies to articulate that sustainability expectations are now embedded in formal supplier governance.

The Finnish manufacturing context is appropriate because several Finnish industrial firms operate through global supplier networks and publish supplier-facing governance documents in English. This study focuses on Metso, Valmet, KONE and Outokumpu because each firm operates in manufacturing or industrial supply-chain settings and provides publicly available supplier-facing documents that specify sustainability, due-diligence, code-of-conduct, audit or supplier-evaluation expectations (Metso, 2024; Metso,

2026a; Valmet, 2025a; Valmet, 2025b; Valmet, 2026a; KONE, 2025; KONE, 2026a; Outokumpu, 2026a; Outokumpu, 2026b). Metso publishes responsible procurement and supplier code material, Valmet provides procurement and supplier code documents, KONE publishes supplier information and a Supplier Code of Conduct, and Outokumpu provides supplier and sustainable supply-chain documentation (Metso, 2024; Metso, 2026a; Valmet, 2025a; Valmet, 2026a; KONE, 2025; KONE, 2026a; Outokumpu, 2026a; Outokumpu, 2026b). These documents define what suppliers are expected to accept, evidence and prioritise, and therefore provide a suitable public corpus for analysing sustainability certification and assurance in supplier-selection discourse (Metso, 2024; Valmet, 2025a; KONE, 2025; Outokumpu, 2026b).

1.2 Problem Statement

Two related but distinct gaps motivate this research. The first concerns how third-party sustainability certifications are formally positioned within supplier-selection discourse. Sustainable supplier-selection research has produced extensive multi-criteria decision-making models, but these studies often assume that sustainability information is reliable, comparable and available for weighting (Govindan et al., 2015; Zimmer, Fröhling and Schultmann, 2016; Schramm, Cabral and Schramm, 2020). This assumption is problematic because supplier sustainability is often difficult to observe directly, meaning that certifications may function as signals, proxies or legitimacy devices rather than as straightforward evidence of substantive supplier performance.

The second gap concerns the organisational response to institutional pressure. Research on sustainable sourcing reveals inconsistent reactions by firms to sustainability demands, which depend on the type of stakeholder pressure and the firm's governance capacity (Blome, Hollos and Paulraj, 2014; Riikkinen, Kauppi and Salmi, 2017; Yawar and Kauppi, 2018). It is not yet understood how these pressures are translated into supplier facing formal documents, whether these are becoming thresholds, differentiators or symbolic gestures in the translation process. This study addresses both gaps by

analysing publicly available supplier-facing documents from selected Finnish manufacturing firms.

1.3 Research Aim, Objectives and Questions

The research aim is to investigate the presentation and positioning of third-party sustainability certifications and equivalent assurance mechanisms in publicly accessible supplier-selection and responsible-sourcing documents of Finnish manufacturing firms, and to examine the apparent influence of institutional pressures on how these mechanisms are positioned relative to traditional supplier-selection criteria.

The objectives of the research are:

1. To identify the third-party sustainability certifications and equivalent assurance mechanisms mentioned in supplier-facing and sustainability-related documents of Finnish manufacturing firms.
2. To determine how these certifications and equivalent assurance mechanisms are positioned against traditional supplier-selection criteria, including cost, quality, delivery, capability, compliance and risk.
3. To explore the reflection of coercive, normative and mimetic institutional pressures in the manner in which firms convey certification requirements.
4. To synthesise the findings from the three research questions into an integrative conceptual model explaining how third-party sustainability certifications and equivalent assurance mechanisms are positioned in supplier selection under institutional pressure.

The research is guided by three questions:

1. How are third-party sustainability certifications and equivalent assurance mechanisms presented in publicly available supplier-selection and responsible-sourcing documents of Finnish manufacturing firms?
2. What is the relationship between third-party sustainability certifications and equivalent assurance mechanisms and traditional supplier-selection criteria in those documents?

3. Which types of institutional pressure are reflected in the way Finnish manufacturing firms communicate third-party sustainability certification and assurance requirements?

The fourth objective is addressed through synthesis of the findings from RQ1, RQ2 and RQ3, rather than through a separate research question. This is consistent with integrative synthesis objectives in secondary research designs, where a conceptual model is developed by consolidating patterns across empirical findings rather than through a new and independent data-collection question (Page et al., 2021).

1.4 Significance of the Research

The research is theoretically important in that it links together three fields of conversation that are generally considered distinct: sustainable buying, institutional pressure, and supplier-selection logic. In the absence of an ability to directly measure supplier sustainability attributes, signalling theory suggests that certification is important (Connelly et al., 2011; Terlaak and King, 2006). From a more theoretical perspective, institutional theory is a plausible explanation that has been proposed for why firms feel obliged to follow and communicate such requirements under coercive, normative and mimetic pressure (Kauppi and Hannibal, 2017; Kauppi and Luzzini, 2022). The literature on supplier selection, on the other hand, demonstrates how the criteria are formally discussed, but not always socially interpreted. By gathering these streams together, the research moves beyond whether certifications are used and examines how they are organisationally positioned and what meanings they acquire in supplier-selection discourse.

The research is also of empirical relevance as it addresses a gap in literature. While the reviews indicate that a lot of model-based work is done, there is significantly less documentary and interpretive work in how the sustainability criteria are framed in the organizational context (Govindan et al., 2015; Schramm, Cabral and Schramm, 2020; Karakoc, Memis and Sennaroglu, 2024). Ethical sourcing scholarship also continues to seek a deeper

understanding on how information pertaining to sustainability gets translated into sourcing decision making (Kim, Colicchia and Menachof, 2018). This research is focused on supplier-facing documents, because it has been broadly adopted in practice, but has not been sufficiently analysed in the context of formal supplier selection.

Its application is of practical relevance because it sheds light on the nature of the trade-off between responsible sourcing claims and traditional commercial goals in the context of the business. Under even the most strident demand to be sustainable, procurement functions have trouble giving up cost, quality or delivery as criteria. The critical question is, then, whether certifications are part of a larger supplier-evaluation logic, as a precondition, as an addition or as a distinction. This is important because each of the framing suggests a different governance approach. A threshold requirement is associated with compliance filtering, a differentiating one with active comparative weighting, and a symbolic one with legitimacy signalling with less-strong operational consequences.

1.5 Scope, Delimitations and Structure

The research is deliberately delimited. It combines a systematic literature review with directed document analysis of public supplier-facing corporate materials — a secondary research design chosen because the research questions concern formal governance discourse rather than internal procurement behaviour or individual decision-making. Interviews with Finnish buyers or suppliers were deliberately excluded: while they would add behavioural depth, they would also shift the research away from its focus on how sustainability requirements are formally constructed and communicated. Public documents do not reveal everything, but they reveal what firms choose to standardise, communicate and defend to the outside world, which is precisely the governance discourse this research aims to analyse. The research also focuses specifically on third-party sustainability certifications and related supplier-governance requirements rather than the broad spectrum of

sustainability practices and/or whether certified suppliers in general are objectively superior to non-certified ones.

The rest of the research proceeds as follows. Chapter 2 critically reviews the literature and develops the analytical framework. Chapter 3 explains the methodology, including the systematic literature review and Finnish document-analysis design. Chapter 4 presents the findings from the Finnish manufacturing document corpus. Chapter 5 discusses the findings, develops theoretical and practical implications, acknowledges limitations and provides directions for future research, thereby also serving as the concluding chapter of the thesis.

2 Literature review

This chapter reviews the theoretical and empirical literature that informs the research. The review proceeds in five stages. First, sustainable supply chain management is examined as the broader field that establishes supplier governance as a central sustainability concern. Second, sustainable purchasing and supplier governance literature is reviewed to identify the specific mechanisms through which buyers manage supplier sustainability. Third, literature on third-party sustainability certificates is explored using the lens of signalling theory to understand how certificates are used as a governance device when there is information asymmetry. Then fourthly, the institutional theory is used to account for the uptake and public disclosure of sustainability assurance mechanisms by firms. Fifth, the literature on sustainable supplier selection is analyzed in order to determine the methodological strengths and the lack of understanding of how the certification process is related to other selection criteria used by traditional suppliers. The chapter concludes with a synthesis that identifies the research gap and establishes the three analytical categories — certification as threshold, as differentiator and as symbolic assurance — that structure the analysis in Chapter 4.

2.1 Sustainable Supply Chain Management: Conceptual Breadth and Analytical Limits

A major contribution of sustainable supply chain management scholarship is its recognition that sustainability problems do not end at the focal firm's boundary. The limited firm-level perspective is not enough to capture environmental harm, labour exploitation and governance failure which often occurs or is exacerbated upstream (Linton, Klassen and Jayaraman 2007; Carter and Rogers 2008; Seuring and Muller 2008). These basic studies had an impact because they changed the perspective of the supply chain from being a place where efficiency is achieved to a place where sustainability governance can be had. They also made supplier relationships a key component of sustainability performance.

This strength, however, also created one of the field's longstanding weaknesses: SSCM became conceptually broad, covering strategy, logistics, procurement, compliance, innovation and stakeholder management under a single umbrella. The rapid expansion of definitions and the varying definitions in terms of scope and emphasis is illustrated by Ahi and Searcy (2013). Carter and Easton (2011) comment too that the field developed quicker than the clarity of its constructs. The result is not just semantical disorder. If the field is not clear on what is meant by governance with parameters of precision, then terms of capability or performance become challenging to explain how sustainability aspirations are manifested into actual decisions.

