

1 Paving the Way for Social Sustainability in Arctic Supply Chain Operations

A Novel Research Agenda

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The extant corpus of research on supply chain sustainability in the Arctic exhibits a conspicuous neglect of the social dimension, rendering it the most underprivileged among the three pillars of sustainability (Ahi and Searcy, 2015; Mani et al., 2016; Govidan et al., 2021). Notwithstanding the mounting attention thrust on the environmental dimension of Arctic supply chain operations, with a clear-cut emphasis on reducing their carbon footprint, the social implications of these operations have largely been shunted aside (Tsvetkova, 2020a). This is particularly worrisome, especially considering that such operations frequently entail Indigenous communities and other local stakeholders who may be impacted by them in myriad ways (Brooks and Frost, 2012). Thus far, there is a critical need for research into social sustainability in Arctic supply chain operations, in order to ramp up our comprehension of, and to address, the social issues and opportunities elicited by these activities.

As the title of this introductory chapter eloquently implies, it seeks to fill this opulent lacuna by outlining a much-needed and novel research agenda that paves the way toward social sustainability in Arctic supply chain operations. Drawing on the existing scholarship, this chapter illuminates the current status of research within the realm of supply chain operations, with an explicit emphasis on the social sustainability aspect. It commences by examining supply chain operations as a captivating research phenomenon, followed by a nuanced discussion of the neglected and unjustly forsaken concept of social sustainability in the supply chain management landscape. The intricate and multifaceted nature of the concept at hand is underscored in this discussion, making it challenging to develop a one-size-fits-all framework that can

effectively address the multifarious social dynamics inherent in context-specific supply chains. The Arctic is then portrayed as a distinctive research terrain that demands special attention due to its crucial role in advancing sustainability efforts. Finally, the outline of the anthology is unveiled, affording a concise and lucid overview of the research to come.

Supply Chain Operations as a Research Phenomenon

The discipline of Supply Chain Management (hereafter, SCM) has acquired the status of a rapidly and widely developing field of knowledge, since its inception in the early 1980s. The mainstream of SCM research has traditionally revolved around optimizing business processes and customer satisfaction to ramp up efficiency and achieve market responsiveness by building models and testing hypotheses. However, in recent years, a particular focus of SCM research has also been put on establishing and forging collaborative relationships and mutually beneficial partnerships within and across organizations (Stock et al., 2010). As a result of the synthesis of these two streams, SCM has morphed into an integrating mechanism that connects key business processes for planning, organizing, monitoring, and governing all supply chain activities, with mutual information sharing within and beyond organizations (Lambert and Cooper, 2000; Mentzer et al., 2001; Handfield and Nichols, 2002). At a more strategic level, supply chain integration has been recognized as a top priority for collaboration and the sharing of intra- and inter-organizational processes and routines among supply chain members, in order to make material flows efficient and better synchronized (Frohlich and Westbrook, 2001; Flynn et al., 2010; Schoenherr and Swink, 2012). As a consequence of these processes and routines, supply chain integration has been inaugurated for the purpose of creating value for customers and stakeholders (Cooper et al., 1997; Lambert, 2008).

In parallel, SCM practices have become operationalized along the entire supply chain, as constituent organizations implement necessary adaptations and adjust their operations, in a concerted and integrated fashion, to roll out new practices and solutions and establish novel inter-organizational links (Nair et al., 2016). Seen from this perspective, SCM ensures strategic behavior such as interaction and collaboration, provides mutual objectives in organizational actions, and embraces control tasks to support operational management (Dekker and Van Goor, 2000). Although SCM has historically been viewed as a function of operations management, recent research posits that it has a greater impact on operations than previously realized. Throughout this volume, the term SCM is used quite broadly, incorporating various facets of the operations and supply chain management knowledge. At least two main facets can be observed: (1) supply chains deal with the flow of material and information, which (2) have to be managed by all partners embedded in the supply chain (Seuring, 2005).

