The Moderating Role of Institutions: How Contractual and Relational Governance Interact to Influence Social Sustainability Implementation in Garment Global Value Chains

Master's thesis

By:
Jasper van Zanten
s1026880

Supervised by:
Dr. CASTALDI, SARAH

Department of International Business Administration
Radboud University

Abstract

This study examines the interaction between contractual and relational governance mechanisms in implementing social sustainability practices within garment GVCs in developing countries. By analyzing data from 371 garment suppliers across 11 countries, it highlights how both governance mechanisms significantly contribute to social sustainability: contractual governance ensures compliance and accountability, while relational governance fosters collaboration and ethical conduct. The research underscores that these mechanisms are complementary, especially in contexts with low regulatory quality where formal institutions are insufficient. The findings offer practical insights for MNEs to adapt governance strategies according to local institutional contexts, ultimately promoting more socially sustainable and ethical supply chains.

Table of contents

Abstract **2**

Table of contents **3**

1. Introduction **5**

1.1 Background *5*

1.2 Problem statement *6*

1.3 Research goal and research question *7*

1.4 Theoretical and practical relevance *8*

1.5 Outline *9*

2. Literature review **10**

2.1 The Integration of Social Concerns into Supply Chain Management *10*

2.2 Social Sustainability Implementation: The Influence of Contractual and Relational Governance *12*

2.2.1 Contractual governance 12

2.2.2 Relational governance 12

2.2.3 Theoretical foundation 13

2.2.4 The interplay between contractual and relational governance 14

2.3 Institutions as a Moderator: How Formal and Informal Rules Shape Governance Mechanisms for Social Sustainability *15*

3. Hypotheses development **17**

3.1 Governance mechanisms and social sustainability implementation *17*

3.2 Institutional moderation of governance mechanisms and social sustainability implementation *19*

4. Methodology **21**

4.1 Justification for research design *21*

4.2 Research context *22*

4.3 Sample and data collection *22*

4.4 Variables and measures *23*

4.4.1 Dependent variable 23

4.4.2 Independent variables 24

Control variables 25

4.5 Estimation procedure *26*

4.6 Ethical considerations *26*

5. Analysis **27**

5.1 Descriptive statistics and correlation analysis *27*

5.2 Ordinary Least Square (OLS) assumptions *28*

5.3 Ordinary Least Square (OLS) analysis *29*

5.4 Robustness analysis *32*

6. Discussion **35**

6.1 Key findings *35*

6.2 Theoretical and practical implications *37*

6.3 Limitations and future research *38*

7. Conclusion **39**

I References **40**

II Appendices **54**

Appendix A: Variable operationalization table *54*

Appendix B: Statistical assumptions output *56*

1. Introduction

1.1 Background

Multinational enterprises (MNEs) face increasing scrutiny regarding the sustainability of their economic, social, and environmental (ESG) performance. Stakeholders, including government agencies, investors, customers, and NGOs, have increasingly emphasized the need for MNEs to take responsibility for their global value chains (GVCs). This pressure stems from the prevalence of vertical disintegration, where MNEs outsource non-core functions to a vast network of suppliers (Ambos et al., 2021). For instance, companies such as Nike, Disney, and Adidas have been held accountable for their suppliers' actions, such as environmental harm or labor law violations (Anisul et al., 2014). Consequently, considerations of environmental and social sustainability have become integral to the purchasing and sourcing decisions within MNEs (Miemczyk et al., 2012).

Effective governance mechanisms can serve as a bridge between stakeholder expectations and sustainability goals. By aligning objectives and strategies, governance frameworks enable MNEs to manage risks, ensure compliance with ESG standards and regulations, and uphold ethical business conduct across GVCs (Awan et al., 2018a; Lumineau & Henderson, 2012). The traditional, internally focused governance framework is no longer sufficient for managing these extended GVCs. A more nuanced approach has emerged, combining contractual agreements with trust-based relational governance between MNEs and their suppliers (Poppo & Zenger, 2002). This transition reflects the growing acknowledgement that achieving sustainability requires addressing the interconnectedness of economic, environmental, and social factors throughout the GVC. Further amplifying this need for sustainability in GVCs is the urgency of global challenges like climate change, environmental degradation, and social inequalities (Govindan et al., 2013). Due to these global challenges, MNEs are under increasing pressure to integrate sustainability into their strategic agendas to meet stakeholder expectations and regulatory requirements (M. Andersen & Skjoett-Larsen, 2009). In response, many MNEs have adopted fitting measures such as environmental reporting, sustainability strategies, and corporate codes of conduct (M. Andersen & Skjoett-Larsen, 2009).

To effectively implement these sustainability measures across complex GVCs, lead firms need to make strategic decisions regarding governance mechanisms. This process involves assessing which approaches are most effective for addressing ESG challenges and for fostering long-term sustainability within their supply chains. The main approaches are formal

governance, which involves using contractual evaluations, and relational governance, which focuses on collaborating with supply partners (Klassen & Vereecke, 2012).

In conclusion, the increasing pressure on MNEs to integrate sustainability into their GVCs highlights the critical role of effective governance mechanisms in achieving ESG goals. By adopting formal and relational governance approaches, MNEs can better manage risks, ensure compliance, and foster long-term sustainability within their supply chains.

1.2 Problem statement

Although governance measures are needed to address ESG challenges within GVCs, prior studies have revealed that lead firms' governance strategies, particularly supplier audits, often fail to significantly improve sustainability within these GVCs (Sinkovics et al., 2016). Due to significant geographical and cultural distances between lead firms and their suppliers, international buyers do not always have adequate understanding of the workers' needs, which are deeply influenced by values, norms, and priorities of suppliers, originating from their domestic institutional environments (Abdi & Aulakh, 2012; Lund-Thomsen, 2008). Additionally, supplier factory owners often experience a power asymmetry relative to their multinational buyers (Hoque et al., 2016), leading to concerns about how formalized compliance and auditing practices might affect the existing social value creation practices of these firms. Specifically, the introduction of complex contracts by lead firms may foster an adversarial mindset by suppliers, emphasizing self-protection and anticipating conflicts rather than promoting collaboration (Mellewigt et al., 2007). Accordingly, stakeholders have started to promote a new cooperative policy paradigm to implement social sustainability practices within GVCs. This paradigm focuses on building long-term, trust-based interorganizational relationships (IOR) and fostering close collaboration between international buyers and suppliers (Lund-Thomsen & Lindgreen, 2014). Informal interorganizational relationships may cause organizations to leave out elaborate contracts, relying on an implicit understanding of each other's intentions and commitment to act in good faith (Czernek et al., 2017).

The literature distinguishes two different views regarding governance mechanisms in buyer-supplier relationships. The first suggests that contractual and relational governance are substitutes (De Jong & Woolthuis, 2008; X. Jiang et al., 2013). For example, De Jong and Woolthuis (2008) argue that simple measurements of contracts cannot reflect the true intentions of contracting, potentially resulting in unexpected negative links between contracts and trust. Furthermore, research by Wang et al. (2011) found that as trust increases, the reliance on comprehensive contracts decreases, because trust naturally mitigates the risks that

contracts typically aim to cover. Conversely, other research suggests that contractual and relational governance are complements (Liu et al., 2009; Poppo & Zenger, 2002). According to Poppo and Zenger (2002), while trust and strong relationships enhance collaborative identification of social needs and foster a culture of shared values, contractual mechanisms are crucial for ensuring transparency, accountability, and adherence to regulatory policies. Furthermore, Liu et al. (2009) argue that the combination of formal mechanisms with trust-based, relational strategies provides a comprehensive governance model that not only discourages opportunism but also enhances the overall performance and sustainability of business relationships.

In other words, existing literature provides a theoretical basis to support either a substitutive or complementary relationship between transaction-level arrangements. However, previous research has not yet studied how these governance strategies interact in the context of suppliers' *social sustainability practice implementation* in GVCs. Furthermore. while research has focused on the substitution/complement debate and their institutional-level effects (Abdi & Aulakh, 2012), it has not yet examined how these strategies, particularly in the context of *social sustainability*, are connected to the institutional environments of suppliers' home countries. Additionally, most social studies have concentrated on the perspective of the buying firm in implementing practices and standards, with relatively few studies examining the viewpoints of suppliers (Jiang, 2009; Zorzini et al., 2015). Also, most existing research on socially sustainable practices has been conducted in the context of developed countries (Anisul et al., 2014), even though this topic is highly relevant to developing countries, where many MNEs have outsourced operations (Yawar & Seuring, 2017). To gain a better understanding of social sustainability implementation across the supply chain, it is necessary to extend the literature to include the perspective of suppliers in developing countries.

Building upon previous insights and divergent perspectives presented in the literature, this paper examines the substitutive and complementary effects between contractual and relational governance mechanisms in promoting social sustainability practice implementation within GVCs, and how these mechanisms vary across countries with different levels of institutional strength.

1.3 Research goal and research question

The goal of this paper is to advance the understanding of governance mechanisms within the field of interorganizational exchanges, with a specific focus on the context of sustainability.

The main purpose is to investigate how organizations navigate between detailed formal contracts and trust in the context of sustainability, studying the interaction between contractual and relational governance mechanisms. Moreover, this study aims to break down potential variations in these interactions across countries with different levels of institutional strength. Therefore, the central research question guiding this study is:

"Does buyer-led relational governance act as substitute or complement to contractual governance for implementation of social sustainability in Global Value Chains? How is this relationship affected by supplier country regulatory institutional quality?"

1.4 Theoretical and practical relevance

This research makes several theoretical and practical contributions: first, it adds to the literature on social sustainability in GVCs (e.g. Sinkovics et al., 2016; Awan, 2019) by investigating a twofold focus on both contractual and relational governance, providing a comprehensive view of how these strategies can be synergized or conflict, extending the current debate in the literature on the interplay of these governance mechanisms (e.g. De Jong & Woolthuis, 2008; Poppo & Zenger, 2002) to the context of social sustainability in GVCs. Second, this research contributes by addressing the gap between global social sustainability norms and locally accepted governance practices (Huq & Stevenson, 2020). Recognizing the deep local integration of suppliers in GVCs, it is proposed that lead firms can adapt their governance strategies to align with local cultural norms and regulatory frameworks, while still upholding global social sustainability standards (Castaldi et al., 2023). Third, it offers insights not only from the perspective of Western lead firms, but also from the perspective of suppliers in developing countries, which is often neglected in the literature (Anisul et al., 2014), which is particularly relevant as it challenges the predominantly Western-centric frameworks that are present in current GVC and social sustainability research. Fourth, this paper examines how lead firms can improve the implementation of ethical practices in GVCs, especially into distant suppliers in very different and challenging institutional contexts (Huq & Stevenson, 2020). This involves an analysis of the strategies that can be employed to ensure compliance with ethical standards, despite the complexities and variances in local governance and cultural norms, which is relevant for lead firms as they are often held accountable for the social and ethical practices throughout their supply chains.

1.5 Outline

The following chapters of this paper are organized as follows: Chapter 2 provides a literature review, examining the integration of social concerns into supply chain management, the role of governance mechanisms on social sustainability implementation, and the moderating effect of regulatory institutional quality. In chapter 3, hypotheses are developed concerning the direct effects of contractual and relational governance on social sustainability, the interaction effect of contractual and relational governance and the moderating effect of institutional strength. Chapter 4 outlines the methodology, including research design, context, sample selection, data collection, and variable definitions. It also discusses the statistical estimation procedure and ethical considerations. Chapter 5 analyzes the data, providing descriptive statistics, correlation analysis, and results from OLS regression analysis, along with robustness checks. Chapter 6 discusses the findings in relation to the hypotheses, highlighting theoretical and practical implications, and acknowledging limitations and future research directions. Chapter 7 will provide a conclusion, summarizing the key findings of the study and offering a final reflection on the research objectives.

2. Literature review

2.1 The Integration of Social Concerns into Supply Chain Management

Increasing awareness of environmental and social issues across supply chains has emerged, ranging from unethical supplier labor practices (Huq et al., 2016) to the escalating effects of climate change, such as rising greenhouse gas emissions from burning fossil fuels and deforestation (Ripple et al., 2017). These challenges are inherently complex, and demand solutions that navigate intricate relationships between various concepts within the field of sustainability. While traditional SCM primarily focuses on logistics optimization and cost reduction across supply chains, modern supply chain management covers environmental and social aspects as well, establishing the concept of sustainable supply chain management (SSCM) (Govindan et al., 2013; Seuring & Müller, 2008). This broader approach aligns with the definition of sustainability, which emphasizes "meeting the needs of the present without compromising the ability of future generations to meet their own needs (United Nations, n.d.)." Elkington's (1998) triple bottom line (TBL) framework further breaks down sustainability into three key dimensions: environmental, social, and economic (as cited in Loviscek, 2020). These are often referred to as the "three pillars" of sustainability. The TBL framework is increasingly adopted in modern sustainability efforts, requiring organizations and supply chains to consider alle three dimensions (economic, environmental, and social) for a holistic approach to sustainability (Farooque et al., 2019).

Research in supply chain management (SCM) is gradually expanding to address sustainability, with a notable emphasis on environmental issues rather than social ones (Zorzini et al., 2015). Nevertheless, a recent shift has emerged towards incorporating social sustainability concerns in the context of supply chain management as well (Hohn & Durach, 2022; Klassen & Vereecke, 2012). This increased emphasis on social sustainability is partly driven by increased awareness in developed nations regarding issues such as employee pay inequality and the implementation of community-oriented initiatives like education and healthcare programs (Nakamba et al., 2017). As stakeholders become increasingly attuned to social responsibility, organizations must constantly adapt to meet these expectations. Companies that prioritize social sustainability are seen as more responsible and trustworthy. This can lead to increased brand loyalty, customer satisfaction, and ultimately, shareholder value (Brammer & Walker, 2011). Moreover, prioritizing social sustainability is not only beneficial for business outcomes but also fundamentally important from an ethical standpoint.

Therefore, this study specifically focuses on the social pillar of the Triple Bottom Line (TBL) framework, aligning with the need to address pressing social issues within GVCs.

