

St. Petersburg State University
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Master in Management

**BUILDING SUSTAINABLE SUPPLY CHAINS:
COLLABORATION CAPACITY IN EMERGING MARKETS**

Master's Thesis by 2nd year student

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ABSTRACT

Master Student's Name	Potapova Polina Andreevna
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Master Thesis Title	Building Sustainable Supply Chains: Collaboration Capacity in Emerging Markets
Description of the goal, tasks and main results the research	The goal of the research is to establish the Sustainable Supply Chain Collaboration capacity of companies operating in the emerging markets – based on the case of Russia. In the first part of research, a multi-stage Core Bibliometric Analysis is performed to find out the emerging trends and academic pillars of the field of SSCM. As a result, seven clusters of scientific interest were identified. In the second part, a country-level assessment of ESG reports is carried out in order to capture the level of SSCC development on the given market. It was found that the majority of companies are currently in the first developmental stage of partner selection based on ESG criteria. Finally, a series of expert interviews is analyzed to explain the specifics of building sustainable supply chains in the emerging markets. Among others, the most common peculiarities included the lack of standard ESG requirements, limited access to digital tools and underdeveloped regulatory base in the domain of sustainability and SSCM in particular.
Keywords	Sustainable supply chain, emerging markets, collaboration for sustainability

АННОТАЦИЯ

Автор	Потапова Полина Андреевна
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Название ВКР	Создание устойчивых цепей поставок: потенциал сотрудничества на развивающихся рынках
Описание цели, задач и основных результатов исследования	Цель исследования – установить потенциал устойчивого сотрудничества в цепочках поставок компаний, работающих на развивающихся рынках, на примере России. В первой части исследования проводится многоэтапный библиометрический анализ, призванный выявить новые тенденции и академические основы в области управления устойчивыми цепями поставок. В результате были определены семь кластеров, представляющих научный интерес. Во второй части проводится оценка отчетов ESG на страновом уровне с целью определения уровня развития взаимодействия для устойчивых цепей поставок на данном рынке. Было обнаружено, что большинство компаний в настоящее время находятся на первом этапе развития процесса

	<p>выбора партнеров на основе критериев ESG. Наконец, анализируется серия интервью с экспертами, чтобы объяснить специфику построения устойчивых цепочек поставок на развивающихся рынках. Среди прочего, наиболее распространенные особенности включали отсутствие стандартных требований ESG, ограниченный доступ к цифровым инструментам и сравнительно слабую нормативную базу в области устойчивого развития и управления устойчивыми цепями поставок в частности.</p>
<p>Ключевые слова</p>	<p>Устойчивая цепочка поставок, развивающиеся рынки, сотрудничество в интересах устойчивого развития</p>

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INTRODUCTION

For the past two decades issues of sustainable business have received a tremendous amount of attention from scholars, NGOs and businesses alike. And the supply chains are believed to hold great opportunity for improving the business-processes – from cutting carbon emissions to supporting local communities in their dependence on resource extraction industries. And while many studies have proven financial and operational benefits of sustainable efforts for the businesses – at large companies are still puzzled as to how these efforts can be implemented.

The **motivation** of research on Sustainable Supply Chain Collaboration in Emerging Markets is derived both from theory and practical business concerns. Academics point out SC collaboration as one of the major pillars for implementing sustainability principles into the SC network, along with certification and innovation (Vachon, Klassen, 2008). Furthermore, collaborative initiatives allow to deeper understand and address the issues of the supply chains, creating synergies from resource pooling and information sharing between actors. However, the research on clear mechanisms of SC collaboration for sustainable goals is still scarce – comprising majorly of case studies of specific manufacturers or industries, rarely incorporating established theoretical basis. Looking from the practical perspective, we see evidence of interest in sustainable supply chains from companies reporting based on GRI standards, specifically under GRI 102-9,10 disclosure clauses. These call on focal companies to report their efforts on SC transparency, supplier involvement and estimation of overall product impact on environment and society taking into account the footprint of the entire chain. In the emerging economies, where the resources for sustainable business are still in development, collaboration becomes a vital source of information and progress. Considering the fact, that the majority of MNCs rely heavily on suppliers and manufacturers in emerging economies, it is clear that ensuring the continuity of SC sustainability across those partners becomes of great concern to business.

The **research goal** is to establish the Sustainable Supply Chain Collaboration capacity of companies operating in emerging markets, based on investigation of Russian data. In order to reach the goal several key steps are to be taken:

1. Establish the theoretical foundation of SSCC in emerging markets – derive the existing means of collaboration for the companies operating in emerging markets;
2. Discover what collaborative initiatives large companies undertake and report currently – through thematic analysis of ESG reports for Y2021;
3. Discover the level of collaboration capacity by linking existing theory with empirical findings;

4. Find out common barriers and incentives for SSCC in the Russian market – through a series of in-depth interviews;

Theoretical background of the chosen topic is based on several core approaches to managing supply chains. The major theoretical lenses used to look into the problem of sustainable supply chains are the Resource-Based View of the firm, the Relational View, the Stakeholder theory, and the Dynamic Capabilities Approach. The Resource-Based View and Competitive Advantage approach serve as the basis for a major part of research on sustainable supply chains in emerging markets. The Relational View theory claims that firms can generate greater economic rents through collaborative partnership, knowledge-sharing, lower transactional costs, and complementary resource endowment – thus building interorganizational competitive advantage. The Stakeholder theory is employed mainly in research oriented towards the social domain of SSCM. The Dynamic Capabilities approach addresses the capabilities a firm must possess to reach competitive advantage in highly dynamic market circumstances. These theoretical lenses were identified through a Co-Citation Analysis of 414 articles in the field of SSCM.

Sustainable Supply Chain Collaboration (SSCC) is defined as the systematic implementation of sustainability into the supply chain through collaborative approaches. Supply chain collaboration involves interaction within the supply chain where actors (organizations) work cooperatively to achieve mutually beneficial outcomes. The concept of “cooperative advantage” introduced by Strand and Freeman (2015) emphasizes the importance of companies interacting with various stakeholders to provide superior customer and shareholder value. SSCC aims to ensure cooperation for achieving environmental, social, and ethical goals between both upstream and downstream members of the supply chain. Overall, SSCC is a complex and multi-faceted concept that may be explored through various theoretical lenses. Traditional research on SSCM has focused primarily on economic benefits, while more contemporary research recognizes the importance of balancing environmental, social, and economic performance.

The **research questions** of the thesis are:

1. How do focal companies collaborate with their suppliers for sustainable goals on the Russian market?
2. What benefits focal companies and suppliers receive from Sustainable Supply Chain Collaboration?
3. What barriers and incentives for SSCC are prominent in emerging markets (based on example of the Russian market)?

In order to achieve the objectives of this research, the **methodology** of the empirical part is structured into two main steps.

Step 1 – Thematic Analysis of ESG Reports

The first step of this research focuses on conducting a thematic analysis of ESG reports to gain a better understanding of the current practices of Supply Chain Collaboration. ESG reports are a useful source of information for companies' environmental, social, and governance activities, including their supply chain management practices.

For this stage, a sample of 72 ESG reports of companies operating in the Russian market for the year 2021 was selected. The decision to choose the year 2021 was based on two major reasons. Firstly, the publication dates of ESG reports vary greatly depending on the company and industry, and reports for the year 2022 would not form a sufficient sample at the time of this research. Secondly, in the year 2022, many companies withdrew from the market or delayed publication of their sustainability measures due to the instability of the political climate. Therefore, the year 2021 is considered the most representative for the goals of this research.

The thematic analysis of the ESG reports is used to identify the current practices of Supply Chain Collaboration in the Russian market. The analysis will follow a systematic process of identifying patterns, themes, and categories that emerge from the data.

Step 2 – Semi-Structured Interviews

The second step of this research involves conducting semi-structured interviews with professionals working on Supply Chain Collaboration in large companies operating in the Russian market. The aim of these interviews is to gain a deeper understanding of the benefits that companies see in implementing SSC initiatives, as well as the challenges and opportunities in implementing Supply Chain Collaboration practices in emerging markets.

The sample size for this stage includes 7 in-depth interviews with professionals responsible for (1) Sustainability and (2) Supply Chain functions of the company. The questions for the interviews are developed in accordance with the findings of Step 1 and relevant theoretical concepts. The interviews are conducted in a semi-structured format to allow for flexibility in exploring the interviewee's perspective while also ensuring that the research objectives are met.

Overall, the combined use of thematic analysis of ESG reports and semi-structured interviews with professionals will provide a comprehensive understanding of the current practices, challenges, and opportunities of Supply Chain Collaboration in the Russian market.

Expected contribution of the research to contemporary theory is bridging theoretical foundations of Sustainable Supply Chain Collaboration with actual empirical research on the country-wide scale in a developing market. Though collaboration is given a great deal of significance in previous academic research, the outlook on real-life collaborative efforts remains fairly scarce. Collaboration for sustainable goals differs greatly from classic forms of SC collaboration for effectiveness and efficiency – since the benefits of sustainable supply chains are not limited to economic rents.

Practical contribution of this research is showcasing the means and levels of SSCC present in the modern emerging market of Russia, highlighting the factors that may encourage or stipulate such collaborative efforts. This result would serve as a guidance to both large enterprises operating in emerging markets, and (perhaps even more valuable) to MNCs looking to steer their supply chains towards greater sustainability – through explaining the specifics of Sustainable Supply Chain Collaboration. This can provide insight into what initiatives and programs can be used to build collaborative efforts throughout the supply chain. The result of the research may serve as a benchmark for SSCC development in the emerging markets.

CHAPTER 1: THE ROLE OF SUSTAINABLE SUPPLY CHAIN COLLABORATION FOR ACHIEVING SUSTAINABLE GOALS

1.1 The Contemporary Theoretical Landscape of Sustainable Supply Chain Management Field

For the past two decades issues of sustainable business have received a tremendous amount of attention from scholars, NGOs and businesses alike. And the supply chains are believed to hold great opportunity for improving the business-processes – from cutting carbon emissions to supporting local communities in their dependence on resource extraction industries. And while many studies have proven financial and operational benefits of sustainable efforts for the businesses – at large companies are still puzzled as to how these efforts can be implemented.

The concern with sustainability of supply chains is specifically grand with brand owning companies. The recent scandals that have tarnished their reputational capital have pushed these companies to prioritize sustainability in their operations. For instance, in 2017 H&M, a fast-fashion retailer, faced public outcry after being accused of burning unsold clothing stock (V. Hendriksz, 2017), in contradiction with their H&M Conscious program claiming to help reduce textile waste, which highlighted the issue of waste within the fashion industry. Another example is the scandal involving several companies (Pepsico, Nestle and Unilever), where they were accused of sourcing palm oil from suppliers who were involved in illegal deforestation and child labor (A. Neslen, 2017).

Reputational capital is the intangible value that a company gains from a positive image and reputation (Fombrun et al., 2000). It is a crucial factor in a company's success since it affects consumer trust and loyalty. Sustainable supply chains are an essential component of building and maintaining reputational capital. Greenwashing, which is the practice of making false claims of being environmentally friendly, is a common problem in the sustainability space. It can be harmful to both the environment and the company's reputation. Consumers are now more aware of greenwashing and are demanding transparency and accountability from the companies they support. Brand-owning businesses must take proactive steps to make sure their supply chains are ethical and sustainable. These actions include collaborating with partners who share their beliefs, adopting ethical sourcing procedures, and practicing open reporting. By doing this, businesses may enhance their reputations and earn the respect and loyalty of customers who place a high value on sustainability.

In this work we want to pose several constraints to the extent of the subject. First of all, out of a full range of sustainability initiatives we only highlight the intricacies of sustainable supply chains – and their future potential. Secondly, we focus our research agenda on businesses operating

in emerging markets – since these environments tend to create quite distinct conditions for companies to navigate – compared with their counterparts in more established economies.

The first reason for particular interest in emerging economies is that a major part of the world population now lives in these regions, and simultaneously they are the same regions more prone to unsustainable business practices for a variety of reasons – lack of environmental regulation, low level of labor rights protection and instruments for protest, higher levels of corruption (Silvestre, 2015), wide gap of social stratification and more. Secondly, it must be mentioned that many international enterprises still tend to outsource their manufacturing and supplier base to the emerging markets for cost-cutting opportunities. This reinforces the notion that emerging markets require a great deal of attention – for the elevated risk they face for unsustainable practices.

A classic definition of Sustainable Supply Chain Management (Carter, Rogers, 2008) states it as a “strategic, transparent integration and achievement of an organization’s social, environmental, and economic goals in the systemic coordination of key interorganizational business processes for improving the long-term economic performance of the individual company and its supply chains”. However, through careful and detailed synthesis of 22 most cited papers, the most comprehensive definition was derived in 2013 by Ahi and Searcy. It poses as follows: “The creation of coordinated supply chains through the voluntary integration of economic, environmental, and social considerations with key inter-organizational business systems designed to efficiently and effectively manage the material, information, and capital flows associated with the procurement, production, and distribution of products or services in order to meet stakeholder requirements and improve the profitability, competitiveness, and resilience of the organization over the short- and long-term.” In this research the later definition will be used as basis for further detailed investigation of the concept.

There are several regulations and frameworks used to regulate the sustainability of supply chains worldwide. The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world’s most widely used sustainability reporting framework. The GRI reporting framework provides a comprehensive set of indicators for companies to report on their sustainability performance. The framework covers a wide range of sustainability issues, including environmental, social, and governance (ESG) performance. ISO 14001 is another widely used regulation that sets out the criteria for an environmental management system. It maps out a framework that a company or organization can use to set up an effective environmental management system. ISO 14001 certification is available and widely used around the world. Other relevant examples include the Principles for Responsible Investments (PRI), the Sustainability

Accounting Standards Board (SASB), and the United Nations Global Compact. These frameworks help businesses prioritize and measure their environmental and social impact goals.

Some of the most influential worldwide organizations that work on building sustainable supply chains feature The Forest Stewardship Council (FSC), an international non-profit organization that promotes responsible forest management, which sets standards for forest products, and companies can obtain FSC certification to demonstrate their commitment to sustainable forestry practices. Fairtrade International is an NPO that works with farmers and workers in developing countries to promote fair trade practices. It offers certification to companies that meet its standards for fair trade practices. The Rainforest Alliance works to conserve biodiversity and ensure sustainable livelihoods. It provides certification for products that meet its sustainability standards, including coffee, cocoa, and tea. Similarly, The Marine Stewardship Council (MSC) is a certification system that ensures responsible fishing practices.

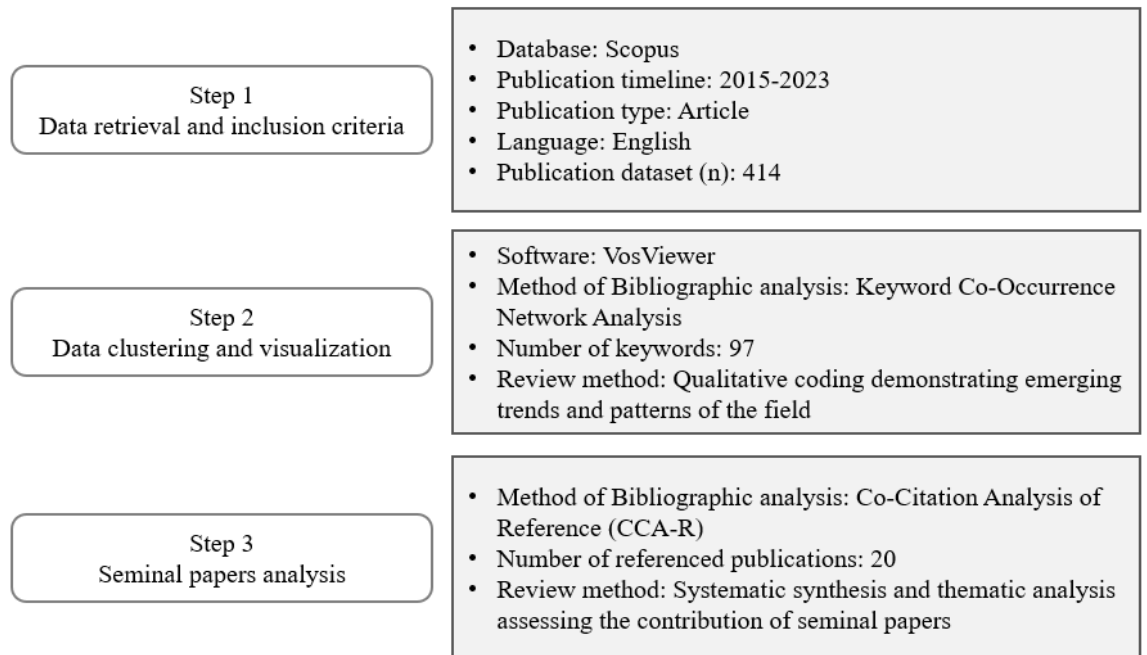
In emerging markets, there are also several organizations that work specifically with building sustainable supply chains. For example, the Global Shea Alliance works with women in West Africa to promote sustainable shea butter production, while the Better Cotton Initiative works with cotton farmers in developing countries to promote sustainable cotton production. These certifications are particularly important in emerging markets where environmental regulations may be weaker, and natural resources are more vulnerable to exploitation.

In this research we follow the principles of scientific deduction for our research design. In order to research current state of the art on academic perception of sustainable supply chains in emerging markets a bibliometric analysis was carried out using the Scopus scientific data base and VosViewer software to visualize current developmental trends of the field. This preliminary research was specifically carried out to assess the research gaps still present in the field and focus our attention on specific research questions. We contribute to existing research by identifying the internal structure of the field, examining trends, patterns and trajectories of research, and coming up with a future study agenda. We present a conceptual framework that enables us to assess progress while identifying focal points and blind spots. Although the literature on sustainable supply chains has seen a number of greatly encouraging changes, most notably its growth across all levels of analysis and the range of research issues that have been addressed, there are still a lot of unexplored areas.

The initial descriptive analysis of the papers was carried out through Scopus search engine to create a comprehensive data base of contemporary scientific literature of sustainable supply chains in emerging markets. Following the bibliometric methodologies of several authors

(Maucuer and Renaud, 2019; Renaud and Maucuer, 2018; Walsh and Renaud, 2017), we adopted a 3- step process: 1) Data retrieval and preliminary descriptive statistics; 2) Data clustering and visualization using VosViewer software; 3) Thematic analysis of seminal papers in order to trace the development of the filed.

Figure 1 – Summary of methodology of the literature review



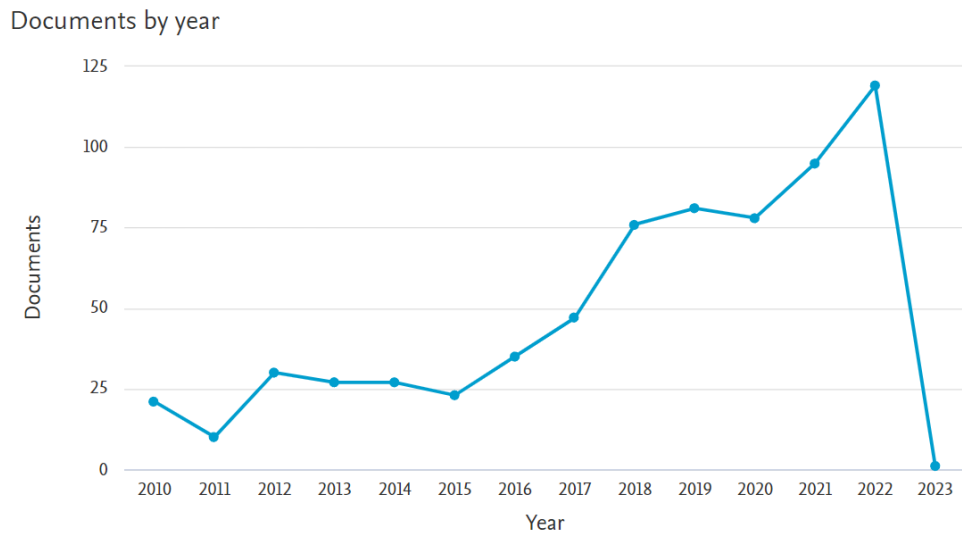
Data retrieval and inclusion criteria

For the initial search we used a combination of keywords related to our focal topic as follows:

1. “Sustainable” = “green, responsible, solidarity, clean, transparent”
2. “Supply chain” = “value chain, procurement, production, sourcing, components, infrastructure, supplier relations”
3. “Emerging markets” = “developing countries, developing world, emerging economies”.