Despite the plethora of definitions and scopes touted by scholars, SCM remains a field that is vastly under-researched. Although it has increasingly gained traction among practitioners, its theoretical foundation lags behind that of other fields (Chen and Paulraj, 2004; Burgess et al., 2006), leading to such malfunctions as fragmentation and inconsistency of core findings (Zsidisin et al., 2000; Cousins and Menguc, 2006). As a consequence of this scarcity, a certain set of theories, approaches, and views has been preferred by the academic community to capitalize on the moment (Halldorsson et al., 2003; Ketchen and Hult, 2007; Shook et al., 2009). The fundamental assumption upon which most of these preferred theories rest is imprisoned within holistic systems thinking (Johannessen and Solem, 2002; Johannessen, 2005). This organizational perspective views the supply chain terrain as a system composed of independent components that are fragmented into parts and then examined as separate entities (Nilsson and Gammelgaard, 2012). As a result, the majority of SCM research boils down mostly to the consideration of parts of the system, while undeservedly eclipsing the various complex interactions between the parts (Neher, 2005). This indicates that systems thinking is characterized by the dualistic nature, since the reality is viewed as a part of the organization, while also standing outside it, due to a spatial boundary that separates parts of the system from each other and from the system as a whole. Although systems thinking is conceived of as more of the methodological foundation of SCM, rather than a theory, it is rarely mentioned explicitly. Nonetheless, it can be of great value in helping researchers formulate concrete research tasks (Gammelgaard, 2023). Overall, holistic systems thinking leads to a fragmented and often incomplete picture of supply chain operations.

As critically asserted by Johannessen (2005), holistic systems thinking fails to provide a convincing explanation for organizational change that both managers and local employees experience in practice. Change is often reckoned as an external pressure, driven by the rational decisions of managers who are seen as autonomous individuals standing outside the organization and striving to make the system as effective as possible. Conversely, the behavior of local employees within the system is assumed to be predictable and stable (Nilsson and Gammelgaard, 2012). However, this view presents formidable difficulties in comprehending how managers outside the organization are able to spark a change in the organizational patterns of actions and behavior of those who implement these patterns in practice. Furthermore, this view fails to recognize that human activity brings about change in organizational life through day-to-day routines, experiences, and interactions (Johannessen, 2005). Without accounting for the impact of human behavior and social interaction, the predictive accuracy of models and hypotheses appears to be limited in the real-world practical issues and challenges of SCM (Tokar, 2010).

The core idea of SCM centers around the relationships and interconnections between companies, which are created and governed by people who design, manage, and execute almost all supply chain activities and functions (Sweeney, 2013). The role of humans is considered of paramount importance in supply

chain decision-making. This is because their actions can have far-reaching implications for organizational operations and outcomes in day-to-day activities, which are often habitual, routine, or even unconscious (Tsvetkova, 2021). But the ground reality continues to be that the human dimension has been largely shunted aside in SCM research (Storey et al., 2006; Fawcett et al., 2008; Tokar, 2010; Sweeney, 2013; Huo et al., 2013). The potential benefits of systems thinking notwithstanding, prior research on SCM has principal shortcomings in addressing the role of human actions and social interaction on driving organizational change. This is a serious limitation, as these factors are critical to achieving sustainable and socially responsible supply chain operations.

As clear from the above, most of the theories that feature prominently in the SCM field adopt a reductionist and static view of the supply chain and its management. These theories approach change in practice as a rational and planned activity, while rejecting the possibility of unpredictable and unknowable outcomes. Acknowledging this view, supply chains tend to be operated without much regard for their contextual environment. This perspective largely overlooks the fact that supply chain operations are fluid and intricately woven into the fabric of political-economic and social processes (Wieland, 2021). Nor does this view acknowledge the very fact that local institutional environments are instrumental in the implementation of almost all supply chain activities (Tsvetkova, 2016). As has also been spelled out eloquently in the extant literature, supply chain operations may impinge upon the context itself by responding to contextual and institutional challenges (Tsvetkova and Gammelgaard, 2018). All this makes it imperative to assess institutional underpinnings or contexts in which supply chain operations take place.