Social sustainability, as per the framework outlined by the UN's Sustainable Development Goal (SDG) 'Decent Work and Economic Growth,' pertains to practices aimed at ensuring the health, safety, well-being, and rights of workers within supply chains. This includes considerations such as working conditions, working hours, fair remuneration, and the freedom of association (Castaldi et al., 2023). These practices are often articulated in global policies specific to social sustainability, such as codes of conduct and third-party standards, compelling decision-makers to address concerns impacting quality of life and consider potential social ramifications of their choices (Mani et al., 2016). This focus on the human aspect is indispensable to achieving sustainability in supply chains and can even enhance a company's competitive advantage (Markley & Davis, 2007). However, recent research suggests fundamental challenges in implementing social sustainability. Unlike environmental concerns, which are readily identifiable in products and throughout the supply chain (Soundararajan et al., 2021), social sustainability issues are often less visible and pose greater difficulty in measurement. Hence, implementing social SSCM demands a more substantial effort for organizations and may not yield immediate measurable economic gains (Gimenez & Tachizawa, 2012, as cited in Hohn & Durach, 2022).

Specifically, this study is interested in to what extent social sustainability practices are effectively integrated into everyday operations and decision making. To assess this implementation, a behavioral approach will be followed (Castka & Prajogo, 2013). This approach looks beyond attitudes towards social sustainability policies and instead examines how well these policies are actually put into practice. This study is interested in the extent to which these practices become routine within a company, as opposed to simply existing on paper.

To conclude, the SSCM perspective emphasizes collaboration across the supply chain, requiring coordinated management of material, information, and capital flows while striving to achieve positive outcomes on all three sustainability dimensions (Seuring & Müller, 2008). Despite the challenges of measuring and implementing social sustainability practices, the evolution of supply chain management towards SSCM underscores the importance of addressing social sustainability alongside environmental and economic factors.

2.2 Social Sustainability Implementation: The Influence of Contractual and Relational Governance

Successful practice transfer involves replicating superior internal practices across an organization. However, institutional differences between home and host countries pose challenges (Abdi & Aulakh, 2012; Kostova et al., 2020). These challenges are more pronounced in GVCs, where local suppliers must align with their local contexts (Kostova & Roth, 2002). Thus, international buyers need to employ GVC governance strategies to support social sustainability practices at suppliers.

2.2.1 Contractual governance

Previous research identifies two primary frameworks for analyzing governance mechanisms: formal and relational perspectives (Poppo & Zenger, 2002; Williamson, 1996). The formal perspective aims to regulate exchanges between actors to reduce uncertainty, using structures such as legal stipulations and economic incentive systems (Clauss & Spieth, 2016). While the terms ‘contractual’ and ‘formal’ are often used interchangeably (Liu et al., 2009; Lumineau & Henderson, 2012), this study particularly uses ‘contractual’ to focus on the narrow scope of contracts within formal governance. Contractual governance refers to the degree to which an interorganizational relationship is regulated by a formal, written contract that clearly defines each party's responsibilities and obligations (Abdi & Aulakh, 2012; Cao & Lumineau, 2015). Contracts reduce opportunistic behavior and increase conformity to the buyer's demands, thereby promoting a more predictable and reliable exchange environment that can foster successful, long-term partnerships (Awan et al., 2018a). Furthermore, contracts act as a cost-effective deterrent against supplier deception through strict monitoring (Goerzen et al., 2021; Jamali et al., 2017). By creating a space for ongoing dialogue, regular audits allow for a collaborative approach to addressing workplace issues. Suppliers can gain valuable insights from auditors in finding effective solutions for these issues (Locke et al., 2009). Contractual agreements can be designed to link compliance with social sustainability standards to continued market access and business opportunities with international buyers (Lund-Thomsen and Lindgreen (2014). This creates a strong incentive for suppliers to prioritize social sustainability practices, knowing it directly benefits their long-term business relationships.

2.2.2 Relational governance

Relational governance works through shared behavioral expectations, fostering implicit control and mutual understanding among parties (Yan & Zhang, 2020). Unlike contractual

governance, relational mechanisms are not explicitly outlined in formal agreements (Tian et al., 2021), but rather govern through the social connections and standards of behavior that these connections establish (Liu et al., 2009). Therefore, relational governance establishes and governs interorganizational relationships through implicit control and mutual understanding, leading to the development of shared behavioral expectations. Research posits that trust and norms are the foundational mechanisms of relational governance (Benítez-Ávila et al., 2018; Liu et al., 2009; Tian et al., 2021). Firstly, the concept of trust, within the context of interfirm relationships, possesses a well-established definition in the literature. Within collaborative partnerships, trust can be described as an exchange partner's belief that the other party will act dependably, behave in a predictable manner, and demonstrate fairness in their interactions (Zaheer et al., 1998). Moreover, relational norms can be described as the common behavioral expectations of both the public and private sectors; these can constrain cooperative activities (Tian et al., 2021). Essentially, this study concentrates on trust at the interfirm level, which refers to the confidence a firm has in its partner's ethical character, trustworthiness, and good intentions (Cao & Lumineau, 2015). High levels of trust within a relationship foster a sense of security. Each party feels confident that the other will not exploit unforeseen circumstances, leading to a greater willingness to consider the partner's interests alongside their own (Liu et al., 2009). In essence, trust involves having confidence in the partner's reliability and loyalty, ultimately encouraging both parties to act in the best interests of the collaborative relationship.

2.2.3 Theoretical foundation

Before moving to the discussion of the interplay between contractual and relational governance, the underlying theoretical foundations of contractual and relational governance will be clarified. This paper discusses two main theories in explaining the effectiveness of contractual and relational governance; i.e., transaction cost theory (TCT) and relational view theory.

TCT posits that to mitigate potential opportunism arising from uncertainty and asset specificity, appropriate governance mechanisms must be implemented (Williamson, 1996). The theory argues that well-established contractual governance effectively addresses information asymmetry in interorganizational relationships (Liu et al., 2009). By establishing transparent communication channels and information sharing protocols, contractual governance can contribute to the monitoring and enforcement of agreements, enabling lead firms to effectively manage supplier actions and uphold the conditions outlined in contracts

(Cao & Lumineau, 2015). However, TCT also acknowledges that the effectiveness of contracts is constrained by bounded rationality and opportunism. Bounded rationality can lead to information asymmetry between buyers and suppliers, where one party possesses superior knowledge about the transaction compared to the other (Kotlar & Sieger, 2019). This can lead to behavioral uncertainty, referring to the challenges firms face in controlling and monitoring the contractual performance of exchange partners (Williamson, 1991). Such conditions raise concerns about opportunistic behavior, where partners might act in their own self-interest at the expense of others (You et al., 2018). In response to these challenges, alternative governance mechanisms, such as relational-based governance, are proposed (Goo et al., 2009).

The relational view theory suggests that effective governance goes beyond controlling costs and enforcing contracts. Trust and shared values are important for building strong relationships within a GVC (Yan & Zhang, 2020). Relational norms such as flexibility, information exchange, and solidarity emphasize the importance of cooperation, and encourage behavior that aligns with the shared values of the relationship (Gençtürk & Aulakh, 2007). This collaborative approach is facilitated by governance mechanisms that promote open communication and information sharing. By reducing information asymmetry, trust between buyers and suppliers is built. Moreover, governance mechanisms can be designed to align incentives towards shared goals, particularly around sustainability practices. This encourages joint problem-solving and collaboration across the GVC. Finally, the relational view emphasizes the importance of building long-term relationships between participants. This fosters a sense of reciprocity (Cropanzano & Mitchell, 2005), discouraging opportunistic behavior and ultimately promoting sustainable practices throughout the entire value chain.

2.2.4 The interplay between contractual and relational governance

Scholars have debated whether contractual and relational governance mechanisms act as substitutes or complements, and how their interaction effectively manages interorganizational relationships (Cao & Lumineau, 2015). On one hand, research suggests that contractual and relational governance substitute for each other (De Jong & Woolthuis, 2008; X. Jiang et al., 2013). This perspective indicates two main mechanisms: “replacing” and “dampening.” The replacing mechanism suggests that when trust and relational norms are well-established, the need for detailed contracts diminishes, as relational governance alone can effectively manage the relationship (Wang et al., 2011). The dampening mechanism suggests that the presence of formal contracts may signal a lack of trust, thereby undermining relational governance

(Malhotra, 2009). Consequently, strict contractual governance might weaken the relational foundations necessary for cooperative behavior, leading to decreased performance.

In contrast, a growing body of literature suggest the complementary nature of contractual and relational governance mechanisms (Wang et al., 2022), arguing that well-defined contracts can promote trust and relational norms by establishing a framework for cooperation (Poppo & Zenger, 2002). This complementary nature can be translated through "enabling" and "compensating" processes. Enabling processes refer to how each governance mechanism creates favorable conditions for the other. For instance, contracts that outline roles, responsibilities, and penalties for opportunistic behavior can diminish information asymmetry and promote a just environment, thereby supporting relational governance (Yang et al., 2012). Compensating processes indicate that each mechanism offsets the limitations of the other. Relational governance, for example, can address the rigidity and gaps inherent in formal contracts, particularly under conditions of uncertainty (Cao & Lumineau, 2015). This facilitates the contracting process and adapts contracts over time to better reflect the relationship dynamics (Poppo & Zenger, 2002).

2.3 Institutions as a Moderator: How Formal and Informal Rules Shape Governance Mechanisms for Social Sustainability

Firm's strategic choices and behaviors are demonstrably influenced by the fundamental "rules of the game," otherwise known as institutions (North, 2005, as cited in Wang et al., 2016). According to institutional theory, institutions (ways of doing things) tend to create isomorphic organizational responses because they accept the legitimacy of established ways of conduct to legitimate their own actions (Joardar & Sarkis, 2021). These actions then turn into a pattern that evolves over time and becomes accepted within an organization. Therefore, it is possible to predict practices within organizations from perceptions of legitimate behavior derived from cultural values, industry tradition, and firm history (Boxenbaum & Arora-Jonsson, 2017).

Firms are influenced by a network of institutional pressures, established by both formal and informal rules (North, 1990). Formal institutions, such as laws and regulations, exert influence through legal systems and courts, imposing clear consequences for non-compliance (Peng 2003). These institutions can be considered as the "written rules of the game" that define the regulatory framework. Conversely, informal institutions exert pressure through social networks and shared values, influencing behavior normatively – what is considered socially acceptable within an industry – and cognitively – how managers' internalized beliefs affect their decision-making (Scott, 2013). Disregarding these pressures, whether formal or

informal, can lead to a loss of social legitimacy among external stakeholders. The influence of the institutional environment extends universally to buyer-supplier relationships, as every supply chain is intricately linked to its broader social context (Reusen et al., 2020). Consequently, the effectiveness of governance mechanisms employed within GVCs is impacted by the overarching institutional environment (Bai et al., 2016).

As this study examines the role of contracts, the focus is on formal institutions, specifically the legal and regulatory systems (Bai et al., 2016). An effective legal system enhances the predictability of the law, while the government, as an independent third party, plays a critical role in ensuring objective and impartial contract enforcement (Greif, 2008). Weak regulatory institutional contexts often have unstable legal frameworks and ineffective enforcement mechanisms, compounded by frequent policy changes that destabilize supply chain operations (Ju et al., 2014).

Williamson's framework (1991) posits that the institutional environment dynamically influences firm-level governance decisions. This framework emphasizes how changes within the institutional environment can "shift" the relative costs of employing market governance (utilizing contracts and market mechanisms) versus hierarchical governance (internalizing activities within the firm's hierarchy). In environments with high regulatory institutional quality, firms can rely more on market governance structures (contracts) to enforce social sustainability practices, as the legal system provides reliable enforcement mechanisms (Williamson, 2008). However, in countries with low regulatory quality, the effectiveness of these contracts diminishes due to weak enforcement. Therefore, only when the legal system is effective, contracts can provide strong governance and ensure legitimate interorganizational behaviors in the supply chain (Bai et al., 2016). In environments with strong intellectual property rights, firms are more likely to engage in contractual governance. Strong protection reduces the risk of appropriation hazards, making detailed contracts and legal enforcement effective (Oxley, 1999). Conversely, in countries with weak intellectual property protection, firms face higher risks of appropriation hazards and may prefer relational governance or hierarchical structures (like joint ventures) to mitigate risks and build trust through closer control and mutual dependence (B. Andersen, 2006).