Using these keywords in the Scopus search engine we received a quite broad result of 6048 sources. Looking at the descriptives, we were able to identify a consistent incline in publications in the field from year 2015 and therefore we limit our search to articles published after year 2015.

Figure 2 – Number of publications by year



To further narrow down the scope of our bibliometric analysis we imposed a series of filters: such as publication type – articles, source types – journals, subject area restricted to business and economical studies and languages to English and Russian. This resulted in a bibliography of 414 sources on the topic in total.

Core Bibliometric Analysis: Keyword Co-Occurrence Network Analysis

Further systematic analysis of literature was performed using co-occurrences mapping in VOSviewer (van Eck and Waltman, 2010). The first step represents the method of keyword co-occurrences and clustering. It is used to assess the general landscape of the research on sustainable supply chains in emerging markets, identify trending areas of research and point out understudied topics and gaps in the theoretical structures.

Within 414 documents extracted from Scopus, VOSviewer was able to identify a total of 2401 keywords present in the dataset. 97 keywords fit the threshold of minimal 5 co-occurrences (standard parameter). Those 97 keywords were put into 7 intertwined clusters (unsupervised).

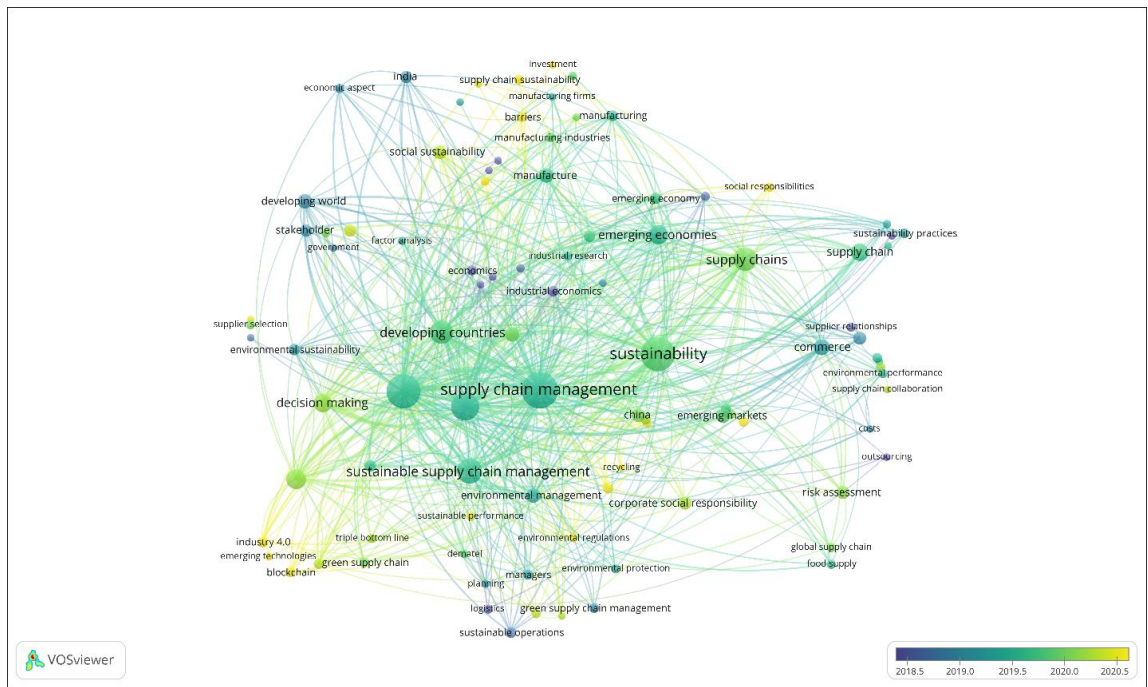
For the purpose of tracing the development of theoretical interest in the field, an overlay graph was presented (Figure 3) determining the historical changes of publication topics. Though some trends were predictable – like a surge of papers exploring emerging technologies as means to facilitate sustainable chains in later years (2020-2023), other insights were less suspected:

1. The earlier papers tend to focus on economic aspects of sustainable supply chains, their impact on financial performance of the business, commercial efficiency as well as operational aspects.

2. One of the latest tendencies shows an increased focus on social sustainability and social responsibility within the supply chains, as color-coded yellow in the top portion of the historical graph.

3. There is an increased attention to the topic of waste management and recycling policies in recent years, combined with assessment of environmental regulations (color-coded yellow in the lower portion of the historical graph).

Figure 3 – Historical development of scientific interest



Further, through interpretative methods suggested by Anand et. al. (2021;2022) we were able to identify main challenges and trends that scholars were addressing in their research regarding sustainable supply chain in emerging markets. The keywords positioned closer to the center of the graph represent the more-widely researched sub-topics of the field, while the periphery includes keywords with less attention from the academia, which is helpful in identifying potential research gaps of the field. Through analyzing keyword clusters (Figure 4) we were able to identify dominant patterns that characterized each of those. Thematically we labelled them as follows:

1. The Green cluster: This cluster focuses on innovation in social sustainability, specifically in the manufacturing industry. It aims to develop new and sustainable practices that improve worker conditions, reduce energy consumption, and minimize waste. The research in this cluster also explores the role of government policies and regulations in supporting sustainable manufacturing practices.

2. The Blue cluster: This cluster is concerned with supply chain governance in developing countries, with an emphasis on waste management and environmentally sustainable procurement. The research in this cluster examines the challenges of implementing sustainable practices in developing countries, such as inadequate infrastructure and lack of resources, and proposes solutions to overcome these challenges.

3. The Turquoise cluster: This cluster focuses on emerging technologies and their role in sustainable sourcing. It explores how technologies such as blockchain, artificial intelligence, and the Internet of Things can be used to improve supply chain transparency, traceability, and sustainability.

4. The Yellow cluster: This cluster addresses the logistical decision-making for green Sales and Operations Planning (S&OP), with a focus on environmental concerns. It aims to develop new models and tools to optimize supply chain operations while minimizing environmental impact.

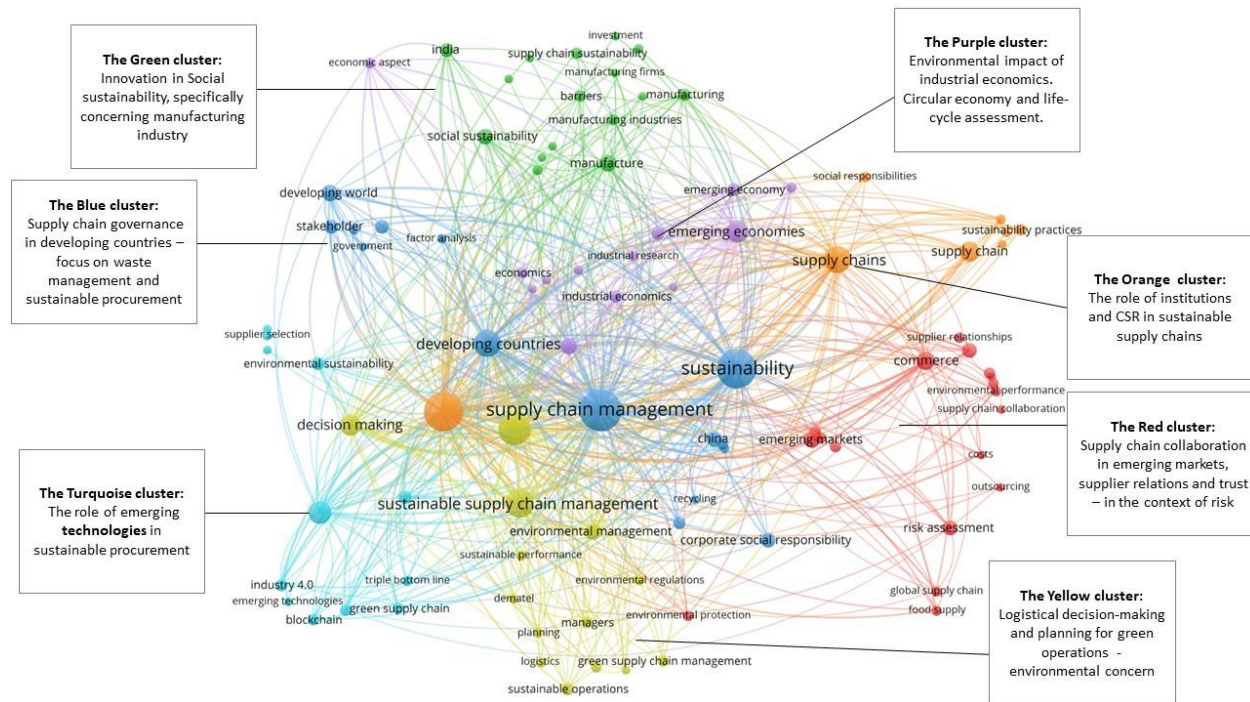
5. The Orange cluster: This cluster examines the institutional approach to sustainable supply chains and contrasts it with the role of corporate social responsibility (CSR). The research in this cluster explores the differences between top-down institutional approaches and bottom-up CSR approaches, and their effectiveness in promoting sustainability.

6. The Purple cluster: This cluster highlights the environmental impact of industrial economics, with a focus on the product life-cycle and circular economy. The research in this cluster examines the environmental impact of different industries and proposes strategies for reducing waste and improving sustainability throughout the product life-cycle.

7. The Red cluster, researching supply chain collaboration between various entities, the role of trust and supplier relations – majorly in the context of risk management; this cluster simultaneously deals with linkage between sustainable supply chains and financial performance of the focal company;

The last cluster is the one we choose to focus on in our further research. Specifically, the aim of this research is to assess the collaboration potential withing the supply chains operating in emerging markets. Notably, out of 414 articles we examined through the software, only 11 explicitly use “collaboration” as a keyword, putting the bubble on the far right on the visual graph.

Figure 4 – Qualitative coding of clusters



Co-Citation Analysis of Reference (CCA-R)

As a third step of the core bibliometric analysis we performed a Co-Citation Analysis of Reference (CCA-R) on the previously extracted articles. This was aimed at tracing the historical academic pillars of the contemporary research and looking at the theoretical evolution of the field. We fed the raw bibliometric data from Scopus (414 articles) to VosViewer to perform co-citation analysis (Anand, 2021). VosViewer identified a total of 30996 references among the publications. To receive a target of 20 seminal papers for further thematic assessment, the threshold of minimal co-occurrences was lowered to 10.

The seminal papers were put into 3 clusters (Figure 5) : 1) The Red cluster formed by papers specifically concerning sustainable supply chain management; 2) The Green cluster formed primarily by methodological basis of research and 3) The Blue cluster, formed generally by papers published within general business strategy and competitive advantage topics. For the purpose of focused core literature review and establishing the prevailing academic outlook on the topic, we decide to remove the publications concerning the research methodology as it does not fit into the research design of this particular work. That leaves us with a total of 14 seminal papers for detailed analysis.

Figure 5 – Seminal papers network

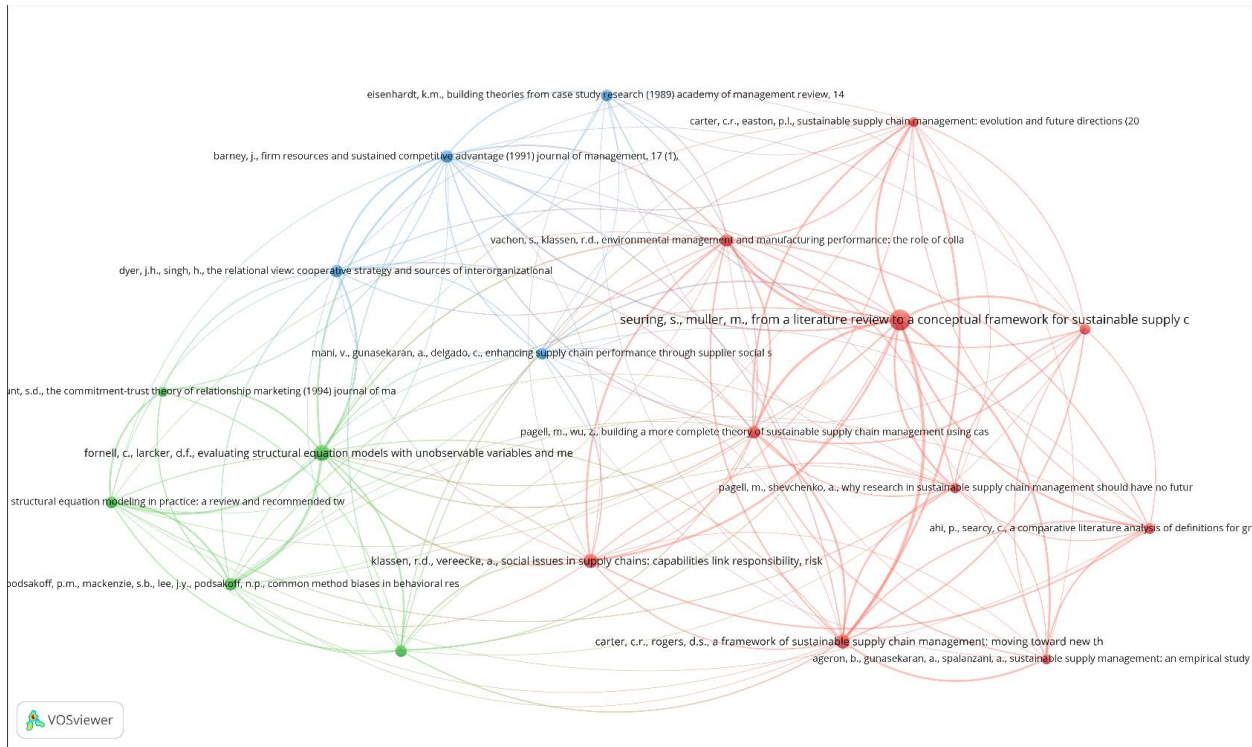


Table 1 – Seminal papers of the field

Article	Author(s)	Year	Cluster
Firm resources and sustained competitive advantage	Barney, J.	1991	3
The commitment-trust theory of relationship marketing	Morgan, R.M., Hunt, S.D.	1994	2
The relational view: cooperative strategy and sources of interorganizational competitive advantage	Dyer, J.H., Singh, H.	1998	3
Environmental management and manufacturing performance: the role of collaboration in the supply chain	Vachon, S., Klassen, R.D.	2007	1
From a literature review to a conceptual framework for sustainable supply chain management	Seuring, S., Muller, M.	2008	1
A framework of sustainable supply chain management: moving toward new theory	Carter, C.R., Rogers, D.S.	2008	1
Building a more complete theory of sustainable supply chain management using case studies of 10 exemplars	Pagell, M., Wu, Z.	2009	1
Sustainable supply management: an empirical study	Ageron, B., Gunasekaran, A., Spalanzani, A.	2011	1
Sustainable supply chain management: evolution and future directions	Carter, C.R., Easton, P.L.	2011	1
Social issues in supply chains: capabilities link responsibility, risk (opportunity), and performance	Klassen, R.D., Vereecke, A.	2012	1
A comparative literature analysis of definitions for green and sustainable supply chain management	Ahi, P., Searcy, C.	2013	1
Sustainable supply chain management practices and dynamic capabilities in the food industry: a critical analysis of the literature	Beske, P., Land, A., Seuring, S.	2014	1
Why research in sustainable supply chain management should have no future	Pagell, M., Shevchenko, A.	2014	1
Enhancing supply chain performance through supplier social sustainability: an emerging economy perspective	Mani, V., Gunasekaran, A., Delgado, C.	2018	3

Through this analysis we can dissect the theoretical lenses that scholars have used to look into the problem of sustainable supply chains. The major directions can be presented as follows: Resource Based View of the firm, where SSCM is seen as a source of competitive advantage, the Relational View, which emphasizes the importance of robust relationships and collaboration for successful SSCM, the Stakeholder theory, Dynamic Capabilities Approach.

Resource Based View and Competitive Advantage approach (Barney, 1991) serves as basis for a major part of research on sustainable supply chains in emerging markets. Coming from a fundamental outlook onto the business strategy, this theory proposes that a competitive advantage of the firm must possess four crucial aspects: value, rareness, imperfect imitability, and substitutability. Following to this framework, SSC can serve as a source of sustained competitive advantage. This theory mostly builds on the preface that sustainable supply chains provide opportunity for enhanced operational efficiency of the company, thus bringing economic benefits through cost-cutting opportunities. Those include reduced packaging waste costs (Mollenkopf et al., 2005), reduced health and safety risks and compensations due to better working conditions and facility safety (Brown, 1996), proactive shaping of environmental regulation (Carter and Dresner, 2001) and shorter lead times (Hanson et al., 2004). In further research (Seuring, Muller, 2008) this economics-centered approach is paired with an external trigger for SSCM implementation – pressure from stakeholders. This is seen as foundation for one of SSCM strategies – supplier management for risk and performance, which primarily adheres to regulations in fear of reputational loss as a risk-management strategy for financial loss control. This approach is contrasted with a different strategy – supply chain management for sustainable products, which is triggered by internal factors (a unique combination of incentives and barriers within the firm). It is considered to rely more on standards of life-cycle assessment and measuring products environmental and social impact for making changes to the supply chain.

Up to a certain point of field development, authors often highlight an evident disproportion in papers discussing the social dimension of SSC, where researchers mostly focus of environmental performance. However, more contemporary research strives to bring SSCM under the triple bottom line – a concept introduced by Elkington (1998, 2004), stating that businesses must consider a balance between environmental, social and economical performance of the company. The implementation of triple bottom line principles to SSCM can be seen as a concurrent effort of multiple factors – (1) sustainable integrated strategy, (2) organizational culture, (3) risk management and (4) transparency (Carter, Rogers, 2008).

The second prevailing paradigm generally falls within the Relational View of supply chain management (Dyer, Singh, 1998), which claims that firms can generate greater economic rents

through collaborative partnership, knowledge-sharing, lower transactional costs, and complementary resource endowment – thus building interorganizational competitive advantage. The principles of successful collaboration within an established network of organizations are first explored through the Commitment-Trust Theory of Relationship Marketing (Morgan, Hunt, 1994), which highlights the role of trust and shared interests among these partnerships. The Commitment-Trust model poses that these functional relationships are based on four primary factors: (1) providing one another with opportunities and resources superior to those of alternative partners, (2) maintaining a high devotion to corporate values, (3) communicating valuable information and (4) avoiding malevolently taking advantage of the partner.

One of the earlier concepts of SSCM theory, environmental collaboration, is defined as “inter-organizational interactions between supply chain members, including such aspects as joint environmental goal setting, shared environmental planning, and working together to reduce pollution or other environmental impacts” (Vachon, Klassen, 2008). It draws a further distinction between environmental monitoring (i.e. audits, questionnaires) and environmental collaboration, which focuses less so on reaching compliance, but rather on means to build long-term green operations (such as sharing policies and establishing common goals). Through examining environmental collaboration practices of North American manufacturers (Vachon, Klassen, 2008), upstream collaboration was linked with enhanced process performance, while downstream collaboration showed better product performance results.

The activities researchers traditionally link with enhanced SSC performance include: organizational commitment, supplier selection and supplier collaboration, ecocentric perspective, life-cycle analysis, closed-loop principles and reverse logistics, collaboration with customers, performance measurement linked with sustainability, just-in-time manufacturing, internal supply chain integration, purchasing on total cost and not the price (Pagell, Wu, 2009). A study of top exemplars of SSC performance allowed to identify another set of practices rarely mentioned in previous literature. Authors have identified several categories of practices that lead to increased sustainability performance. The first category may be labelled as organizational commitment to sustainability on every level of decision making, which includes a sustainable business model, having a touchstone value, conversation and effort integration throughout the entire organization. The second category deals with ensuring supplier continuity – reducing supplier risk, supplier development and support, work with lower-tier suppliers and decommunitizing the inputs. The third bundle of practices is about reconceptualizing the supply chain in general – either through closed loop principles, reverse logistics or reshaping the supply chain through including non-traditional entities such as NGOs.

An empirical conceptual model of SSCM (Ageron, B. et. al., 2011) consists of 7 “building blocks”: “(1) reasons for sustainable SSM, (2) criteria employed for SSM, (3) greening supply chains, (4) characteristics of suppliers, (5) managerial approaches for SSM, (6) barriers for SSM and (7) benefits and motivation for SSM”. Specifically, the research on barriers to SSC implementation, showed that financing, return on investment, supplier capabilities, supply chain network and top-management support were the factors most likely to stipulate the greening of the supply chain. However, it is crucial to notice, that these factors are limited to the internal issues of the supply chain, without assessing the external impacts.