This anthology gears its efforts toward unveiling the diverse and often hidden intricacies of the human dimension in SCM. To achieve this ambitious goal, it advocates for a shift in methodological thinking toward an interpretive perspective. As a viable alternative to the dominant systems thinking, and supported by a handful of scholars (Arlbjørn and Halldorsson, 2002; Johannessen, 2005; Nilsson and Gammelgaard, 2012), this perspective seeks to enrich the scope of SCM by delving deeper into how supply chain activities are operationalized through social interactions and responsibilities. By shedding light on the social and human dynamics underlying supply chain activities, the interpretive perspective tends to offer a more inclusive and comprehensive approach to SCM.

Social Sustainability as a Missing Pillar in the SCM Landscape

There is hardly a term as ubiquitous today as the notion of sustainability. Having gained traction in the late 20th century, it has spurred huge interest and concern worldwide, serving as an important beacon to guide our current efforts for the sake of the future. No exception to the global trend, supply chains and their management are also under the relentless pressure of the sustainable

policy challenge (Punte et al., 2020; Matos et al., 2020). As a result, SCM has evolved over the two-decade history of its development into a domain that amalgamates, although to varying degrees, the environmental, social, and economic facets of supply chains into a common framework (Seuring and Müller, 2008; Carter and Rogers, 2008).

This framework, commonly known as the triple bottom line (Elkington, 1997), has enabled illuminating insights to be provided into various issues in supply chains. Premised on this framework, sustainability-driven SCM appeals for greater integration and cooperation between partners. This is done to make supply chain practice and performance sustainable, by pushing environmental and social criteria beyond the confines of any single company to capture the whole supply chain (Bai and Sarkis, 2010). As prior research has posited (Ansari and Kant, 2017), embracing the sustainability concept in core business functions of the supply chain has enabled firms to expand their operational scope beyond traditional processes and hone competitive advantage in the market. The positive aspects notwithstanding, the SCM literature is replete with cases that provide documented evidence of supply chains being compelled to adopt novel and/or costly practices, all in the name of sustainability. Unsurprisingly, such pressures can bring a deluge of detrimental implications for the local environment and communities. This makes it imperative to rekindle a debate about the perception of social benefits. Overall, the role of SCM in addressing socially sustainable issues remains largely uncharted, offering immense possibilities for exploring how SCM facilitates the implementation and further embeddedness of sustainable practices (Tsvetkova, 2020a).

Complex Dynamics in Achieving Sustainable Supply Chain Practices

A host of scholars shares the view that sustainability can only be attained by giving equal and simultaneous attention to environmental, social, and economic concerns or so-called responsibilities and by involving all partners in the supply chain (Faisal, 2010; Bai and Sarkis, 2010; Mani et al., 2016; Tsvetkova, 2020a). This poses a formidable challenge for firms to manage sustainability along the supply chain, which involves interdependent actors that can impact each other's performance. Thus far, understanding the triad of these three distinct but interrelated responsibilities is at the very heart of SCM research (Pagell and Wu, 2009; Mani et al., 2016; Tsvetkova, 2020a).

The reality is that, despite some indications of the complexity of the sustainability concept, the extant literature cannot boast a wide range of studies shining a light on the complex nature of the transformations toward sustainable SCM practices. This is especially evident at the operational level, as opposed to the strategic level, where a quite profound view of complexity in sustainable SCM has been reached. As Silvestre has spelled out (2015, p. 157), "sustainable supply chains are not a destination but rather a journey because

as supply chains move toward more sustainable practices, they go through a complex, dynamic, and evolutionary learning process”. Some organizations have yet to go down this pathway toward sustainability, while others that have embarked on it underestimate its complexity. This calls for delving deeper into the implications of sustainability theory for SCM in the scramble to better understand the complex dynamics in the journey toward sustainable practices and operations (Pagell and Shevchenko, 2014; Quarshie et al., 2016).