3. Hypotheses development

3.1 Governance mechanisms and social sustainability implementation

The diverse cultural contexts and geographically dispersed nature of GVCs present significant challenges to implementing social sustainability (Awan et al., 2018a). To overcome these challenges, governance mechanisms are crucial. Such mechanisms facilitate the implementation and monitoring of social sustainability standards across GVCs, ultimately reducing inefficiencies and ethical risks. Contracts are crucial in interorganizational relationships (Castaldi et al., 2023). First, contracts provide stringent and regular monitoring, acting as a deterrent against supplier deception (Goerzen et al., 2021), which ensures constant efforts from suppliers towards implementing social sustainability standards established by lead firms. Second, frequent audits facilitate an ongoing dialogue between suppliers and inspectors regarding effective solutions for workplace issues (Locke et al., 2009). This continuous interaction enables suppliers to better understand and implement social sustainability policies by providing them with ongoing guidance and support from auditors. Third, facing multiple audits per year from various customers reduces the incentive for suppliers to make superficial changes just to pass single audits, especially in emerging markets (Toffel et al., 2015). This discourages temporary compliance and promotes a more substantial and lasting adoption of social sustainability practices. Fourth, contractual governance can connect suppliers' compliance with social sustainability standards to continued market access and business opportunities with international buyers. Lund-Thomsen and Lindgreen (2014) argue that suppliers are more likely to adopt social sustainability measures when they see a direct link between compliance and long-term business relationships with international buyers. Given these arguments, the following hypothesis is formulated:

Hypothesis 1a (H1a): *Contractual governance mechanisms in GVCs have a positive effect on the implementation of social sustainability practices by suppliers.*

While contractual governance mechanisms are common in interorganizational relationships, relational governance can also play a role. Relational governance, rooted in trust, shared norms, and mutual understanding, extends beyond contractual obligations to promote deep collaboration and ethical conduct among supply chain partners (Liu et al., 2009). Looking at the effect of relational governance on suppliers' social sustainability

practice implementation, it becomes evident that this effect is particularly positive. Several factors contribute to this positive impact. First, research suggests that trust enables individuals to come up with new ideas during interactions, which is important for transforming ideas into practical actions that actually improves social quality for organizations' workers and society (Awan et al., 2018b). Secondly, high levels of trust promote ethical behavior throughout the supply chain. When suppliers trust that a lead firm will act ethically and hold them accountable, they are more likely to comply with and implement social sustainability standards consistently (Awan et al., 2018a). Empirical studies support this statement, saying that a shift from power exploitation to open dialogues and trust between multinational firms and suppliers can directly facilitate the practical application of sustainability practices, leading to social improvements in the supply chain (Anisul et al., 2014). Building on these insights, the following hypothesis is formulated:

Hypothesis 1b (H1b): *Relational governance mechanisms in GVCs have a positive effect on the implementation of social sustainability practices by suppliers.*

In the context of social sustainability, contractual and relational governance mechanisms tend to work together complementarily rather than acting as substitutes. First, while contracts establish the foundational obligations, relational governance ensures ongoing dialogue and adjustments, making the implementation process of social sustainability dynamic and responsive (Hyder et al., 2017). This *enables* suppliers to continuously improve and adapt their practices to evolving conditions and stakeholder needs. Second, the complementary effect between contractual and relational governance can resolve cost issues. By ensuring that formal agreements and specified requirements are not just imposed top-down but are supported by an understanding and cooperation between the parties, buyers increase their understanding of suppliers' conditions. This allows buyers to make better use of their own resources invested in the relationship and activate and utilize the suppliers' resources for mutual benefit (Ghauri et al., 2008), thereby *enabling* the effective use of resources determined in contracts through trust and collaboration. Third, trust enhances contract efficiency by reducing the need for extensive monitoring due to information asymmetry (Aben et al., 2021). This *compensates* for the limitations of contractual governance by building confidence and reliability between parties, fostering transparency, and facilitating open discussions about goals and challenges. As a result, this allows flexibility in adapting contracts as social sustainability standards continuously evolve (Gopal & Koka, 2012). Given

these arguments, the following hypothesis can be formulated:

Hypothesis 2 (H2): *Relational governance between buyers and suppliers positively moderates the relationship between contractual governance and the implementation of social sustainability practices by suppliers.*

3.2 Institutional moderation of governance mechanisms and social sustainability implementation

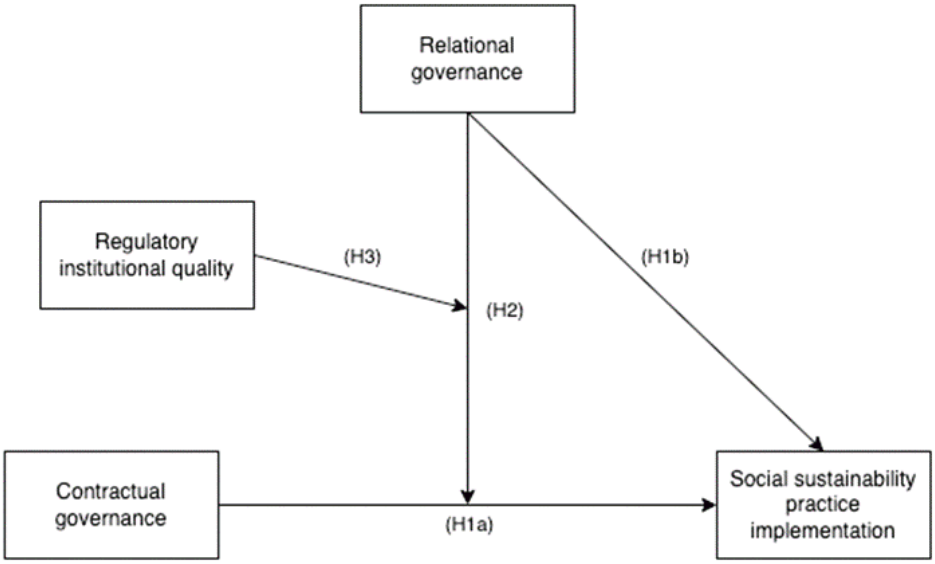
In countries with low regulatory institutional quality, the complementarity between contractual and relational governance is strengthened due to several factors. First, while contracts outline the responsibilities of buyers and suppliers, foster transparency and hold both parties accountable for maintaining sustainability standards (Kauppi & Hannibal, 2017), regulations governing contracts regarding social sustainability practices may be underdeveloped in countries with low regulatory institutional frameworks (Peng, 2003). In the absence of stringent regulations, the dynamic and responsive nature of relational governance (Hyder et al., 2017) allows suppliers to continuously improve and adapt their practices to evolving conditions and stakeholder needs next to existing contracts. Second, low regulatory oversight often leads to a more uncertain and risky business environment. Trust reduces this uncertainty by ensuring that parties act predictably and in good faith (Czernek et al., 2017), lowering the perceived risks of engaging solely in contractual relationships (Aben et al., 2021). Third, effective resource allocation is crucial in weak regulatory environments. Through open dialogue and transparency, buyers gain a deep understanding of their supplier's conditions and needs, hence lead firms can establish better contractual agreements that optimize resource utilization for both parties (Ghauri et al., 2008), thereby improving social sustainability implementation.

In summary, in weak regulatory environments, the lack of reliable enforcement mechanisms increases the risk of contract violations and undermines the effectiveness of purely contractual governance. This places greater importance on the complementary use of relational governance to ensure compliance with social sustainability standards, leading to the following hypothesis:

Hypothesis 3[1] (H3): *The complementary effect between contractual and relational governance on the implementation of social sustainability practices by suppliers will be stronger when the supplier is located in a country with low regulatory institutional quality.*

Please see conceptual model (Figure 1) below for an overview of the hypotheses:

Figure 1: *Conceptual model*



[1] AI-based assistance was used, specifically in refining the articulation of the hypotheses.

4. Methodology

This chapter outlines the methodology used to answer the research question: *"Does buyer-led relational governance act as substitute or complement to contractual governance for implementation of social sustainability in Global Value Chains? How is this relationship affected by supplier country regulatory institutional quality?"*

First, the choice for a quantitative research design will be substantiated. Then, the research context, including industry, organizational type, and countries selected, is described. Next, sample and data collection methods are elaborated, focusing on data utilization, sampling strategies, and determining the final sample size. Then, the dependent, independent, and control variables are defined. The statistical models used are explained and justified. Finally, ethical considerations are discussed.

4.1 Justification for research design

Quantitative survey research serves as a foundation in this study's methodological approach since it offers several essential advantages to this study's objectives. Firstly, qualitative research facilitates the collection of primary data directly from a range of emerging country garment suppliers, ensuring the reliability and validity of empirical findings by capturing a comprehensive overview of real-world practices. Easterby-Smith et al. (2012) emphasize the importance of quantitative approaches in generating robust empirical evidence within complex organizational settings. Moreover, using survey data allows for the construction of statistical models that can analyze hypothesized relationships among variables, thereby enabling the systematic testing of research hypotheses. Notably, Bryman (2016) highlighted the effectiveness of quantitative methodologies in studying causal relationships within multifaceted organizational contexts. Furthermore, the practical challenges in studying a geographically dispersed industry such as the garment sector require an approach that balances methodological rigor with operational feasibility. Quantitative surveys offer a solution to this challenge by facilitating data collection across distinct regions and countries, thereby enabling the analysis of diverse stakeholder perspectives while maintaining methodological consistency. This perspective aligns with the observations made by Nardi (2018) who advocates for the usefulness of quantitative surveys in addressing logistical complexities within global research efforts.

4.2 Research context

This article focuses on the garment industry, due to its global presence and the challenges it presents for achieving social sustainability within its complex, geographically dispersed supply chains (Merk, 2014). The industry's large scale and integrated production networks often span multiple countries and involve many suppliers and subcontractors (Hurley, 2005). Given its emphasis on labor rights, vulnerable working conditions, and worker well-being, the garment industry is a strategic area for studying social sustainability (Appelbaum, 2008). Additionally, rising consumer awareness regarding ethical production practices has intensified the demand for ethically-sourced garments (Anisul et al., 2014). Thus, studying social sustainability in the garment industry is not only timely but also essential for effective strategies to strengthen social sustainability in this sector.

This research targets suppliers from emerging countries, which dominate global garment production and cover a significant portion of the global workforce (Azmeh & Nadvi, 2014). This focus provides a substantial dataset for in-depth analysis and allows exploration of how governance mechanisms interact with social sustainability practices within diverse institutional contexts (WGI) (*Home | Worldwide Governance Indicators*, n.d.). Furthermore, the garment industry in emerging countries face criticism regarding labor rights and working conditions, highlighted by the tragic Rana Plaza factory collpase in Dhaka in 2013, which killed over 1,133 workers. Hence, investigating suppliers in emerging countries helps to address these social sustainability challenges.

4.3 Sample and data collection

This research examines the relationship between contractual and relational governance, social sustainability, and institutional context in the garment industry using existing data. The primary data source is a supplier survey conducted by Castaldi et al. (2023), which provides insights into social sustainability practices and buyer-supplier relationships in the garment and footwear sector. The survey targeted first-tier suppliers in Asia Pacific, Latin America, and Europe exporting to North American or Western European buyers. The study by Castaldi et al. (2023) offers several advantages. First, it is one of the few datasets that contains supplier-level data across multiple countries, providing a comprehensive view necessary for exploring the impact of institutional contexts. The data also provides information on social sustainability policy implementation and supplier-buyer relationships, directly aligning with the research objectives. Furthermore, the dataset encompasses garment and footwear suppliers from key production regions, such as Bangladesh, China, India, Indonesia, which aligns with

the research focuses on emerging countries. Lastly, the rigorous data collection and quality control procedures employed by Castaldi et al. (2023) ensure the reliability of the information used in this study.

To gain a comprehensive understanding of institutional context's influence on social sustainability, additional data from the World Bank's Worldwide Governance (WGI) dataset will be incorporated. The WGI dataset measures governance quality across over 200 countries, covering six dimensions of governance: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption (World Bank Group, 2024). The WGI dataset has been used in academic research before to examine the relationship between governance and various outcomes, including social sustainability. For instance, Boubakri et al. (2021) employed the WGI data to assess the determinants and performance implications of CSR practices in emerging market economies (EMEs). By incorporating the WGI data, this study can effectively assess whether institutional strength acts as a moderating factor. This approach strengthens the analysis by isolating effects of contractual and relational governance on social sustainability within the garment industry.

A total of 570 surveys were collected, with 176 surveys excluded for not matching the selection criteria. Specifically, suppliers that were not exporting to Western Europe or North America or were not located in emerging countries, and 24 respondents were excluded because they had missing data points. The final analysis included 370 responses from suppliers in 11 countries across the Asia Pacific and Latin America regions.

4.4 Variables and measures

4.4.1 Dependent variable

The dependent variable "social sustainability practice implementation" is measured on a continuum, ranging from low to high degree of implementation. The supplier's effectiveness of social sustainability policies is rated on a five-point Likert scale from 1 ("needs major improvements") to 5 ("very good"). The supplier was asked to rate their level of effectiveness with the following statements: (1) leadership (e.g., managers' active support for social compliance initiatives); (2) documentation (e.g., formal reporting of factory accidents or illness rates); (3) people (e.g., reflecting whether employee suggestions are taken seriously); and (4) process management (e.g., concerning the inclusion of social sustainability policies on the agenda of regular factory meetings) (Kostova & Roth, 2002). Factor analysis, confirmed by the Kaiser-Meyer-Olkin (KMO) measure of .814 and Bartlett's Test of Sphericity ($p <$

.001), shows these items significantly load on a single factor. A composite measure is created by averaging these items (α = .87).

4.4.2 Independent variables

In assessing contractual governance related to social sustainability implementation, this study focuses on the frequency of external audits as a primary indicator. Contractual governance for social sustainability is measured by the number of external audits conducted at supplier firms the past year. The audits may be carried out either by international buyers or independent third parties (Goerzen et al., 2021). This metric is mean-centered using the z-score formula, which adjusts the variable to have a mean of zero and a standard deviation of one.

For the independent variable 'relational governance', data are collected using a Likert-scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The supplier was asked to rate their level of agreement with the following statements: (1) This customer usually keeps the promises that it makes to our manufacturing plant; (2) When we share our problems with this customer (e.g. material prices), we know that it will respond with understanding; (3) This customer has often provided us information that has later proven to be inaccurate; (4) Whenever this customer gives us advice on our business operations, we know that it is sharing its best judgment; (5) If we struggle in implementing the social sustainability policy, this customer would simply switch to other suppliers rather than work out problems with us. Factor analysis (KMO = .631; Bartlett's test: $p < .001$) shows items 1, 2, and 4 significantly load on the first factor, forming a composite measure (α = .67). This measure is mean-centered.

Additional data from the World Bank's Worldwide Governance Indicators (WGI) for 2016 measure institutional quality across six dimensions. These indicators include: (1) Voice and Accountability; (2) Political Stability and Absence of Violence/Terrorism; (3) Government Effectiveness; (4) Regulatory Quality; (5) Rule of Law; (6) Control of Corruption. Each indicator is quantified on a scale from 0 to 100, representing percentile rankings that compare the governance quality of different countries. The scores for each indicator are specifically gathered for each supplier country included in the study (Appendix C3). Factor analysis (KMO = .624; Bartlett's test: $p < .001$) reveals significant loadings on the first factor for Government Effectiveness, Rule of Law, Control of Corruption, Political Stability, and Regulatory Quality, forming a composite variable of regulatory institutional quality (α = .885). This measure is also mean-centered.