Based on the review of seminal papers it can be inferred that the principles of SSCM implementation can be divided into three broad categories – certification, collaboration, and innovation (Vachon, Klassen, 2008). The problem of integrating the sustainable development principles into the strategic and operational planning of the company is a point of discussion. Researches pose that it is largely ineffective to assign the responsibility over sustainability to a separate entity within the organizational structure (Pagell, Wu, 2009). Rather, it should be dispersed evenly throughout every function of the business.

The Stakeholder theory (Freeman, 1984) is employed majorly in research oriented towards the social domain of SSCM. Through it, it is proposed to consider a minimum of three levels of stakeholders throughout the supply chain – internal (company’s own operations under direct control of management), inter-firm level (covering any transactional partners such as suppliers, customers, or end-users of the product) and external level (actors with less direct economical linkages – NGOs, regulators, communities etc). The social issues targeted by the companies most commonly include health and safety of the workers, safety of the products, prevention of child and/or slave labor throughout the supply network, diversity and inclusion and workers rights. The instruments most commonly used to mitigate the social risks include on-site audits of suppliers, developing corporate policies for supplier engagement and centralized control (Klassen, Vereecke, 2012). There is also research aimed to specify particular social issues relevant to the emerging markets (Mani et. al, 2018), which are typically location dependent. For instance, these include poverty alleviation, sanitation, fresh water and power supply.

The Dynamic Capabilities approach (Teece, Pisano,1994) addresses the capabilities a firm must possess in order to reach competitive advantage in highly dynamic market circumstances. Dynamic Capabilities are defined as “the capacity of an organization to purposefully create, extend, or modify its resource base” (Helfat et al.,2007). In the context on SSCM the dynamic capabilities represent knowledge management (information sharing throughout the supply chain, transparency, innovation capacity) (Defee, Fugate, 2010); partner development and co-evolving

(simultaneous development of all partners in the supply chain, keeping their interests and vision in order through intensive communication) (Beske et al., 2014); and reflexive control (continuous evaluation of SC integrity and performance through both financial and non-financial KPIs and making necessary adjustments with time) (Schliephake et al., 2009). These dynamic capabilities are believed to provide long-term opportunity for the evolution of SSCM, rather than a direct measure to reach enhanced sustainable performance.

The critiques of traditional research on SSCM rose in the last decade. The main point of judgement is the economics centered approach to evaluating sustainable measures. It considers radically incorrect to assess whether SSCM brings additional economic value similarly to JIT or lean supply chains. New research proposes that we should not strive to make unsustainable supply chains cause less harm, but design immanently sustainable business models that at least cause no harm and hopefully provide restoring positive effects on the environment and society (Pagell, Shevchenko, 2014). In a similar fashion, traditional research is accused of focusing on already familiar tools – and sustainability therefore being a byproduct of existing practices rather than targeted innovation.

In further research we assume the theoretical lens of the Relational View theory to build theoretical contribution, since the core concepts of the relational view are highly relevant to sustainable supply chain collaboration. Applying the Relational View theory to the concept of our research suggests that companies must establish long-term relationships with suppliers and stakeholders to achieve sustainability goals. This theory emphasizes the importance of collaboration, trust, and shared value creation between companies and their partners. In the context of supply chain collaboration for sustainable goals, the relational view theory highlights the need for companies to work closely with their suppliers to identify opportunities for improvement in environmental and social practices throughout the supply chain. This approach involves adopting a collective perspective and integrating sustainability throughout the supply chain. It states that through collaborative efforts companies can gain more competitive advantage rather than acting individually – gaining the “relational rents”.

Relational View Theory (RVT) is a management theory that emphasizes the importance of relationships between organizations – which can be well translated into the context of building sustainable supply chains. RVT has four core concepts that are critical in understanding how to effectively manage relationships in sustainable supply chains.

- **Relation-Specific Assets.** Relation-specific assets are assets that are uniquely valuable in a specific relationship. These assets can include specialized

equipment, specialized knowledge, or specialized personnel. In sustainable supply chain management, relation-specific assets are critical because they help to build trust and commitment between organizations. For example, a supplier may invest in specialized equipment to ensure that they can meet the specific needs of a customer. This investment demonstrates their commitment to the relationship and helps to build trust.

- **Knowledge Exchange.** Knowledge exchange is the process of sharing information, expertise, and experience between organizations. In sustainable supply chain management, knowledge exchange is critical because it helps to build trust, improve decision-making, and drive innovation. Knowledge exchange can occur through formal channels, such as training programs or joint research and development projects, or through informal channels, such as regular communication between organizations.

- **Complementary Resources.** Complementary resources are resources that are not necessarily unique to a specific relationship but are valuable when combined with the resources of another organization. In sustainable supply chain management, complementary resources are important because they enable organizations to achieve economies of scale, improve efficiency, and reduce costs. For example, a manufacturer may partner with a logistics provider to leverage their transportation expertise and reduce the emissions through shorter shipping routes.

- **Effective Governance.** Effective governance refers to the mechanisms that organizations use to manage their relationships. In sustainable supply chain management, effective governance is critical because it helps to ensure that relationships are managed in a way that is fair, transparent, and sustainable. Effective governance mechanisms can include contracts, performance metrics, and dispute resolution processes.

Effective supply chain collaboration for sustainable goals requires a long-term perspective. Companies must be willing to invest in sustainable practices and make changes that may not result in immediate returns. This approach aligns with the Sustainable Development Goals (SDGs), which emphasize the importance of sustainable development for present and future generations.

Trust is another core concept of the Relational View theory. Trust is essential for effective collaboration between companies and their suppliers. By working together and sharing information, companies can build trust with their suppliers, which can lead to greater transparency and accountability throughout the supply chain. Shared value creation is also a key concept of the relational view theory. By collaborating with suppliers and stakeholders, companies can identify opportunities to reduce environmental impact, improve social practices, and reduce resource

consumption throughout the supply chain. This approach can lead to significant environmental and social benefits, as well as cost savings and improved brand reputation.

1.2 Sustainable Supply Chain Collaboration: Concept and Theoretical Background

As evident from research of core literature on SSCM authors put an emphasis on the importance of collaborative approaches to systematically implement sustainability into the supply chain. Supply chain collaboration is typically interpreted as any interaction within the SC, where actors (organizations) achieve mutually beneficial outcomes by working in cooperative ways (Rong, Xu, 2019). A concept of “cooperative advantage” as opposed to “competitive advantage” was introduced by Strand and Freeman (2015), where the companies are encouraged to interact with various stakeholders in order to provide superior customer and shareholder value. Sustainable Supply Chain Collaboration specifically is aimed to ensure cooperation for achieving environmental, social, ethical goals between both upstream and downstream members of the supply chain (Gunasekaran et al., 2015). The core difference of collaborative practices from sheer regulatory compliance strives from its voluntariness and proactive nature. Therefore, collaboration lays on the internal motivation of actors, who believe in potential mutual benefit of such efforts.

Interorganizational collaborative capacity (ICC) is “the capability of organizations (or a set of organizations) to enter into, develop, and sustain interorganizational systems in pursuit of collective outcomes” (Jansen, 2008). The collaboration capacity of the market refers to the ability of individuals, organizations, and governments to work together towards achieving sustainable development objectives. This involves a collective effort to share knowledge, resources, and expertise to address social, economic, and environmental challenges. Collaboration capacity is essential for achieving sustainable goals because it enables stakeholders to work towards common objectives and avoid competing interests. When different individuals and organizations come together, they can leverage their strengths and collective resources to tackle complex issues that are beyond the capacity of any single entity.

For example, collaboration capacity can be seen in multi-stakeholder initiatives that bring together businesses, NGOs, and communities to address climate change, reduce poverty, and improve community health. By pooling their resources, members of these initiatives can achieve greater impact than if they were acting alone. In the context of this research, collaboration capacity is defined as the ability of market participants, such as suppliers, manufacturers, distributors, and retailers, to work together towards achieving sustainability goals in the supply chain. This collaboration involves sharing information, resources, and expertise to improve the environmental, social, and economic performance of the supply chain (Van Hoff, 2014). To enhance collaboration capacity of the given market, organizations can establish partnerships, form alliances, and engage

in dialogue with stakeholders to identify shared sustainability goals and develop collaborative strategies. They can also invest in technologies and systems that enable transparency, traceability, and sharing of information throughout the supply chain.

Classic approach to supply chain collaboration offered by Cao and Zhang (2011) views it through a combination of seven basic components of information sharing, goal congruence, decision synchronization, incentive alignment, resources sharing, collaborative communication, and joint knowledge creation. And while same mechanisms are traced in the sustainability aimed collaboration, there is a drastic distinction in the incentives policies of such efforts. The additional green rents that focal brand owning companies receive from greening their supply chain are not easily redistributed upstream the supply chain – advantages such as reputational benefits, improved credit ratings, improved brand value are intangible and are received over a significant time period. Therefore, the collaborative partners are unlikely to engage not see immediate value in such partnerships unless there are additional incentives introduced either by (1) the focal company itself, (2) third party institutions or (3) suppliers internal goals and policies centered around sustainability (in the case of strategic alignment with suppliers goals).

Supply chain incentives are interventions used in sustainable supply chain management that can be either financial or non-financial (Faisal, 2010). The aim of these interventions is to enhance the capabilities of upstream suppliers and reduce risks for supply chain members. One way in which buyers can provide incentives is by sharing financial returns and offering longer-term contracts to their suppliers, particularly in the case of SME partners. For instance, when a buyer offers a long-term contract and specifies the environmental and social criteria for a supplier's products, the buyer ensures the supplier's continuity and strengthens the relationship between the two parties (Pagell and Wu, 2009). By sharing the costs and rewards of collaborative efforts, buyers can foster a sense of shared responsibility and promote a culture of sustainability within the supply chain. This aligns with the research on social sustainability in the supply chains of emerging markets, that demonstrates the direct effect of both supplier training and rewards on the sustainability performance (Amoako et. al, 2021).

Some research suggests that different stakeholder groups throughout the supply chain can hold conflicting interests (Matos, Silvestre, 2013), which would make the supply chain integration process difficult. Similarly, researchers caution against the risk of for opportunistic behavior of stakeholders (Silvestre et. al, 2018), specifically at the frontier of political collaboration, which is an area prone to corruption.

Some research suggests an evolutionary approach to reaching sustainable collaboration within the SC, starting with green transactions between actors, to green cooperation, to green coordination, to finally reach green collaboration (Gunasekaran et al., 2015). Green transactions cover a wide range of mutual actions aimed at providing a green benefit, those can be unsystematic, aimed at reaching a short-term goal. Green Cooperation is tied with revenue sharing which generates from the green benefits acquired through said cooperation. It is aimed at long-term relationship building through initially selecting the SC partners, establishing clear information distribution channels and risk-mitigation – likely through the use of long-term contracts. Green Coordination refers to integrating various company processes with one another for effective resource use, which includes shared manufacturing supply chains, closed-loop systems, reusability of products. Finally, Green Collaboration is seen as an all-encompassing strategic relationship with shared values and objectives.

In a similar streamline approach Zimmer et. al, 2016 outline three general stages of Supplier Relationship management in regards with sustainability – supplier selection, supplier monitoring and supplier development. They pose that the supplier selection stage is crucial for implementing sustainability into the supply chain, where adequate criteria must be established for the procedure. Furthermore, at the supplier selection stage the focal company holds the biggest amount of leverage in the bargaining power to influence the immediate compliance of the suppliers with its ESG requirements, while in further established business processes the power balance shifts towards more equal distribution.

Through a bibliographic review of literature on SCC Chauhan et. al. (2022) were able to identify eight functional areas of collaboration for sustainability. Collaborative innovation – utilizing inter-organizational competences to discover solutions to sustainability issues throughout the supply chain; Information-sharing and knowledge integration; Resource-sharing and management; Collaborative logistics; Collaborative processes and product greening; Collaborative advertising; Collaborative inventory management and Collaborative forecasting. Kunkel et. al suggest that Industry 4.0 technologies are a powerful tool to facilitate collaborative efforts within the supply chain for sustainable goals. This is specifically tied with artificial intelligence tools that help promote efficient energy use throughout the various facilities as well as uncovering opportunities for material use optimization aimed at circular economy principles.

Through a careful synthesis of existing frameworks proposed in scientific literature on SSSC and adjacent topics, it has been found that collaboration capacity is often measured in evolutionary terms, through developmental stages. The proposed structure to assess the level of collaboration capacity of the market is: supplier selection based on ESG criteria, supplier

monitoring, knowledge sharing and supplier development, supplier collaboration, and stakeholder collaboration. It is inferred that organizations need to progress through each stage to build a sustainable and resilient supply chain.

The first stage of sustainable supply chain collaboration is supplier selection based on ESG criteria. This stage emphasizes the importance of selecting suppliers who share similar values and principles of sustainability. Organizations need to ensure that their suppliers comply with environmental, social, and governance (ESG) standards. This stage helps to ensure that the supply chain is sustainable from the very beginning.

The second stage is supplier monitoring. At this stage, organizations monitor their suppliers' performance in terms of sustainability. Organizations use various tools and methods to assess their suppliers' sustainability performance, including audits, assessments, and certifications.

The third stage is knowledge sharing and supplier development. At this stage, organizations collaborate with their suppliers to share knowledge and develop strategies to improve sustainability performance. Organizations share best practices and provide training to suppliers to improve their sustainability practices. This stage helps to build trust and foster collaboration between organizations and their suppliers.

The fourth stage is supplier collaboration. At this stage, organizations work collaboratively with their suppliers to achieve shared sustainability goals. Organizations and suppliers work together to develop joint projects and initiatives that improve sustainability performance. This stage helps to build stronger relationships between organizations and their suppliers.

The fifth and final stage is stakeholder collaboration. At this stage, organizations collaborate with a wider set of supply chain members, including customers, competitors, and regulators, to achieve shared sustainability goals.

In further empirical parts of this research we will be looking to match this theoretical evolutionary model with the evidence from contemporary Russian market. Based on empirical evidence, the proposed model may be adjusted accordingly in order to better reflect the concept of SSCC in the emerging market.

1.3 The Emerging Market Perspective in Sustainable Supply Chain Collaboration

The approach to defining the concept of emerging markets is still not unanimous among scholars and the political and economic community. Based on different approaches, a different set of nations can be described as an emerging economy. However, the consensus is that emerging markets share a set of unique structural, institutional and industrial traits that set them apart from the so-called developed markets. The initial outlook onto emerging markets was brought up in the investment literature, aiming to guide capital holders to invest in high-potential emerging markets, which possess less developed financial systems and are open for foreign investment (IMF, 2004). In further literature the following concepts are set to identify emerging markets: bigger size of economy, better institutional environment, higher economic growth, fast economic structural change, sufficient impetus for development, growing population, abundant natural resources (Hu et. al, 2021). While these characteristics help to differentiate the countries that are in transitional process towards becoming the developed market and highlight their economic potential, it is equally important to address the structural specifics of emerging markets which hold back their growth – in order to set them apart scientifically from their developed counterparts.

Some of the unique structural characteristics of emerging markets include:

- Elevated levels of political and economic instability (Zhang, 2013). This factor increases the risk for changes in government policies and regulations, currency fluctuations, inflation, which in turn stipulates the business development and results in risk-averse tendencies in investors.
- Less developed infrastructure (Haavisto, 2017). This can include inadequate logistical systems, energy infrastructure, and telecommunications networks. These challenges can make it difficult for businesses to operate efficiently and cost-effectively.
- Greater regulatory and legal risks. This can include challenges related to intellectual property protection, corruption, and bureaucratic hurdles.
- Institutional voids
- Cultural differences.

We must, however, point out, that the term emerging markets refers to a group of highly heterogeneous economies. Therefore, researchers offer several types of emerging markets, such as BRIC countries, Next Eleven, frontier markets, and middle-income countries. BRIC countries include Brazil, Russia, India, China, which are all expected to become major economic powers in the coming years. The Next Eleven includes countries such as Indonesia, Mexico, and Turkey, which are also expected to experience significant economic growth over the next decade. Frontier markets include countries that are in the early stages of economic development, such as

Bangladesh, Cambodia, and Kenya. Middle-income countries include nations that are transitioning from emerging markets to developed economies, such as South Africa and Malaysia.

Consequently, building sustainable supply chain in the emerging markets comes with a set of challenges. Emerging markets are playing an increasingly important role in the global economy. However, rapid economic growth within these markets often comes with a cost - underdeveloped regulations and ineffective law enforcement can lead to growing levels of environmental pollution and human rights violations. The COVID-19 pandemic and political instabilities in countries such as Russia have only served to exacerbate these issues.

Emerging markets often have less developed infrastructure, which makes it challenging to implement sustainable supply chain practices, especially in the domain of green transportation and logistics. In developed markets, transportation is often reliable and efficient, enabling sustainable practices such as just-in-time delivery and low-carbon transportation, whereas in the emerging markets companies are faced with the need to develop innovative solutions to green their supply chain. The issue becomes more complex when the company is faced with limitations in the availability of local suppliers and their capacities, which prompts more substantial reliance on imports, which in turn undermine the sustainability of the entire supply chain.

Emerging markets often have less stringent regulations on environmental and social responsibility compared to developed markets, making it more challenging to implement sustainable supply chains, as the procedures have not been yet established by the local regulators. This implies that companies need to be involved into the process of regulatory development, working collaboratively with local institutions to come up with viable solutions.

Lower supply chain visibility opportunities are available in the emerging markets due to both lack of attention to sustainability monitoring and the wideness of technological spread. While companies operation in developed markets enjoy such technologies as blockchain tracking systems for raw materials, in emerging markets these processes require a great amount of manual labour in combination with on site audits. The lack of SC transparency makes it challenging to analyse the thin spots in the supply chains – leaving the risks of violations.

To overcome these challenges, businesses need to establish effective collaboration strategies that integrate sustainability policies, stakeholder engagement, and risk management mechanisms. Furthermore, businesses must work closely with local governments, NGOs, and suppliers to create a supportive environment for sustainable supply chain collaboration. Moreover, Pakdeechoho et al. (2018) suggest that in emerging markets, environmental and social

performance of companies are still not being measured to the same extent as in developed markets. With little attention to measuring sustainable performance, there is a lack of institutional incentives to facilitate SSCC. Rather, the existing incentives focus on greater sustainable performance inside the firms. In developed markets, on the other hand, high institutional constraints push supply chain members to pool resources and share competences to adhere to stringent sustainability requests.

Resource dependence theory (Pfeffer, Salancik, 1978) explains why companies operating in emerging markets may be more drawn to inter-organizational collaboration. In the absence of sufficient green resources, sustainable capabilities, and expertise (Jayarama, Avittathur, 2015), the role of collaboration becomes vital for sustainable supply chain management (SSCM) implementation. Emerging markets may require more time and resources to build the capacity for sustainable supply chain practices, such as training and education. In developed markets, capacity building is often already in place, enabling faster and more widespread adoption of sustainable practices.

It is of great concern, how the green benefit of SCC can be distributed to the upstream members of the supply chain (Chen, Hung, 2014). For the focal companies, the benefits are typically long-term, and are not always easy to share. Therefore the burden of greening the supply chain falls onto the supplier, who may lack resources to change the operations to adhere to the focal company requirements. The incentives for the suppliers to engage in these collaborative projects has to be clearly realized by the actors, otherwise their participation becomes forced by the focal company, realizing the risk of a power imbalance between supply chain members.

In conclusion, sustainable supply chain management (SSCM) is a complex and multi-faceted concept that has been explored through various theoretical lenses. The major directions of SSCM include the Resource-Based View of the firm, the Relational View, the Stakeholder theory, and the Dynamic Capabilities approach. Through these lenses, researchers have identified various practices that lead to enhanced SSC performance, including organizational commitment, supplier collaboration, life-cycle analysis, closed-loop principles, and performance measurement linked with sustainability. While traditional research on SSCM has focused on economic benefits, more contemporary research recognizes the importance of balancing environmental, social, and economic performance. The implementation of triple bottom line principles to SSCM can be seen as a concurrent effort of multiple factors, including a sustainable integrated strategy, organizational culture, risk management, and transparency.

Effective supply chain collaboration for sustainable goals requires a long-term perspective, trust, and shared value creation between companies and their partners. Collaboration capacity is

essential for achieving sustainable goals because it enables stakeholders to work towards common objectives and avoid competing interests. Incentives policies and supplier rewards are also important considerations in the implementation of SSCM. In summary, SSCM is a crucial aspect of sustainable development, and it requires the cooperation and collaboration of all actors within the supply chain. Future research should continue to explore these concepts to develop effective sustainable supply chain management strategies.