Unpacking Social Sustainability: A Multifaceted Concept in SCM Literature

Although the concept of sustainability has trickled down into the SCM field, the extant literature has largely centered around issues of making supply chain operations “green” or environmentally friendly, through measures such as reducing fuel consumption and mitigating environmental impact (Carter and Rogers, 2008; Silvestre, 2015; Lam and Lai, 2015; Mansouri et al., 2015), with the overarching goal of boosting economic performance. There is burgeoning evidence that, while the quantity of research on the environmental dimension has recently more than tripled (Gurtu et al., 2015), social issues in pursuit of sustainability have, on the contrary, been marginalized in the research agenda (Seuring and Müller, 2008; Wu and Pagell, 2011; Beske, 2012; Sarkis, 2012; Ahi and Searcy, 2015; Mani et al., 2016; Tsvetkova, 2020a). It comes as no surprise, then, that the social dimension of sustainability is often conceived of as the weakest link in the triad.

Resulting from this clear-cut bias, the scope of social sustainability has been conscripted to environmental issues, such as the potential adverse effects of pollution on human health, safety, and quality of life (Tsvetkova, 2020a). Furthermore, there has been a focus on the product and process measures geared toward safeguarding the safety and welfare of people in the chain (Mani et al., 2016). Thus far, studies addressing social issues remain scarce, and greater attention is needed to raise awareness of the social impacts across the supply chain (Rajeev et al., 2017; Tsvetkova, 2020a). This lacuna in the literature makes it challenging to gauge advances in sustainable SCM practices (Davidson, 2011).

The social sustainability concept has encountered a significant challenge and criticism, centering around its obscure alignment with the other dimensions of sustainable development and other social development issues (Boström, 2012). One of the defining characteristics of this concept is its frequent association with a multitude of related terms and definitions, making it tempting for scholars to buy into the social sustainability of their choice. All this is to contend that social sustainability is largely a complex and multifaceted concept, laden with value statements, morals, and other intangible and non-measurable facets (Govindan et al., 2021). Among those facets or images widespread in the extant literature are social well-being, quality of life, social capital, social

justice, social cohesion, cultural diversity, democratic rights, workers' rights, social inclusion, social exclusion, and individual capabilities, to name a few. As Dempsey et al. (2011, p. 292) have elucidated, "social sustainability is neither an absolute nor a constant... [it] has to be considered as a dynamic concept, which will change over time (from year to year/decade to decade) in a place". There is a profound lack of a clear and unambiguous consensus on what constitutes social sustainability, which gives rise to certain struggles and contradictions aimed at the institutionalization of this concept. This, in turn, leads to a bewildering diversity of specific typologies and frameworks.

Prioritizing Social Sustainability: A Critical Look at Corporate Social Responsibility

Social sustainability undoubtedly features prominently in a supply chain context. This is not only because it raises awareness among relevant stakeholders about human safety but also because it deals with the 'how', 'who', and 'under what conditions' questions SCM can contribute to community development and address social issues that are high on the agenda in extremely remote areas (Tsvetkova, 2020a). With some minor exceptions, there is, however, still a dearth of research into the underlying meaning of social sustainability and social issues in the SCM field. Reflecting this paucity, some scholars have dubbed the social dimension of sustainability mostly an ethical code of conduct for human survival and future development that needs to be accomplished "in a mutually inclusive and prudent way" (Sharma and Ruud, 2003). Instead of explicitly referring to sustainability (Quarshie et al., 2016), proponents of this view incline more toward the term "corporate social responsibility" (CSR), which encompasses corporations' legal, economic, ethical, and discretionary responsibilities, placing extra emphasis on moral management and organizational stakeholders by avoiding harm (Carroll, 1991). Seen from this vantage point, the scope of social sustainability has been narrowed down to human rights, working conditions, welfare, and labor safety (Quarshie et al., 2016).

Another stream of research advocates for the integration of CSR in the supply chain, which can take various forms, e.g., through socially responsible supplier development (see Krause, 1999). Viewed from this perspective, the bulk of studies within SCM has centered around purchasing decisions resulting from the unethical behavior of suppliers and inadequate provision of services. Supplier relationships are conceived of as a challenge to social sustainability in this view (Carter and Jennings, 2002; Boyd et al., 2007; Ciliberti et al., 2008). As Andersen and Skjoett-Larsen (2009) have contended, CSR practices can entail intensively developing suppliers and incentivizing them through long-term contracts and large orders.