Control variables

To isolate the effects of governance mechanisms on social sustainability implementation, this study incorporates several control variables both on the supplier level and country level. Following prior research by (Jiang, 2009), the duration of buyer-supplier relationships is included, categorized into three groups: 1 (less than 1 year), 2 (1-3 years), and 3 (more than 3 years). This information is sourced from the Castaldi et al. (2023) survey. Next, Muller and Kolk (2010) suggest that the demand for social sustainability practices varies by export destination. Therefore, 'export intensity' to North America or Western Europe is also controlled, calculated as the share of the supplier's total export profits from these regions. Additionally, supplier age and size are included. Supplier age reflects the maturity of operational practices, potentially influencing their approach to social sustainability. Supplier size accounts for the fact that large firms might have substantial resources to invest in SSCM and maintain higher bargaining power to influence suppliers and achieve better performance (Gualandris & Kalchschmidt, 2016). This is measured by the number of employees.

At the country level, supplier country culture is controlled using Hofstede's dimensions of Individualism versus Collectivism (IDV) and Long-Term Orientation versus Short-Term Normative Orientation (LTO) are included. The IDV dimension reflects the degree to which individuals are integrated into groups. Looking at the nature of social sustainability practices, which often emphasize community welfare, collective action, and social responsibility, collectivist societies might be more inclined to implement practices that benefit the community in comparison to individualistic societies (Hofstede et al., 2010). The LTO dimensions reflects the extent to which a society values long-term commitments and respects the norms that facilitate future rewards over immediate outcomes. Societies with a long-term orientation tend to prioritize future rewards, therefore are more likely to adopt (social) sustainability practices (Wang & Bansal, 2012). Although the Country Comparison Tool does not provide data for separate years, the most recent update was in 2023, so scores prior to this update are used (*Country Comparison Tool*, n.d.). Lastly, GNI per Capita[2], sourced from the World Bank's 2016 data, is included as suppliers in higher-income countries may have more financial resources to invest in social sustainability initiatives. (*GNI per Capita, Atlas Method (Current US$)*, n.d; Skowronski et al., 2020).

[2] AI-assistance was used to identify GNI per capita as a relevant control variable for this study.

4.5 Estimation procedure

A moderated regression analysis, specifically Ordinary Least Squares (OLS) regression with robust standard errors, was employed. The choice of OLS regression was driven by several factors, including the nature of the research question, the structure of the dataset, and the characteristics of the variables. First, this research focuses on understanding the linear relationships between independent variables (contractual governance, relational governance, regulatory institutional quality) and the dependent variable (social sustainability practice implementation). OLS regression is particularly suited to estimate the best-fitting linear equation to explain the variation in the dependent variable based on the independent variables, providing robust estimates of these effects. Second, while OLS regression ideally assumes normality of errors, this study acknowledges that achieving perfect normality might not be realistic. However, with a reasonably large sample size (n = 371), the central limit theorem assures that the OLS estimates will still be approximately normally distributed and reliable for hypothesis testing (Field, 2013). Third, a sample size of 371 responses from garment suppliers across 11 countries provides sufficient statistical power for OLS regression analysis. This allows for more generalizable inferences about the population from which the sample was drawn. OLS regression relies on assumptions such as linearity, independence of errors, homoscedasticity, and normality of residuals. Given the nature of the dataset and preliminary diagnostic checks, these assumptions are reasonably met. Additionally, any violations can be addressed through robust standard errors or data transformation techniques, ensuring the validity of the results.

To specifically test the moderating role of regulatory institutional quality, a sub-sample analysis was conducted. This involved dividing the sample into groups based on different levels of regulatory institutional quality and running separate OLS regressions for each sub-sample.

4.6 Ethical considerations

This research adheres to ethical principles established for conducting research with human subjects. The data used in this study (Castaldi et al., 2023) was collected with informed consent from the participating suppliers, and anonymity will be maintained throughout the analysis and reporting stages. Additionally, the research design avoids any manipulations or deceptive practices that could potentially harm participants.

5. Analysis

5.1 Descriptive statistics and correlation analysis

The 'contractual governance' variable had high kurtosis, which was addressed with a square root transformation, reducing the kurtosis to -.083. The control variable 'Age' also exhibited high kurtosis, affecting the regression model's interpretability. Transforming 'Age' from continuous to categorical (Old: >20 years, Middle-aged: 10-20 years, Young: <10 years) corrected this issue. 'Supplier size' had high skewness and kurtosis, resolved through a log transformation, resulting in skewness of -.027 and kurtosis of -.421.

Table 5: *Descriptive statistics of the final sample*

N = 370, missing = 0

Variables	Mean	Median	SD	Min	Max	Skew.	Kurt.
1. Social sustainability implementation	3.535	3.5	.877	1	5	-.337	-.451
2. Contractual governance[a]	0	-.162	1	-1.371	3.389	.502	-.083
3. Relational governance[a]	0	.289	1	-2.963	1.915	-.336	.231
4. Regulatory institutional quality[a]	0	.485	1	-1.927	2.277	-.817	-.030
Control variables							
5. Supplier-buyer relationship length	2.70	3.00	.525	1	3	-1.534	1.447
6. Export intensity	56.658	60.00	29.655	.3	100.0	-.216	-1.149
7. Age	1.87	2.00	.739	1	3	.211	-1.147
8. Size	6.350	6.397	1.500	2.08	10.55	-.027	-.421
9. Individualism	22.03	20.00	7.907	14	48	1.672	2.125
10. Long term orientation	62.49	57.00	17.953	25	87	.370	-1.302
11. GNI per capita	5,314.38	3,400.00	3,474.83	1,330	10,540	.119	-1.709

[a]Mean-centered value

The correlations are presented in Table 6. The correlation matrix shows that social sustainability implementation is positively correlated with contractual governance at 0.301 and with relational governance at 0.416.

Table 6: *Correlations*

N = 370, missing = 0

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Social sustainability implementation	1										
2. Contractual governance[a]	.286	1									

3. Relational governance[a]	.455	.295	1								
4. Regulatory institutional[a] quality	.014	-.035	-.044	1							
5. Supplier-buyer relationship length	.287	.154	.254	0.10	1						
6. Export intensity	.183	.121	.118	-.268	.261	1					
7. Supplier age	-.177	-.147	-.094	-.089	-.261	-.060	1				
8. Supplier size	.104	.270	.160	-.322	.236	.113	-.169	1			
9. Individualism	.082	-.010	-.113	.184	-.010	.123	-.150	-.274	1		
10. Long term orientation	.038	.269	.116	.379	-.153	-.392	.112	-.184	-.305	1	
11. GNI per capita	.136	.229	.044	.490	-.047	-.183	-.176	-.441	.383	.434	1

[a]Mean-centered value

5.2 Ordinary Least Square (OLS) assumptions

The validity and reliability of the results in this study rely on several assumptions related to the moderated regression analysis. The assumptions mostly contain general assumptions regarding the linear regression model, including linearity, normality, homoscedasticity, independence, and multicollinearity (Field, 2013).

First, the assumption of linearity was supported by the presence of clear linear relationships between the dependent variable and the independent variable, marked from the plots in Appendix B1. Secondly, the assumption of normality of the residuals was evaluated using a Normal P-P Plot of the standardized residuals. The plot (Appendix B2) showed that the points closely followed the diagonal line, suggesting that the residuals are approximately normally distributed. Third, the assumption of homoscedasticity was assessed through the inspection of a scatterplot plotting the standardized residuals against the standardized predicted values derived from the regression model. The scatterplot (Appendix B3) did not display any systematic patterns, which would indicate heteroscedasticity. Fourth, to address the assumption of no endogeneity, which requires that independent variables are not correlated with the error term, multiple control variables were included to the analysis. This inclusion substantially reduces the risk of omitted variable bias, ensuring exogeneity. Fifth, the collinearity statistics presented in Appendix B4 indicate that all Variance Inflation Factor (VIF) values are under the established threshold of 10, confirming that there is no significant multicollinearity among the independent variables.

5.3 Ordinary Least Square (OLS) analysis

To test the hypotheses, several ordinary least square regressions were conducted. In Table 7, the results of these regressions are presented. Model 1 includes only the control variables. Models 2 and 3 test Hypotheses 1a and 1b, assessing the impact of contractual and relational governance on suppliers' social sustainability practices. Model 4 tests the moderating effect as outlined in Hypothesis 2. Models 4a and 4b examine the interactions between governance types under low and high regulatory institutional quality (Hypothesis 3). Sample sizes for Models 4a and 4b are 184 and 186, respectively. Hypothesis 1a and 1b propose that both contractual and relational governance positively influence the implementation of social sustainability practices by suppliers. Findings confirm this, with significant positive impacts of contractual governance in Model 2 ($\beta = .179$, $p = .002$) and relational governance in Model 3 ($\beta = .330$, $p = .001$), supporting both hypotheses. Hypothesis 2 suggests that strong relational governance positively moderates the impact of contractual governance on the implementation of social sustainability practices by suppliers, supported by Model 4 ($\beta = .107$, $p = .023$). Relational governance thus strengthens the effect of contractual mechanisms. Hypothesis 3 predicts that the complementary of contractual and relational governance is greater in countries with weak regulatory institutions (Model 4[a]). The coefficient for this sub-sample interaction effect is positive and statistically significant ($\beta = .204$, $\rho = .018$). This suggests that relational governance significantly enhances the effectiveness of contractual governance in promoting social sustainability practices under low regulatory conditions. In high regulatory quality countries (Model 4[b]), the interaction effect is negative ($\beta = -.051$) but not statistically significant ($p = .450$), indicating no strong evidence of adverse interaction effects. Thus, Hypothesis 3 is supported for low regulatory quality countries but inconclusive for high regulatory quality countries. Figure 1 visualizes the interaction effect, showing that strong relational governance enhances the effectiveness of contractual governance in low regulatory countries, while weak relational governance results in little impact. Lastly, in the control model (Model 1), several control variables significantly predict the implementation of suppliers' social sustainability practices. These include the duration of the supplier-buyer relationship ($\beta = .200$, $p = .001$), export intensity ($\beta = .158$, $p = 0.003$), supplier size ($\beta = .200$, $p = .001$), individualism ($\beta = .145$, $p = .023$), long-term orientation ($\beta = .114$, $p = .098$), and GNI per capita ($\beta = .153$, $p = .035$).

Figure 1: *Marginsplot: contractual governance and social sustainability practice implementation by level of relational governance in low regulatory institutional countries*

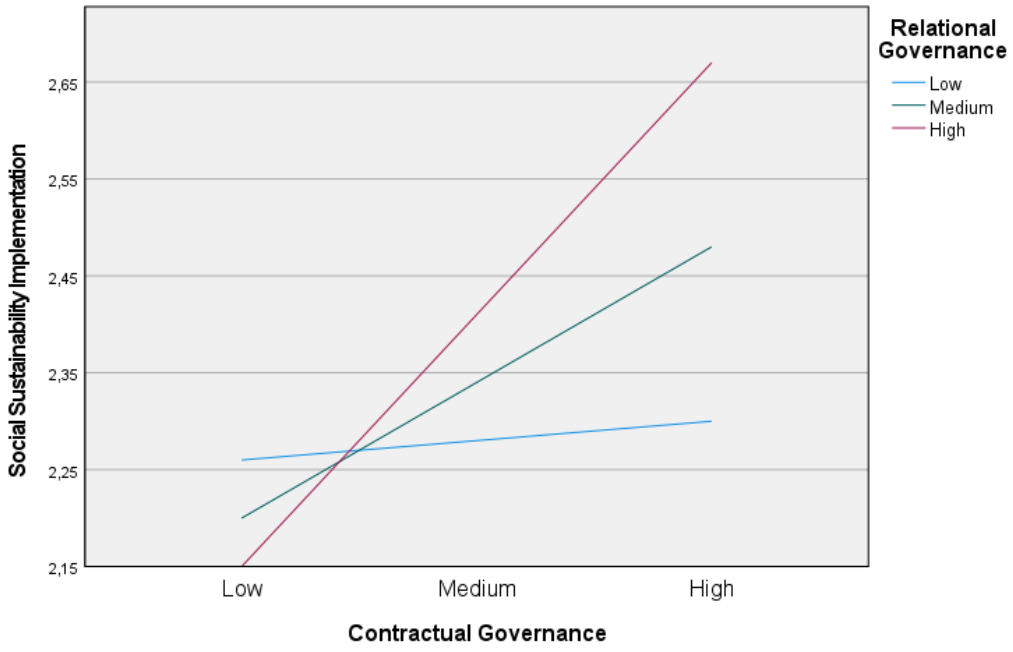


Table 7: *Explaining supplier's social sustainability practice implementation*

N = 370

Independent variables	Model 1		Model 2		Model 3		Model 4		Model 4[a]		Model 4[b]	
	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value
Contractual governance			.179	.002					.103	.218	.190	.026
Relational governance					.330	.001			.230	.007	.461	.001
Contractual governance * relational governance							.107	.023	.204	.018	-.051	.450
Supplier-buyer relationship length	.200	.001	.190	.001	.125	.012	.114	.022	.203	.005	-.030	.684
Export intensity	.158	.003	.115	.035	.085	.099	.072	.161	-.113	.139	.160	.026
Supplier age	-.075	.158	-.071	.179	-.066	.185	-.065	.188	-.045	.545	-.098	.169
Supplier size	.200	.001	.122	.048	.103	.077	.105	.071	.173	.072	.040	.591
Individualism	.145	.023	.130	.039	.162	.007	.162	.007	.239	.028	-.005	.938
Long term orientation	.114	.098	.049	.486	.019	.774	-.012	.855	-.064	.504	.050	.563
GNI per capita	.153	.035	.104	.157	.089	.196	.097	.160	.141	.176	.007	.933

[a]Low regulatory institutional quality countries
[b]High regulatory institutional quality countries

5.4 Robustness analysis

To validate the findings, two robustness tests were conducted. First, an alternative measure of the dependent variable was used. The supplier's social sustainability practices were evaluated using a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The supplier was asked to rate their level of agreement with the following statements: (1) Self-assessments are conducted regularly and the results are used as a basis for improving our processes; (2) All workers are trained in the social sustainability requirements (e.g., health and safety hazards);

(3) We clearly document the social sustainability policy and procedures, and continuously update them; (4) We integrate financial and social sustainability reporting to make more informed assessments on our plants overall performance; (5) We strictly maintain our daily operations and practices according to the documented social sustainability requirements.