This issue is especially apparent during the supplier selection process. Miemczyk, Johnsen and Macquet (2012) also provide a helpful distinction between sustainable purchasing and supply management at a dyadic level, a chain level and a network level. However, even this more differentiated approach has left an unanswered analytical question: what are the specific devices which allow supplier sustainability action to be taken in choice situations? While the overarching principles of SSCM scholarship may identify the broad dimensions that firms should consider, the mechanisms that make the dimensions comparable, believable and actionable at supplier approval are not as well articulated.

The second one is the historical focus of environmental management in the field. Studies on key drivers, practices and effects on green supply chain performance had been significant contributors, such as by mapping the drivers (Zhu, Sarkis and Geng, 2005), practices (Srivastava, 2007), and performance effects (Walker, Di Sisto and McBain, 2008; Sarkis, Zhu and Lai, 2011). However, the green framing's dominance also created the normalization of sustainability as an area that can be enhanced via technical alignment of processes, eco-efficiency, and measurable controls of the environment. Social and governance issues can be more intractable. Labour practices and freedom of association and grievance handling or upstream human-rights diligence are less easy to observe, less easy to aggregate and more easily

concealed. In the case of a research about supplier certifications, that's significant. Certifications are particularly appealing when they are attributes that are not easily verifiable on the premises.

Touboulic and Walker (2015) and Pagell and Shevchenko (2014) extend this critique, suggesting that much SSCM research examines the greening of business-as-usual rather than genuinely sustainable organising. This is important here because certifications can be used in addition to the standard procurement methodology without changing the order of cost, quality, delivery, and risk. In contrast with this research, certifications are not considered evidence of sustainable sourcing but rather governance signposts that need to be considered.

2.2 Sustainable Purchasing and Supplier Governance: Control, Coordination and Capability

Once SSCM sets the stage for the relevance of sustainability in the upstream, sustainable purchasing offers clarity on the relevance of concerns in the operational. Schneider and Wallenburg (2012) suggest that changes in purchasing processes, skills and priorities are necessary to implement sustainable sourcing. Other studies by Ashby, Leat and Hudson-Smith (2012) and Gold, Seuring and Beske (2010) also demonstrate that sustainability performance is not only a result of the ethical intention of the focal firm but also of relationships, routines and inter-organizational resources. Buyers, then, are not "downstream" users of sustainability strategy but are "upstream" actors in the chain, choosing suppliers according to these requirements.

But in this literature, two sides of supplier governance exist: One is developmental. Blome, Hollos and Paulraj (2014) demonstrate that both green procurement and green supplier development have the potential to enhance the performance of suppliers and Lu, Lee and Cheng (2012) define socially responsible supplier development as a structured managerial competence. Riikkinen, Kauppi and Salmi (2017) also emphasize the importance of absorptive capacity as it is necessary for the buying firm to understand and apply sustainability knowledge. In this stream the focus on sustainable

purchasing is not primarily on identifying non-compliant suppliers but on developing the relational and organizational capability to enhance the supply base.

The second logic is a control-oriented one. In the literature on supplier sensitivity and extending sustainability to suppliers, the importance of supplier assessment and auditing is demonstrated by Gimenez and Tachizawa (2012). Hannibal and Kauppi (2019) pay attention to third party social sustainability assessment, while Kauppi and Hannibal (2017) provide an institutional analysis of assessment initiatives. This stream sees supplier governance as formalized via codes of practice, assessment, audits, statements and normalised requirements. It's an obvious choice. Scales, audits, and communication on the complex supply network with codified mechanisms.

But it is not the substantive change that is difficult – it is formalization. Egels-Zandén (2007) shows how codes of conduct can be implemented poorly and selectively, and Soundararajan and Brown (2016) suggest that it is not evident that voluntary governance is always creating stakeholder values. The consistency here in the literature is that the presence of a governance mechanism is given as if it is effective. However, supplier-based standards could be taken up if only because they are readable and protectable, rather than having the ability to reliably alter conditions upstream.

This critique is more pronounced in supplier-selection environments. Supplier development is an ongoing process where companies can learn, invest and intervene. Supplier selection is compressed into a decision moment. The buyer has to decide, based on limited information, whether or not the supplier is eligible, credible or too risky. In such a case, visible pieces of a document like certifications, supplier codes, onboarding declarations and audit commitments can gain a disproportionately large level of importance due to the ease of judgment. It is unclear in the literature whether these artefacts are regarded as representing future performance or proof of minimum conformity or shorthand for legitimacy.

The situation is even more complicated in multi-tier supply chains. Mena, Humphries and Choi (2013) offer support for the need for new theorisation of multi-tier management since buyers typically have no direct visibility beyond first-tier suppliers. Similarly, Busse, Schleper and Weilenmann (2017) demonstrate the need to include a broader scope of visibility beyond immediate dyads when identifying sustainability risks. The public supplier requirements as well as third party certifications can thus be interpreted as attempts to govern at a distance. They provide a way for lead companies to make forecasts for tiers down the chain, without owning or directly seeing the whole chain. They are important but also charged: They are tools of opacity management, not opacity elimination.

The literature in the field of sustainable purchasing gives both justification and caution for this research. It validates supplier governance as an analytical focus point for suppliers. It also demonstrates the need to be wary of supplier codes and audits/certifications. The organizational function that they fulfill must be looked at critically, particularly in the context of supplier-selection discourse where formal requirements can have multiple functions such as compliance, coordination and signalling.

2.3 Third-party Sustainability Certifications: Signal, Proxy or Symbolic Assurance?

The signalling theory is the key conceptual framework for supplier selection that is adopted for understanding the role of third-party certifications. The theory has three key components: there is a sender (the supplier) that knows sustainability performance information that is not publicly available, there is a recipient (the buyer) who does not have a reliable method to obtain the knowledge about sustainability performance at a cost that is acceptable, and there is a message (the certification) that is observable and intended to convey the information about the level of sustainability that is otherwise not verifiable (Connelly et al., 2011). The signal must be expensive or difficult to fake, otherwise low-quality suppliers could simply copy it (Spence 1973 as applied to organisation studies by Connelly et al., 2011). Sustainability

certifications are designed to act as these signs; they put audit pressure on companies, and they need to be maintained, so they are not as easy to fake as unverified supplier claims. The theoretical justification of third-party certification is therefore based on the information asymmetry between buyer and supplier. Terlaak and King (2006) discuss ISO 9000, explaining that in markets where there is no external audience to directly evaluate the quality of the process, ISO 9000 can serve as a market signal. The same can be said about the diffusion of sustainability certification.

However, the literature of certification also reveals the reasons for being wary of such efficiency. Hannibal and Kauppi (2019) do not view the third-party social sustainability assessment as a simple remedy for multi-layered issues, but as a governance strategy in response to ongoing uncertainty. Kauppi, Hannibal and Bryde-Evens (2025) pick up on this by saying that sustainability is a credence characteristic. The significance of this argument is that it takes the discussion away from the question of whether anyone has a certificate and onto the question of under what circumstances a certificate is meaningful. Just because a sign can be seen does not mean that it is credible.

The certification is socially and organizationally determined in practice. Some buyers use certificates as convincing evidence, others as a compliance mechanism and others as a very weak proxy. Credibility depends on the scheme's reputation, the issue being signalled, audit rigour and the buyer's governance setting.

This caution is confirmed by empirical research on codes, auditing and private regulation. Egels-Zanden (2007) demonstrates that adherence to codes of conduct of large companies can be incomplete, gradual or even contrary to local working conditions. Voluntary governance should be evaluated based on the utility it provides to the stakeholders and not assumed to be effective (Soundararajan and Brown, 2016). In the same way, an increasing number of efforts in supplier codes of conduct as governance instruments indicate that these documents can improve transparency and define the

environmental, social and governance (ESG) expectations, but without full uniformity in the way they are applied and the weight they have. That is, visibility and verifiability shouldn't be confused.

A more plausible theory is that certifications serve multiple purposes. They can reduce search costs, facilitate pre-qualification, streamline supplier communication, serve as proof of due diligence and aid firms in their presentations to external parties of decisions made in sourcing. This versatility could be the reason for their resilience in use. Certifications do not persist because they always accurately reflect sustainability; rather, they persist because they are useful organisational devices under uncertainty.

This is an important piece of information for documentary research. The question that is not to be answered is whether a specific certification would be able to ensure sustainable supplier behaviour completely. The crucial one is how firms actualise certification in formal supplier-oriented texts. Is it a requirement for eligibility, a part of a multi-faceted eligibility process, a component of risk management or a general sign of good partnering? Public documents are suitable for this inquiry, as they expose the types of sustainability assurance that companies are prepared to record and disclose, but not all the decisions that were made internally when assessing suppliers.

2.4 Institutional Pressures and the Uptake of Supplier Sustainability Requirements

The institutional theory also carries an important explanatory dimension as it not only explains how certification works, but why firms are willing to implement and publicize certification mechanisms. This explanatory dimension is particularly timely: the regulatory landscape reviewed in Chapter 1 — including the Corporate Sustainability Due Diligence Directive, the EU Deforestation Regulation and the Carbon Border Adjustment Mechanism — represents a wave of coercive regulatory pressure that is directly shaping what firms must require of suppliers, making institutional theory not merely a historical explanatory framework but a live analytical tool for the current European manufacturing context. The argument here is that organisations react to

coercive, normative and mimetic pressures as they strive to gain legitimacy in their environment. This point of view has been influential throughout the research on green and sustainable supply chain. Zhu, Sarkis and Geng (2005) examine the influence of external pressures on green supply-chain practices, Walker, Di Sisto and McBain (2008) explore a variety of drivers and barriers, and Sarkis, Zhu and Lai (2011) demonstrate the value of organizational-theoretic explanations in this area.