One of the basic features of the CSR approach is that it focuses mainly on practices adopted by individual firms. Rather than confined to any single entity, the scope of SCM encompasses a broad range of organizations from

varying fields of business, each with its own goals and ways of managing. This makes it necessary to extend the coverage of CSR initiatives well beyond the boundaries of individual firms, to act “as a multiplier effect for social responsibility” (Preuss, 2000, p. 143). It seems that the CSR approach falls short of reflecting the social cohesion that various actors, including residents as end customers of supply chain services, can express and, even more so, the desire for the well-being of local communities. In one of the earliest definitions of CSR, Bowen (1953, p. 6) equated it with a commitment “to pursue those policies, to make those decisions or to follow those lines of actions that are desirable in terms of the objectives and values of our society”, thereby appealing to the need to cater to communities’ needs.

Empowering Communities for Social Sustainability: A Community-Based Approach

As alluded to earlier, SCM is marked by the intricate interplay of multiple actors, each with their own set of goals and ways of managing. These diverging goals engender hindrances in achieving a shared understanding of social responsibility among all actors involved. This raises a thorny question of whether and eventually how these differences can be resolved and, if possible, how they can be integrated into efforts toward social responsibility and sustainability. Against this background, the so-called community-based approach proposed by Dempsey et al. (2011) may serve as an appropriate framework. Specifically tailored for urban settings, this approach is rooted in the European Union’s notion of “sustainable communities”, which are defined as places

where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all.

(ibid, p. 290)

As evident from this excerpt, this community-based approach valorizes social interactions among community members, promotes social inclusion, entails the equitable distribution of opportunities and resources between all actors enmeshed, and recognizes the vital role of local collective institutions, whether formal or informal, in advancing sustainable practices. Equally important, it posits that honing sustainability is not the sole responsibility of business corporations but necessitates the collaborative efforts of all community members. We argue that the community-based approach, which has previously been used in an urban context, can also serve as a versatile strategy for maintaining social coherence and integrity in SCM practice. By elevating the importance of social responsibility principles among all actors involved, we can

hopefully advance the literature on how these principles evolve in existing SCM practices (Tsvetkova, 2020a), ultimately boosting the overall understanding of social sustainability in SCM.

In light of the preceding discussion, a fundamental question arises regarding what it truly means to be socially responsible, especially in a supply chain context. Previous research (Maignan and Ferrell, 2001; David et al., 2005) has asserted that social responsibility requires adherence not only to economic imperatives but also to moral, ethical, and social standards that are partly determined by actor demands. Yawar and Seuring (2017) have proposed communication and compliance strategies as responsible supply chain activities. However, determining what constitutes social issues remains the principal challenge. This is due to the fact that social issues vary drastically among diverse stakeholders, are constantly evolving, and are largely contingent on the circumstances in which a firm operates (Klassen and Vereecke, 2012; Hojmosse et al., 2014). As a consequence of this diversity and fluidity, a mosaic of partly discordant perspectives on reality ensues (Davidson, 2009). Furthermore, the integrative and collaborative nature of SCM may have a singular impact on socially responsible activities that may not be reflected in conventional private sector practices (Spence and Bourlakis, 2009), particularly with regard to societal needs (Tsvetkova, 2020a). The move toward supply chain responsibility necessitates that all members strive to achieve social and environmental benefits beyond economic gains and appreciate the divergent ethical approaches of various organizational forms within the supply chain (De Vlieger, 2006; Spence and Bourlakis, 2009).

Rethinking Social Sustainability through Social Responsiveness?

As an intricate and multifaceted concept, social sustainability is recognized as both a crucial task and a very big challenge. It entails grappling with a wide array of pressing social issues that impact individuals, organizations, and local communities. Despite the burgeoning efforts to tackle these issues, a comprehensive understanding of social sustainability is still lacking. As previously alluded to, one potentially viable strategy for advancing social sustainability is to adopt a community-based approach that entails working closely with local communities. To further amplify the impact of this approach, we suggest enriching it with two closely intertwined concepts – social responsibility and social responsiveness. The former refers to an individual or entity's moral obligation and duty to society (Waddock, 2004), while the latter involves responding to societal needs and key actor demands by taking explicit and proactive actions (Crampton and Patten, 2008). Coalescing these two concepts under the umbrella of a community-based approach may enable individuals and groups of people to benefit the development of local communities by elevating the standard of living and enhancing the environment of those in their vicinity. Furthermore, this approach has the potential to foster collaboration

and trust among local communities, organizations, and institutions through social integrity and coherence. Consequently, such efforts may result in more equitable and sustainable outcomes.