A factor analysis (KMO = 0.858; Bartlett's test: $p < .001$) confirmed all five items loaded strongly on a single factor. A composite measure was created by averaging these items, with good internal consistency ($\alpha = .85$). The findings presented in Table 8 are generally consistent with the main analysis, confirming the positive impacts of contractual governance (H1a) and relational governance (H1b). However, the interaction effects differ: the robustness test shows an insignificant interaction effect, while the main analysis shows a significant result. Similarly, the interaction effects in Models 4a and 4b are insignificant in the robustness test, contrasting with the significant interaction effect in Model 4a of the main analysis.

Secondly, a three-way interaction regression was conducted as a robustness check. This indicated that the variable Regulatory institutional strength was added to the interaction term between Contractual governance and Relational governance. The findings presented in Table 9 indicate that the three-way interaction term ($\beta = .015$, $p = .816$) was not statistically significant. This finding implies that the quality of regulatory institutions does not significantly moderate the combined effect of contractual and relational governance on social sustainability practices.

Table 8: *Robustness analysis: dependent variable*

N = 370

Independent variables	Model 1		Model 2		Model 3		Model 4		Model 4[a]		Model 4[b]	
	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value
Contractual governance			.194	.001					.146	.087	.116	.120
Relational governance					.478	.001			.302	.001	.592	.001
Contractual governance * relational governance							.050	.258	.054	.536	-.065	.274
Supplier-buyer relationship length	.282	.001	.272	.001	.178	.001	.173	.001	.232	.002	.042	.519
Export intensity	.174	.001	.128	.021	.085	.082	.079	.108	-.106	.168	.193	.002
Supplier age	-.027	.613	-.023	.671	-.015	.743	-.015	.749	.056	.450	-.126	.045
Supplier size	.089	.124	.004	.945	-.023	.676	-.022	.685	-.019	.843	-.037	.566
Individualism	.107	.099	.091	.155	.137	.015	.137	.015	.168	.124	-.041	.503
Long term orientation	.212	.002	.142	.048	.099	.118	.084	.193	-.089	.361	.119	.121
GNI per capita	-.049	.507	-.102	.168	-.123	.058	-.120	.066	-.133	.208	-.200	.010

[a]Low regulatory institutional quality countries
[b]High regulatory institutional quality countries

Table 9: *Robustness analysis: dependent variable*

N = 370

Independent variables	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value	β (SE)	ρ value
Contractual governance			.179	.002										
Relational governance					.330	.001								
Regulatory institutional quality									-.096	.102				
Contractual governance * relational governance							.107	.023						
Contractual governance * regulatory institutional quality											-.015	.764		
Relational governance * regulatory institutional quality											.028	.579		
Contractual governance * relational governance * Regulatory institutional quality													.015	.816
Supplier-buyer relationship length	.200	.001	.190	.001	.125	.012	.114	.022	.127	.011	.129	.011	.130	.011
Export intensity	.158	.003	.115	.035	.085	.099	.072	.161	.063	.226	.062	.237	.062	.233
Supplier age	-.075	.158	-.071	.179	-.066	.185	-.065	.188	-.067	.173	-.066	.181	-.066	.180
Supplier size	.200	.001	.122	.048	.103	.077	.105	.071	.105	.071	.104	.073	.105	.072
Individualism	.145	.023	.130	.039	.162	.007	.162	.007	.168	.005	.167	.005	.167	.005
Long term orientation	.114	.098	.049	.486	.019	.774	-.012	.855	.009	.894	.008	.907	.008	.908
GNI per capita	.153	.035	.104	.157	.089	.196	.097	.160	.145	.053	.146	.054	.146	.054

6. Discussion

6.1 Key findings

Driven by increasing demands from stakeholders for better labor rights and social conditions within GVCs, this study investigates how governance mechanisms – contractual and relational – influence the implementation of social sustainability practices by suppliers within varying institutional contexts. This article builds on the assumption that both contractual and relational governance mechanisms contribute to social sustainability implementation in GVCs. However, this research also explores the potential for these mechanisms to complement each other, enhancing their overall impact on sustainability within varying institutional contexts. This research examines these interrelations and provides a nuanced view of GVC governance, thereby addressing a critical gap in the existing literature on sustainable supply chain management.

In alignment with Hypothesis 1a, the results from the analysis demonstrate that contractual governance mechanisms significantly enhance the implementation of social sustainability practices in GVCs. These results suggest that contracts reduce opportunistic behavior, promoting a more reliable exchange environment where there is more room for collaboration instead of organizations acting in their own self-interest at the expense of others (You et al., 2018). In other words, contracts contribute to a transparent and accountable environment that fosters robust collaboration between buyers and suppliers in GVCs (Awan et al. 2018a), which is essential for the successful adoption of social sustainability practices in supply chains. Next, consistent with Hypothesis 1b, relational governance mechanisms have also shown a positive impact on the implementation of social sustainability practices. These findings corroborate the relational view, which suggests that trust and mutual understanding foster collaborative environments conducive to sustainability (Yan & Zhang, 2020). Essentially, the finding confirms that a shift from power exploitation to open dialogues and trust between multinational firms and suppliers can foster social improvements in the supply chain (Anisul et al., 2014).

The analysis of Hypothesis 2 revealed that relational governance positively and significantly moderates the impact of contractual governance on the implementation of social sustainability practices by suppliers. This finding supports Poppo and Zenger's (2002) proposition that formal and relational governance mechanisms are complementary in enhancing organizational performance. Specifically, integrating these governance

mechanisms leverages the explicit control of formal contracts with the flexibility and mutual understanding inherent in relational governance. This research supports the idea that trust enhances contract efficiency by reducing the need for extensive monitoring due to information asymmetry (Aben et al., 2021). Trust builds confidence and reliability, fosters transparency, and facilitates open discussions about goals and challenges between firms. This findings also supports the idea that relational governance allows flexibility in adapting contracts as social sustainability standards continuously evolve, without the need for constant renegotiation of terms (Gopal & Koka, 2012).

The results for Hypothesis 3 show that the expected complementary effects of contractual and relational governance on the implementation of social sustainability practices by suppliers significantly increase in varying regulatory contexts. Specifically, in low regulatory institutional environments, contractual and relational governance are more likely to act as complements rather than substitutes, as indicated by the positive and significant coefficient in Model 4a. This finding supports Bai et al. (2016), suggesting that the effectiveness of governance mechanisms within GVCs is influenced by institutional frameworks, and the analysis of this paper indicates that these combined mechanisms are particularly effective in weaker regulatory environments. This finding supports the idea that while contracts outline responsibilities, foster transparency and hold both parties accountable for sustainability standards (Kauppi & Hannibal, 2017), regulations governing contracts regarding social sustainability practices may be underdeveloped in countries with low regulatory institutional frameworks (Peng, 2003). In such contexts, the dynamic and responsive nature of relational governance (Hyder et al., 2017) allows suppliers to continuously improve and adapt practices to evolving conditions and stakeholder needs alongside existing contracts.

This suggests that in low regulatory environments, relational governance enhances the effectiveness of contractual governance by compensating for weaker formal institutional support. Consequently, this research calls for a more nuanced understanding of institutional theory. While strong regulatory environments are advantageous, the interplay of governance mechanisms can overcome institutional weaknesses, highlighting the importance of relational governance in reinforcing contractual governance, particularly in contexts with less robust regulatory frameworks.

6.2 Theoretical and practical implications

This research makes several theoretical and practical implications. First, it adds to the debate on whether contractual and relational governance mechanisms act as complements or substitutes (Cao & Lumineau, 2015). The results show that these mechanisms can be complementary, particularly in contexts with weak regulatory institutions. This finding supports the theoretical view that while contracts provide a formal structure and accountability, relational governance fosters trust and cooperation, which are essential for the dynamic implementation of social sustainability practices (Hyder et al., 2017). The research extends institutional theory by demonstrating that in countries with weak regulatory frameworks, the complementary effect of contractual and relational governance is more pronounced, thus providing new understandings of governance in varying institutional settings (Abdi & Aulakh, 2012; Bai et al., 2016), in the context of social sustainability.

Second, this study contributes to the literature on social sustainability in GVCs (Huq et al., 2016; Lund-Thomsen & Lindgreen, 2014; Toffel et al., 2015) by empirically testing the impact of combined governance mechanisms on social sustainability practice implementation. While previous research studied the direct effects of governance mechanisms on social sustainability (Awan et al., 2018a; Toffel et al., 2015), this study uniquely examines the complementary versus substitution debate in this field. Also, by focusing on the actual implementation rather than just social sustainability in general, this study underscores the importance of moving beyond ambiguous sustainability objectives to actual behavioral changes within organizations, aligning with Castka and Prajogo's (2013) emphasis on the practical enactment of sustainability policies.

Third, the research highlights the necessity for lead firms to adapt their governance strategies according to the institutional quality of the supplier's country (Oxley, 1999). This underscores the importance of aligning global social sustainability standards with local cultural norms and regulatory frameworks (Castaldi et al., 2023). Lead firms must recognize and respect the local contexts of their suppliers while maintaining their global sustainability commitments. In weak regulatory environments, emphasizing relational governance can help bridge the gaps left by insufficient legal enforcement. Regular audits and formal contracts should be supplemented with ongoing dialogues and cooperation. This continuous engagement ensures that social sustainability practices are dynamically adapted and effectively implemented.

6.3 Limitations and future research

This study provides several opportunities for future research. First, this study lays a foundation for the critical understanding of implementation practices among first-tier suppliers. Extending the research to include tier-two suppliers, subcontractors, intermediaries, and third-party auditors could provide a more comprehensive understanding of the entire GVC's social sustainability practices. Tier-two suppliers and subcontractors often play significant roles in production but operate under less direct oversight from lead firms (Gereffi et al., 2005), potentially leading to gaps in social sustainability compliance. Therefore, theory would benefit from additional research on this extended network to further address the complexities of social sustainability across the entire supply chain. Second, while this study provides valuable insights, its findings are based solely on quantitative data, which may not fully capture the nuanced interaction between contractual and relational governance. Future research could strengthen the insights of this study by incorporating qualitative methods, such as expert interviews. This mixed-methods approach improves the analytical depth of the study, offering new perspectives that can complement quantitative findings (Alasuutari et al., 2008).

Third, this research relies on self-reported measure of social sustainability practice implementation. It is acknowledged that managers' self-reported answers on questions around social sustainability issues may be subject to social desirability bias (Podsakoff et al., 2003). Although Castaldi et al. (2023) minimized this issue by ensuring the respondents anonymity, the possibility that it may have affected the results by overstating suppliers' social sustainability responsiveness cannot be entirely ruled out. Future research could further reduce potential bias by relying on non-self-reported measures, such as independent company reports (Muller & Kolk, 2010). Fourth, the use of cross-sectional data in this study presents the results of the data at a specific point in time. This methodology limits the ability to observe how changes in the variables evolve or respond to external influences over time. To overcome this limitation, future research could employ spatial panel data, tracking the same variables across multiple time points. By observing how these interactions develop and potentially change over extended periods, researchers could gain insights into the long-term effects of governance mechanisms on social sustainability practice implementation within different regulatory contexts (Eikelenboom & de Jong, 2019).

7. Conclusion

This study examined the interaction between contractual and relational governance mechanisms in implementing social sustainability practices in developing country garment supply chains. It is evident that both governance mechanisms separately significantly contribute to the implementation of social sustainability practices. Contractual governance ensures compliance and accountability, while relational governance fosters collaboration and ethical conduct. The findings suggest that these mechanisms are not substitutes but rather work complementary, strengthening the overall governance strategy. This study also features the moderating role of institutional contexts. In countries with low regulatory quality, the complementary effect between contractual and relational governance becomes even more evident, as it fills the gaps left by insufficient formal institutions. This research offers practical insights for lead firms aiming to improve their governance strategies among geographically dispersed GVCs, emphasizing the importance of adapting these strategies to the local institutional contexts of their suppliers.

In summary, the study underscores the importance of a combined approach that integrates contractual and relational governance for the successful implementation of social sustainability practices within global value chains. By aligning governance mechanisms with local institutional strengths and weaknesses, MNEs can better navigate the complexities of sustainability, leading to more socially sustainable and ethical supply chains.