Kauppi and Hannibal (2017) is relevant, as it directly uses institutional theory for sustainability evaluation of supply chains. It shows that the assessment programs are driven by more than just operational need; by regulation, customer pressure, as well as professional norms and imitation. Kauppi and Luzzini (2022) build on this contribution by conceptualizing coercive, normative and mimetic pressures within a purchasing context. It is clear from this array of research that supplier certificates and attached requirements are institutionally shaped governance practices and not merely a technical aspect of procurement.

However, institutional theory risks treating firms as passive legitimacy-seekers. Riikkinen, Kauppi and Salmi (2017) and Yawar and Kauppi (2018) complicate this by showing that internal capability and context-specific motivations mediate how firms respond to sustainability pressures — some invest in supplier development, others use standardised codes, and some act symbolically.

This variation is important for documents which are intended for public use and are to be supplier-facing. These kinds of documents can be interpreted as the textual locus at which institutional pressure becomes organizational language. A more coercive and more normative pressure could make certification an integral part of prequalification and due-diligence and corrective-action requirements. A more selective firm might use general sustainability terms whilst maintaining that traditional business criteria are still the key factors. The institutional theory helps to understand why supplier sustainability

requirements emerge, but not necessarily the degree of salience. This is why it must be used in conjunction with signalling theory and the supplier selection literature.

Another challenge is institutional pressures may be at odds with commercial pressures. The role of procurement functions can be increasingly challenged on matters of due diligence and transparency, in addition to cost, continuity and operational responsiveness. Public supplier documents can thus be considered as compromise artefacts; they amplify sustainability concepts without changing the procurement priorities. This is relevant to the current study, as it suggests the potential for certifications to have extensive visibility and institutional impact, but limited influence in comparative supplier selection.

2.5 Sustainable Supplier Selection Literature: Methodological Abundance, Behavioural Thinness

The literature on the sustainable supplier selection is the most apparent to look for the answers with regard to certification and criteria; however, the literature has evolved in a unique manner. A review by Govindan et al. (2015), Zimmer, Fröhling and Schultmann (2016) and Schramm, Cabral and Schramm (2020) and Karakoc, Memis and Sennaroglu (2024) reveals that the field is dominated by multi-criteria decision-making and hybrid optimisation methods. These studies are of real value. They can find the pertinent criteria, set up trade-offs, and give structured support for procurement decisions which might not otherwise be impressionistic.

Supplier selection is also a process of justification, not only optimisation. A certification criterion can justify a decision, demonstrate diligence or signal conformity to accepted norms — functions that computational models cannot represent.

There is not yet a massive amount of behaviour evidence. Zhan et al. (2021) demonstrate that sustainability dimensions affect managerial supplier assessments, thereby muddying the water regarding optimisation by buyers. As shown by Kim, Colicchia and Menachof (2018), however, the field has yet

to see better explanation of the way in which sustainability related information is implemented in sourcing practice. Patil et al. (2022) also highlight ongoing conceptual and empirical uncertainties in the field of supplier sustainability. All these studies indicate that the field is more aware of the possible criteria of supplier selection than of how organizations actually formulate and apply these criteria.

This is where the present research departs from the dominant literature. It won't try to develop a more accurate weighting system for certifications. Rather, it asks how companies make certifications a public signal to customers about how they compare traditional supplier-selection factors. That is a governance discourse issue, institutional response and organizational prioritisation issue. The central question of this research is not addressed by decision models, although they offer background information.

2.6 Synthesis and Research Gap

The findings of the literature review above can be summarized into three general points. First, SSCM and sustainable purchasing scholarship recognize that supplier-facing governance is a key aspect of sustainability and not just that of the focal firm, in other words, beyond the focal firm (Carter and Rogers, 2008; Schneider and Wallenburg, 2012; Miemczyk, Johnsen and Macquet, 2012). Second, the literature of certification and assessment demonstrates that external assurances are important, as many sustainability attributes are not observed directly, and that the meaning of these is contingent and contested (Connelly et al., 2011; Kauppi, Hannibal and Bryde-Evens, 2025; Hannibal and Kauppi, 2019). Third, institutional theory provides an explanation of adoption of 'visible' supplier-governance mechanisms when firms face regulatory, normative and mimetic pressures, yet fails to account for the influence of those mechanisms on the supplier-selection logic (Kauppi and Hannibal, 2017; Kauppi and Luzzini, 2022).

What is less fully explored is the formal placement of certifications. While the literature does indicate that sustainability is important, and that certification is broadly adopted, there is far less sign of how companies communicate

certifications in the context of cost, quality, delivery, capability, compliance and risk. The studies based on models for supplier selection generally circumvent that problem by assuming stable criteria and weights. Codes, audits and voluntary governance tend to be implemented or legitimized without a direct connection to the discourse of supplier selection.

This research fills that void by focusing on the public document that is available to suppliers as a governance artefact that links institutional pressure, signalling logic and procurement priorities. Based on the literature reviewed on signalling and institutional theory, three analytical categories are proposed to analyse the type of formal communication of certifications in supplier-oriented documents. They are: certification as a threshold of supplier eligibility (compliance and control logic, following Schneider and Wallenburg, 2012); certification as a difference-maker in supplier comparison (signalling logic, following Terlaak and King, 2006 and Zhan et al., 2021); and certification as symbolic reassurance to achieve legitimacy and include conventional operational criteria (institutional theory, following Kauppi and Hannibal, 2017 and Egels-Zandén, 2007). These are not mutually exclusive or exclusive categories; a document may have more than one function. However, they provide a theoretically grounded analytical frame to interpret the textually positioning of certification in the discourse of supplier selection within the firm.

3 Research material and methods

3.1 Research design

This research is of a secondary research design type, a literature review (LR) in combination with a directed document analysis of the supplier-facing documents sent by manufacturing companies in Finland. The SLR aims to identify and synthesize literature and evidence from peer reviewed publications related to supplier sustainability governance, third party sustainability certification, third party assessment, signalling, institutional pressures and supplier selection behaviour. This design is appropriate because certification and equivalent assurance mechanisms are most relevant where buyers face incomplete information about suppliers' upstream practices, human-rights performance, traceability and environmental management (Terlaak and King, 2006; Kauppi and Hannibal, 2017; Hannibal and Kauppi, 2019; Zhan et al., 2021; Kauppi, Hannibal and Bryde-Evens, 2025).

The study is explanatory and comparative rather than purely descriptive. The SLR provides the theoretical and conceptual basis for the research; the Finnish document-analysis stage applies that framework to examine how Metso, Valmet, KONE and Outokumpu formally communicate certification, assurance and supplier-governance requirements. The two components are related but analytically distinct: the SLR corpus consists of peer-reviewed studies, while the Finnish corpus consists of public corporate documents. This distinction prevents company self-presentations from being treated as equivalent to academic evidence and follows PRISMA 2020 reporting logic and CASP-informed appraisal practice (Page et al., 2021; CASP, 2024).

The Finnish document corpus was selected using four criteria: the firm had to be headquartered in Finland; operate in manufacturing or industrial supply chains; publish supplier-facing material in English; and include explicit sustainability, procurement, code-of-conduct, audit, due-diligence, certification, assessment or supplier-evaluation requirements. Metso, Valmet, KONE and Outokumpu met these criteria (Metso, 2024; Metso, 2026a; Valmet, 2025a;

Valmet, 2026a; KONE, 2025; KONE, 2026a; Outokumpu, 2026a; Outokumpu, 2026b). Other Finnish firms including Wärtsilä, Cargotec and Neste were excluded because their publicly available documents lacked sufficiently explicit sustainability assessment, certification or due-diligence requirements at the time of retrieval. The analysis examines formal supplier-facing governance architecture, not internal decisions or actual supplier behaviour (Egels-Zandén, 2007; Soundararajan and Brown, 2016; Hannibal and Kauppi, 2019).

Table 1: PICOC framework

Element	Operational definition for this research
Population	Buying firms and suppliers in manufacturing supply chains, with specific application to Finnish manufacturing firms.
Intervention	Third-party sustainability certifications, third-party assessment, codes of conduct, audits and related assurance tools in supplier selection.
Comparison	Certification and third-party assurance compared with internal supplier evaluation, buyer audits, self-assessments, supplier development, traceability documentation and traditional supplier-selection criteria.
Outcomes	Supplier qualification, risk reduction, legitimacy, sustainability screening, selection intent, audit follow-up and transferability to Finnish manufacturing.
Context	Sustainable purchasing, supplier governance, multi-tier supply chains and Finnish manufacturing procurement.

The PICOC framework narrowed the review away from consumer-facing product-label studies and purely technical optimisation papers with no sustainability-governance content. It kept the review aligned with procurement practice, supplier evaluation and governance design rather than general corporate sustainability reporting (Page et al., 2021; CASP, 2024). Where studies fell on the boundary — for example, institutional-theory studies that examined firm-level CSR without explicit supplier-selection content — they were excluded if their primary contribution could not be mapped to at least one of the research questions.

3.2 Search strategy

The SLR search strategy identified peer-reviewed studies relevant to supplier sustainability governance, sustainability certification, supplier assessment, institutional pressures, signalling and supplier-selection criteria. Searches were conducted across Scopus, Web of Science, ScienceDirect, Emerald Insight and Google Scholar, supported by backward and forward citation chaining. The process recorded identification, screening, eligibility and inclusion decisions in line with PRISMA 2020 (Page et al., 2021).