It is our unwavering belief that the proposed approach has potential applications within SCM practice by acknowledging and addressing human-centered issues. This belief stems primarily from the approach's view of SCM as a series of consistent patterns of human actions that perform ongoing operations, produce outcomes, and envision new forms of collaboration among supply chain members (Tsvetkova, 2021). It is worth noting that, despite the prominence of social responsibility in SCM literature through the CSR approach, social responsiveness has not garnered the same level of attention thus far (Tsvetkova, 2021). Therefore, more effort is required to give social responsiveness the prominence it deserves in the SCM domain. With this argument in mind, one of this book's endeavors is to highlight social responsiveness in the context of the Arctic, to which we now turn our attention.

The Arctic as a Research Context

The Arctic is a vast region that is highly abundant in mineral resources, but its sparsely populated areas lack essential infrastructure on a widespread scale (Høifødt et al., 1995). Until the 20th century, the Arctic was considered a remote and inhospitable region, with limited economic prospects for harnessing its natural resources. However, the region is presently experiencing noteworthy transformations, largely attributed to the observable and contentious effects of climate change. With the advent of industrial development, the role of supply chains has undoubtedly become important in driving economic progress in far-flung Arctic areas. These supply chains are instrumental in distributing cargo to the market, catering to industrial needs, and ensuring the survival of not only large manufacturers but also remote communities, encompassing local residents and Indigenous Peoples. Furthermore, the exponential growth of commercial activities in the Arctic, notably involving oil and gas exploration, mineral extraction, and shipping, has led to the expansion of the region's economy and heightened demand for streamlined and resilient supply chain services.

The distribution of cargo in the Arctic region is significantly impeded by its harsh natural conditions. The traditional land-based transportation methods such as railways and roads are often impractical, making maritime transportation a vital means of cargo distribution. Consequently, SCM practices are predominantly focused on the operations related to maritime transportation of goods. The Arctic maritime routes, such as the Northern Sea Route, the Northwest Passage, and other critical channels, are rightfully considered crucial connecting arteries for the social, economic, and cultural advancement of remote northern regions and global trade (Høifødt et al., 1995; Hong, 2012; Tsvetkova, 2020b). In recent years, there has been a burgeoning potential for

maritime activities along the Northern Sea Route, which incorporates offshore petroleum resource extraction and intra-regional transportation of extracted minerals and onshore energy resources, as well as international transit, although it has remained limited in volume.

However, the scope of SCM advances beyond the maritime domain, comprising the complex land-based logistics challenges and air services of the Arctic's rugged and remote hinterlands. During the summer months, certain settlements become entirely cut off from neighboring villages and urban centers, making the delivery of critical supplies, including food, an insurmountable challenge. These areas can only be reached via temporary winter roads or "zimmik" originating from the closest port and town, underscoring the logistics complexities involved in the Arctic region's SCM practices. Additionally, heavy-lift freight resupply to isolated coastal settlements is often seasonal, with yearly requirements only able to be provided by ship in the summer navigation (Brooks and Frost, 2012). These challenges are compounded by numerous stressful situations that companies and professionals working in the Arctic confront while carrying out their daily supply chain operations. While not exhaustive, the roster of stressors encompasses navigating through ice floes for most of the year, harsh natural Arctic conditions, the need for icebreaker assistance, lack of technology, time constraints, and long distances (Tsvetkova, 2020a, Tsvetkova, 2021). These factors make the supply chains in this area susceptible to delays and disruptions, which can have formidable societal impacts on local communities. To mitigate these risks, specific supply chain strategies are needed that not only address industrial activities but also recognize the needs and well-being of local communities (Tsvetkova, 2016).