CHAPTER 2: COLLABORATION CAPACITY IN EMERGING MARKETS: EMPIRICAL EVIDENCE FROM THE RUSSIAN MARKET

2.1 Methodology Development

The empirical part of this research is organized into two consecutive parts – each aimed to answer a separate research question. The first part of empirical research aims to answer the question “How do focal companies collaborate with their suppliers for sustainable goals on the Russian market?”

In order to comprehensively answer the research question at hand, a market-wide assessment must be carried out. Given that the topic of interest is still scarcely developed in scientific literature, we have opted for a Qualitative Exploratory Approach (Hunter et. al, 2019) to data collection and analysis. Qualitative methods, while limited in their ability to draw statistically proven conclusions, have great potential to gather insight on the composition of the previously under-researched topic (Stebbins, 2001). This approach is particularly effective in the early stages of research, allowing for the identification of key themes and patterns that can inform future studies. The sampling for Qualitative Exploratory Approach must be purposeful (Sandelowski, 2004) and reflect the phenomena over a variety of contexts. Therefore, we do not restrain the sample by the industries of company’s operations. We create a database of non-financial reports from year 2021 based on the data accumulated in the National Register of Corporate Non-Financial Reports facilitated by the Russian Union of Industrials and Entrepreneurs. The year is chosen for two major reasons, firstly, since companies publish their non financial reports at various times throughout the year, at the moment of data collection a rather limited sample size was available for year 2022. Secondly, after the beginning of the SMO in Russia, many international companies have suspended their non-financial reporting due to the silence mode of operations. Therefore, year 2021 is the most recent and suitable for further analysis of the ESG reports. We aim to address the specifics that have arose later in the later part of this research.

To conduct this assessment, we will employ a content analysis methodology (Bengtsson, 2016) for non-financial reports of large companies operating in the Russian market. This methodology involves the systematic examination and categorization of the language used in the Supply Chain section of these reports, with the aim of identifying recurring themes and patterns related to the topic of interest. We will begin by collecting a comprehensive sample of ESG reports from a range of companies and industries. These reports will be analyzed using a range of qualitative data analysis techniques, including coding, categorization, and frequency analysis. Through this process, we hope to gain a better understanding of the current state of SSCC in the Russian market.

For the second stage of the research, the questions are as follows:

- “What benefits focal companies and suppliers receive from Sustainable Supply Chain Collaboration?” This question arises from the Relational View theory and aims to discover the internal benefits each side of the collaborative partnership expects from investing their resources into greening the supply chain.

- “What barriers and incentives for SSCC are prominent in emerging markets (based on the example of the Russian market)?” This question, on the contrary, explores the external environment specific to the emerging market, hoping to provide insight into environmental factors that might influence the development of sustainable supply chain collaboration.

To answer these questions, semi-structured interviews with industry professionals will be conducted. This approach will allow for a more in-depth exploration of the topic, as the interviews can be tailored to the interviewee's specific experiences and knowledge. The sample for the interviews will consist of representatives of focal companies in the Russian market that have experience with sustainable supply chain collaboration. This will ensure that the insights gained are relevant to the research questions and specific to the context of the Russian market. The interviews will be conducted in via video conferencing in order to collect detailed and accurate transcripts of the answers, that will be used for further analysis.

The data from the interviews will be analyzed through thematic analysis. One of the key benefits of thematic analysis is that it allows for a deep and nuanced exploration of the data. By identifying the key themes and patterns within the data, we aspire to gain a more detailed understanding of the participants' experiences, perspectives, and attitudes towards SSCC. This can be particularly valuable in fields where there is limited understanding of the topic of interest, or where there is a need to explore complex and multi-layered phenomena. The analysis will be conducted using qualitative data analysis software MaxQDA to ensure rigor and reliability.

The process of conducting a thematic analysis involves several steps. First, the transcripts of the interviews are read and re-read, in order to gain a detailed understanding of the data. Next, initial codes are generated, which involve identifying key words or phrases that relate to the research question. These codes are then organized into broader themes, which capture the underlying meaning of the data. Finally, the themes are interpreted in relation to the research question, and used to develop a comprehensive understanding of the topic. By gaining insights from industry professionals in the Russian market, this research aims to contribute to the broader understanding of the challenges and opportunities for SSCC in emerging markets.

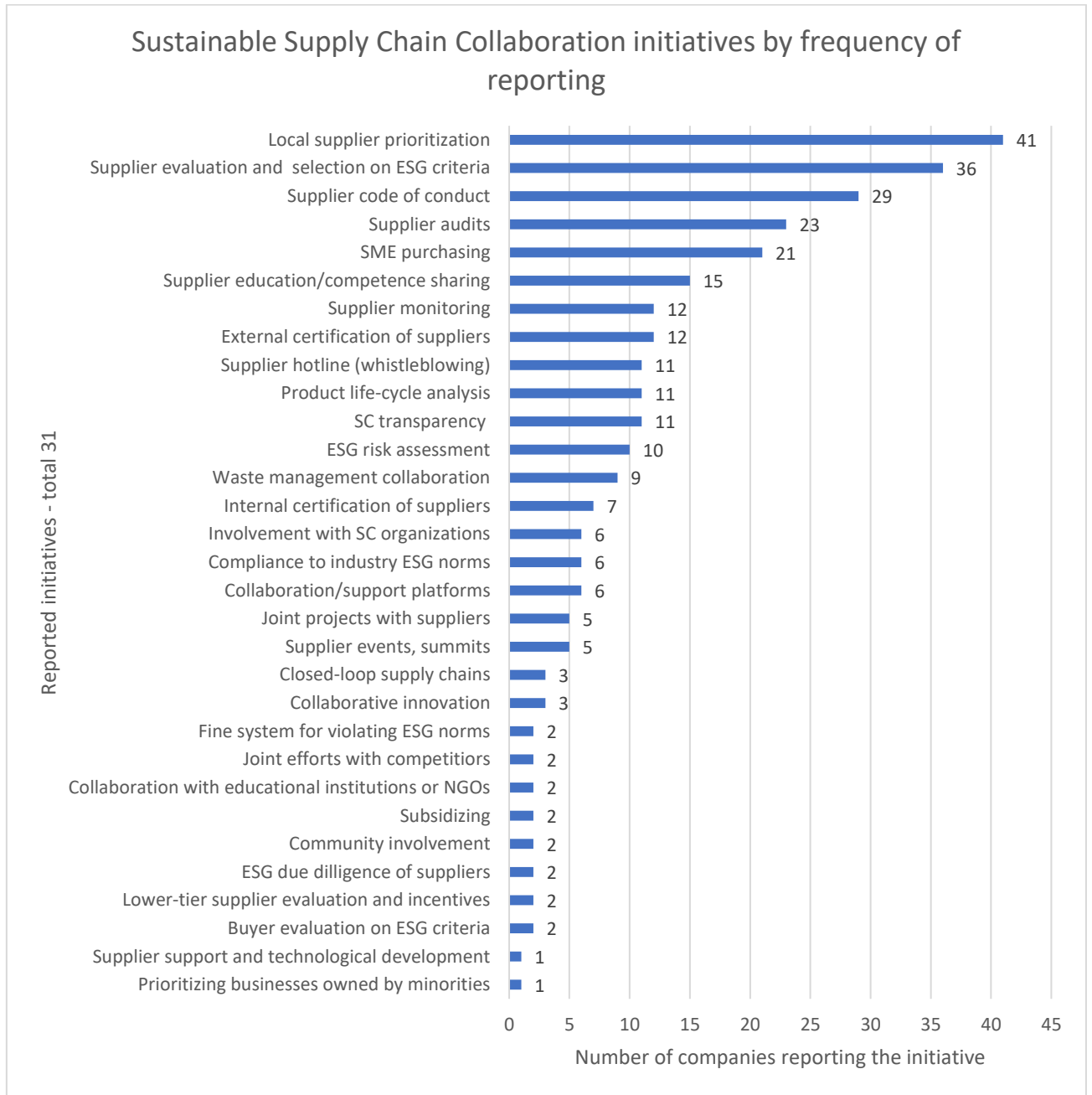
2.2 The Contemporary Level of Collaboration Capacity – Analysis of Non-Financial Reports

In order to assess the current level of collaborative practices in Russia we use the method of Content Analysis of qualitative data (Bengtsson, 2016) retrieved from a database of ESG reports from year 2021. The database consists of 72 reports from companies operating in the Russian market, those include both national companies and local divisions of multi-national corporations. The full list of companies, whose reports were investigated is found in Appendix 1. The vast majority (60) of retrieved documents represent sustainability reports, while the rest are integrated reports featuring the non-financial data.

The Global Reporting Initiative recognizes the importance of sustainable procurement practices throughout the supply chain and offers guidance on disclosing supply chain related issues in the non-financial reports. The procurement practices are covered under the GRI 204 section, which specifically mentions the proportion of procurement based on local suppliers, methodology of tracing the origins of purchased goods and assessing their environmental and social impact, forms of economic inclusion of various suppliers (GRI, 2016). In order to assess the supply chain initiatives declared by the investigated companies, we analyze the sections of reports focused on procurement practices.

The qualitative coding procedure was performed deductively. A total of 31 distinctive means of SSCC were identified among the reports (Figure 6). A frequency analysis is presented to reflect which collaborative measures companies use most often to achieve sustainable goals within their supply chain.

Figure 6 - Sustainable Supply Chain Initiatives reported

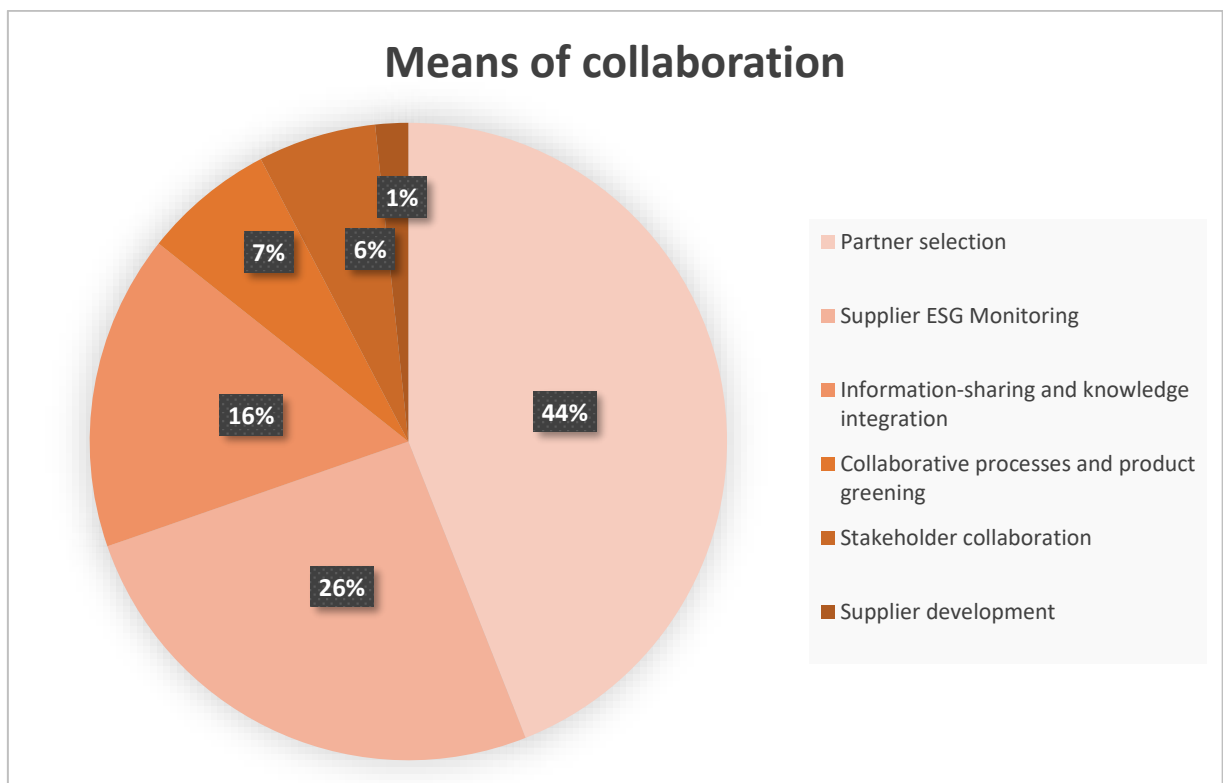


A total of 31 types of initiatives were reported by the 72 companies reviewed. In order to see the prevailing patterns in corporate reporting, the reported measures were grouped on the basis of theoretically derived levels of SSCC.

Table 2: Groups of reported SSCC initiatives

Partner selection	Supplier development
Prioritizing businesses owned by minorities ESG due diligence of suppliers ESG risk assessment External certification of suppliers Supplier evaluation and selection on ESG criteria Local supplier prioritization SME purchasing Buyer evaluation on ESG criteria Internal certification of suppliers	Supplier support and technological development Lower-tier supplier evaluation and incentives Subsidizing
Supplier ESG Monitoring	Collaborative processes and product greening
Fine systems for violating ESG norms Supplier hotline (whistleblowing) Supplier audits Supplier code of conduct Supplier monitoring	Joint projects with suppliers Waste management collaboration Collaborative innovation Closed-loop supply chains
Information-sharing and knowledge integration	Stakeholder collaboration
Supplier events, summits Supplier education/competence sharing Collaboration/support platforms Product life-cycle analysis SC transparency	Compliance to industry ESG norms Involvement with SC organizations Community involvement Joint efforts with competitors Collaboration with educational institutions or NGOs

Figure 7. SSCC Means Distribution.



1. Partner selection

This group of measures refers to the notion of reaching the triple bottom line in the process of partner selection – where traditionally only economic and efficiency criteria were taken into account, now companies introduce an additional set of criteria in order to evaluate their suppliers – environmental and social ones. Rashidi et al (2020), outline the main criteria of supplier selection used in each of the three domains of the TBL:

- Economical - “Quality, Delivery, Cost, Price, Technology capability, Flexibility”;
- Environmental – “Environmental Management System, Eco-design, Energy Consumption, Recycling, Pollution Control”;
- Social – “Work safety and labor health, Employment Practices, Social Responsibility”.

Supplier selection and evaluation based on ESG criteria is the second most frequently reported measure with a total of 36 mentions. Companies have reported this process on various stages of implementation, while some intend to initiate the assessment process in the coming years, many other companies already report tangible results. For instance, Lukoil reports the «implementation of evaluation of all suppliers for compliance with the criteria of sustainable development», while En+ Group specifically reports that *«particular attention is paid to compliance with the Group's principles in the field of ethics, anti-corruption, industrial safety, labor protection and the environment and all new and potential suppliers of En+ Group are evaluated for social effectiveness»*.

The term “partner selection” is proposed rather than “supplier selection” because the empirical evidence suggests that companies not only evaluate their direct suppliers, but also various subcontractors and vendors, as well as two instances of buyer evaluation. This helps trace the product life cycle not only upstream, but also downstream, which ensures sustainable supply chain continuity and transparency. Alrosa company implemented a system of internal buyer certification to ensure responsible use of raw diamonds: *“The ALROSA ALLIANCE logo has been developed to identify customers as reliable buyers of rough diamonds”* while SUEK aims to ensure responsible utilization of their product: *“When entering into a contract with SUEK, buyers undergo a counterparty verification procedure, equivalent to that of suppliers”*. It must be noted that both companies operate in high conflict potential mining and energy sectors, where higher supply chain transparency is required by the worldwide industry regulations – the prime example being the Kimberley Process, aimed to eliminate the worldwide trade of “conflict diamonds”, the

extraction and sale of which supports the weaponized conflict and aggression in vulnerable places of the mining origin. Nevertheless, partner selection and evaluation should encompass not only the direct suppliers, but strive to include the wider set of stakeholders within the supply chain.

Another highly used metric is the percentage that local suppliers (41) and/or small and medium enterprises (21) take up in the full volume of purchasing. Prioritizing local suppliers aims to support the regions where the company is present in their operations, creating jobs and fueling the local economy. This is an especially important factor in the developing countries, where smaller manufacturers could face difficulty to compete with cheaper imported goods. This factor is especially relevant for production companies who have their supplier base of raw materials and resources in the areas prone to labor rights violations and risk of unfair compensation. The closest attention is typically paid to these issues in the manual labor intensive agricultural sector, for instance a tobacco producer BAT reports that *“the vast majority of tobacco farms in our supply chain are small family farms”*. Partnering with small local producers promotes local economic development, while ensuring a consistent quality supply base for the focal company. A somewhat unique policy is introduced by NLMK, where the company takes a step further to enhance collaboration with *“suppliers and contractors owned by women or members of vulnerable groups”*. We must mention, however, that an issue of a power imbalance may arise when a large multinational corporation partners with local SMEs. Large companies often have significant bargaining power, financial resources, and market influence, which can give them an advantage over small suppliers. This can lead to an unequal distribution of benefits and risks in the collaboration, with the focal company benefiting at the expense of the smaller suppliers. Small suppliers may be more vulnerable to opportunistic behavior of the MNCs, as they may lack the resources to conduct their own due diligence on the focal company's sustainability practices.

The second benefit of localizing the supplier base stems from the environmental benefits of shorter transportation routes – therefore reducing the carbon miles required to get the product to the end consumer. Garant Invest recognizes this opportunity as follows: *“In order to reduce the environmental impact of emissions, preference is given to suppliers located as close as possible to the delivery site”*. Thirdly, localizing the supplier base can help to promote transparency and accountability in the supply chain. When companies source goods and services locally, they have greater visibility and control over the production processes and working conditions of their suppliers. This can help to ensure that suppliers are complying with ethical and sustainability standards, which can help mitigate reputational and legal risks.

ESG due diligence and ESG risk assessment of suppliers are similarly procedures performed before signing the contract with chosen suppliers. They are aimed to uncover and

review all information about the potential supplier with regards to their reliability and ensuring the company has not been linked to any ESG violations. ESG risk assessment primarily focuses on identifying and assessing ESG risks that a company may face. This process involves analyzing a company's operations, supply chain, and other factors to identify potential ESG risks and assess their likelihood and potential impact. ESG risk assessment is often used by investors and lenders to evaluate a company's ESG performance and inform investment decisions. ESG due diligence, on the other hand, is a more comprehensive process that involves evaluating a company's ESG performance and practices in depth. This may include assessing a company's policies and procedures, conducting site visits and interviews with stakeholders, and reviewing relevant documents and data.

As seen from the reviewed reports, risk assessment is often times tied with the potential of human rights infringements throughout the supply chain. In 2021 Nestle reported that *“the analysis of data for some cocoa-growing regions suggests an increased risk of exploitation of child labour during quarantine measures”*. The attention to human rights agenda is elevated in the emerging markets, where regulatory institutions are yet to address and establish procedures for ensuring compliance with workers' rights and safety labour conditions for all. The businesses that are willing to build their supply chains with regards to human rights therefore establish their own procedures to ensure worker safety in the regions of their supplier base. The human rights risk assessment is not only relevant in default high risk regions of production and agriculture, but also in regions with high immigrant populations. Due to increased demand for jobs in migrant communities, lack of education and legal literacy, institutional and regulatory gaps in protecting the rights of migrant workers (Ross, 2019) multiple human rights risks appear – such as withholding wages, restricted mobility of workers, identity document retention and drastic overtime work. These risks are highlighted in the industries working largely with subcontractors, therefore focal companies aim to eliminate these risks through social supplier due diligence. En+ reports that *“the company assesses and manages supply chain risks and excludes transactions and suppliers that could jeopardise the right to freedom of association and collective bargaining or for which there is a high risk of the use of child or forced labour”*. The reason why risk assessment focuses primarily on human and workers rights (the social domain) could be explained by the fact that environmental risks are heavily regulated by quality control, legally binding documents and standards for company operations. Therefore risks of illegal disposal or violation of acceptable levels of pollution are more largely covered by the official industry standards.

Finally, the last set of initiatives that falls under the partner selection category is internal or external certification of suppliers on ESG criteria. Internal certification provides an opportunity

for the focal company to establish their own criteria for sustainable performance of the suppliers, identifying the most significant topics for their business and industry. Internal certification is typically performed through the established supplier accreditation process, by adding the ESG requirements into the procedure.

External certification is provided by independent third party organizations, while the focal company either requests such certification from their suppliers or takes them into account when making decisions on partnering. The most commonly mentioned external certifications include:

- ISO 14001 - Environmental Management Systems
- OHSAS 18001 - Occupational Health and Safety Management Systems and health protection
- ISO 45001 - Occupational Health and Safety Management Systems
- FCS2 – Responsible Forest Management
- EcoVadis
- Industry specific environmental and social certifications (i.e. International Cyanide Management Code).