The academic search was separated from the Finnish company-document search. After duplicate removal, title-and-abstract screening and full-text eligibility assessment, 14 peer-reviewed studies were retained for extraction, appraisal and synthesis. These studies formed the final academic SLR corpus. A separate official-website search identified supplier-facing documents from Metso, Valmet, KONE and Outokumpu for directed document analysis, because company documents are not peer-reviewed studies and should not be counted inside the SLR corpus (Page et al., 2021; CASP, 2024).

Table 2: Boolean search strings

String	Search logic
S1	("sustainable supplier selection" OR "supplier sustainability" OR "sustainable purchasing") AND (certification OR "third-party assessment" OR "supplier audit" OR "code of conduct" OR assurance).
S2	("third-party certification" OR "sustainability certification" OR "supplier assessment") AND ("supplier selection" OR "supplier evaluation" OR "procurement decision").
S3	("institutional pressure" OR "institutional theory" OR "coercive pressure" OR "normative pressure" OR "mimetic pressure") AND ("sustainable purchasing" OR "supplier governance" OR "supplier sustainability").
S4	("signalling theory" OR "information asymmetry" OR "credence attribute") AND (certification OR "supplier sustainability" OR "third-party assessment").
S5	("supplier code of conduct" OR "supplier audit" OR "voluntary governance") AND (sustainability OR "responsible sourcing" OR "supply chain governance").

Table 3: Academic SLR search strategy

Source	Filters and retrieval logic	Records captured	Retained for full text
Scopus	Strings S1-S5; English; peer-reviewed; business, procurement, supply chain and sustainability; 2006-2026	42	13
Web of Science	Strings S1-S5; English; peer-reviewed; management, supply chain and sustainability; 2006-2026	31	9
ScienceDirect	Strings S1-S5; English; journal articles in operations, procurement, sustainability and supply chain; 2006-2026	26	6
Emerald Insight	Strings S1-S5; English; peer-reviewed purchasing, supply chain and sustainability journals; 2006-2026	19	4
Google Scholar	Targeted supplementary title and keyword searches; peer-reviewed sources only; 2006-2026	14	4
Citation chaining	Backward and forward checking from core studies; direct relevance required	12	4
Total before duplicate removal	Combined database and citation-chain records	144	40
Final academic SLR corpus	Studies passing full-text eligibility, relevance screening and quality appraisal	-	14

Source: Author's search strategy structured using PRISMA 2020 reporting logic (Page et al., 2021).

Table 4: Finnish company-document search strategy

Company source	Retrieval logic and filters	Documents retained
Metso official website	"Metso" + "responsible procurement" + "supplier code of conduct"; official public pages/PDFs; supplier-facing content only	2
Valmet official website	"Valmet" + "procurement" + "supplier code of conduct"; official public pages/PDFs; supplier-facing content only	2
KONE official website	"KONE" + "supplier information" + "supplier code of conduct"; official public pages/PDFs; supplier-facing content only	2

Outokumpu official website	"Outokumpu" + "suppliers" + "sustainable supply chain" + "supplier code of conduct"; official public pages/PDFs; supplier-facing content only	2
Final Finnish document corpus	Public, current, relevant and supplier-governance focused documents	8

3.3 Selection, appraisal and extraction

The inclusion criteria required explicit connection to supplier sustainability governance, supplier evaluation, third-party assessment, codes or certifications, supplier development, institutional pressure, signalling or sourcing decision behaviour. Exclusion criteria removed firm-level CSR studies without supplier-selection content, consumer-facing labelling studies, purely technical optimisation papers with no governance focus, non-peer-reviewed items and studies with insufficient relevance to the research questions.

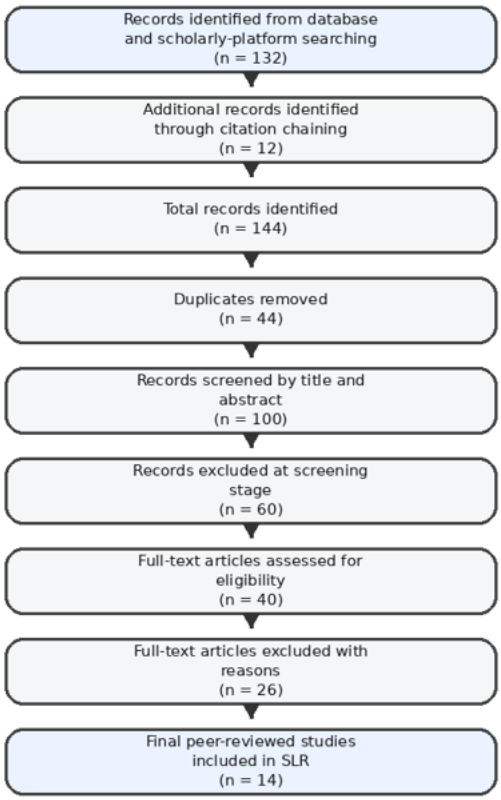


Figure 1: PRISMA Flowchart

Source: Author's PRISMA 2020 flow for the academic SLR corpus (Page et al., 2021).

Table 5: SLR selection and exclusion

Phase	Process	Count
Records identified	Peer-reviewed records from Scopus, Web of Science, ScienceDirect, Emerald Insight and Google Scholar	132
Citation chaining	Additional records from backward and forward citation checks	12
Total identified	Database, platform and citation-chain results	144
Duplicates removed	Duplicate records removed before screening	44
Records screened	Titles and abstracts screened against PICOC	100
Records excluded	No relevant supplier sustainability, certification, assessment, institutional-pressure or selection focus	60
Full texts assessed	Full texts assessed for methodological relevance, conceptual fit and contribution to research questions	40
Full texts excluded	Weak relevance, consumer focus, no supplier-selection link, no governance focus, non-peer-reviewed or insufficient detail	26
Final SLR studies	Peer-reviewed studies included in extraction, appraisal and synthesis	14

Table 6: Finnish document-analysis selection and exclusion

Phase	Process	Count
Company records identified	Public supplier-facing pages and PDFs from Metso, Valmet, KONE and Outokumpu	20
Duplicates/outdated pages removed	Duplicate page/PDF pairs, mirrored pages, outdated copies or superseded versions removed	4
Records screened	Pages/documents screened for supplier-facing procurement, sustainability, audit, due-diligence, code or evaluation relevance	16
Records excluded	General sustainability pages, partnership pages, invoicing/admin pages or non-supplier-facing material	4
Full documents assessed	Documents assessed for explicit certification, assessment, audit, traceability, due-diligence or evaluation requirements	12

Full documents excluded	Supporting-only policies, outdated pages, weak supplier-governance detail or duplicated evidence	4
Final Finnish corpus	Public supplier-facing documents included in Chapter 4	8

Table 7: Final SLR study characteristics and extraction

Study	Design/context	Main extracted contribution
Terlaak and King (2006)	Archival quantitative study of 19,713 U.S. manufacturing facilities and ISO 9000.	Certification reduces information asymmetry and works as a buyer signal where process quality is difficult to observe.
Egels-Zandén (2007)	Qualitative compliance study of Chinese toy suppliers.	Codes and monitoring can be decoupled from substantive compliance; formal governance cannot be over-read.
Schneider and Wallenburg (2012)	Conceptual study of sustainable sourcing and stakeholder salience.	Purchasing must integrate economic, environmental and social criteria into supplier governance.
Lu, Lee and Cheng (2012)	Measurement validation using manufacturer and buyer-supplier data.	Supplier evaluation, information sharing and development show sustainability governance beyond screening.
Blome, Hollos and Paulraj (2014)	Survey and SEM using Western European company data.	Green procurement and supplier development influence supplier performance through managerial commitment.
Soundararajan and Brown (2016)	Qualitative governance study in Indian knitwear supply chains.	Voluntary governance can weaken at subcontracting stages due to local constraints and power dilution.
Busse et al. (2017)	Design science and field testing in a Swiss food supply chain.	External stakeholder knowledge can identify sustainability risk hotspots where tier visibility is limited.
Riikkinen, Kauppi and Salmi (2017)	Survey across Finland, Germany, Ireland and Italy.	Realised absorptive capacity drives sustainability practices in purchasing.
Kauppi and Hannibal (2017)	Institutional-theory study of assessment initiatives.	Assessment initiatives reflect coercive, normative and mimetic pressure chains.
Yawar and Kauppi (2018)	Multiple case study of Indian dairy supply chains.	Supplier-development practices can be adopted for legitimacy, efficiency and competitive survival.
Hannibal and Kauppi (2019)	Qualitative study of third-party social sustainability assessors.	Third-party assessment provides partial assurance because scope and tier coverage vary.
Zhan et al. (2021)	Behavioural experimental study of supplier evaluation.	Sustainability affects supplier selection, but economic criteria remain important.
Kauppi and Luzzini (2022)	Scale-development study in purchasing.	Institutional pressure should distinguish coercive regulatory, coercive market, normative and mimetic forms.
Kauppi, Hannibal and Bryde-Evens (2025)	Interpretive signalling study of sustainability certificates.	Certificates work as sustainability signals in credence contexts but can also become generic legitimacy signals.