I References

Abdi, M., & Aulakh, P. S. (2012). Do country-level institutional frameworks and interfirm governance arrangements substitute or complement in international business relationships? *Journal of International Business Studies*, *43*(5), 477–497. https://doi.org/10.1057/jibs.2012.11

Aben, T. A. E., van, der V. W., Roehrich, J. K., & Selviaridis, K. (2021). Managing information asymmetry in public–private relationships undergoing a digital transformation: The role of contractual and relational governance. *International Journal of Operations & Production Management*, *41*(7), 1145–1191. https://doi.org/10.1108/IJOPM-09-2020-0675

Alasuutari, P., Bickman, L., & Brannen, J. (2008). The SAGE Handbook of Social Research Methods. In *SAGE Publications Ltd eBooks*. https://doi.org/10.4135/9781446212165

Ambos, B., Brandl, K., Perri, A., Scalera, V. G., & Van Assche, A. (2021). The nature of innovation in global value chains. *Journal of World Business*, *56*(4), 101-221. https://doi.org/10.1016/j.jwb.2021.101221

Andersen, B. (2006). *Intellectual Property Rights: Innovation, Governance and the Institutional Environment*. https://ci.nii.ac.jp/ncid/BA78167096

Andersen, M., & Skjoett-Larsen, T. (2009). Corporate social responsibility in global supply chains. *Supply Chain Management: An International Journal*, *14*(2), 75–86. https://doi.org/10.1108/13598540910941948

Anisul, H. F., Stevenson, M., & Zorzini, M. (2014). Social sustainability in developing country suppliers: An exploratory study in the ready made garments industry of Bangladesh. *International Journal of Operations & Production Management*, *34*(5), 610–638. https://doi.org/10.1108/IJOPM-10-2012-0467

Appelbaum, R. P. (2008). Giant Transnational Contractors in East Asia: Emergent Trends in Global Supply Chains. *Competition & Change*, *12*(1), 69–87. https://doi.org/10.1179/102452908X264539

Awan, U. (2019). Effects of buyer-supplier relationship on social performance improvement and innovation performance improvement. *International Journal of Applied Management Science*, *11*(1), 21–35. https://doi.org/10.1504/IJAMS.2019.096657

Awan, U., Kraslawski, A., & Huiskonen, J. (2018). Governing Interfirm Relationships for Social Sustainability: The Relationship between Governance Mechanisms, Sustainable Collaboration, and Cultural Intelligence. *Sustainability*, *10*(12), 4473. https://doi.org/10.3390/su10124473

Awan, U., Kraslawski, A., & Huiskonen, J. (2018b). The impact of relational governance on performance improvement in export manufacturing firms. *Journal of Industrial Engineering and Management*, *11*(3), 349. https://doi.org/10.3926/jiem.2558

Azmeh, S., & Nadvi, K. (2014). Asian firms and the restructuring of global value chains. *International Business Review*, *23*(4), 708–717. https://doi.org/10.1016/j.ibusrev.2014.03.007

Bai, X., Sheng, S., & Li, J. J. (2016a). Contract governance and buyer–supplier conflict: The moderating role of institutions. *Journal of Operations Management*, *41*(1), 12–24. https://doi.org/10.1016/j.jom.2015.10.003

Benítez-Ávila, C., Hartmann, A., Dewulf, G., & Henseler, J. (2018). Interplay of relational and contractual governance in public-private partnerships: The mediating role of relational norms, trust and partners' contribution. *International Journal of Project Management*, *36*(3), 429–443. https://doi.org/10.1016/j.ijproman.2017.12.005

Boubakri, N., El Ghoul, S., Guedhami, O., & Wang, H. (Helen). (2021). Corporate social responsibility in emerging market economies: Determinants, consequences, and future

research directions. *Emerging Markets Review*, *46*, 100758. https://doi.org/10.1016/j.ememar.2020.100758

Boxenbaum, E., & Jonsson, S. (2017). Isomorphism, Diffusion and Decoupling: Concept Evolution and Theoretical Challenges. In SAGE Publications Ltd eBooks (pp. 77–97). https://doi.org/10.4135/9781446280669.n4

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

Bryman, A. (2016). *Social Research Methods*. Oxford University Press.

Cao, Z., & Lumineau, F. (2015). Revisiting the interplay between contractual and relational governance: A qualitative and meta-analytic investigation. *Journal of Operations Management*, *33–34*(1), 15–42. https://doi.org/10.1016/j.jom.2014.09.009

Castaldi, S., Wilhelm, M. M., Beugelsdijk, S., & Van Der Vaart, T. (2023). Extending Social Sustainability to Suppliers: The Role of GVC Governance Strategies and Supplier Country Institutions. *Journal of Business Ethics*, *183*(1), 123–146. https://doi.org/10.1007/s10551-022-05083-4

Castka, P., & Prajogo, D. (2013). The effect of pressure from secondary stakeholders on the internalization of ISO 14001. *Journal of Cleaner Production*, *47*, 245–252. https://doi.org/10.1016/j.jclepro.2012.12.034

Clauss, T., & Spieth, P. (2016). Treat your suppliers right! Aligning strategic innovation orientation in captive supplier relationships with relational and transactional governance mechanisms. *R&D Management*, *46*(S3), 1044–1061. https://doi.org/10.1111/radm.12202

Country comparison tool. (n.d.). Retrieved 25 April 2024, from https://www.hofstede-insights.com/country-comparison-tool

Cropanzano, R., & Mitchell, M. S. (2005). Social Exchange Theory: An Interdisciplinary Review. *Journal of Management*, *31*(6), 874–900. https://doi.org/10.1177/0149206305279602

Czernek, K., Czakon, W., & Marszałek, P. (2017). Trust and formal contracts: Complements or substitutes? A study of tourism collaboration in Poland. *Journal of Destination Marketing & Management*, *6*(4), 318–326. https://doi.org/10.1016/j.jdmm.2017.07.001

De Jong, G., & Woolthuis, R. K. (2008). The Institutional Arrangements of Innovation: Antecedents and Performance Effects of Trust in High-Tech Alliances. *Industry and Innovation*, *15*(1), 45–67. https://doi.org/10.1080/13662710701858520

Easterby-Smith, M., Thorpe, R., & Jackson, P. R. (2012). *Management Research*. SAGE.

Eikelenboom, M., & de Jong, G. (2019). The impact of dynamic capabilities on the sustainability performance of SMEs. *Journal of Cleaner Production*, *235*, 1360–1370. https://doi.org/10.1016/j.jclepro.2019.07.013

Farooque, M., Zhang, A., Thürer, M., Qu, T., & Huisingh, D. (2019). Circular supply chain management: A definition and structured literature review. *Journal of Cleaner Production*, *228*, 882–900. https://doi.org/10.1016/j.jclepro.2019.04.303

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics*. SAGE.

Gençtürk, E. F., & Aulakh, P. S. (2007). Norms- and Control-Based Governance of International Manufacturer–Distributor Relational Exchanges. *Journal of International Marketing*, *15*(1), 92–126. https://doi.org/10.1509/jimk.15.1.092

Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. *Review of International Political Economy*, *12*(1), 78–104. https://doi.org/10.1080/09692290500049805

Ghauri, P. N., Tarnovskaya, V., & Elg, U. (2008). Market driving multinationals and their global sourcing network. *International Marketing Review*, *25*(5), 504–519. https://doi.org/10.1108/02651330810904062

GNI per capita, Atlas method (current US$). (n.d.). World Bank Gender Data Portal. Retrieved 13 June 2024, from https://genderdata.worldbank.org/en/indicator/ny-gnp-pcap-cd

Goerzen, A., Iskander, S. P., & Hofstetter, J. (2021). The effect of institutional pressures on business-led interventions to improve social compliance among emerging market suppliers in global value chains. *Journal of International Business Policy*, *4*(3), 347–367. https://doi.org/10.1057/s42214-020-00064-8

Goo, J., Kishore, R., Rao, H. R., & Nam, K. (2009). The Role of Service Level Agreements in Relational Management of Information Technology Outsourcing: An Empirical Study. *MIS Quarterly*, *33*(1), 119–145. https://doi.org/10.2307/20650281

Gopal, A., & Koka, B. R. (2012). The Asymmetric Benefits of Relational Flexibility: Evidence from Software Development Outsourcing. *MIS Quarterly*, *36*(2), 553–576. https://doi.org/10.2307/41703467

Govindan, K., Khodaverdi, R., & Jafarian, A. (2013). A fuzzy multi criteria approach for measuring sustainability performance of a supplier based on triple bottom line approach. *Journal of Cleaner Production*, *47*, 345–354. https://doi.org/10.1016/j.jclepro.2012.04.014

Greif, A. (2008). Commitment, Coercion and Markets: The Nature and Dynamics of Institutions Supporting Exchange. In Springer eBooks (pp. 727–786). https://doi.org/10.1007/978-3-540-69305-5_29

Gualandris, J., & Kalchschmidt, M. (2016). Developing environmental and social performance: The role of suppliers' sustainability and buyer–supplier trust.

International Journal of Production Research, *54*(8), 2470–2486. https://doi.org/10.1080/00207543.2015.1106018

Hofstede, G. H., Hofstede, G. J., & Minkov, M. (2010). Cultures and Organizations, Software of the mind. Intercultural Cooperation and Its Importance for survival. http://ci.nii.ac.jp/ncid/BB02154491

Hohn, M. M., & Durach, C. F. (2022). Taking a different view: Theorizing on firms' development toward an integrative view on socially sustainable supply chain management. *International Journal of Physical Distribution & Logistics Management*, *53*(1), 13–34. https://doi.org/10.1108/IJPDLM-09-2021-0410

Hoque, S. F., Sinkovics, N., & Sinkovics, R. R. (2016). Supplier strategies to compensate for knowledge asymmetries in buyer-supplier relationships: Implications for economic upgrading. *European Journal of International Management*, *10*(3), 254–283. https://doi.org/10.1504/EJIM.2016.076292

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

Huq, F. A., & Stevenson, M. (2020). Implementing Socially Sustainable Practices in Challenging Institutional Contexts: Building Theory from Seven Developing Country Supplier Cases. *Journal of Business Ethics*, *161*(2), 415–442. https://doi.org/10.1007/s10551-018-3951-x

Hurley, J. (2005). Unravelling the Web: Supply Chains and Workers' Lives in the Garment Industry. In *Threads of Labour* (pp. 95–132). John Wiley & Sons, Ltd. https://doi.org/10.1002/9780470761434.ch5

Hyder, A. S., Chowdhury, E., & Sundström, A. (2017). Balancing Control and Trust to Manage CSR Compliance in Supply Chains. *International Journal of Supply Chain Management*, *6*(2), 1–14.

Jamali, D., Lund-Thomsen, P., & Khara, N. (2017). CSR Institutionalized Myths in Developing Countries: An Imminent Threat of Selective Decoupling. *Business & Society*, *56*(3), 454–486. https://doi.org/10.1177/0007650315584303

Jiang, B. (2009). The effects of interorganizational governance on supplier's compliance with SCC: An empirical examination of compliant and non-compliant suppliers. *Journal of Operations Management*, *27*(4), 267–280. https://doi.org/10.1016/j.jom.2008.09.005

Jiang, X., Li, M., Gao, S., Bao, Y., & Jiang, F. (2013). Managing knowledge leakage in strategic alliances: The effects of trust and formal contracts. *Industrial Marketing Management*, *42*(6), 983–991. https://doi.org/10.1016/j.indmarman.2013.03.013

Joardar, A., & Sarkis, J. (2021). An examination of sustainable development of supply chain using foreignness perspective. *Business Strategy and the Environment*, *30*(1), 630–642. https://doi.org/10.1002/bse.2643

Ju, M., Zhao, H., & Wang, T. (2014). The Boundary Conditions of Export Relational Governance: A "Strategy Tripod" Perspective. *Journal of International Marketing*, *22*(2), 89–106. https://doi.org/10.1509/jim.13.0114

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

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

Kostova, T., Beugelsdijk, S., Scott, W. R., Kunst, V. E., Chua, C. H., & van Essen, M. (2020). The construct of institutional distance through the lens of different institutional perspectives: Review, analysis, and recommendations. *Journal of International Business Studies*, *51*(4), 467–497. https://doi.org/10.1057/s41267-019-00294-w

Kostova, T., & Roth, K. (2002). Adoption of an Organizational Practice by Subsidiaries of Multinational Corporations: Institutional and Relational Effects. *Academy of Management Journal*, *45*(1), 215–233. https://doi.org/10.5465/3069293

Kotlar, J., & Sieger, P. (2019). Bounded Rationality and Bounded Reliability: A Study of Nonfamily Managers' Entrepreneurial Behavior in Family Firms. *Entrepreneurship Theory and Practice*, *43*(2), 251–273. https://doi.org/10.1177/1042258718796085

Liu, Y., Luo, Y., & Liu, T. (2009). Governing buyer–supplier relationships through transactional and relational mechanisms: Evidence from China. *Journal of Operations Management*, *27*(4), 294–309. https://doi.org/10.1016/j.jom.2008.09.004

Locke, R., Amengual, M., & Mangla, A. (2009). Virtue out of Necessity? Compliance, Commitment, and the Improvement of Labor Conditions in Global Supply Chains. *Politics & Society*, *37*(3), 319–351. https://doi.org/10.1177/0032329209338922

Loviscek, V. (2021). Triple Bottom Line toward a Holistic Framework for Sustainability: A Systematic Review. RAC. *Revista de Administração Contemporânea, 25*(3). https://doi.org/10.1590/1982-7849rac2021200017.en

Lumineau, F., & Henderson, J. E. (2012). The influence of relational experience and contractual governance on the negotiation strategy in buyer–supplier disputes. *Journal of Operations Management*, *30*(5), 382–395. https://doi.org/10.1016/j.jom.2012.03.005

Lund-Thomsen, P. (2008). The Global Sourcing and Codes of Conduct Debate: Five Myths and Five Recommendations. *Development and Change*, *39*(6), 1005–1018. https://doi.org/10.1111/j.1467-7660.2008.00526.x

Lund-Thomsen, P., & Lindgreen, A. (2014). Corporate Social Responsibility in Global Value Chains: Where Are We Now and Where Are We Going? *Journal of Business Ethics*, *123*(1), 11–22. https://doi.org/10.1007/s10551-013-1796-x

Malhotra, D. (2009). When Contracts Destroy Trust. *Harvard Business Review*, *87*(5), 25–25.

Mani, V., Gunasekaran, A., Papadopoulos, T., Hazen, B., & Dubey, R. (2016). Supply chain social sustainability for developing nations: Evidence from India. *Resources, Conservation and Recycling*, *111*, 42–52. https://doi.org/10.1016/j.resconrec.2016.04.003

Markley, M. J., & Davis, L. (2007). Exploring future competitive advantage through sustainable supply chains. *International Journal of Physical Distribution & Logistics Management*, *37*(9), 763–774. https://doi.org/10.1108/09600030710840859

Mellewigt, T., Madhok, A., & Weibel, A. (2007). Trust and formal contracts in interorganizational relationships—Substitutes and complements. *Managerial and Decision Economics*, *28*(8), 833–847. https://doi.org/10.1002/mde.1321

Merk, J. (2014). The Rise of Tier 1 Firms in the Global Garment Industry: Challenges for Labour Rights Advocates. *Oxford Development Studies*, *42*(2), 259–277. https://doi.org/10.1080/13600818.2014.908177

Miemczyk, J., Johnsen, T. E., & Macquet, M. (2012). Sustainable purchasing and supply management: A structured literature review of definitions and measures at the dyad, chain and network levels. *Supply Chain Management: An International Journal*, *17*(5), 478–496. https://doi.org/10.1108/13598541211258564

Muller, A., & Kolk, A. (2010). Extrinsic and Intrinsic Drivers of Corporate Social Performance: Evidence from Foreign and Domestic Firms in Mexico. *Journal of Management Studies*, *47*(1), 1–26. https://doi.org/10.1111/j.1467-6486.2009.00855.x

Nakamba, C. C., Chan, P. W., & Sharmina, M. (2017). How does social sustainability feature in studies of supply chain management? A review and research agenda. *Supply Chain Management: An International Journal*, *22*(6), 522–541. https://doi.org/10.1108/SCM-12-2016-0436

Nardi, P. M. (2018). *Doing Survey Research: A Guide to Quantitative Methods* (4th ed.). Routledge. https://doi.org/10.4324/9781315172231

United Nations. (z.d.). *Sustainability | United Nations*. https://www.un.org/en/academic-impact/sustainability

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.