External certification provides a range of benefits to both the focal company and the supplier. First, independent organizations provide a comprehensive set of criteria the company must meet to issue the certificate – which will be recognized globally (or locally) by the major potential client-companies. This provides suppliers with the opportunity to verify their sustainability position through a single authority, saving the resources and time of compliance with various company requests. To the focal company, an external certification is the simplest way to verify supplier ESG commitment, saving resources on internal surveys, certification and audits. In the emerging markets, external certification is one of the ways, in which SC Collaboration is realized. In order to formulate common criteria relevant for Russian business, companies need to combine knowledge and expertise, one of the examples of such process is reported: *“EVRAZ is currently participating in a large-scale ESG-certification of counterparties conducted by Bidzaar. Bidzaar, together with the National Research University Higher School of Economics, has initiated the development of a methodology for rapid assessment of companies for ESG compliance in Russia”*. Here, the collaboration takes place between focal companies, an IT platform for supply chain management and the educational institution in order to facilitate external certification of suppliers.

Partner selection is the most common practice reported by the companies operating in Russia. In theoretical research that is seen as the primary crucial stage to build further sustainable supply chain collaboration. Making sure that supply chain members actively share and support the company sustainability principles and values helps create a solid foundation, where further connections can be established. Furthermore, at the stage of partner selection companies hold the greatest amount of power to influence the decisions of the suppliers (Zimmer et. al, 2016). However, while a crucial part of sustainable collaboration, partner selection is not the most powerful tool to generate collaborative rents and create synergies in achieving sustainability goals. Deeper levels of collaborative investments have to be explored in order to build productive sustainable relationships within the supply chain.

2. Supplier ESG monitoring

Supplier ESG monitoring involves continuous checking and verification of contractors status of operations and sustainable development progress. This serves as a logical continuation of partner selection measures, extending the company attention onto day-to-day operations of suppliers with whom the contracts and business relationships have been already established. One of the most common tropes of monitoring is tracking the supplier volume of CO2 emissions over a certain period (Scope 2 and Scope 3), along with water consumption and waste disposal.

The main guidance for suppliers is established in their contracts with the focal company, however an increasingly popular tool, reported by a total of 29 companies of the sample, is the introduction of the supplier Code of Conduct, which describes company expectations of all the suppliers it works with. In the scientific literature, two broader approaches are identified to the Code of Conduct influence power – mandatory and voluntary approaches (Jaiswal, G., 2020). The mandatory approach establishes a strict set of rules, which the suppliers accept when entering the business relationship with the focal company – while a number of sanctions are introduced for the case of violation of the CoC. An illustration of such approach is the fine system reported by Polymetal, where: *“The contracts include fines for non-compliance with environmental and other requirements related to packaging, noise level, environmental pollution and emergency preparedness”*. On the other hand, some companies prefer to establish the ESG requirements in a step-by-step manner, taking onto the voluntary approach. In that case, Code of Conduct features less strict principles and goals the company is working towards and ESG values it expects its suppliers to share. This approach allows the supplier base to gradually expand their capacities in terms of meeting the ESG requirements of the firm, while continuing the operations with trusted partners. The approaches could be merged by setting differentiated targets for various aspects of the supplier sustainability – for instance, waste managements practices or pollution levels are

typically much more heavily regulated and traced, while CO2 emission targets can be flexible depending on the specifics of operations. This combinatory approach is taken by Nornickel: *“This Code sets out mandatory, target and expected requirements for suppliers, which are audited annually or as significant changes occur in the relevant supply chain”*. Another tool reported by 11 companies is an established communication channel for potential whistleblowing from the suppliers, where any concerns of ethical breaches can be brought up with the focal company: *“Since 2021, Nestlé has had a single global channel for reporting possible violations of ethical principles and legal requirements Speak Up.”* The formats range from a phone hotline, dedicated email, to a digital supplier relations platform, which in BAT is organized in the mobile app format: *“The SoBC app is available in 14 languages. You can learn the Rules of Business Conduct for Suppliers and use the Speak Up channels”*.

Supplier ESG audits appear to be one of the more popular instruments of supplier monitoring (23 reports), while requiring more advanced approaches and involvement. Supplier ESG audits are carried out both preemptively, before signing with the supplier, and more so as an ongoing practice to make sure longitudinal compliance with company sustainability policies. While supplier selection typically includes ESG questionnaires and/or documentation proving the commitment to ESG principles, supplier audits allow to ensure the practical implementation of declared principles.

3. Information-sharing and knowledge integration

The initial theoretically proposed level of Information Sharing and Supplier Development was divided into two sublevels due to significant difference in the forms of collaboration reported by the companies investigated. The first group, therefore, is examined further. Supplier education and competence sharing initiatives were shared in 15 company reports. A large retailer Detsky Mir reported *“conducting regular sustainability training with suppliers and implementing an ESG risk map by supplier category”*, while BAT highlights that *“350817 people took part in human rights training provided by their tobacco production sites and strategic suppliers and 75,000+ farmers are contracted by BAT and supported by their experienced technicians to help develop their skills, increase their yields and increase their sustainability competences”*. Information sharing is shown to be organized in the form of specialized supplier events and summits, to enable not only the competence sharing between the supplier and the focal company, but also among the suppliers themselves. As an example of such events, Leroy Merlin showcased a *“large online conference for suppliers on the Positive Products strategy, where among other things, their Responsible Product Proposal Guidelines were presented”*. As we will discover further in this research, supplier education in the sphere of ESG is a crucial point for the companies developing SSC in the

Russian market currently. Companies require both attention and commitment from their suppliers to the ESG principles established on the focal company, as well as rely on supplier ESG capacities and competences in development of SSC. Therefore information and competence sharing becomes a crucial step in the collaborative development.

In some companies collaboration and support platforms for suppliers are used as an instrument of information and knowledge sharing. As an illustration of such case, Garant Invest claims to collect and discuss supplier and contractor proposals within their regular “Green Committees”, while Magnit *“participates in a working group on the ECR platform, which is designed to share experiences between manufacturers and retailers to improve product quality and customer service. As part of the working group, they are involved in discussions with suppliers and retailers from 20 European countries on an industry standard for sustainable packaging”*.

However, knowledge sharing was not only observed in the form of supplier education, but also in terms of increasing supply chain transparency through integrated information systems, as well as using tools like product life-cycle analysis collaboratively in order to uncover the “thin spots” in the supply chain, which carry the biggest environmental and/or social risks. This is especially relevant for companies that prioritize control of CO₂ emissions throughout the entire life cycle of their products, like Tatneft which *“integrates greenhouse gas reduction goals throughout its supply chain and into the life cycles of business processes, products and services, including contractors and suppliers”*. This increased transparency in the supply chain allows for greater visibility and accountability for all parties involved, helping to ensure that ethical and sustainable practices are being followed throughout the entire process. One tool to ensure that is offered by Beeline, who formulate *“the terms of reference for the selection of a contractor shall take into account the entire lifecycle of the product”*. Additionally, collaboration and knowledge sharing in this way can lead to improved efficiency and cost savings for suppliers, which can ultimately benefit the entire supply chain. By leveraging these tools and practices, companies can work together to address pressing environmental and social challenges, while also improving their own operations and bottom lines.

4. Supplier Development

During empirical analysis of the sustainability reports, it was noted that the difference between knowledge sharing and supplier development is based on the intention of the focal company. While knowledge sharing was mostly linked with widespread awareness building and training among the supply chain members in order to increase understanding and willingness to adhere to company requests in the area of sustainability, supplier development was shown to be a

more targeted, one-to-one approach aimed at developing the sustainability competences and capabilities of strategic suppliers and partners. Likewise, X5 Retail Group “*will support and promote the development of technology and products of those suppliers who comply with [ESG requirements]*”. The supplier development approach is specifically relevant to the companies which involve into supply chain relations with agricultural sector of suppliers, who may need additional resource development to adhere to company ESG standards. In some cases companies (i.e. KazMunayGas) refer to the tool of subsidizing their subcontractors in order to ensure safety of working conditions and fair compensation to the workers.

Another component of supplier development relates to the lower-tier supplier management and incentives. It is still highly uncommon in the Russian market, where the first-tier supplier selection and monitoring is still in developmental stage. NLMK offers it’s suppliers ESG support tools to help them implement and monitor their ESG programs better. These support tools include online resources, software, and other solutions that help suppliers track and report on their ESG performance. Managing lower tier suppliers in term of their ESG performance in a challenging task, since they typically act passively in order to adhere to compliance requirements (Villena, 2018), therefore becoming the riskiest link within the supply chain. One of the biggest challenges here lies in the domain of unfair working conditions, where emerging markets are especially vulnerable. For the MSCs, the first tier suppliers will typically be in the spotlight, being themselves large producers in their respective areas, under close attention from regulators, whereas lower-tier suppliers down the supply chain do not face the same level of stringency.

5. Collaborative processes and product greening

As the title suggests, the collaboration may target the greening the product itself, meaning its ingredients and materials, including sourcing, packaging and its environmental footprint, as well as the processes involved in production – such as logistics, waste management, and more. The area where collaboration was highlighted most often in terms of process greening was waste management collaboration. This can be partially explained by the rapid development of waste management regulations in Russia and the clause on extended producer responsibility (Russian Government Decree on the Approval of Waste Disposal Rates for Goods for 2021), which prompts companies to manage the waste accumulated from their product use through post-consumer treatment or being faced with ecological fees towards the federal budget. The aforementioned collaboration primarily takes place in the form of contracting eco-waste operators, as well as redesigning the packaging with the suppliers in order to reduce the excessive waste associated with it. In order to promote end-of-life recycling of goods and packaging Leroy Merlin is “*working with their suppliers to establish clear instructions for sorting and disposing of goods and*

packaging”, whereas Detsky Mir is operating a Trade In program for used clothing and footwear items. Other companies are extending their efforts in waste management into working towards creating closed loop supply chains. NLMK reports “*reducing waste through reuse and recycling and through the use of recovered and recycled products and materials*”, while RosAgro leverages their vertically integrated structures to promote the waste based resource use in adjacent business segments of the holding.

Waste management, although being a popular domain, is not the only strategic area of collaboration within the supply chain. Joint sustainability projects with suppliers were reported by 5 companies, while 3 reported collaborative innovation projects. FosAgro reported having begun “*a joint project to convert the main lime supplier's production from coal to gas*”. Joint projects require the largest amount of knowledge and resource sharing, sharing financial investments into the development and shared processes therefore being the most sophisticated form of collaboration for sustainability. Magnit reported a joint initiative with its suppliers “*for the development and production of new products, including eco-commodities and private label goods*”, as well as a large project carried out with a large FMCG producer and strategic supplier Procter&Gamble for collection of used plastics and using the recycled materials for various socially beneficial projects. We must note that joint project collaboration was more so visible in the pairing of a large retail company and an equally large producer, which might be explained by the condition that both companies have their own developed policies and practices of sustainable business, helping them to set similar goals and use existing synergies to the benefit of both. Secondly, both retailers and FMCG companies may be labelled highly consumer facing – meaning that their sustainability efforts may be communicated as part of marketing strategy targeted toward end users. X5 Retail Group similarly reports active dialog and joint ESG program development with their key suppliers, while Nestle reports active collaboration with their suppliers in the water conservation and responsible use for their production.

Collaborative innovation is another powerful tool to develop viable solution to complicated sustainability issues and reaching sustainability targets more effectively. RUSAL signed an agreement of intent on strategic cooperation for low-carbon development in logistics with PJSC TransContainer, an intermodal container operator with the largest container fleet in Russia. The agreement holds its goals to “*reduce greenhouse gas emissions, and the companies are committed to jointly develop and implement new low-carbon technologies for the transport of raw materials and aluminium products*”. The topic of collaborative collaboration is further covered in the interview section of this research, in order to explore various forms to foster sustainable collaboration.

6. Stakeholder collaboration

Finally, the level of wider supply chain stakeholder collaboration is explored throughout the analyzed set of reports. The collaborative efforts reported were divided by the stakeholder group involved: the company industry, dedicated supply chain organizations, local communities affected by company operations, competitors, educational institutions and NGOs.

Compliance to industry specific ESG norms was reported by 6 companies, where their own ESG initiatives within the supply chain were developed under the influence of industry guidelines and common agreements. Such regulations and agreements are typically linked with high-risk raw materials such as metals, rare-earth minerals and oils. For instance, Krascvetmet claims full compliance of their SC processes with international industry standards - London Bullion Market (LBMA), London Platinum and Palladium Market (LPPM) and Dubai Multi Commodities Centre (DMCC). However such efforts are not limited to compliance to existing norms, but can include further regulatory development with peer companies and regulatory bodies. Likewise, ALROSA claims compliance with current industry standards and active involvement in developing new approaches to forming transparent diamond supply chains. In such cases we can observe a multi-stakeholder approach to collaboration.

Similarly to industry collaboration, involvement with SC organizations fosters a great amount of knowledge sharing and opportunities for collaborative projects. One of the biggest platforms for responsible sourcing is EcoVadis, which helps certify a large database of suppliers and evaluate their performance in regard to the focal company. However, due to political instability, EcoVadis rating stopped their operations in Russia, leaving a large operational gap for sustainably oriented companies. However, in 2021 VimpelCom reported being audited by EcoVadis, based on their international principles of responsible purchasing. In the reporting year, Detsky Mir became the first Russian company to join the international Zero Discharge of Hazardous Chemicals initiative. To improve procurement transparency, in January 2021, Nor Nickel joined the Responsible Sourcing Blockchain Network (RSBN). Working with established supply chain organizations provides comprehensive frameworks and instruments to increase Supply Chain Sustainability and fosters more profound collaboration between the member companies of the organization.

Magnit Retail, MTS and Beeline reported partnership with the JAC (Joint Audit Cooperation) association, which brings together sustainably oriented companies in order to pool resource for sustainability audit of common suppliers. This allows to cover a wider supplier base with trustworthy audits carried out by peer companies under the same unified standard of

sustainability criteria. Notably, competitor collaboration is also reported by several companies. In order to manage climate impacts in the supply chain, Severstal has developed its own Climate Memorandum “Together for a Low Carbon Future”, a voluntary initiative that other companies can join. In 2021 the Memorandum has already been joined by Schneider Electric, SPECTA, Peikko, Air Liquide and Sveza. Such initiatives help foster productive collaboration and create a unanimous set of requirements and significant topics for all members involved.

Educational institutions and targeted NGOs serve as a source of immense expertise and know-how in the area of sustainable development. Therefore companies collaborate with them in developing policies and practices on sustainable supply chain management. As an illustration, X5 Retail Group has developed a set of sustainability recommendations with the support of WWF Russia, Greenpeace, Deloitte CIS and a number of other stakeholders based on the results of a survey of X5's 30 largest suppliers. Finally, some companies highlight their long-lasting relationships built with local communities, especially with the indigenous people of the North, whose livelihood is affected by the presence of company operations in their respective historical lands. This is especially a priority for Russian oil and gas companies, who perform extraction in the Northern Russian regions. Surgutneftegas claims to engage in ongoing dialog with local communities, in order to balance the interests of business and the quality of life and traditional livelihood of indigenous communities.

Based on the evidence from the ESG reports, a pattern has been noticed, that stakeholder collaboration does not necessarily serve as the highest evolutionary level of collaboration, as we previously suggested based on literature review. Rather, stakeholder collaboration supports the development of internal SSCC by bringing together various stakeholder views and inputs in creating comprehensive viable models of collaboration.

In conclusion, the content analysis of ESG reports partially confirmed the theoretically derived evolutionary model of SSCC capacity in the Russian Market. The following adjustments to the model were made based on the conclusions drawn from the data. Firstly, the third level was divided into two separate levels – (1) Information sharing and knowledge integration and (2) Supplier Development. Secondly, stakeholder collaboration is considered as a separate connected process which helps foster individual collaboration for sustainability within unique supply chain systems. The adjusted model is presented below.

Figure 8. The theoretical model of SSCC development. Based on Zimmer et. al, 2016, Chauhan et. al. , 2022. Adapted by the author.



This chapter answers the first research question of the paper: “In what ways do focal companies collaborate with their suppliers for sustainable goals on the Russian market?”. Partner selection is an essential measure in achieving sustainable supply chain goals. Companies in Russia are now evaluating suppliers based on economic, environmental, and social criteria to reach the triple bottom line. Supplier selection and evaluation based on ESG criteria is the second most frequently reported measure, with a total of 36 mentions. Companies prioritize local suppliers to support the regions where they operate, promote transparency and accountability in the supply chain, and reduce carbon emissions. ESG due diligence and risk assessment of suppliers are performed before signing contracts with chosen suppliers to ensure reliability and assess potential ESG risks. Internal and external certification of suppliers based on ESG criteria is another common practice reported by companies.

Supplier ESG monitoring involves continuous checking and verification of contractors' status of operations and sustainable development progress. Supplier ESG audits are carried out to ensure practical implementation of declared principles. Supplier education and competence sharing initiatives are common, and supplier events and summits enable competence sharing among suppliers themselves. Collaboration and support platforms for suppliers are used as an instrument of information and knowledge sharing.

Collaboration and knowledge sharing can lead to improved efficiency and cost savings for suppliers, which can ultimately lead to sustainable supply chain goals. Companies in Russia prioritize knowledge sharing in terms of increasing supply chain transparency through integrated information systems, as well as using tools like product life-cycle analysis collaboratively to uncover the “thin spots” in the supply chain that carry the biggest environmental and/or social risks.

In conclusion, the content analysis of the ESG reports published by the Russian companies revealed that the majority of them are still establishing the first level of collaboration capacity in the proposed theoretical model – partner selection based on ESG criteria. However, stakeholder collaboration turned out to be more present and developed than we anticipated.

2.3 Barriers and Incentives for Sustainable Supply Chain Collaboration in Emerging Markets

In order to answer the research questions 2 and 3, we turned to the method of semi-structured interviews with industry professionals responsible for supply chain management in large companies operating in the Russian market. The choice of experts was not limited by the economic sector of the company. The sample of interviewees is presented in the table below.

Table 3: Interviewee Sample description

Company sector	Company type	Company size	Interviewee position
Non-food FMCG	Multinational	Large	Chief sustainability officer
Beverage	Multinational	Large	Sustainability manager
FMCG	Multinational	Large	Procurement director & sustainability leader
Chemicals	Russian	Large	Procurement & logistics director
Mining & metallurgy	Russian	Large	Head of sustainability
Mining & metallurgy	Russian	Large	Sustainable development manager
Food	Multinational	Large	Sustainability manager

The interviews were carried out in an anonymous manner due to two major reasons. Firstly, we strived to eliminate the personal biases of the experts as much as possible, giving them the opportunity to express opinions and reflect their experience without linking their name and professional reputation to their statements. Secondly, some of the companies operate under a “silence mode” after the start of political instability in Russia, meaning that company information shall not be publicized in any capacity. Therefore, to acquire access to valuable information from those experts, we must respect their policies of non-disclosure and offer full anonymity. After collecting the qualitative data in the form of interview transcripts, the significant topics were identified through an open-coding procedure using MaxQDA software. The full list of codes, along with an example interview transcript are attached in the Appendixes section.