Table 8: Finnish manufacturing document corpus

Firm/document	Supplier-facing evidence extracted	Source
Metso, Responsible procurement	Supplier Code as starting point; audits, e-learning, SBTi supplier engagement and 185 sustainability audits in 2025.	Metso (2026a)
Metso, Supplier Code of Conduct	Compliance, flow-down to sub-suppliers, monitoring, self-assessment, audit access and conflict-mineral due diligence.	Metso (2024)
Valmet, Procurement	Mandatory supplier evaluation with sustainability gates, self-assessment and CO2-related expectations. Valmet (2025b) is supporting evidence, not a separate corpus item.	Valmet (2026a; 2025b)
Valmet, Supplier Code of Conduct	Due diligence, living wage, human rights, raw-material traceability, EUDR and CBAM documentation.	Valmet (2025a)
KONE, Supplier information	Continuous supplier-base evaluation, onboarding expectations, code compliance and supplier administration routines.	KONE (2026a; 2025)
KONE, Supplier Code of Conduct	Due-diligence responsibilities extend to suppliers, subcontractors and conflict-mineral expectations.	KONE (2025)
Outokumpu, Suppliers	Supplier Code, Supplier Requirements and supporting policies define expectations for suppliers and subcontractors.	Outokumpu (2026a)
Outokumpu, Sustainable supply chain	Audits, assessments, EcoVadis, country-risk mapping, prior audit results and human-rights mitigation.	Outokumpu (2026b)

3.4 Quality appraisal and coding

A CASP-informed appraisal framework was applied to the 14 peer-reviewed studies. Because the corpus includes qualitative, quantitative, conceptual, experimental, design-science and scale-development studies, CASP was used as a transparent critical-appraisal guide rather than a rigid scoring instrument. The appraisal assessed clarity of aim, design fit, sample/context transparency, data-collection or measurement rigour, analytical rigour, conceptual clarity, acknowledgement of limitations, evidence support, ethical or procedural appropriateness and relevance (CASP, 2024; Long, French and Brooks, 2020).

Corporate documents were not scored with CASP because they are authored company materials rather than research studies. They were screened for authenticity, recency, supplier-facing relevance and evidential specificity. This distinction prevents corporate self-presentation from being treated as

equivalent to peer-reviewed empirical evidence (CASP, 2024; Egels-Zandén, 2007; Soundararajan and Brown, 2016).

Table 9: CASP-informed appraisal criteria

Code	Criterion	Meaning in this SLR
C1	Clear aim	Purpose is relevant to supplier sustainability, certification, assessment, purchasing or institutional pressure.
C2	Appropriate design	Design fits the stated aim and evidence type.
C3	Context/sample transparency	Sample, sector, country, documents or conceptual evidence base are clear.
C4	Data or measurement rigour	Data collection, measurement, experiment, archival source or literature basis is explained.
C5	Analytical rigour	Analysis is systematic, transparent and connected to evidence.
C6	Conceptual clarity	Key concepts such as certification, sustainability, pressure or signalling are defined.
C7	Bias/limitations	Limitations, bias risks, context boundaries or assumptions are acknowledged.
C8	Evidence support	Findings are connected to data, analysis or theory.
C9	Ethical/procedural fit	Ethics or appropriate secondary/conceptual procedures are addressed.
C10	Review relevance	Study informs at least one research question.

Table 10: CASP-informed quality appraisal summary

Study	Score	Quality/use
Terlaak and King (2006)	9.0	High; signalling and certification logic.
Egels-Zandén (2007)	9.0	High; code/audit limitation evidence.
Schneider and Wallenburg (2012)	8.0	High; conceptual sourcing framework.
Lu, Lee and Cheng (2012)	9.0	High; supplier-development measurement.
Blome, Hollos and Paulraj (2014)	9.0	High; procurement and development effects.
Soundararajan and Brown (2016)	9.5	High; voluntary governance limitations.
Busse et al. (2017)	8.5	High; multi-tier risk visibility.
Riikkinen, Kauppi and Salmi (2017)	9.0	High; purchasing capability including Finland.
Kauppi and Hannibal (2017)	9.5	High; institutional-pressure coding.
Yawar and Kauppi (2018)	9.0	High; institutional supplier-development logic.
Hannibal and Kauppi (2019)	9.5	High; third-party assessment scope.
Zhan et al. (2021)	9.0	High; behavioural supplier-selection evidence.
Kauppi and Luzzini (2022)	9.5	High; institutional-pressure scale.
Kauppi, Hannibal and Bryde-Evens (2025)	9.0	High; sustainability signalling.

3.5 Coding framework

Table 11: Coding framework

Code	Operational indicator
Certification as threshold	Supplier must hold, sign or evidence compliance before onboarding or continued approval.
Certification as differentiator	Certification visibly improves ranking, preference or comparative supplier position.
Certification as proxy signal	Certification reduces uncertainty where direct observation of supplier sustainability is weak.
Certification as complement	Certification is paired with audits, self-assessment, traceability or supplier development.
Multi-tier governance	Requirements explicitly extend to sub-suppliers or subcontractors.
Institutional pressure	Regulatory, market, customer, normative or mimetic drivers are visible.
Sustainability trade-off logic	Interaction with cost, quality, delivery, innovation, capability or risk criteria.
Transferability to Finland	Fit with Finnish manufacturing procurement processes and supplier documents.

The journal studies and Finnish documents were coded deductively with this framework. Certification as proxy signal was informed by the argument that certification can reduce information asymmetry where direct assessment is difficult (Terlaak and King, 2006; Kauppi, Hannibal and Bryde-Evens, 2025). Certification as complement and multi-tier governance were informed by evidence that third-party assessment, audits and stakeholder-based visibility provide only partial assurance in complex supply chains (Busse et al., 2017; Hannibal and Kauppi, 2019).

Institutional-pressure coding followed research on coercive, normative and mimetic pressures in supply-chain assessment and purchasing (Kauppi and Hannibal, 2017; Kauppi and Luzzini, 2022). Sustainability trade-off logic was informed by behavioural supplier-selection evidence showing that sustainability affects evaluation but does not remove economic and operational criteria (Zhan et al., 2021). The conceptual model was therefore developed through synthesis of RQ1, RQ2 and RQ3, not as a separate research question.

3.6 Finnish document application, ethics and limitations

Each document was read for the supplier entry requirements, sustainability gates, code signing requirements, human rights and environmental due diligence, audit rights, self-assessment, traceability requirements, sub supplier flow down clauses and for any reference to certification or equivalent third party evidence. The comparisons across Metso, Valmet, KONE and Outokumpu explored the treatment of assurance signals as evidence, the inclusion of assurance signals in a package of audits, contractual flow-down, risk screening and corrective actions and capability expectations (Metso, 2024; Metso, 2026a; Valmet, 2025a; Valmet, 2026a; KONE, 2025; KONE, 2026a; Outokumpu, 2026a; Outokumpu, 2026b).

No humans were used as participants. The study is based on peer-reviewed literature or public company documents. The fundamental ethics rule is to present studies and company materials accurately, which means no selective quoting or taking any bigger-than-what-no-document-supports approach to this.

Its main drawbacks consist of three points. Firstly, the SLR is more focussed on studies that directly inform certification and assessment, institutional pressure and supplier-selection behaviour, rather than being a bibliometric of all sustainable supplier-selection studies. Second, Finnish documents are public facing texts, and the quality of implementation may be exaggerated. Third, the study does not include interviews with Finnish buyers or suppliers, so internal procurement judgements and actual supplier responses cannot be verified. These limits do not invalidate the method, but they require cautious interpretation of Chapter 4 findings.

4 Findings and Analysis

4.1 Introduction

This chapter presents the findings from the directed document analysis of supplier-facing documents published by Metso, Valmet, KONE and Outokumpu. The analysis applies the Chapter 3 coding framework to examine how third-party sustainability certifications and equivalent assurance mechanisms are presented, how they are positioned against traditional supplier-selection criteria, and which institutional pressures are visible in the documents. The chapter reads each document as a formal governance artefact — evidence of what firms have chosen to standardise and make externally accountable — rather than as proof of realised supplier behaviour or confirmed sustainability outcomes. The analytical question is not whether these documents represent operational reality, but what governance logic they construct and what that logic reveals about how Finnish manufacturing firms formally position certification within supplier selection under institutional pressure (Terlaak and King, 2006; Egels-Zandén, 2007; Hannibal and Kauppi, 2019; Kauppi, Hannibal and Bryde-Evens, 2025).

4.2 Overview of the Finnish Manufacturing Document Corpus

The empirical corpus consists of eight supplier-facing documents from four Finnish manufacturing firms. Metso is represented through its Responsible Procurement page and Supplier Code of Conduct. Valmet is represented through its Procurement page and Supplier Code of Conduct. KONE's Supplier Information page and Supplier Code of Conduct represent KONE. Through Suppliers page and Sustainable Supply Chain page, Outokumpu is represented. These documents are appropriate for Chapter 4 as they address issues of corporate sustainability in a more specific manner. They set expectations of what suppliers need to accept, provide, or monitor and improve to be part of the buying companies' value chains. (Metso, 2024; Metso,

2026a; Valmet, 2025a; Valmet, 2025b; Valmet, 2026a; KONE, 2025; KONE, 2026a; Outokumpu, 2026a; Outokumpu, 2026b).

Rarely, documents will give a certificate as the sole basis for supplier acceptance. Rather, they offer a multi-layered assurance model consisting of codes, screening, self-assessments, audits and traceability. It shifts focus of analysis from certificate as proof to certificate as one aspect of governed uncertainty (Terlaak and King, 2006; Kauppi, Hannibal and Bryde-Evens, 2025).

4.3 Roles of Certification and Equivalent Assurance Mechanisms

4.3.1 Assurance as supplier-entry threshold

Across all four firms, the strongest role of certification and equivalent assurance mechanisms is the threshold role. Suppliers are not primarily invited to differentiate themselves through voluntary sustainability excellence; they are first required to satisfy minimum expectations. Metso states that its Supplier Code of Conduct is the starting point for new and existing business relationships and covers health and safety, child and forced labour, human rights, anti-corruption, legal compliance, environment and climate change (Metso, 2026a). Its Supplier Code further requires cooperation with self-assessments, reports and on-site audits by Metso or a third party selected by Metso (Metso, 2024). This means the supplier is not merely expected to hold a recognisable certificate; it must accept Metso's governance authority.