Oxley, J. E. (1999). Institutional environment and the mechanisms of governance: The impact of intellectual property protection on the structure of inter-firm alliances. *Journal of Economic Behavior & Organization*, *38*(3), 283–309. https://doi.org/10.1016/S0167-2681(99)00011-6

Peng, M. W. (2003). Institutional Transitions and Strategic Choices. *Academy of Management Review*, *28*(2), 275–296. https://doi.org/10.5465/AMR.2003.9416341

Podsakoff, P. M., MacKenzie, S. B., Jeong-Yeon Lee, & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, *88*(5), 879. https://doi.org/10.1037/0021-9010.88.5.879

Poppo, L., & Zenger, T. (2002). Do Formal Contracts and Relational Governance Function as Substitutes or Complements? *Strategic Management Journal*, *23*(8), 707–725.

Poppo, L., & Zhou, K. Z. (2014). Managing contracts for fairness in buyer–supplier exchanges. *Strategic Management Journal*, *35*(10), 1508–1527. https://doi.org/10.1002/smj.2175

Reusen, E., Stouthuysen, K., Roodhooft, F., Van den Abbeele, A., & Slabbinck, H. (2020). Imitation of Management Practices in Supply Networks: Relational and Environmental Effects. *Journal of Supply Chain Management*, *56*(1), 54–72. https://doi.org/10.1111/jscm.12216

Ripple, W. J., Wolf, C., Newsome, T. M., Galetti, M., Alamgir, M., Crist, E., Mahmoud, M. I., Laurance, W. F., & 15, 364 scientist signatories from 184 countries. (2017). World Scientists' Warning to Humanity: A Second Notice. *BioScience*, *67*(12), 1026–1028. https://doi.org/10.1093/biosci/bix125

Scott, W. R. (2013). *Institutions and Organizations: Ideas, Interests, and Identities*. SAGE Publications.

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

Sinkovics, N., Hoque, S. F., & Sinkovics, R. R. (2016). Rana Plaza collapse aftermath: Are CSR compliance and auditing pressures effective? *Accounting, Auditing & Accountability Journal*, *29*(4), 617–649. https://doi.org/10.1108/AAAJ-07-2015-2141

Skowronski, K., Benton Jr., W. C., & Hill, J. A. (2020). Perceived supplier opportunism in outsourcing relationships in emerging economies. *Journal of Operations Management*, *66*(7–8), 989–1023. https://doi.org/10.1002/joom.1123

Soundararajan, V., Wilhelm, M. M., & Crane, A. (2021). Humanizing Research on Working Conditions in Supply Chains: Building a Path to Decent Work. *Journal of Supply Chain Management*, *57*(2), 3–13. https://doi.org/10.1111/jscm.12260

Tian, B., Wang, Z., Li, C., & Fu, J. (2021). Can relational governance improve sustainability in public-private partnership infrastructure projects? An empirical study based on structural equation modeling. *Engineering, Construction and Architectural Management*, *30*(1), 19–40. https://doi.org/10.1108/ECAM-04-2021-0333

Toffel, M. W., Short, J. L., & Ouellet, M. (2015). Codes in context: How states, markets, and civil society shape adherence to global labor standards. *Regulation & Governance*, *9*(3), 205–223. https://doi.org/10.1111/rego.12076

Wang, H., Edelenbos, J., & Cheng, Z. (2022). Combining project and process management in PPP network: Relationship between management style and outcome. *Australian Journal of Public Administration*, *81*(2), 320–342. https://doi.org/10.1111/1467-8500.12519

Wang, L., Yeung, J. H. Y., & Zhang, M. (2011). The impact of trust and contract on innovation performance: The moderating role of environmental uncertainty. *International Journal of Production Economics*, *134*(1), 114–122. https://doi.org/10.1016/j.ijpe.2011.06.006

Wang, M., Zhang, Q., Wang, Y., & Sheng, S. (2016). Governing local supplier opportunism in China: Moderating role of institutional forces. *Journal of Operations Management*, *46*(1), 84–94. https://doi.org/10.1016/j.jom.2016.07.001

Wang, T., & Bansal, P. (2012). Social responsibility in new ventures: Profiting from a long-term orientation. *Strategic Management Journal*, *33*(10), 1135–1153. https://doi.org/10.1002/smj.1962

Williamson, O. E. (1991). Economic Institutions: Spontaneous and Intentional Governance. *The Journal of Law, Economics, and Organization*, *7*(special_issue), 159–187. https://doi.org/10.1093/jleo/7.special_issue.159

Williamson, O. E. (1996). *The Mechanisms of Governance*. Oxford University Press.

Williamson, O. E. (2008). Outsourcing: Transaction Cost Economics and Supply Chain Management*. *Journal of Supply Chain Management*, *44*(2), 5–16. https://doi.org/10.1111/j.1745-493X.2008.00051.x

World Bank Group. (2024). Home | Worldwide Governance Indicators. In *World Bank.* https://www.worldbank.org/en/publication/worldwide-governance-indicators

Yan, L., & Zhang, L. (2020). Interplay of Contractual Governance and Trust in Improving Construction Project Performance: Dynamic Perspective. *Journal of Management in Engineering*, *36*(4), 04020029. https://doi.org/10.1061/(asce)me.1943-5479.0000791

Yang, Z., Su, C., & Fam, K.-S. (2012). Dealing with Institutional Distances in International Marketing Channels: Governance Strategies that Engender Legitimacy and Efficiency. *Journal of Marketing*, *76*(3), 41–55. https://doi.org/10.1509/jm.10.0033

Yawar, S. A., & Seuring, S. (2017). Management of Social Issues in Supply Chains: A Literature Review Exploring Social Issues, Actions and Performance Outcomes. *Journal of Business Ethics*, *141*(3), 621–643. https://doi.org/10.1007/s10551-015-2719-9

You, J., Chen, Y., Wang, W., & Shi, C. (2018). Uncertainty, opportunistic behavior, and governance in construction projects: The efficacy of contracts. *International Journal of Project Management*, *36*(5), 795–807. https://doi.org/10.1016/j.ijproman.2018.03.002

Zaheer, A., McEvily, B., & Perrone, V. (1998). Does Trust Matter? Exploring the Effects of Interorganizational and Interpersonal Trust on Performance. *Organization Science*, *9*(2), 141–159. https://doi.org/10.1287/orsc.9.2.141

Zorzini, M., Hendry, L. C., Huq, F. A., & Stevenson, M. (2015). Socially responsible sourcing: Reviewing the literature and its use of theory. *International Journal of*

Operations & Production Management, *35*(1), 60–109.

https://doi.org/10.1108/IJOPM-07-2013-0355

II Appendices

Appendix A: Variable operationalization table

Variables	Theoretical description	Operationalization	Key references
Dependent variable			
Social sustainability practice implementation	The degree to which social sustainability practices are effectively integrated into everyday operations and decision making.	*For each of the following descriptions, please tick the one that best represents your opinion.* (1) Leadership (e.g., managers' active support for social compliance initiatives) (2) Documentation (e.g., formal reporting of factory accidents or illness rates) (3) People (e.g., reflecting whether employee suggestions are taken seriously) (4) Process management (e.g., concerning the inclusion of social sustainability policies on the agenda of regular factory meetings).	Castaldi et al. (2023), Castka & Prajogo (2013), Kostova & Roth (2002), Mani et al. (2016)
Independent variables			
Contractual governance	The degree to which an interorganizational relationship (IOR) is regulated by a formal, written contract that clearly defines each party's responsibilities and obligations	*How many external social audits (e.g. by 3rd parties or customer initiatives) have been conducted last year?*	Abdi & Aulakh (2012), Awan et al. (2018a), Cao & Lumineau (2015)
Relational governance	The degree to which interorganizational relationships are established and governed through implicit control and mutual understanding, leading to the development of shared behavioral expectations.	*For each of the following descriptions, please tick the one that best represents your opinion.* (1) This customer usually keeps the promises that it makes to our manufacturing plant. (2) When we share our problems with this customer (e.g. material prices), we know that it will respond with understanding. (3) This customer has often provided us information that has later proven to be inaccurate. (4) Whenever this customer gives us advice on our business operations, we know that it is sharing its best judgment. (5) If we struggle in implementing the social sustainability policy, this customer would simply switch to other suppliers rather than work out problems with us.	Benítez-Ávila et al. (2018), Liu et al. (2009), Tian et al. (2021)
Regulatory institutional quality	The degree to which legal frameworks and enforcement mechanisms are well-defined and efficient.	An average score of 5 WGI indicators (i.e. government effectiveness, rule of law, control of corruption, political stability, and regulatory quality).	North (1990), Peng (2003), Scott (2013)

Control variables Supplier-buyer relationship length	Duration of contractual relationship between supplier and buyer	*How long has this manufacturing plant been working with this customer?* (1) Less than 1 year (2) 1 to 3 years (3) More than 3 years	Jiang (2009), Poppo & Zhou (2014)
Export intensity	Supplier's current production focus on export market demands	*From this plant's total export profits, what percentage is sold to customers located in North America or Western Europe?*	(Muller & Kolk, 2010)
Supplier age	Age of the supplier	*What is the year of incorporation of this manufacturing plant?*	(Awan et al., 2018b)
Supplier size	Size of the supplier	*How many workers does this manufacturing plant employ?*	(Gualandris & Kalchschmidt, 2016)
Individualism	The degree to which individuals are integrated into groups.	A score from 0 to 100 based on the Hofstede dimensions	(Hofstede et al., 2010)
Long term orientation	The extent to which a society values long-term commitments and respects the norms that facilitate future rewards over immediate outcomes.	A score from 0 to 100 based on the Hofstede dimensions	(Hofstede et al., 2010)
GNI per capita	The dollar value of a country's final income in a year, divided by its population, reflecting the average income of a country's citizens	Annual GNI per capita in US dollars, as reported by the World Bank	(Skowronski et al., 2020)