Table 4. Significant topics identified through open-coding procedure

Significant topics	Codes	Example citations
Collaboration with industry associations for regulatory development	<ul style="list-style-type: none"> •industry collaboration •professional association collaboration •unstandardized requirements from different compar •regulatory development with the governance body 	"We can take part in this together. We can work with state agencies and associations, with standard-setting, roughly speaking, to help them and ensure that we achieve realistic goals, so that all the tools are realistic."
The effect of political instability and sanctions on the SSCC progress	<ul style="list-style-type: none"> •sanctions setback •compliance to international standards 	"If we take into account the fact that our supply chain has been bombarded by the past year, this is the tenth issue. And all the international companies have accepted that EcoVadis is gone."
Knowledge sharing for synergetic development	<ul style="list-style-type: none"> •supplier education •global company guidelines •industry collaboration •supplier development •development of operations, free expertise 	"That for them it's also about gaining a certain expertise, it's about improving operations there and so on, that is enrichment with such a certain kind of experience here."
Collaborative product greening	<ul style="list-style-type: none"> •collaborative innovation •joint projects with suppliers •supplier monitoring 	"So for the company, it's probably about getting some interesting and innovative proposals, solving our problems"
ESG as a competitive advantage for suppliers	<ul style="list-style-type: none"> •export opportunities and access to wider markets •stable reliable orders •having large focal companies in their portfolio •development of operations, free expertise •differentiate from competition through ESG 	"They start thinking, building their competitive advantage around that. Yes, because when you hold a tender, then, accordingly, those who fall into what we want as much as possible, they win it"
Legal frameworks and their EM specifics	<ul style="list-style-type: none"> •developed market regulation •ESG criteria as monopolization - legislation issue •Local regulatory base •increased attention to practices in EM 	"But for example in the European part there are practically no requirements for social responsibility of the company. And in Russian practice, social responsibility is the mast heave, because, well, our government doesn't cover"
Public image and reputation building	<ul style="list-style-type: none"> •consumer focus and public image •downstream collaboration 	"It seems to me that those are the companies that own brands that have a public history. In other words, we are talking about the fact that it is clearer and more relevant to them."
"Green rents" for focal companies	<ul style="list-style-type: none"> •access to investment capital, exchange stocks •extended producer responsibility •cost-cutting measures •KPIs •Clients' ESG requirements 	"Someone wanted to prove himself well in front of foreign investors like x5, for example, they started working on a sustainability strategy right out of it. Someone was leasing on Western exchanges, like our metallurgists, industrialists, etc."
Lack of standardization and common digital solutions for SSCC	<ul style="list-style-type: none"> •lack of digital solutions for SSCM •unstandardized requirements from different compar 	"Because it is really difficult, time-consuming, and we strive to do something, some kind of standard must have. What indicators must necessarily be, each company must show and tell us something about them."
Supplier ESG awareness and capacity	<ul style="list-style-type: none"> •obligatory supplier compliance •the supplier's readiness to develop ESG agenda •lack of ESG understanding in suppliers •Code of Conduct •Partner selection •supplier ESG assessment 	"Yes, that is why the ESG agenda is very difficult to promote as it is for local local suppliers who do not work there for the international, for example, are only focused on the local Russian, there or Chinese or Indian market."
Elimination of SC risks	<ul style="list-style-type: none"> •risk-free high-quality products •supply chain due diligence •compliance to international standards •supplier tiers - level of transparency •supplier audits 	"When a customer buys our raw material, they understand that we bought it from a certified company and they feel safe knowing the material was produced correctly."

A total of 11 significant topics were identified. Firstly, the data from the interviews mostly confirmed the level of SSC collaboration identified through the analysis of ESG reports in the previous section of this paper. When discussing the SSC measures currently being implemented in their respective enterprises, the experts overwhelmingly referred to the procedures aimed at sustainable partner selection (the first level of SSCC we identified previously). Implementation of supplier Code of Conduct was mentioned in several interviews: *"First of all, we have a code which has very clear requirements. We have a very extensive supplier code of conduct."*; *"In 21, we made a supplier code and updated the section on the website. I mean, in order to be more understandable for our suppliers"*, alongside the notions of obligatory supplier compliance to company imposed sustainability requirements and partner selection based on ESG KPIs. Downstream collaboration with consumer facing retailers was also highlighted as a progressing practice: *"Absolutely, yes, with retail, it is possible because there are common goals, common*

KPIs and well again everything is tied to the consumer”. The efforts towards CO2 emissions control throughout the supply chain (Scope 2 and Scope 3) were also signaled as a priority by representatives of 3 companies: *“to reduce the traffic of empty cars, more full loading of cars. So it was all just counted in CO2. That is the amount of emissions, the environment from there transported ton of finished product”*.

Nevertheless, the level of collaborative process and product greening was also brought up during the discussions: *“the ideas born in the discussion [with suppliers] turned into projects, from reducing just the weight of plastic bottles, to changing the weight and thickness of cardboard boxes, where we could play with the size of the label, again less label less paper, all this worked to reduce the negative impact”*. Noteworthy, stakeholder collaboration in the form of industry and competitor collaboration, government collaboration and NGO collaboration was highlighted as a current tool in every interview: *“we don't get any notion that there is sustainable packaging. Some kind of standard that is sustainable packaging. Now we are in a confectioners' association. And industry associations always collaborate in the area of sustainability, at the very least, they always form the common position of the industry regarding any changes in legislation.”*

Generally, interviewees reinforced the claim of the Russian market being in the beginning developmental stages of Sustainable Supply Chain management and collaboration within the supply chain, stating the area as high focus, however still needing a lot of improvement from all stakeholders involved.

2.3.1 Benefits from Sustainable Supply Chain Collaboration for focal companies and suppliers.

In the topics described below we are looking for specific benefits that focal companies and their suppliers receive from SSCC. This section aims to address the internal benefits that drive companies in Russia to pursue SSCC.

Green rents for focal companies

From the focal company point of view, building sustainable supply chains brings a set of benefits to the business – the so-called “green rents”. First of all, good performance in SSCM provides companies with access to international investment capital – through presence in international ESG rankings tied to investment ratings. These rankings assess companies based on their social and environmental impact, and investors often use them to determine which companies to invest in. Furthermore, companies with higher SSCM performance can receive lower interest rates on loans, therefore lowering the cost of capital. By having a good ESG ranking, companies can attract investors who value sustainability and are willing to invest in companies that prioritize

it. We must note, however, that after the sanctions were imposed in the Russian market, many international rankings stopped assessing the performance of Russian companies, therefore partially blocking access to such investment benefits for local companies. The uniquely Russian rankings partially cover this gap, however, as noted by interviewees, these ratings give too little value to the domain of SSCM, therefore not providing sufficient incentive to develop this area as a priority: *“For example, we have learned an interesting story for ourselves that there are almost no questions about the supply chain in the Russian ratings. That is to say, there is one question that gives you 2 points and it is not even worth fighting for. And if in EcoVadis it was a whole section, for which you were given a certain number of points, and you understood, as a company, why you need to develop in that direction, then the Russian ratings do not inspire us very much”*.

Another way companies can access investment capital is through access to financial listings on major stock exchanges, who themselves impose ESG criteria for the companies. This means that companies must meet certain sustainability standards to be listed on these exchanges. By meeting these standards, companies can gain access to a wider pool of investors who prioritize sustainability. For instance, this is especially relevant to companies that trade high-risk raw materials like metals: *“primarily suppliers of metal-containing raw materials, nickel, cobalt, copper, which brands we have registered on the London Metal Exchange. The Exchange has issued a policy on responsible supply chain”*. Listing on international stock exchanges can help companies in emerging markets to gain increased visibility, which can enhance their reputations. This increased visibility can also improve their access to financing, as investors are more likely to invest in companies that have greater visibility and transparency. In addition, listing on international stock exchanges can lead to improved corporate governance practices, as these exchanges often have stricter regulations and requirements for listed companies. This can help companies to improve their operations, reduce risks, and increase their long-term sustainability.

Following the financial incentives based on access to investment capital, companies benefit from improved SSC performance through cost-cutting that can come from greening the operations: *“In fact, most initiatives for ESGs they basically always carry with them money savings. That's the kind of initiatives that businesses always like very much and they're very easy to sell to their management”*. Improving the sustainability performance of a supply chain can have a significant impact on a company's bottom line by reducing costs – such as reducing energy consumption in the production process, reducing waste and the expenses towards disposal, optimizing transportation costs. However, that is not to say that sustainability projects are always directly financially beneficial, since they often require high initial investment: *“For example, I have calculated a project on cooperation with the center that collects waste, it is super expensive, not*

all businesses can afford such projects". Specific to the Russian legislative base in particular, producers of goods are faced with extended producer responsibility: *"that is, the more recycled raw materials in our packaging, the less this burden on our business"*. Investing into recycling programs and collaborating with waste management operators helps relieve the financial load posed on the company for post-consumer waste treatment.

On the other hand, focal companies are themselves faced by constantly evolving ESG requirements of their clients and buyers, who pay increased attention to where and how the sourcing was done: *"Further, there are kind of strict requirements, customers have very strict requirements for their suppliers. They can terminate the contract if you do not comply with the principles of sustainable development"*. And while this pressure from European and American clients used to be (and remains to some extent) one of the main drivers for Russian businesses to develop their SSC policies, after the economic sanctions were imposed, many companies have lost their western partners, and were forced to develop connections eastbound, where *"asian markets are less demanding on the product"*. Nevertheless, large multinational corporations still demand following rather strict requirements as to how the raw materials are being sourced: *"accordingly, they have quite clear and serious requirements for raw materials, which have to be properly produced and supplied, taking into account the entire supply chain"*.

Public image and reputation building

Several interviewees have highlighted that sustainable supply chains are more so relevant for consumer brand companies, who can advertise SSC claims to the end user of their products – in order to gain consumer trust and loyalty: *"if you work in the consumer market with the end buyer, who cares about getting, environmentally friendly products and in general understand that what he buys is of high quality and is not harmful to health, nature and poor Tajiks are not forced to work around the clock without a passport"*. On one hand, this serves as greater motivation for consumer facing companies, as well as their partners (i.e. retailers) to use as competitive advantage and incorporate SSC into their marketing strategy. On the other hand, we may assume that companies that are not as consumer focused, and operate on the B2B market, the incentive becomes much less to develop SSC.

This reputational aspect also touches on the choice of downstream collaboration for focal companies, rather than exploring the opportunities and challenges upstream: *"When we talk about retail and directly B2C, B2B is sometimes a segment when it is with partners, but I see it less often at the start of the supply chain."* With retailers having their own sustainability goals, their large suppliers can align their goals to develop specific projects and solutions – like transportation efficiency and reduced packaging initiatives. Because of existing complimentary KPIs on the

company and retailer level, a greater opportunity arises to allocate resources to sustainable supply chain products.

Elimination of Supply Chain risks

Finally, ensuring sustainability of their supply chains becomes a risk-management tool for focal companies. Sustainable supply chain collaboration helps companies to reduce risks in several ways. First, it enables them to identify and mitigate the environmental and social risks associated with their supply chain operations – identifying the sustainability hotspots. For example, by sharing information about their carbon footprint and water usage, companies can identify areas where they can reduce their impact on the environment. By collaborating with their suppliers and customers, companies can also ensure that their products are produced under ethical and humane working conditions, reducing the risk of negative publicity and legal action: *“it's about minimizing risks and compliance on all fronts and the ability to verify all the data we publish”*. Second, sustainable supply chain collaboration helps companies to reduce operational risks, such as disruptions caused by natural disasters, political instability, or supply chain failures. By working closely with their suppliers and customers, companies can identify potential risks and develop contingency plans to mitigate them.

Minimizing supply chain risks not only refers to the processes that go into product creation, but also the quality of the products themselves. Therefore tracing the origin of components, and working closely with suppliers on the ESG criteria helps ensure *“we bought it from a certified company and they feel safe knowing the material was produced correctly”*.

ESG as a competitive advantage for suppliers

From the supplier point of view, development of sustainable capabilities is primarily seen by experts as a source of competitive advantage. By developing sustainable capabilities, suppliers can increase their competitiveness in the market and create new opportunities for growth and expansion.

Suppliers who develop sustainable capabilities can increase their access to international markets. As sustainability becomes a key factor in the decision-making process of companies worldwide, buyers are more likely to select suppliers who prioritize sustainable practices. This opens up a wider range of market opportunities for suppliers (Aray et.al, 2020), increasing their customer base and revenue potential. This is especially true for local companies looking to export their products into the markets, where legal requirements to ingredient sourcing and sustainability principles differ from those imposed in the Russian market: *“business proceeded from the fact that such expectations exist in international markets. And, accordingly, if Russian business exports*

something, we will invest in ESG agenda, because we will draw a report, it will be correct and, accordingly, we will be taken as suppliers by international, large companies there". The sustainable capabilities and offerings can help differentiate massively from the crowded pool of suppliers in some niches: "there is a lot of competition on the market and companies want to assert themselves, to distinguish themselves from others, to show their competitiveness. And then they take the initiative themselves, showing their resilience".

Sustainability is also a key factor in building long-term relationships with buyers. Suppliers who prioritize sustainable operations are more likely to attract buyers who value stability and reliability: *"Working with a large company is reliable, stable, which means that it brings a certain margin".* By demonstrating their commitment to sustainability, suppliers can build trust and foster long-term partnerships with buyers. This translates into long-term contracts and consistent orders, providing a stable revenue stream for suppliers. In some areas, where production sights of large companies is located, suppliers will strive to meet all the ESG requirements in order to acquire such a buyer, since the focal company is the biggest and most reliable client in the region: *"being a supplier there naturally you really want to work with us, because this is the main production in the area".*

Consecutively, suppliers strive to acquire contracts with large focal companies in order to have them as portfolio case: *"Which, if you have in your portfolio, it's easier for you to sell to others, because many people work with us".* This serves as a tool for reputation building among the suppliers in order to attract large clients in the future, especially those who themselves have an interest in sustainably sourced products. It must be noted that at the stage of partner selection, focal companies possess the greatest amount of leverage and bargaining power therefore being able to influence suppliers operations and practices and tailor them to own sustainability requirements to a great extent.

Development of Suppliers' Operations & Free Expertise

The development of sustainable capabilities often requires changes in operational practices, which can lead to increased efficiency and cost savings. For example, transitioning to renewable energy sources can reduce energy costs over time. Moreover, respondents mark their input into development of supplier operations as a source of free expertise: *"if we want to develop, we order an audit, which costs money and is very time-consuming. But here we are ready to train them, to share with them all normative documents, to help them prepare documents and so on. This is an opportunity for all sides".* This expertise can help suppliers identify areas for improvement and develop more sustainable practices, ultimately leading to cost savings, increased efficiency and access to a wider pool of buyers who impose sustainability requirements.

Collaborating with clients on sustainability projects can help suppliers build their capacity to implement sustainability initiatives. This may involve training on new technologies or processes, or help in developing sustainability strategies and action plans: “[the supplier] will just see that the next step is to ground the system, then to put in KPIs, that is motivation across the spectrum”. By building their capacity, suppliers can become more competitive and improve their ability to meet client demands. Moreover, working collaboratively provides suppliers with access to greater resources, which may include access to funding, expertise, or digital tools to help boost their operations and promote sustainability. The mechanisms for such expertise transfer currently include questionnaires, certifications and audits which offer a roadmap for suppliers to develop their weaker areas of compliance.

Knowledge sharing for synergetic development

Knowledge sharing is seen as a beneficial practice not solely between the buyer and the supplier, but the wider pool of stakeholders as whole, since it allows for synergies to be developed. For example, the ESG Alliance, a collaboration platform between several large companies, provides suppliers with training and education on sustainability best practices. As one member of the alliance stated, "we want to spread this level of education more widely, we want to make materials on the ESG alliance website which could be used to educate suppliers not only in our companies, but in other companies as well. That is why the level of education of suppliers is so important." By sharing their expertise and resources with suppliers, the ESG Alliance is helping to build capacity across entire supply chains, leading to more sustainable business practices. This allows companies not to invest resources into the development of projects that have been already successfully implemented by their peers and partners. Sometimes, this can be observed in responsible organizations formed by industry members in order to establish functional guidelines and procedures to ensure sustainability of supply chain operations: “*Certification schemes like the Roundtable for Sustainable Palm Oil provide the foundation for responsible sourcing of these ingredients.*” Knowledge sharing can go both ways in buyer-supplier relationships, where suppliers can offer technological, operational or creative solutions to solve clients sustainability-related problems: “more often than not it's within the terms of reference, say, a company wants to increase the amount of recycled plastic in used packaging. Accordingly, which of the current market players can offer this”.

A separate stream of synergetic development comes from MNCs operating in the emerging markets. Because they have strong R&D resources and a large reference of experience from other developed and emerging markets, they help to localize these functional ideas and frameworks in the context of the Russian market. When such international companies engage in collaboration

downstream, upstream or with their peers, they help bring the international expertise to the local market: *“there is local country specificity and there is adherence to global guides”*.

Answering the second research question of this paper, Sustainable Supply Chain Collaboration (SSCC) provides several benefits for focal companies and their suppliers in Russia. From the focal company point of view, building sustainable supply chains brings a set of benefits to the business – the so-called “green rents”. Good performance in SSCM provides companies with access to international investment capital, access to financial listings on major stock exchanges, and cost-cutting that can come from greening the operations. Focal companies also benefit from improved SSC performance through the elimination of supply chain risks and building public image and reputation.

From the supplier point of view, development of sustainable capabilities is primarily seen as a source of competitive advantage. Suppliers who develop sustainable capabilities can increase their competitiveness in the market and create new opportunities for growth and expansion. Sustainability is also a key factor in building long-term relationships with buyers. The development of sustainable capabilities often requires changes in operational practices, which can lead to increased efficiency and cost savings. Moreover, suppliers can benefit from free expertise and knowledge sharing for synergetic development.

In conclusion, SSCC provides several benefits for focal companies and suppliers in Russia. By collaborating and developing sustainable capabilities, companies and suppliers can gain access to international markets, improve their reputation, and build long-term relationships with buyers. Moreover, SSCC can lead to cost savings, increased efficiency, and access to a wider pool of buyers. Finally, knowledge sharing and synergetic development can help build capacity across entire supply chains, leading to more sustainable business practices.

2.3.2 Barriers and incentives for SSCC prominent in emerging markets (based on example of the Russian market)

In contrast to the previous section, this part strives to gain insight on external factors of the Russian market, that can stipulate or encourage the development of SSCC. In other words, here we focus on the environment the companies need to navigate in to pursue their sustainable supply chain targets. First and foremost, we must address the impact of political instability and the economic sanctions of the development of SSCC in the Russian market specifically, since this level of disruption, at least in terms of sustainable supply chain building, is unprecedented. Therefore, the extrapolation of the results found in the Russian market may be challenging, since no emerging market is currently experiencing such a degree of crisis in various domains. However,

the current political and economic circumstances in Russia might give us a hint as to what kind of processes may arise in the emerging markets facing a degree of political instability and potential for conflict.

The setback caused by the political instability and sanctions imposed

The Russian market has faced political instability and sanctions, which have been identified as the most prominent external factors affecting the progression of sustainable supply chain measures. Experts unanimously agree that the negative impact of these factors has been significant. The imposition of sanctions has led to a decline in economic activity, and companies have been forced to shift their focus towards survival rather than the improvement of sustainable supply chains: *“It is clear that the supply department, of course, switched over to looking for import substitutions and finding new suppliers. And this very much reduced the pace of our work in the field of sustainable chain supplies”*. The lack of industry collaboration through organizations like the Association for the Promotion of Sustainable Development (ASUR) has become a major issue since the beginning of the sanctions. Interviewees share a general consensus that all the efforts towards more sustainable supply chains have been deprioritized. As one interviewee stated, *“the focus, firstly, has shifted to survival rather than improvement of what there was before”*. The need to reconfigure supply chains quickly and find new suppliers compliant with legal requirements has made the idea of deeper collaboration for sustainability unrealistic. As a result, the projects that were being launched to promote sustainable supply chains have ceased to exist: *“of course, it also has a negative impact on moving forward. If we were thinking about audits, then now we have to go through the process of accreditation of these suppliers from scratch”*.

The exit of key international platforms and associations from Russia has also presented a significant barrier to the development of SSCC. The loss of EcoVadis, a respectable international ranking and platform, has been a major setback for Russian companies seeking to measure and implement sustainability among their supply chains: *“all the international companies have accepted that EcoVadis is gone”*. Access to capital in the form of loans and investments has been tied to the position of companies in the EcoVadis ranking, making it a crucial instrument for promoting sustainable supply chains. The negative impact of political instability and sanctions on SSCC in Russia cannot be overstated. The membership in global or regional organizations has also been suspended for many Russian companies: *“We were on our way to joining, for example, the circular traceability responsible supply chain, the blockchain even system, then we were already at the final stage of joining Resource where Tesla, the motorbike manufacturers. But last year's events had an impact, which means, that when we were already on the finish line, we could not join.”*

We must note, however, that some companies, for whom sustainability of their supply chain is a key factor for business (like the companies trading potential conflict metals or risky raw materials like palm oil), have continued to work in this direction, though having to adjust significantly. For instance, one of the metallurgical companies had to work under the risk of Russia becoming a CAHRA country - conflict-affected and high-risk areas. Therefore they had to strengthen their sustainability compliance even further. Similarly, companies had to switch their ways of reporting to international entities after the typical instruments of reporting and assessment have become unavailable. Therefore, the economic sanctions and their mediated effect definitely serve as the most evident barrier to development of sustainable supply chains in the short-term sense, that has been noted by the experts.