Valmet's threshold logic is even more process-based. Its procurement process assesses suppliers in relation to potential sustainability risk, requires signing of the Sustainable Supply Chain Policy and may require completion of a sustainability self-assessment (Valmet, 2026a). Valmet also states that suppliers must be financially sound, responsive, technically excellent, sustainable and delivered on time, while compliance with policies and sustainability requirements is "absolutely essential" (Valmet, 2026a). In other words,

sustainability is not a discretionary bonus. It is an entry condition combined with commercial and technical requirements.

KONE and Outokumpu follow the same logic. KONE expects suppliers to deliver quality, on-time delivery, agreed commercial processes, compliance with the Supplier Code of Conduct and support for sustainability and responsible business practices (KONE, 2026a). Outokumpu expects all suppliers and subcontractors to comply with its Supplier Code of Conduct or similar standards and makes supplier requirements available as formal procurement documents (Outokumpu, 2026a). These patterns support Schneider and Wallenburg's (2012) argument that sustainable sourcing requires purchasing to integrate environmental and social expectations into supplier management. However, they also show a control bias: the first function of sustainability assurance is to establish supplier eligibility rather than to create a nuanced sustainability ranking.

4.3.2 Limited evidence of assurance as supplier differentiator

The second finding is more critical: the documents provide little explicit evidence that sustainability certifications operate as supplier differentiators. This is important because sustainable supplier-selection research often assumes that sustainability criteria can be weighted and compared in a multi-criteria decision model (Govindan et al., 2015; Zimmer, Fröhling and Schultmann, 2016; Schramm, Cabral and Schramm, 2020). The Finnish documents do not support such a clean weighting logic.

Valmet comes closest to comparative selection language because it classifies critical suppliers using value drivers such as innovativeness, sustainability, risk exposure, cost competitiveness, product or service importance, volume, spend size and non-substitutability (Valmet, 2026a). However, even here, certification itself is not identified as a scored differentiator. Sustainability is one value driver among several, and the document does not state that certified suppliers receive preference. Metso likewise evaluates new suppliers on sustainability alongside economic, financial and quality aspects,

but its documents emphasise risk assessment, screening and audits rather than certification-based supplier ranking (Metso, 2026a). This arguments is also supported by KONE, (2025), and Outokumpu, (2026b) as they also prioritise compliance, requirements and monitoring rather than explicit certification scoring.

This discovery supports Terlaak and King's (2006) signalling logic. Certification may reduce buyer uncertainty, but the Finnish evidence does not show certification being converted into a clear competitive premium. The finding is also consistent with Zhan et al. (2021), who show that sustainability affects supplier evaluation but does not automatically dominate decision-making; economic sustainability remains highly influential. The Finnish documents suggest that sustainability assurance may penalise weak suppliers more than it rewards strong suppliers. A supplier that fails to meet code, audit or due-diligence requirements risks exclusion, whereas a supplier with stronger certification evidence is not necessarily shown as gaining additional commercial advantage.

4.3.3 Assurance as evidence complement within broader governance

The dominant pattern is therefore not “certification as differentiator”, but “certification and equivalent assurance as evidence complement”. Metso’s Responsible Procurement page is particularly clear. It does not rely on a named sustainability certificate as proof of responsible sourcing. Instead, it combines SBTi supplier engagement, e-learning, supplier sustainability audits, third-party screening and corrective actions. Metso reports a target for 40 per cent of procurement spend to be with suppliers committed to science-based emissions reductions by 2030, and reports that 34 per cent of direct supplier spend in 2025 was with suppliers committed to SBTi (Metso, 2026a). It also reports 185 supplier sustainability audits in 2025, selected through sustainability risk assessment (Metso, 2026a). This is significant because it reflects not only symbolic signalling but active governance capacity. It also aligns with Riikkinen, Kauppi and Salmi’s (2017) argument that sustainability

implementation depends on realised absorptive capacity: firms must transform sustainability information into routines, monitoring and action.

Valmet embeds assurance into a governance process rather than treating certification as a stand-alone credential. Its Supplier Code requires due diligence, conflict-mineral investigation, EUDR compliance, supply-chain tracking and CBAM documentation (Valmet, 2025a). Valmet does not simply ask whether a certificate exists; it asks whether the supplier can produce traceable, auditable, regulation-ready evidence — consistent with Hannibal and Kauppi's (2019) warning that third-party assessment must be interpreted by scope and coverage.

KONE's Supplier Code of Conduct also supports the evidence-complement interpretation. It requires suppliers to comply with the stricter of applicable law or the Code, conduct risk-based due diligence, extend due-diligence principles to suppliers, subcontractors and business partners, address risks related to corruption, fraud, sanctions, financial integrity, data protection and cybersecurity, and provide corrective actions where risks are identified (KONE, 2025). KONE also encourages environmental management systems aligned with internationally recognised standards such as ISO 14001 and encourages environmental targets aligned with SBTi (KONE, 2025). This illustrates the distinction between a certificate as a visible signal and a management system as an operational capability. KONE's text is less about possessing a badge and more about having the internal systems to identify, document and manage risk.

Outokumpu provides the most explicit example of third-party assessment as one input in a multi-source risk model. It uses EcoVadis for supplier self-assessments covering environment, labour and human rights, ethics and sustainable procurement. It also uses monthly sanctions screening, country-risk indices, the TDi Sustainability AIRS index, Dodd-Frank Section 1502, EU conflict-affected and high-risk areas, available certifications and previous audit results (Outokumpu, 2026b). Suppliers may then be selected for

sustainability visits, audits or human-rights impact assessments (Outokumpu, 2026b). This directly supports Busse, Schleper and Weilenmann's (2017) argument that firms with limited visibility can extend the supply-chain visibility boundary by using stakeholder and external-risk information. In Outokumpu's approach, it's not a simple certification, but risk triangulation.

4.3.4 Symbolic assurance and the risk of over-reading documents

The documents are detailed in how they operate, but it is not possible to rule out symbolic assurance. Supplier codes, audit rights and public sustainability pages create a perception of legitimacy for businesses to customers, regulators and stakeholders. Kauppi and Hannibal (2017) demonstrate that assessment activity creates institutional pressure via consumers, compliance, auditors and producers' networks. These documents in this sense are not neutral administrative documents, but they are involved in the construction of legitimacy.

But the symbolic interpretation should not be exaggerated. The audit programme carried out by Metso, the detailed evidence requirements during the audit that Valmet has, the CBAM/EUDR related clauses on due-diligence and corrective action by KONE and the system of country-risk with EcoVadis by Outokumpu indicate more than ceremonial compliance (Metso, 2026a; Valmet, 2025a; KONE, 2025; Outokumpu, 2026b). The importance of this position is thus a balance: formal governance is showcased in the documents but it is not clear if there is any actual improvement in sustainability. A key point here is that codes and monitoring are not necessarily linked to factory reality, as demonstrated by Egels-Zandén (2007), whose work revealed that codes and monitoring were separated from the reality of the factory through coached workers, false records and selective compliance. Voluntary governance can break down if there is /responsible procurement/low buyer power and low supplier/subcontractor utility, as argued by Soundararajan and Brown (2016). Therefore, Chapter 4 concludes that there is a formalisation

of assurance in Finnish companies, but the effectiveness of the assurance is not proven in empirical terms.

4.4 Certification and Traditional Supplier-Selection Criteria

The second research question is related to the link between sustainability assurance and traditional supplier-selection criteria. The analysis reveals that certifications and other assurances are not offered as alternatives to cost, quality, delivery or capability. Rather, they have the strongest link to compliance and risk.

Cost is a still current tendering factor. Cost competitiveness is explicitly mentioned as a supplier relationship management value driver by Valmet and is expected that suppliers are proactive for improving cost competitiveness (Valmet 2026a). Metso also takes into account sustainability, not as a top priority but along with the economic, financial and quality aspects (Metso, 2026a). This is relevant since it rebuts the notion that sustainability has supplanted commercial procurement logic. Instead, the documents reflect what Zhan et al. (2021) show behaviourally: sustainability matters, but economic considerations remain central in supplier evaluation.

Quality and delivery are similarly preserved. KONE expects consistent quality and on-time delivery, and Valmet seeks financially sound suppliers capable of delivering top-quality and technically excellent materials and services on time (KONE, 2026a; Valmet, 2026a). Outokumpu's supplier requirements emphasise supplier compliance with technical and procedural expectations, and its supplier pages link sustainability to broader supplier requirements rather than treating it as a separate moral category (Outokumpu, 2026a). Sustainability assurance therefore appears as an added governance layer rather than a substitute for technical supplier approval.

There is some capability development, though it is secondary, with Metso's e-learning and SBTi engagement demonstrating some capability development logic (Metso, 2026a; Valmet, 2025a; Lu, Lee and Cheng, 2012), but all firms are more strongly inclined towards control and risk reduction.