Appendix B: Statistical assumptions output

Appendix B1: Linearity assumption

Figure B1.1: Linearity analysis of Contractual Governance

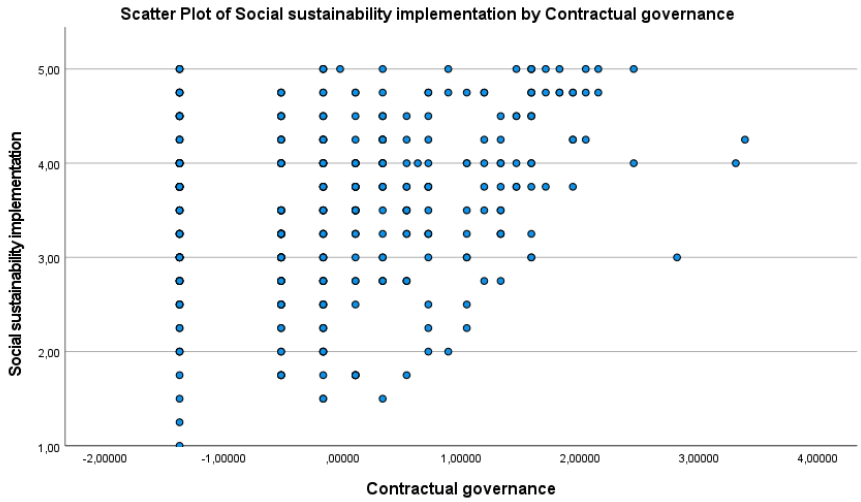


Figure B1.2: Linearity analysis of Relational Governance

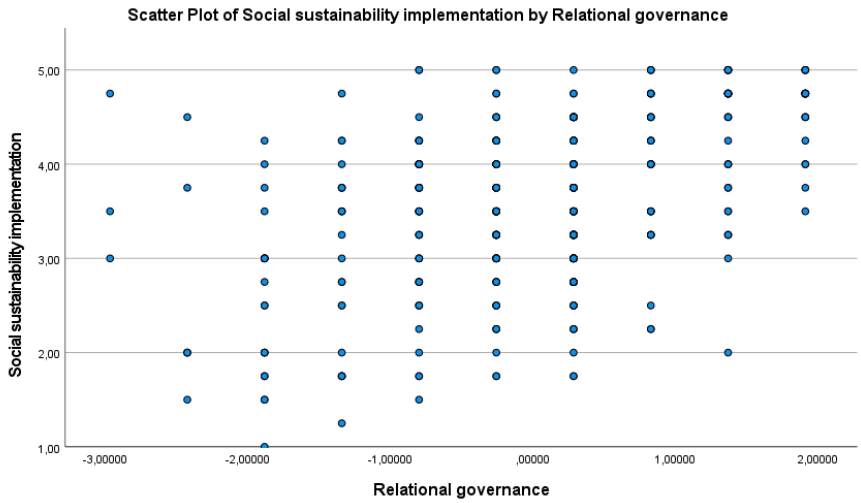


Figure B1.3: Linearity analysis of Regulatory Institutional Quality

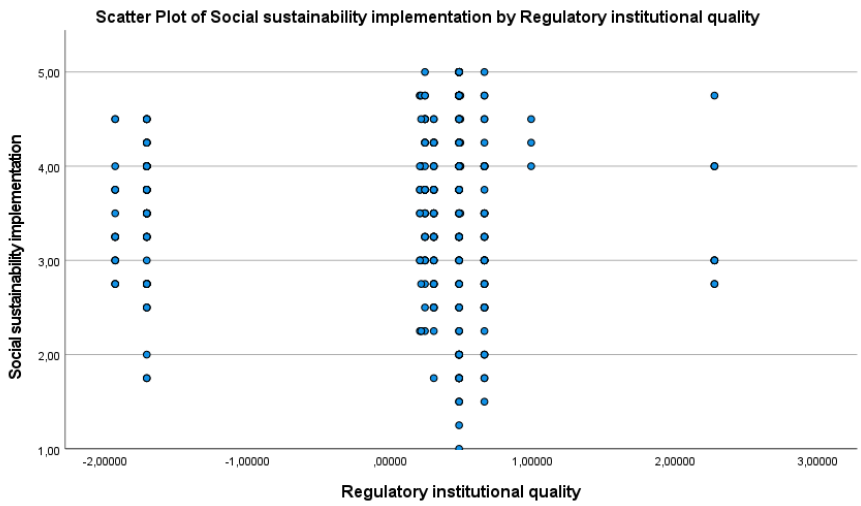


Figure B1.4: Linearity analysis of Buyer-Supplier Relationship Length

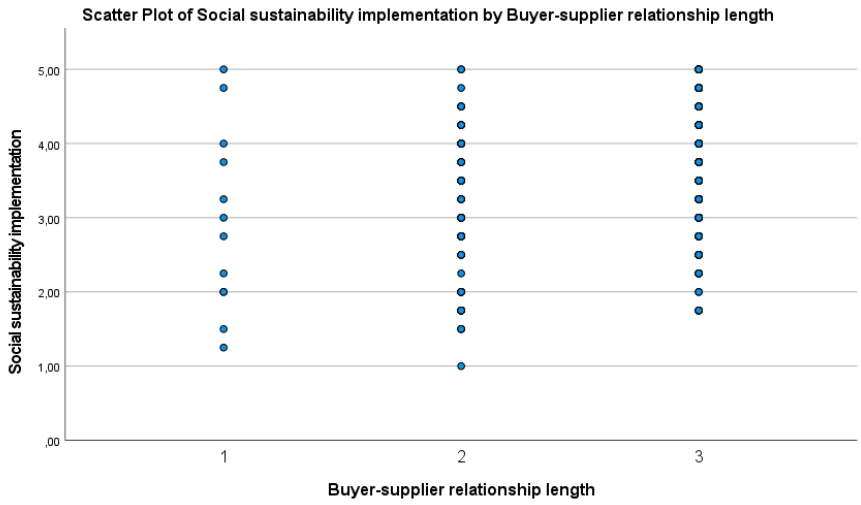


Figure B1.5: Linearity analysis of Export Intensity

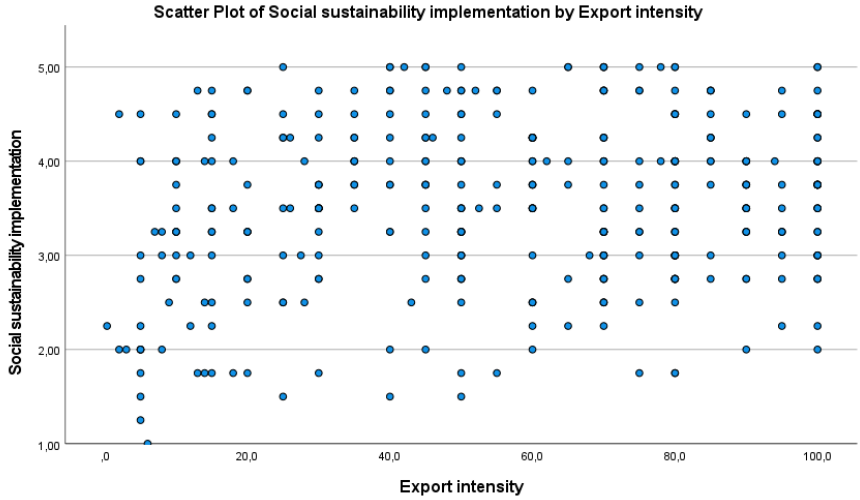


Figure B1.6: Linearity analysis of Supplier Age

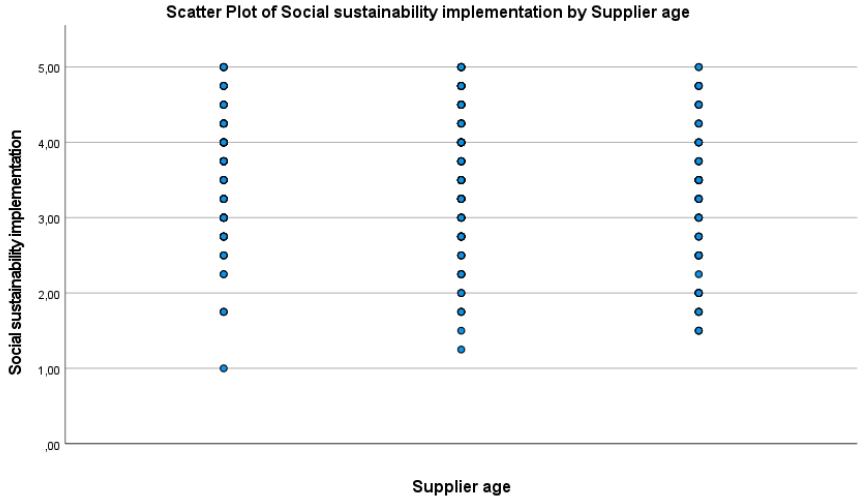


Figure B1.7: Linearity analysis of Supplier Size

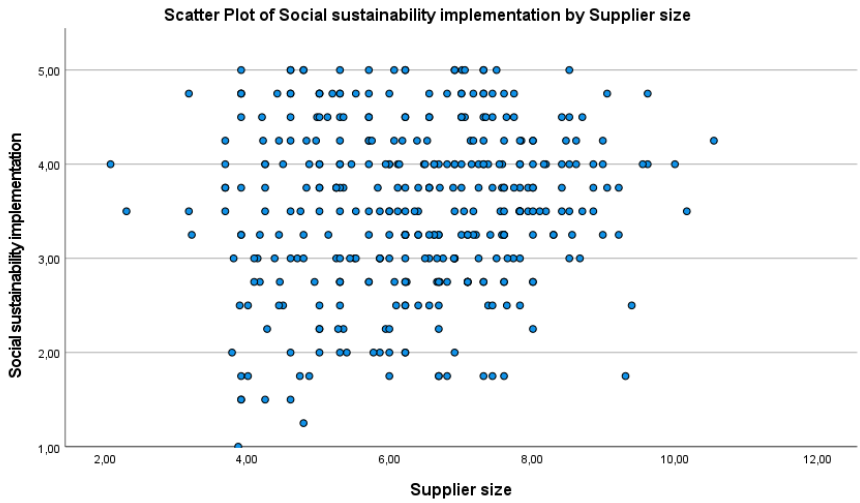


Figure B1.8: Linearity analysis of Individualism

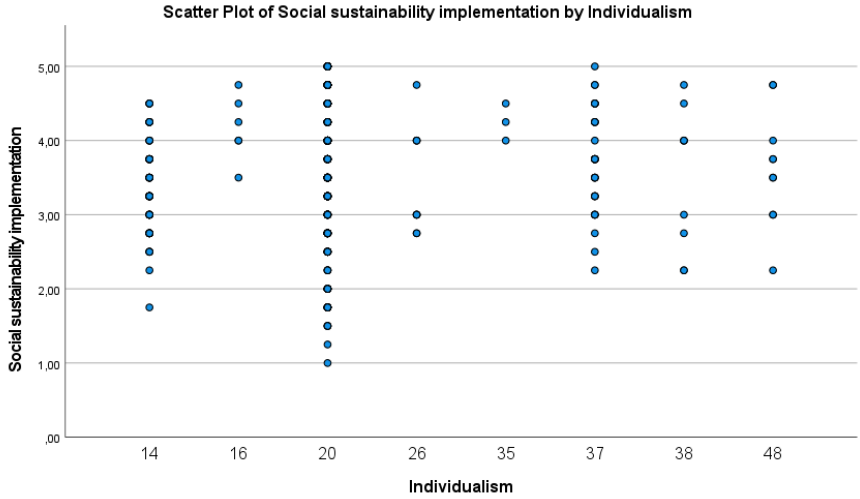


Figure B1.9: Linearity analysis of Long Term Orientation

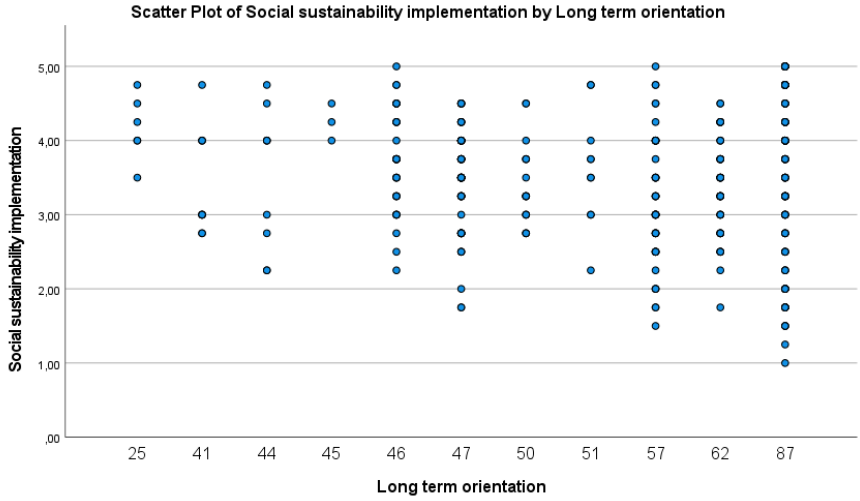
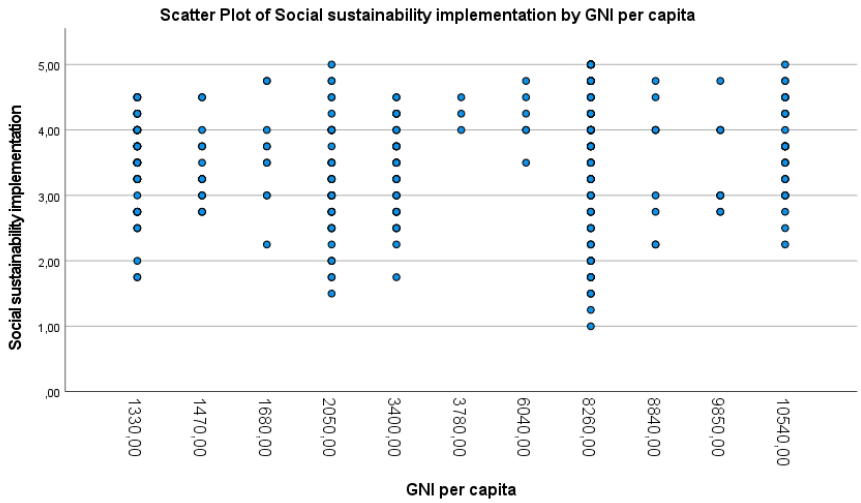
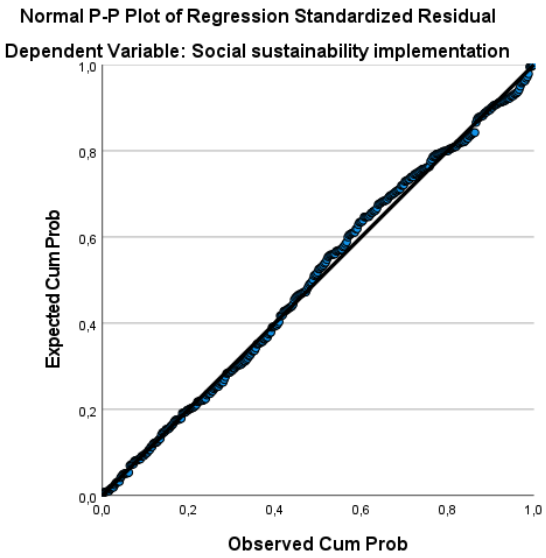


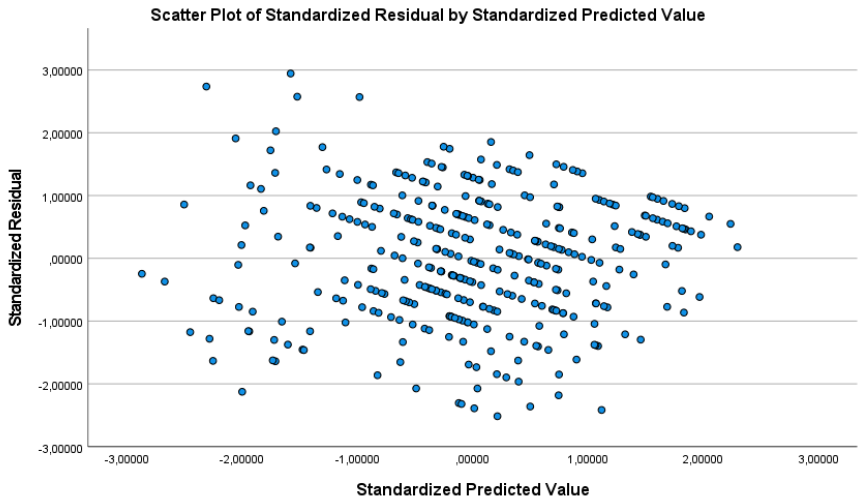
Figure B1.10: Linearity analysis of GNI per capita



Appendix B2: Normality assumption



Appendix B3: Homoscedasticity assumption



Appendix B4: Multicollinearity assumption

Variable	Tolerance	VIF
Contractual governance	.630	*1.589*
Relational governance	.843	*1.186*
Regulatory institutional quality	.567	*1.764*
Supplier-buyer relationship length	.784	*1.276*
Export intensity	.737	*1.357*
Age	.813	*1.229*
Size	.585	*1.711*
Individualism	.556	*1.800*
Long term orientation	.427	*2.343*
GNI per capita	.352	*2.837*