As previously mentioned, the Arctic region is currently experiencing swift and unprecedented changes, primarily due to the expansion of existing industrial activities and the emergence of new ones, along with the tangible effects of climate change. These changes give rise to dramatic societal impacts, impinging upon social needs and resulting in far-reaching repercussions for local communities and Indigenous Peoples. Remote settlements and traditional lifestyles – such as the nomadic lifestyle of reindeer herders – are especially vulnerable to these societal impacts, which affect their quality of life and ability to maintain their cultural heritage. This is further aggravated by the susceptibility of the Arctic environment to the adverse effects of business activities and high-risk technological projects that are backed by political ambitions. In such a fragile environment, encroachments and accidents can have lasting consequences and impose significant financial burdens. Last, but not least, contending priorities, fueled by the pursuit of economic growth and resource extraction, often spark tensions between business interests and political ambitions that affect the needs and well-being of local communities.

Echoing the mounting interest in the Arctic, research on the region has gained prominence (Timoshenko and Mineev, 2021). Much of the conducted research is centered around exploring the newfound economic opportunities

that have ensued due to climate change and globalization across various sectors (Stephen, 2018). Of particular interest is how these alterations inflict environmental impacts and risks that challenge long-standing subsistence-based lifestyles, leading to fierce competition between traditional ways of life and new economic activities (Moerlein and Carothers, 2012; Hossain et al., 2014; Torrecuadrada Garcia-Lozano and Egea, 2017). Although economic activity in the Arctic is on an upward trajectory, there is a profound lack of opportunities for local residents and Indigenous Peoples to participate in, as evidenced by a number of scholars (Bell, 2011; Hendriksen et al., 2014; Saxinger, 2016). Several factors contribute to this situation, but the primary one is a shortage of skilled labor and the required qualifications to support the nascent industries that have emerged in the region. As a result, social cohesion within Arctic communities is on the decline. Against this background, supply chains that prioritize socially responsible practices have greater potential to promote the authentic needs and values of local communities in the Arctic, thereby enhancing social sustainability (Tsvetkova, 2020a).

The concept of “sustainable development” has gained momentum in the Arctic region, yet there is still a gigantic gap in the understanding of how supply chain operations intersect with social sustainability in this unique milieu. While some strides have been made in infusing social responsibility into SCM practices, a pressing need remains for comprehensive research to tackle the complex challenges faced by Arctic Indigenous communities. This book seeks to bridge this knowledge gap and, ultimately, contribute to the truly sustainable development of the Arctic.

Outline of the Anthology

We are delighted to offer you in this volume a meticulously curated collection of scholarly works that rekindle the fascination with the social dimension of sustainability in Arctic supply chain operations. By showcasing real-life case studies of supply chain operations, all in different industries and located in various Arctic regions, we seek to delve into the intricate interplay between business interests, political ambitions, and social issues. Comprising chapters by contributors hailing from Norway, Finland, Russia, Iceland, Greenland (Denmark), the United States, Canada, Alaska (the United States), Turkiye, and Japan, this edited volume brings to your attention a compelling tapestry of experiences and candid views on the complexities of implementing socially sustainable and responsible policies in Arctic supply chains. With the breadth of perspectives, this volume proffers 11 thought-provoking and insightful contributions, arranged in a logical and coherent sequence that allows readers to follow a clear thread of argumentation.

Serving as a point of departure and scanning the extant literature over the past century, the next thematic chapter, penned by Amulya Gurtu, Hamid Afshari, and Mohamad Y. Jaber (Chapter 2), seeks to synthesize state-of-the-art

knowledge on supply chain activities and transportation in the Arctic and identify research gaps. In so doing, the chapter shines a light on opportunities and challenges that exist in the SCM field and comes up with effective ways to address them. Building on that, a research agenda for future work and direction in the field is set up. The findings indicate that the focus has shifted drastically from supply, in the early 1980s, to transportation activities and, more recently, to service delivery. Next, a need to develop regulatory and investments frameworks is voiced, to enhance navigation safety without harming the environment. Last but not least, the authors persistently urge the research community to embrace social factors in managing supply chains, along with economic, environmental, and governance issues. As exemplified in the chapter, there is a compelling imperative to address the social aspects of developing northern ports and their impact on the Indigenous Peoples and local residents.