Compliance and risk dominate the positioning of assurance. Metso uses screening and audits for sanctions, adverse media, environmental and labour-rights violations, and conflict minerals (Metso, 2024; Metso, 2026a). Valmet requires compliance with REACH, RoHS, EUDR, CBAM, trade sanctions, export controls and GDPR-type obligations (Valmet, 2025a). KONE requires suppliers and their supply chains to comply with international trade sanctions, export controls and customs laws, while also requiring due diligence on human rights, environment, corruption, fraud, data protection and cybersecurity (KONE, 2025). Outokumpu connects conflict minerals to OECD guidance, EU conflict-mineral regulation, Dodd-Frank reporting and CMRT declarations (Outokumpu, 2026b). The evidence therefore suggests that sustainability assurance is operationalised primarily as compliance infrastructure.

To clarify how certification and equivalent assurance mechanisms may operate within supplier selection, Figure below presents an illustrative supplier sustainability risk-screening and assurance pathway. The figure is not intended to represent the internal process of any single case company. Rather, it synthesises the logic visible across the analysed documents: suppliers are first required to provide onboarding information and accept code-of-conduct expectations, after which they may be assessed through sustainability risk screening, self-assessment, EcoVadis-type assessment, audit, due diligence and corrective-action monitoring. This reflects the Chapter 4 finding that sustainability assurance is positioned mainly as a compliance and risk-management layer rather than as a replacement for cost, quality, delivery and capability.

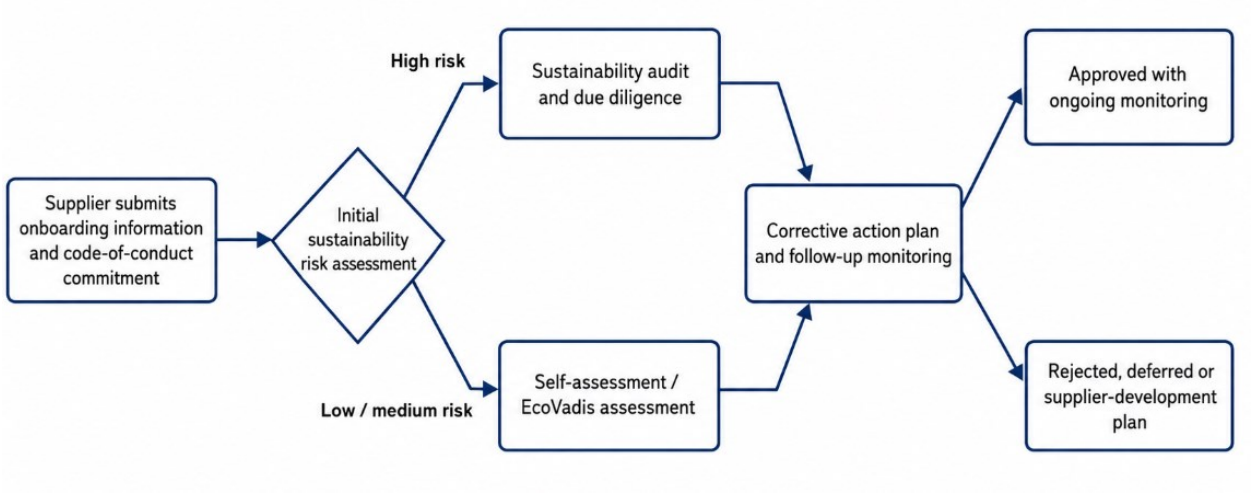


Figure 2: Supplier sustainability risk-screening and assurance pathway

Source: (Author)

4.5 Institutional Pressures Reflected in the Documents

The documents show strong evidence of institutional pressure. Following Kauppi and Luzzini (2022), the analysis separates coercive regulatory pressure from coercive market pressure, while also coding normative and mimetic pressures.

Coercive regulatory pressure is highly visible. Valmet's Supplier Code refers to the EU Deforestation Regulation, CBAM, REACH, RoHS, sanctions, export controls, GDPR and NIS2-related obligations (Valmet, 2025a). KONE requires compliance with applicable laws, trade sanctions, export-control and customs laws, and requires suppliers to comply with the stricter standard where the Code and law conflict (KONE, 2025). Outokumpu's conflict-minerals process refers to OECD guidance, EU conflict-mineral regulation, Dodd-Frank Section 1502 and CMRT (Outokumpu, 2026b). Metso similarly requires conflict-mineral due diligence under international standards and EU conflict-minerals regulation (Metso, 2024). These examples show that assurance mechanisms are partly a response to formal regulatory demands that require evidence, traceability and documentation.

Coercive market pressure is also present, although usually indirectly. Metso's SBTi procurement-spend target shows climate expectations moving from corporate strategy into supplier engagement (Metso, 2026a). Valmet frames supplier performance around customer success, sustainability, quality and innovation (Valmet, 2026a). Outokumpu states that its customers require a great deal from it as a supplier, and therefore it requires the same from its suppliers (Outokumpu, 2026b). This reflects Kauppi and Hannibal's (2017) concept of pressure chains: institutional pressure does not always move directly from regulator to firm; it can pass through customers, markets, auditors and supply-chain actors.

Normative pressure is the most uniform and constant pressure throughout the body. The documents repeatedly reference universally accepted standards and principles such as ILO, UNGPs, OECD guidance, SBTi, ISO 14001-type environmental management systems and responsible sourcing templates (Metso, 2024; Valmet, 2025a; KONE, 2025; Outokumpu, 2026b). The references illustrate that supplier sustainability is now a concept that is being used in the field of professionalised procurement. Normative pressure thus becomes more than just an outside force, it becomes the normal language of what is considered an acceptable purchase.

Mimetic pressure is not necessarily evident, firms approach identical supplier codes, audit rights, language of due diligence and corrective clauses, as observed by Yawar and Kauppi (2018) about the identical governance forms that could come for various reasons.

4.6 Multi-Tier Governance and Traceability

The documents also reveal that Finnish industrial companies try to push sustainability requirements to their first-tier supplier. This is very important because these certifications/codes of suppliers, if left in the hands of the first supplier, may fail. Hannibal and Kauppi (2019) show that third-party assessment may cover only certain tiers or criteria, while Busse, Schleper and

Weilenmann (2017) argue that firms face limited visibility over upstream sustainability risks.

Metso requires suppliers to ensure that their own suppliers adhere to the Supplier Code or comparable principles, while also allowing Metso or a third party to access premises, information and documentation for audits (Metso, 2024). Valmet requires suppliers to cascade and communicate the Supplier Code to their suppliers and subcontractors, maintain reliable documentation and allow Valmet or authorised third parties to verify compliance through dialogue, self-assessment, audit or social impact assessment (Valmet, 2025a). KONE requires suppliers to extend due-diligence principles to their own suppliers, subcontractors and business partners, including vetting third parties for human-rights and environmental risks (KONE, 2025). Outokumpu similarly expects suppliers and subcontractors to comply with its Supplier Code or similar standards (Outokumpu, 2026a).

The strongest traceability evidence is in conflict-mineral and raw-material contexts. Valmet requires material-source identification, supply-chain tracking and CBAM/EUDR documentation (Valmet, 2025a); Outokumpu uses CMRT to confirm country of origin and approved smelters (Outokumpu, 2026b); Metso requires origin reporting for aluminium, steel and conflict minerals (Metso, 2024); and KONE requires proof of manufacture or source when requested (KONE, 2025). These mechanisms allow for the production of records but do not mean that opacity is no longer a problem: as shown by Egels-Zandén (2007), records can be faked and audits can be "gamed" so that it appears as if the formal policy is transparent, but it is really not. Traceability clauses enhance formal governance, but do not necessarily lead to substantive transparency.

4.7 Cross-Case Synthesis

The architecture is similar across the four firms, but with varying degrees of emphasis. Model of Metso is an audit and development model. It incorporates Supplier Code of Conduct, e-learning, SBTi engagement, third-party

screening, audits and corrective actions. This places Metso closest to the supplier-development logic discussed by Lu, Lee and Cheng (2012) and Blome, Hollos and Paulraj (2014), although the development is still tied to risk and compliance.

Valmet's model is due-diligence-and-documentation oriented. Its Supplier Code is the most detailed in relation to regulatory evidence, raw-material tracking, CBAM, EUDR, full material disclosure, environmental tracking and social impact assessment (Valmet, 2025a). It therefore illustrates how coercive regulatory pressure becomes supplier-facing documentation. KONE's model is compliance-and-systems oriented. It integrates legal compliance, trade sanctions, third-party due diligence, ISO 14001-type environmental management and corrective action into a compact supplier code (KONE, 2025). Outokumpu's model is risk-triangulation oriented. It uses EcoVadis, CMRT, sanctions screening, country-risk mapping, certifications and previous audits to identify where deeper reviews are required (Outokumpu, 2026b).

4.8 Findings by Research Question

For RQ1, the findings show that third-party sustainability certifications and equivalent assurance mechanisms are presented mainly as threshold and complementary governance devices. They appear through supplier codes, self-assessments, third-party audits, EcoVadis, CMRT, ISO 14001-type systems, SBTi commitments, sanctions screening, risk indices and traceability documentation. The key finding is that Finnish manufacturing firms do not treat certification as sufficient proof. They see it as a tangible but incomplete message which needs to be backed up with documentation, audits and monitoring. It aligns with Kauppi, Hannibal and Bryde-Evens' (2025) claims that sustainability signals can be apparent in credence situations but not fully comprehensible. Certifications and assurance mechanisms come into the picture closest to compliance and risk for RQ2. Sustainability assurance is primarily applied to see if a supplier is acceptable, auditable and risk-

manageable; cost, quality, delivery and capability are still active selection criteria. This aligns with Zhan et al (2021), demonstrating that sustainability is important with supplier evaluation, but is not a substitute for economic evaluation. It also supports Schneider and Wallenburg (2012), because sustainable sourcing is layered onto purchasing rather than replacing purchasing's traditional responsibilities.