Lack of standardization and common digital solutions for SSCC

The second important barrier that was brought up by the interviewees is the lack of common standards within the focal companies as to what sustainability criteria should be met by the suppliers, and inadequate understanding of what criteria should be prioritized in this developmental stage. The absence of standard requirements in sustainable supply chain development poses several challenges. The absence of common standards in sustainable supply chain development complicates the legal aspects of the business: *“it is really difficult, time-consuming, and we strive to do something, some kind of standard “must have”. What indicators must necessarily be, each company must show and tell us something about them”*. The companies need to comply with various legal requirements, such as environmental regulations, labor laws, and social policies, which vary significantly across different regions. The lack of common standards leads to confusion and uncertainty among the companies, making it challenging for them to comply with different legal requirements. For example, the terms of “sustainable packaging” are not defined in the Russian law yet, therefore both companies and suppliers have to agree on their requirements for such solutions – and downstream, it is not evident what claims can be made to consumers and the public as to how sustainable the packaging is.

The lack of common standards also complicates the processes of sustainable supply chain development. The companies face difficulty in identifying the relevant sustainability criteria, prioritizing these criteria, and communicating them to their suppliers: *“Now we do not have such a tool to conduct independent scoring where everyone can use it. That's how everyone can harass their suppliers”*. This complication results in time-consuming and costly processes, which often lead to delays in the implementation of sustainable supply chain development. In addition, the lack of common standards may lead to inconsistencies in the implementation of sustainable supply chain development across different suppliers.

The suppliers may not be aware of the sustainability criteria that they need to meet, which may lead to non-compliance and rejection of their products. The lack of clarity also leads to confusion among the suppliers, making it harder for them to implement sustainable practices in their own operations: *“formation of some unified approaches for the company, because without them it's very difficult for suppliers to orient in all this, one company wants one thing, others want something else”*. As a result, the suppliers may not prioritize sustainability in their operations, leading to a lack of commitment towards sustainable supply chain development. This could ultimately hinder the efforts of the companies to achieve sustainability goals.

Adopting common standards would facilitate the compliance of the companies and their suppliers, streamline the processes of sustainable supply chain development, and ensure a consistent implementation across different suppliers. The positive aspect is that companies recognize standardization as a challenge and already put efforts between their respective industries to formulate such unanimous approaches. However, in such case, the entity that will ultimately launch such criteria must possess a level of authority, so that the requirements imposed are met by the focal companies.

Similarly to the issue of standardization, interviewees have highlighted limited access to digital solutions for building sustainable supply chains. In the companies discussed a large portion of verification and supplier accreditation is still performed manually – through a very meticulous process that requires a lot of time and efforts. Edge-cutting technologies have been introduced in developed markets. For instance, blockchain-based supply chain management systems can help ensure greater transparency and traceability across the supply chain. These systems can enable secure and efficient transfer of data between different parties in the supply chain. For instance, IBM Food Trust is a blockchain-based solution that helps food companies trace the origin of their products and ensure food safety. Supplier management software can help automate the process of supplier verification and accreditation: *“if you look at the tracking of energy consumption there, many of their European colleagues have more automated, there are different devices for tracking.”* These tools can help track supplier performance, and ensure compliance with sustainability standards. Previously mentioned EcoVadis is a supplier management platform that provides sustainability ratings for suppliers based on their environmental, social, and governance (ESG) performance, which was largely used in Russia before the sanctions. Environmental monitoring tools can help track the environmental impact of supply chain operations. These tools can help identify areas of improvement and enable companies to take corrective actions. For example, Trucost is an environmental data and risk analysis tool that helps companies measure and manage the environmental impacts of their supply chains.

As stated by the experts, Russian companies still struggle to implement such solutions on the large scale. However, in the Russian market, digital tools for building sustainable supply chains are becoming increasingly available. For example, blockchain-based supply chain management systems are being implemented by companies such as Vostok, which uses blockchain technology to provide end-to-end transparency in their supply chains. Moreover, the Russian government has launched several initiatives to promote sustainable supply chains and the adoption of digital technologies in this area. One such initiative is the creation of a national blockchain platform, which aims to provide transparency and traceability in supply chains across different industries. A large scale solution is being developed by Sber: *Sber is trying to pull this off. They launched it last year as what we call the closest possible alternative to EcoVadis. Only this year by order of X5 I don't know if it will succeed or not. But all the players of large, especially foreign businesses are confused by this story that Sber is under sanctions and this assessment, even if they will keep this register of suppliers who have passed their platform assessment and so on when passing international audits may be insufficient*".

Gaps in legal regulation

Another barrier brought up by the interviewees is the underdeveloped legal base in the Russian market, regulation the sustainability frameworks. The respondents admit that the role of the government regulation is very strong in this process. However, when contrasting with the stringent western European legal bases, some respondents notice less protection of sustainable practices by the law in the Russian market: *"that is a norm for the West - not trying to make a gray salary, everything is socially regulated there. So you cannot pay less taxes there - unscrupulous contractor in Europe will be kicked out of the market very fast"*. Providing social support was even mentioned as corporate responsibility, since, allegedly, the government does not provide that sufficiently.

Nevertheless, other respondents have brought up that social domain in regulated exceptionally well in the Russian law – partially because it was inherited from the Soviet Union: *"RMI for example, that is a separate standard only on ESG and many questions that the auditor asks, they are immediately closed by our laws, that is, roughly speaking, in another country, where there is no such broad legal framework. We are already in a more advantageous position a priori"*. Similar attitude was shown to the topic of waste disposal: *"We were talking with colleagues about the waste management legislation, and I actually realized that everything in our country is much more serious in terms of legislation"*. Despite the varying opinions of the interviewees, it is clear that legal regulation has a significant impact on sustainability frameworks in the Russian market. A strong legal framework is crucial to promoting sustainable practices and ensuring businesses are

held accountable for their actions. However, there is a potential research gap in understanding the effectiveness of the current legal framework and identifying areas for improvement. Future research in this area can help inform policymakers and businesses on how to create a more sustainable business ecosystem in Russia.

Collaboration with industry associations for regulatory development

When we turn to the incentives side of the discussion, a lot of attention during the interview discussions was directed towards the opportunity of business to help shape the regulatory base of sustainable supply chain management. While the gaps in regulatory development were said to stipulate the development of SSCC, the other side of it manifests in the fact that companies hold power to influence the regulatory development in order to come up with viable functional solutions: *"There is an understanding that we always work with the regulator. Because country specifics leave their mark and we have to either help the regulator to bring it all up or to conform to the established norms and somehow not just modify them, but help them evolve."* This is a great opportunity for other emerging markets as well, where sustainability regulation is not yet completely formed, to contribute to great solutions that can benefit all parties involved.

A common example of such back-and-forth regulatory development comes from the law on extended producer responsibility: *"We are constantly adapting to it, now a new reform is taking place again, and again there are completely different approaches. Absolutely some things have to be invented, new mechanisms of work with it, and this is also a kind of burden. But fortunately, so far the government has been listening to business in this regard, when there were not entirely successful versions of the bill and they didn't pass"*. For the larger focal companies and suppliers this creates an opportunity to anticipate the changes coming and adapt quickly to emerging requirements, which brings competitive advantage to their operations. Overall, the respondents have put a great emphasis on the role of institutional development in SSCM, since it is the most powerful tool to impose universal requirements and define the rules for all stakeholders involved. However, such development must meet the existing circumstances and limitations companies face in implementing these measures.

Supplier ESG awareness and capacity

The readiness of suppliers for sustainable transformation was a point of discussion with all the experts in our data collection. First of all, the interviewees have pointed out the obligatory nature of compliance for a certain domain of social and environmental compliance: *"he is obliged to implement them if he wants to continue working with us. When we confirm the risk, we give him a red flag, we give him a corrective action plan, he implements it."* When sustainability requirements are imposed by the focal company, the suppliers go through an accreditation

procedure to make sure they meet them fully. For instance, suppliers cannot enter a tender procedure before they comply, and special clauses are added to the procurement contracts which regulate the sustainability criteria and KPIs for the suppliers. This forces large suppliers to develop their operations to keep the service level for their buyers downstream.

As to the general readiness of suppliers to collaborate and comply, interviewees held a generally positive outlook: *“Suppliers are really willing to meet, but we are talking, of course, about large suppliers. You have to understand that some small companies, which are not key companies, are not yet ready to meet the entire pool of requirements, but they are nevertheless striving to do so.”* However, the importance of supplier education was still highlighted as a crucial factor, since the understanding of importance of sustainability is not always sufficient in all suppliers, especially those oriented towards the local market only: *“that is why the ESG agenda is very difficult to promote as it is for local local suppliers who do not work there for the international, for example, are only focused on the local Russian, there or Chinese or Indian market”*.

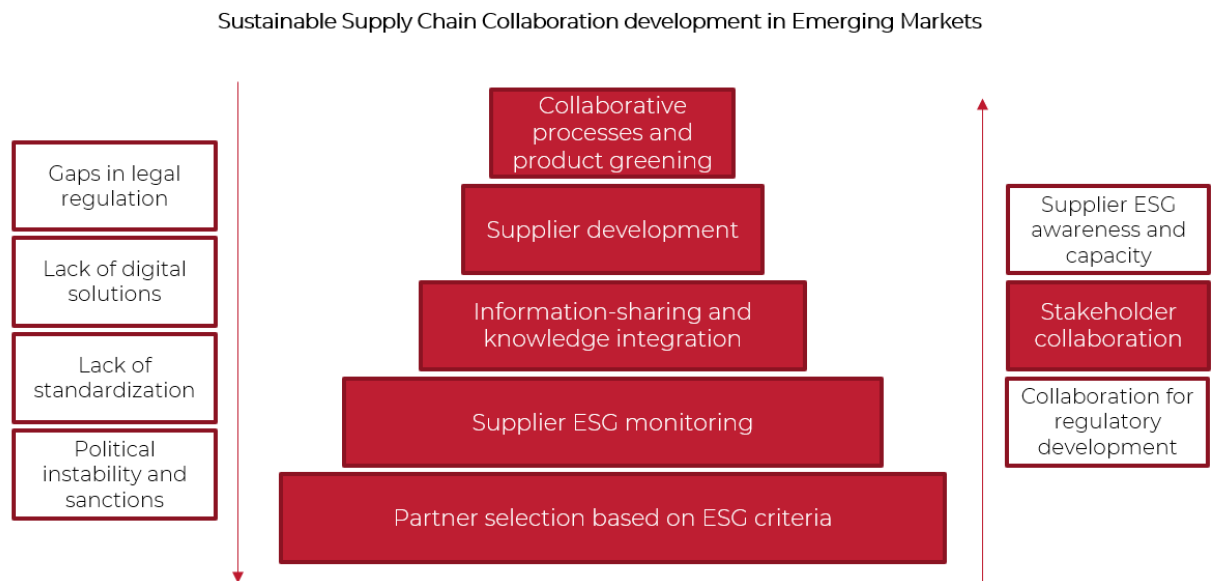
One of the metallurgical companies had assessed the readiness of their supplier base towards sustainability changes: *“the average score there was 70, we can see that the main statistics is still the average level of development, not high. That is, there are few companies which have nothing at all, few companies which have a lot of things. They are mostly large companies, mostly they have an average score of 50 or 40”*. This again reinforces the idea of the Russian market being in the first developmental stage of SSCC, where the frameworks are only being established and capabilities are being formed. The improvement over the last decade have been highlighted: *“Yes, suppliers are ready, I mean, let's just compare the situation on the horizon of the past 9 years the situation has changed dramatically, and over the past 3 years very substantially”*. The interviewees believe that supplier readiness can be quite greatly enhanced when sustainably sourced produced are purchased at a significant price premium – to rewards the suppliers changes in their operations.

This section of the study reveals that political instability and economic sanctions have significantly hindered the development of sustainable supply chain measures in the Russian market. The negative impact of these factors has led to a decline in economic activity, and companies have been forced to shift their focus towards survival rather than the improvement of sustainable supply chains. The exit of key international platforms and associations from Russia has also presented a significant barrier to the development of SSCC. The lack of standardization and common digital solutions for SSCC has been identified as another major barrier. The absence of common standards in sustainable supply chain development complicates the legal aspects of the

business. The lack of common standards also complicates the processes of sustainable supply chain development. The underdeveloped legal base in the Russian market regulating sustainability frameworks is another barrier that hinders the development of SSCC. Nevertheless, the role of companies in shaping the regulatory base of sustainable supply chain management was highlighted as an opportunity for businesses to contribute to great solutions that can benefit all parties involved.

The readiness of suppliers for sustainable transformation was also a point of discussion. While the interviewees held a generally positive outlook, the importance of supplier education was highlighted as a crucial factor. In conclusion, this section highlights the need for a strong legal framework, common standards, and digital solutions for building sustainable supply chains. The study also emphasizes the importance of collaboration with industry associations for regulatory development and supplier education. The findings of this section provide valuable insights for businesses and policymakers in promoting sustainable supply chain development in the Russian market and other emerging markets.

Figure 9. The conceptual model of Sustainable Supply Chain Collaboration development in the Emerging markets. Based on Zimmer et. al, 2016, Chauhan et. al. , 2022. Adapted by the author.



As a result of this research, we describe the following model of evolutionary development for SSCC in emerging markets. The motivation behind this development process lies in a collection of green relational rents that both focal companies and their suppliers generate from greening the supply chain. The main environmental barriers that may stipulate the SSCC development in the emerging market of Russia showed to be gaps in legal regulation, lack of digital solutions, lack of standardizations, as well as political instability and sanctions. On the other hand, the process of

stakeholder collaboration can accelerate the developmental process, along with additional environmental incentives of supplier ESG awareness and capacity, and collaboration for regulatory development.

Further research is needed to assess the strength and significance of the established factors, where the proposed model may serve as basis for formulation of hypotheses. As a proposed stream of further research, a cross-cultural empirical study will help better understand how well the conclusions from the Russian market can be extrapolated towards other emerging economies. Finally, a time-series study should be conducted in order to trace the progression of SSCC development through the proposed evolutionary stages.

DISCUSSION OF RESULTS AND CONCLUSION

Sustainable Supply Chain Management (SSCM) has emerged as an important concept that refers to the integration of environmental, social, and economic considerations into supply chain management practices. The goal of SSCM is to achieve sustainability by creating value for all stakeholders, including customers, suppliers, employees, shareholders, and the environment. SSCM involves the adoption of sustainable practices that reduce negative environmental and social impacts, and enhance the long-term economic performance of the supply chain.

Based on the analysis of theoretical lenses used by scholars to explore SSCM, it can be concluded that there are four major paradigms: Resource-Based View of the firm, Relational View, Stakeholder Theory, and Dynamic Capabilities Approach. Each of these paradigms offers a unique perspective on how to achieve sustainable supply chain management. The Resource-Based View emphasizes SSCM as a source of competitive advantage by leveraging the firm's unique resources and capabilities to create value for stakeholders. The Relational View highlights the importance of collaboration among supply chain partners to improve environmental, social, and economic performance. The Stakeholder Theory targets the social domain of SSCM by emphasizing the need to consider the interests of all stakeholders in supply chain decision-making. Finally, the Dynamic Capabilities Approach addresses the capabilities required to achieve competitive advantage in dynamic market circumstances by adapting to changing environmental and social conditions. Interorganizational collaborative capacity is essential for achieving sustainable goals because it enables stakeholders to work towards common objectives and avoid competing interests. Effective supply chain collaboration for sustainable goals requires a long-term perspective, willingness to invest in sustainable practices, and changes that may not result in immediate returns. Trust, shared value creation, and incentives policies are the key components of supply chain collaboration.

The first research question of this paper was answered through the Content Analysis of qualitative data. To assess the current level of collaborative practices in Russia, an investigation of 72 ESG reports from companies operating in the Russian market, it was found that partner selection, supplier ESG monitoring, and information-sharing and knowledge integration are the most commonly reported practices. Partner selection, the primary stage of sustainable supply chain collaboration, is used by companies to evaluate their suppliers based on environmental and social criteria in addition to economic and efficiency criteria. This includes initiatives such as ESG due diligence of suppliers, external certification of suppliers on ESG criteria, and prioritizing local and small and medium enterprise suppliers. Essentially, partner selection is the foundation of sustainable supply chain collaboration, and without it, the other collaborative practices wouldn't

be possible. Supplier ESG monitoring is the continuous checking and verification of contractors' sustainable development progress. This involves monitoring CO2 emissions, water consumption, and waste disposal, as well as implementing supplier codes of conduct and ESG audits. By monitoring these factors, companies can ensure that their suppliers are adhering to ethical and sustainable practices, which ultimately helps the environment and society in the long run. Information-sharing and knowledge integration involve supplier education and competence sharing initiatives. This includes conducting regular sustainability training with suppliers and implementing ESG risk maps. By sharing information and knowledge, companies can build stronger relationships with their suppliers, leading to a more productive and sustainable supply chain.

Overall, while partner selection is essential, deeper levels of collaborative investments need to be explored in order to build productive and sustainable relationships within the supply chain. The findings suggest a need for more comprehensive and standardized approaches to sustainable supply chain collaboration in Russia. By implementing these approaches, companies can work towards a more ethical, sustainable, and responsible supply chain, which benefits not only the company but also the environment and society as a whole.

The second research question, concerned with the benefits focal companies and suppliers receive from Sustainable Supply Chain Collaboration, was answered through Thematic Analysis of in-depth semi-structured interviews with industry professionals. Across the discussions, we have delved into the topic of sustainable supply chain collaboration (SSCC) and specifically looked at the internal benefits that drive companies in Russia to pursue SSCC. Our exploration of this topic has revealed that focal companies and their suppliers receive a range of benefits from SSCC, including increased access to investment capital, cost-cutting, building a positive public image and reputation, elimination of supply chain risks, and the development of sustainable capabilities.

From the perspective of focal companies, building a sustainable supply chain can bring about significant benefits to the business, including what is referred to as “green rents”. This includes access to international investment capital through presence in international ESG rankings tied to investment ratings, which can help attract investors who value sustainability. Companies with higher SSCM performance can also receive lower interest rates on loans and gain access to financial listings on major stock exchanges, leading to greater visibility, improved corporate governance practices, and better access to financing. Moreover, improving the sustainability

performance of a supply chain can have a significant impact on a company's bottom line by reducing costs and improving operational efficiency.

For suppliers, the development of sustainable capabilities is primarily seen as a source of competitive advantage, leading to increased access to international markets, building long-term relationships with buyers, and free expertise. By demonstrating their commitment to sustainability, suppliers can build trust and foster long-term partnerships with buyers, which translates into long-term contracts and consistent orders, providing a stable revenue stream for suppliers. Additionally, developing sustainable capabilities can lead to increased efficiency and cost savings, which can be achieved through changes in operational practices, such as transitioning to renewable energy sources.

Knowledge sharing is seen as a beneficial practice for all stakeholders, as it allows for synergies to be developed and brings international expertise to the local market. This allows companies to learn from one another, share best practices, and ultimately improve their sustainability performance. Moreover, by collaborating with their suppliers and customers, companies can identify potential risks and develop contingency plans to mitigate them, reducing operational risks and disruptions caused by natural disasters, political instability, or supply chain failures.

The third research question on the barriers and incentives for sustainable supply chain development in emerging markets was answered through examining the case of the Russian market. The external factors affecting the development of sustainable supply chain measures in the Russian market were analyzed, based on the insights of industry experts. The paper explores the impact of political instability and economic sanctions on SSCC development, the lack of standardization and common digital solutions, gaps in legal regulation, collaboration with industry associations, and the readiness of suppliers for sustainable transformation.

The study found that political instability and economic sanctions have had a significant negative impact on the implementation of SSCC measures in the Russian market. Companies have had to shift their focus towards survival rather than the improvement of sustainable supply chains, and the lack of industry collaboration through organizations has become a major stopper. The loss of EcoVadis, a respectable international ranking and platform, has been a major setback for Russian companies seeking to measure and implement sustainability among their supply chains.

The lack of common standards in sustainable supply chain development poses several challenges, including complicating the legal aspects of the business and leading to confusion and uncertainty among the companies. This results in time-consuming and costly processes, which often lead to delays in the implementation of sustainable supply chain development. The study also found that the underdeveloped legal base in the Russian market, regulating sustainability frameworks, is a barrier to the implementation of SSCC measures. However, the role of the government regulation is strong in this process, and the respondents have highlighted the opportunity for companies to help shape the regulatory base of sustainable supply chain management. The readiness of suppliers for sustainable transformation was a point of discussion with all the experts in the data collection. The interviewees held a generally positive outlook, but the importance of supplier education was still highlighted as a crucial factor, since the understanding of the importance of sustainability is not always sufficient in all suppliers, especially those oriented towards the local market only.