For RQ3, coercive regulatory and normative pressures are strongest, market pressure is visible, and mimetic pressure is weaker but inferred. Regulatory pressure appears in conflict minerals, sanctions, EUDR, CBAM, GDPR, NIS2 and material-compliance clauses. Normative pressure appears in the use of ILO, OECD, UNGPs, SBTi and ISO-style language. Market pressure appears in customer expectations and climate targets. Mimetic pressure appears in similar supplier-code and audit structures across the firms, but this remains an inference rather than a direct finding.

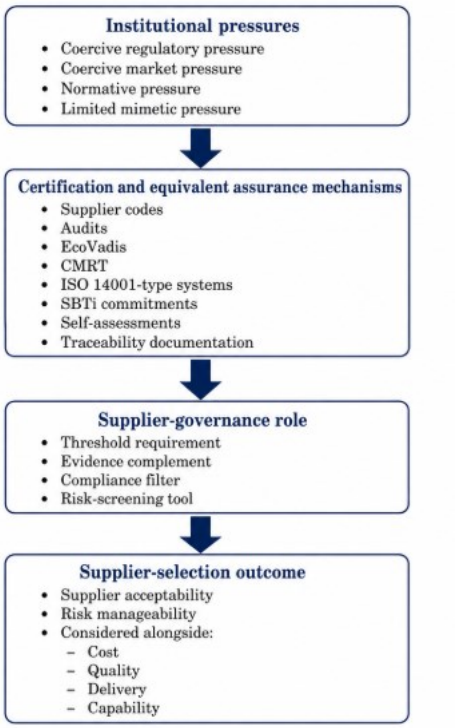


Figure 3: Conceptual model of certification and equivalent assurance mechanisms in supplier selection under institutional pressure

Source: (Author)

4.9 Chapter Summary

This chapter finds that Finnish manufacturing firms present sustainability certification and equivalent assurance mechanisms as part of a hybrid supplier-governance system. The documents do not support a simple “certified supplier is preferred supplier” logic. Instead, it results into the identification of a more complex model where certification-related evidence supports supplier eligibility, compliance, risk screening, traceability and due diligence. The critical interpretation is that the Finnish companies have taken the "most symbolic" sustainability language out of their products and into more formalised assurance systems, albeit, these systems are still susceptible to partial visibility, self-reporting, audit limitations and decoupling. Chapter 5 should therefore talk about certification not as evidence of sustainability, but as a signal that's governed: useful, institutionally powerful and increasingly required, but without supplier capability, monitoring and accountability.

5 Summary/Conclusions

5.1 Summary of the Study

The research explored the positioning of third-party sustainability certifications and equivalent assurance mechanisms in the discourse of supplier selection in manufacturing companies in Finland. The question wasn't whether there was certification, but what is it in formal supplier governance? Supplier sustainability can be hard to see, particularly when the supplier's human-rights performance, environmental management, traceability, and/or practices at lower tiers of its supply chain are not directly visible to the buyer. Under those circumstances, certification can help lower the level of information asymmetry, but also function as a partial signal, a legitimacy device or an administratively convenient proxy (Terlaak and King, 2006; Boiral, 2012; Kauppi, Hannibal and Bryde-Evens, 2025; Hannibal and Kauppi, 2019). The study thus included a systematic literature review and directed document analysis of eight documents from suppliers that are relevant for the user of the material: Metso, Valmet, KONE and Outokumpu. It was about formal governance language, not corporate sustainability practices or hidden procurement practices.

5.2 Conclusions by Research Question

The first research question was 'How are certifications and similar assurance mechanisms communicated?'. The results indicate that certification is not often used as a full guarantee of sustainability by the four firms. Rather, supplier codes, self-assessments, audits, certification tools such as EcoVadis, Chain of Responsibility Systems (CMRT), ISO 14001-type systems, SBTi commitments, screening of sanctions, traceability documentation and corrective-action processes (Metso, 2024; Metso, 2026a; Valmet, 2025a; KONE, 2025; Outokumpu, 2026b) are used to provide assurance. The most robust is a threshold one: suppliers have to meet minimum level before being considered acceptable. Certification is thus not a single determinant credential, but rather a component of a multi-level governance system. This is important

because a threshold role differs from a performance role, in that it is used to screen the acceptability of the supplier, but it does not necessarily mean superior supplier sustainability. What it also implies is that the concept of “equivalent assurance” is analytically significant as well, because companies sometimes produce audits, declarations and traceability evidence even when there is no named certification.

The second research question was about the relation between assurance mechanisms and the conventional supplier selection criteria. Research indicates that sustainability assurance sits closer to compliance and risk than to cost, quality, delivery or capability. Cost competitiveness, technical excellence and delivery reliability are emphasized by Valmet and Metso considers sustainability in addition to economic, financial and quality aspects (Metso, 2026a; Valmet, 2026a). Supplier responsibility is also linked to quality, legal compliance, operational reliability and risk screening by KONE and Outokumpu (KONE, 2025; KONE, 2026a; Outokumpu, 2026a; Outokumpu, 2026b). This reinforces the idea that sustainability impacts on the supplier's assessment, but it does not remove economic decision factors (Zhan et al., 2021). The boundary of selection is deeper: sustainability relies on disciplines the boundary of selection, defining who is eligible, and who is manageable; traditional disciplines the boundary of selection, influencing the commercial preference. It is no wonder that the documents are filled with compliance language and don't show a lot of evidence for sustainability-based ranking or premium selection.

The third research question focused on the institutional pressures that are included in the documents. Pressure from regulations and norms is most apparent. Regulatory pressure comes in the form of conflict-mineral due diligence, sanctions, EUDR, CBAM, GDPR, NIS2, REACH, RoHS and material-compliance clauses, normative pressure—via ILO, OECD, UNGP, ISO-style and SBTi references. The similarity of supplier-code, audit and due-diligence structures amongst companies is an observation of mimetic pressure,

although of a weaker nature. This is consistent with the institutional theory (DiMaggio and Powell, 1983; Kauppi and Hannibal, 2017; Kauppi and Luzzini, 2022) which asserts that coercive, normative and mimetic pressures lead to increasing similarity between organisations, particularly when legitimacy is of high importance and uncertainty is high. But evidence does not establish imitation – similarity may be due to common regulation and professional procurement norms.

5.3 Contribution and Implications

The main finding is that the third-party sustainability certifications in Finnish manufacturing supplier selection must be understood as governed signals. They are important, as they structure uncertainty, facilitate due diligence and establish auditable supplier expectations. They are not standalone evidence of substantive sustainability performance, however. The value of these depends on the extent to which they are integral to larger audits, traceability, self-assessment, supplier development, risk screening and corrective actions. This finding buttress signalling theory, as the meaning of a signal is not enough to rely on the presence of a signal only, but is also dependent on the governance context in which the signal is situated (Terlaak and King, 2006; Kauppi, Hannibal and Bryde-Evens, 2025). It also adds to the existing sustainable supplier selection literature, which demonstrates that certification is not just a weighted criterion, but also a justification mechanism, a compliance filter and a legitimacy resource. The study, therefore, provides a discourse-based explanation to a field that is largely dominated by decision models. It not only demonstrates a calculation of criteria, it also demonstrates a defensible decision-making process for regulators, customers, auditors and internal stakeholders.

So the lesson for procurement managers is to stay away from extremes. The certification should not be overlooked as "paperwork" as it is linked to detailed supplier governance by the analysed companies. But don't view it as a guarantee, either. Evidence of auditing and monitoring research reveals that formal systems can be separated from practice particularly where records

are incomplete or suppliers are coached or where there is less visibility at lower levels (Egels-Zandén, 2007; Locke, Qin and Brause, 2007; Soundararajan and Brown, 2016). In order to be responsible, procurement must be accompanied by certification-plus-governance: Supplier codes, audit rights, traceability clauses, risk triangulation, corrective action, capability building etc. Suppliers should also take note: certification can lead to entry, but ongoing acceptability depends on a growing requirement for documentary evidence and data quality, plus a responsiveness to corrective actions. The implication for policy makers is that evidence quality and follow-up is encouraged by the regulation, rather than just the presence of certificates.

5.4 Limitations and Future Research

This study has three main shortcomings. First, it is based on documents from the public face of suppliers, rather than secret procurement files or interviews. The findings, therefore, refer to the formal governance structure, and not to the quality of its implementation. Secondly, the sample is limited to four manufacturing companies and is not representative of all manufacturing companies in Finland. Third, the public documents may be an expression of the corporate self-presentation and legitimacy management, and the formalistic requirements could be more severe than the enforcement. Further research can be conducted to review the individual scoring measures, conduct interviews with procurement managers and suppliers, and analyse the outcomes of the supplier's performance compared to the supplier's commitments recorded. Longitudinal studies also could evaluate if assurance requirements have an impact on supplier practices over time. International comparisons would help to understand if the Finnish model is national business systems or European or global manufacturing systems.

5.5 Final Conclusion

Overall, the research has found that third-party sustainability certifications and other forms of equivalent assurance are key but inadequate governance tools. They do not play a clear-cut role as a supplier differentiator in the Finnish manufacturing supplier selection process, but rather as a threshold, an

evidence complements and a risk management tool. These mechanisms are more visible and auditable due to institutional pressure, and traditional procurement criteria continue to be in effect. In this context, the certification holds the utmost importance provided it is accompanied by broader verification, traceability and accountability mechanisms. The last finding of this research is that supplier sustainability assurance is not a proof, but simply a sign, established in a governing framework and institutional context, of supplier acceptability.

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