In conclusion, the study highlights the challenges and opportunities for sustainable supply chain development in emerging markets, using the Russian market as an example. The study suggests that the implementation of SSCC measures in emerging markets requires a collaborative effort between the government, companies, and industry associations. The development of common standards and digital solutions, along with the readiness of suppliers for sustainable transformation, is crucial for the successful implementation of SSCC measures in emerging markets. Ultimately, the study has reached its' research objective - establishing the Sustainable Supply Chain Collaboration capacity of companies operating in the Russian market through answering each of the research questions.

Theoretical contribution. This research work makes a significant contribution to the existing body of knowledge on Sustainable Supply Chain Collaboration (SSCC) in several ways.

Firstly, the study conducts a comprehensive bibliometric analysis of the scientific field of SSCM to identify the emerging research topics and academic pillars of the field. This analysis helps to highlight the gaps and limitations in the existing research, which provides a foundation for the development of new theoretical models and concepts.

Secondly, the study proposes a theoretical model of SSCC development based on the synthesis of previous research and findings from adjacent scientific fields. The model is further refined and strengthened through the empirical findings of the study. This model fills the research gap identified in the initial stages of the research process, which is the interconnection between

the importance of SSC collaboration highlighted in seminal research and the actual business processes of implementing such collaboration.

Thirdly, the study applies the core concepts of the Relational View theory to the field of SSCM. This approach widens the understanding of buyer-supplier relationships in the context of SSCM and provides a new perspective to the existing literature.

In conclusion, this research work contributes significantly to the existing body of knowledge on SSCC, and the proposed theoretical model and application of the Relational View theory provide a foundation for further research and development in this field. The proposed areas of research offered by this work are: comparative cross-cultural studies of SSCC in different emerging market contexts, the role of businesses in forming the regulatory base for SSCM in emerging markets, the mechanisms for lower-tier supplier management in sustainable supply chains.

Managerial implications.

First, recognize and strive to follow the evolutionary model of sustainable supply chain development. Partner selection is a crucial stage of sustainable supply chain collaboration, as it lays the foundation for other collaborative practices to be implemented. Companies should evaluate their suppliers based on a comprehensive set of criteria, including environmental, social, economic, and efficiency criteria. By establishing this foundation, companies can move along the evolutionary steps to reach the stage of collaborative process and product greening, which is proposed as the ultimate form of Sustainable Supply Chain (SSC) collaboration.

Second, clearly recognize the benefits the company is aiming to receive from making the supply chain more sustainable - and, even more importantly, clearly communicate to the suppliers the benefits they can acquire from adhering to the sustainable supply chain principles. This is especially crucial in emerging markets, where the burden of SC greening falls onto the suppliers, who might not possess such abundant resources. Therefore, both sides of sustainable collaboration need to clearly envision what gains they can achieve through such partnerships – this is an essential tool for motivating the supply chain members for SSC collaboration.

Third, recognize the environmental specifics of working with suppliers based in emerging economies. Pay increased attention to political risks, gaps in legal regulation that need to be filled, lack of standardization in ESG requirements, and limited access to digital solutions. Companies should seize the opportunities to help form the regulatory base in the given country through

participation in collaboration between peers and regulators. Consider the increased investment into supplier education and development – since the awareness on the significance of sustainable development is not as widespread as in the developed economies.

Research limitations.

Research is a complex process that involves various stages, including data collection, analysis, and interpretation. However, despite the rigorous approach, scientific research is not free from limitations that can affect the validity and reliability of the findings. In this section, we discuss some of the limitations of the research conducted on sustainable supply chain collaboration (SSCC) in emerging markets.

Regional Bias. One of the major limitations of this research is the presence of regional bias. While the data for this research was collected from a sample of companies operating in the Russian market, it is important to note that the Russian market may present certain biases due to local specifics. For instance, the constraints of economic sanctions may influence the behavior of companies in the Russian market, which, in turn, can affect the SSCC practices. Therefore, the findings of this research may not be fully applicable to other emerging markets with different economic, political, and social contexts. To address this limitation, future research could benefit from a comparative multi-country study to identify and address such biases.

Causality Verification. Another limitation of this research is the lack of statistical verification of the identified factors' causality on sustainable performance. While qualitative research methods were used to gain a detailed outlook on the development of SSCC in emerging markets, the findings could not be verified statistically. This leaves room for subjectivity in interpretation, which can affect the validity of the findings. To address this limitation, future research could use a mixed-method approach that combines qualitative and quantitative research methods to verify the causality of the identified factors on sustainable performance.

Focal Company Perspective. The empirical research primarily featured data from the focal company representatives. While the supplier perspective was also discussed, the credibility of this information may be biased. The focal company representatives may have their own agenda and interests that can influence the information they provide, which can affect the validity and reliability of the findings. Therefore, future research may benefit from a multi-stakeholder approach that involves suppliers, customers, and other stakeholders to ensure a more comprehensive and unbiased perspective.

In conclusion, the limitations of the research conducted on SSCC in emerging markets highlight the need for further research that addresses these limitations. By doing so, we can enhance the validity and reliability of the findings and provide more robust insights into the practices and challenges of sustainable supply chain collaboration in emerging markets.

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APPENDIX

Appendix 1. Full list of company ESG reports.

Industry	Companies
Oil and Gas	LUKOIL Rosneft TATNEFT Surgutneftegaz KazMunayGas INK-Capital Severneftegazprom NOVATEK YATEK
Energy	Gazprom Rosseti RusGidro ENEL Russia Inter RAO UniPro Setevaya Company Rosatom
Metallurgy and mining	METALLOINVEST Normikel Severstal SUEK EVRAZ ALROSA KRASTVETMET Rospadskaya GV Gold OMK NLMK Polymetal Polyus Rusal En+ Group
Machinery and equipment manufacturing	Rostech
Chemicals	EuroChem SIBUR Holding Uralkali FosAgro Metafrax Chemicals
Woodworking	Segezha Group
FMCG	ROS AGRO BAT Nestle Russia
Telecommunications	Beeline Megafon MTS Rostelecom Yandex VK
Finance and insurance	Sistema Center-Invest Bank Russ-invest SBER AK Bars SFI Sovcombank Moscow Exchange

Retail	X5 Group Leroy Merlin Vostok MVideo Magnit ROLF Detsky Mir
Healthcare	BIOCAD
Transport	RZD Federal Passenger Company Aeroflot GTLK S7
Construction	Garant-Invest Etalon Group Brusnika LSR

Appendix 2. Interview transcript demonstration.

“Please introduce yourself and your role within the company?”

Yes, I am the project manager for sustainability projects. Accordingly, the main scope of my tasks is kind of implementation of projects with suppliers with clients and non-financial reporting. That is the way I support marketing and sales functions and supply chain support.

Actually the first question is the most general one, could you tell us what kind of attention your company pays to supply chain sustainability in general?

We have supply chain management in terms of evaluation of suppliers according to ESG criteria, setting more than technical requirements to them, yes price and quality or service, it is present. That's part of our sustainability strategy, because we understand that whether we have a sustainable supply chain we can or can't offer a good quality or a poor quality product to the market and therefore the service that the company provides to the market. So yes this is part of our strategy. Yes, it is important to us.

The way this system is structured in principle, we have a policy. Accordingly, like many companies, for whom this is a history, so to speak, of working with suppliers, which in principle lays out all the basic principles of the approach, how we work with them in this part. There is a system for assessing how we evaluate suppliers in the area of sustainability, policies, procedures and requirements for suppliers that are strategic there. Yes, i.e. those suppliers that we have a direct impact on the product, i.e. Ingredients, materials that are used in production, they have a higher, shall we say, degree of attention and a higher degree of focus. And working with them in these areas, that is, there are like audits, and like always with every batch of incoming quality control of what they bring in, and accordingly, compliance of all their activities there with best practices in the field of sustainable development. That is, if there is certification, it's good. And if not, then let's say we have a requirement for them to undergo a social audit once every three years, which means that all this kind of thing exists in principle.

And for strategic partners it is a priority, respectively, the assessment of passing through the EcoVadis platform, in Russia it is not available at the moment, so the ESG form is used accordingly. The national partner company completes the questionnaire, attaches the relevant documentation already in the company. Internally, we make a certain assessment, because the information is provided. So this is the story we have in Russia right now, like most people do, because basically everybody used to use . EcoVadis. Well, what else can we add here, if we talk about KPIs and metrics, in general we have KPIs for the number of strategic suppliers there, it used to be those who were evaluated by EcoVadis and, accordingly, improved their performance.

The ranking was created and we tracked that, what score our suppliers get there in general. There on filling in the ESG forms, if it still applies to us more for them yes, then some small companies are not the most significant suppliers for us. Probably the key ones here are the number of suppliers that are assessed, the quality of the assessments to improve every year, they have information to work on it, and probably.

And is the collaboration within the supply chain an important instrument to reach sustainability goals in your company?

Well here it's hard to say it's a straightforward partnership story, more often than not it's within the I don't know terms of reference that, say, a company wants to increase the amount of recycled plastic in used packaging. Accordingly, which of the current current market players can offer this. That is to say, for meeting our sustainability goals there, but also, conditionally speaking, for those partners who are also into it and deal with it. Also an important aspect is the amount of recycled plastic in the products that they sell, that it also reduces their overall performance, but here it goes more as a simple request from the company, that we want them to, I don't know, reduce the amount of co2 there, for example on the packaging. Who can offer such a solution in the market? Those who can, come and offer it.

Yes, that's kind of the story, I mean, yes, we can, well, naturally, we go to those of our current suppliers that we work with. That guys, here's what we need, someone you can or you can't, and on. Accordingly, on the basis of some feedback that we get, we decide whether or not to work with the vendor, because any such launches are like a mutual process, because they bring us something for testing, and we test it on our lines to see if it works or not, and we give feedback, so, on the one hand, it could be seen as a partnership, some kind of project. And joint innovation on the other hand, this is more of a company request, if we didn't say we needed it, it is unlikely anyone would have come to us with it. So that's the story.

I understand, but on the whole, if you look at the last five years, how would you assess the readiness of suppliers to work on these projects, to contribute resources to it, to spend them?

Well, if they are paid for it, they are always ready.

A related question is, how do you look at what benefits your company and suppliers are getting from making the supply chain more responsible? On the company side, and on the suppliers side, what is the incentive for them to do it?

And well, on the company side it is clear that we have increased traceability yes all our information chain, when we understand where what comes from, as if it is risk minimization

related to ESG compliance and in general as if data verification, which is provided in non-financial reporting, i.e. here we are in the safe mode. Yes, that is, we are kind of in such safe territory when we understand what is going on with our suppliers and in this way we can kind of minimize the risks. And second is, I would say, is probably the key story here by and large, of course, when in principle you show interest, show that you care, need it then eventually you stimulate suppliers to come up with all kinds of ideas for innovation. Which maybe you suggested to me yourself, you didn't solve, you didn't find. But on the whole as if they see your orientation in that direction, they start thinking, building their competitive advantage around that. Yes, because when you hold a tender, then, accordingly, those who fall into what we want as much as possible, they win it, so this is also a way for them to sort of set themselves apart from their competitors by offering some additional bonuses in solving our problems in the area of sustainable development.

So for the company, it's probably about getting some interesting and innovative proposals, solving our problems, and 2 it's about minimizing risks and compliance on all fronts and the ability to verify all the data we publish there, and so on.

Yeah, so that's the story here for suppliers, for some reason it's interestingly important. Well, because we are a big customer. Yeah, I mean, it's like, if we're talking specifically about some kind of product production out there, it's high volumes, it's steady payment and so on. Yeah, so it's like a reliable partner that you can trust. Which, if you have in your portfolio, it's easier for you to sell to others, because many people work with us, including from the position that we have you in the portfolio, and this is then easily sold to more, well, other businesses. Yes, that is to say their service and so on. By and large, working with a large company is reliable, stable, which means that it brings a certain margin, maybe not the biggest one, because they can't make big money on volumes. But it gives them a basic understanding that their production will be loaded, that they have an order there and so on, so it is important for them.

From this point of view and so they are ready to change in this direction. And probably also here, of course, for them, is that it kind of works out, as we usually initiate all these stories, then it's some kind of development and training for them, that is, as if they get her expertise, which They could be on their own, would have to go to it for a long time. Here It's all much quicker when you explain what you need, how you need it, why it's important and so on. That for them it's also about gaining a certain expertise, it's about improving operations there and so on, that is enrichment with such a certain kind of experience here.

And there is another separate question that I want to look at, but this is an international company. Maybe you have some experience in exchanging knowledge with your foreign

colleagues, what might be the difference between who and how supply chains are built in our Russian business versus in the developed markets?

Well the main difference is that we still have a race to the top, as in Europe and in India, it's one of our competitive advantages usually in any emerging market for a company. Yes, that is why the ESG agenda is very difficult to promote as it is for local suppliers who do not work there for the international, for example, are only focused on the local Russian, there or Chinese or Indian market.

The level of maturity and understanding of what sustainability is and why it is needed is much lower there. Plus the practice of spreading is also much less, that is there do not know buy apples from farmers that are certified according to the principles of sustainable development in Russia, well practically no well very difficult because they do not want to do it. It's an unnecessary hassle. So why do I need it? I'll go to Pyatrchka and sell it, they don't ask me for it.

In Russia, conventionally speaking, I meet these state requirements, regulations, and that's it, why do I need these certificates, why do I need this extra fuss, audits, time, nerves, money. That's about the same attitude, that's probably the key difference. And in attitudes, because you in sustainable development the role of the regulator is very strong. In fact, until the rooster bites, many small medium-sized businesses won't even scratch their heads if it's not their competitive marketing advantage.

That is, for those who produce, conditionally commodities such very general stories, do not work with the end consumer, who can be told about how white and fluffy we are in the B2B market. Well, it's like I comply with the legislation of the local regulator and that's it, I have everything certified there by the state authorities, why should I need anything else? I don't really see the point of it. That's probably the key difference, because I don't know if it's a Western European regulator or if it's a little stronger in this area. Yes, it sort of requires reporting from such companies, even from the average size there is different everywhere, but there is a revolution in this area from 2023, so to speak, when everyone has to report and from 26 years even small medium-sized companies have to report. That is why it is becoming important for them. But in general we should not live in such a delusion that everyone loves ESG, and everyone understands why it is necessary. That is, I would say, on the contrary, very few companies understand why it is necessary, how, and most importantly, even if they do, they don't understand how to commercialize it and why it can be cost effective.

That's what I would say and some tasks in the company to solve, because maybe it does not always solve, let's say, money issues, maybe you solve reputational ones there risk

management and everything else and so on and so forth. But not all experts simply understand and know how to work with it. It seems to me that those are the companies that own brands that have a public history. In other words, we are talking about the fact that it is clearer and more relevant to them. I guess so. Well, yes, that is, you kind of have an ESG history, or you're such a big business in B2B that you can't help but get noticed by, let's say, government agencies you need to build up a reputation among there, and such heavyweight stakeholders, as let's call it as supervisory bodies, executive authorities. And if you're also an exporter, investors, stock exchanges and so on are welcome there. And there you simply have nowhere to go, you go into it all sort of. It's simple, or if you work there in the consumer market with the end buyer, who cares about getting, I don't know, environmentally friendly products and in general understand that what he buys is of high quality and is not harmful to health, nature and poor Tajiks are not forced to work around the clock without a passport.

And if we are talking about the average B2B company, well, it is not really interested in this, because no one asks much of it and it does not see any big ones there. If we take into account the fact that our supply chain has been bombarded by the past year, this is the tenth issue. And all the international companies have accepted that EcoVadis is gone. All right, let's use the ESG form it is, to put it mildly, just going through all these questionnaires and so on. Well it's well to say you won't train all the buyers to competently assess the ESG risks of your potential supplier, well that's impossible, it either has to be specially trained people or artificial intelligence.

So, if we're not talking about suppliers, but a broader chain of stakeholders?

Well, yes, conventionally speaking, on some issues, especially related to government related issues industries have properties to unite and lobby for their interests and tasks. Here, but if we talk about suppliers, it's just there more fmcg retail industry, when we used to have this scoring and everybody was happy that we had this scoring and everybody was basically independent evaluation and everybody used it. Now we do not have such a tool to conduct independent scoring and everyone can use it. That's how everyone can harass their suppliers and so on. And so yes, now there is, so to speak, the league of green brands are trying there is yes, but it strongly lobbies Gost to turn the assessment of small medium-sized enterprises. Yeah, I mean a kind of, like, tool to do that? Well, that would also be the same questionnaire, if the league of green brands kept a register of suppliers, it would be possible to check, verify and so on. So what if there is no gost and gost, then what if there is no register with it, the supplier will come to each company anyway, each company will be assessed.

And so, as far as supply chain management is concerned, it doesn't really work. It's not like that in principle. Well, for example, if we are with a supplier, that is, as if Unilever always does all the audits itself and does not trust anyone and does not want anything. And but we here if the supplier says, and we have been audited there Unilever we ok, show the certification, if they there everything is ok, everything is good, we like it, conditionally speaking, we trust, that is as if there is such a story that some companies can trust each other's assessment, if already there passed as if documented, that we can call colleagues, from Unilever and say whether he is really adequate. Certainly speaking, yes everything is good here. I mean, as if such a thing exists, but I wouldn't say it's a systemic story.

If we talk about some kind of systemic story, more often than not, companies come together in developing standards of approach. That is, let's say, recommendations for sustainable packaging, that cross-industry history. Well, on different issues too, everything is united there on the basis of their unions of associations, each has its own sandbox, conventionally speaking, to solve a particular problem.

This, of course, always works, that is, it is always a tool to work with the suppliers, and with the suppliers here all say so far sadly languishing. Sber is trying, of course, to pull this out. They launched it last year as what we call the closest possible alternative to EcoVadis. That is, they tried to do the same thing. But as far as I know some software, I mean some software, here they are pulling it up. Only this year by order of X5 I don't know if it will succeed or not. But all the players of large, especially foreign businesses are confused by this story that Sber is under sanctions and, so to speak, this assessment, even if they will keep this register of suppliers who have passed their platform assessment and so on when passing international audits. It's like they can tell us, it's not valid, so we kind of need something else. And so far it's all a sad state of affairs in this respect.”

Appendix 3. Interview qualitative coding system.

List of codes	Frequency
Code system	242
access to investment capital, exchange stocks	4
cost-cutting measures	3
developed market regulation	2
obligatory supplier compliance	5
Code of Conduct	2
Clients ESG requirements	7
lack of incentive for focal companies from Russian rankings	1
ESG criteria as monopolization - legislation issue	1
Partner selection	2
business as usual, evolutionary supplier collaboration	5
collaborative innovation	3
consumer focus and public image	7
downstream collaboration	3
industry collaboration	10
joint projects with suppliers	3
lack of ESG understanding in suppliers	5
lack of digital solutions for SSCM	8
professional association collaboration	7
supplier ESG assessment	4
supplier audits	8
supplier development	10
supplier education	9
supplier monitoring	3
support of social entrepreneurs	2
unstandardized requirements from different companies	6
development of operations, free expertise	7
differentiate from competition through ESG	8
extended producer responsibility	3
having large focal companies in their portfolio	2
global company guidelines	7
leading by example of established companies	7
export opportunities and access to wider markets	1
regulatory development with the governance body	8

risk-free high-quality products	7
stable reliable orders	5
the suppliers readiness to develop ESG agenda	11
Local regulatory base	11
greenwashing and fake compliance	1
increased attention to practices in EM	3
supplier tiers - level of trasparency	7
attention from rankings	1
supply chain due diligence	3
compliance to international standards	7
emission control	3
KPIs	4
sanctions setback	16

Appendix 4: Interview questions (semi-structured approach).

1. Tell us, please, how much attention does your company pay to supply chain resilience?
2. What KPIs does your company use to measure supply chain resilience?
3. Do you view collaboration with suppliers and other stakeholders as an important means of achieving your sustainability goals?
4. How does your company engage and encourage suppliers to collaborate on sustainability?
5. Relational View: what benefits does your company and your suppliers gain by making your supply chain more responsible?
6. Do you think there is a significant difference between how companies in developed and developing countries build supply chain collaboration?
7. In our review of ESG reports from major Russian companies, we found that most companies are at the point where they are in the process of becoming compliant or introducing documents to regulate suppliers according to ESG criteria. Can you suggest what barriers might be holding back deeper collaboration - in the form of knowledge and experience sharing, joint goal setting or joint sustainability projects?
8. Conversely, in your view, what characteristics of the Russian environment (and developing countries more generally) could push companies to collaborate more deeply with supply chain actors for sustainability purposes?