Chapter 3, by Antonina Tsvetkova, Alexey Fadeev, and Natalia Anikeeva, aims to delve deeper into how SCM practices in the extreme environments of the Arctic have been continuously (re)shaped by the complex and evolving interactions between oil and gas businesses and Indigenous reindeer herders. Abundant data from 18 interviews, personal observations, and archival materials are interpreted through the ecosystem approach. This in-depth study eloquently demonstrates that a paradigmatic shift in the conceptual focus of SCM – from networks toward ecosystems – contributes to value-creation and value-capture for both oil and gas project activities and local communities. The synergy between value-creation and value-capture is achieved by ensuring social responsibility practices under limited doing-business conditions and in extreme environments. The chapter posits that integration between key actors – big businesses, politicians, and Indigenous Peoples – into ecosystems may result in unexpected social consequences, thanks to the complex interplay of collective interdependencies of co-existence.

Taking a close look at the “Arctic Corridor” railway project between Finnish Lapland and the coast of the Barents Sea, Juha Saunavaara, Ritva Kylli, and Aileen A. Espíritu (Chapter 4) offer a compelling account of how the development of new transportation routes and SCM practices in the Arctic triggers social contradictions at the local, regional, and national levels. Relying on the institutional logics approach as a lucrative theoretical lens and multiple data-gathering techniques, the chapter unravels the collision of the conflicting views and opposing interests of the key stakeholders involved. A clash of the main competing institutional logics is brought to light in terms of economic benefits, the protection of the fragile Arctic environment, and the rights of the Sámi and their traditional ways of life. While proponents of the railway construction primarily emphasize its economic benefits, a considerable lack of socially responsible and sustainable practices has placed a question mark over the entire project’s implementation.

Flagging the importance of the social dimension of sustainability within the tourism industry, Guðrún Helgadóttir, Doris Effah-Kesse, Eyrún Jenný Bjarnadóttir, Georgette Leah Burns, and Guðrún Þóra Gunnarsdóttir

(Chapter 5) aim to examine resident perceptions of the tourism supply chain in Iceland, where rapid pre-COVID growth led to wide-ranging discussions on over-tourism. Leveraging data from a longitudinal study based on surveys and interviews, the chapter provides an in-depth understanding of why it is vital to embrace resident perceptions and social sustainability within the SCM domain. The authors assert that residents possess profound knowledge of certain parts of the supply chain – such as local infrastructure and destination safety – and are deeply concerned about them. However, their perceptions often diverge sharply from those of other stakeholders, mainly tourism companies, and are even disregarded. The need to develop socially sustainable practices within SCM is underlined, as this has far-reaching implications for local communities. In particular, it is contended by the authors that the government can play a critical intermediary role in bringing together different actors, including residents and businesses.

In their anthropological study of social responsiveness initiatives in SCM, Antonina Tsvetkova and Marina Nenasheva (Chapter 6) offer thorough reflections on how local residents in 13 isolated northern islands and coastal settlements of the White Sea respond to social needs. Drawing upon 50 semi-structured and in-depth interviews with local residents and authorities, the chapter traces the development of socially responsible food supply chains in most coastal communities in the Russian Arctic. The findings showcase that economic concerns and the need to adapt and maintain mobility result in evolving social responsiveness, squarely manifested in residents' explicit and proactive actions without support from the local authorities. The active mediating role of commitment and trust in amalgamating SCM practices and social exchange is elucidated. The authors conclude that social issues and cultural attributes can act as both a challenge and a source of innovation and inspiration within existing SCM practices. The chapter adds to the current body of knowledge by highlighting how social responsibility principles and responsiveness enable supply chains to cater to the needs of local communities.

Taking a deep, critical dive into the Greenlandic fishing industry, Javier L. Arnaut and Rikke Østergaard (Chapter 7) strive to uncover how key stakeholders envision environmental, economic, and social adaptation of fisheries and their overall supply chain operations. Based on a series of semi-structured interviews with the main actors involved, the chapter provides evidence of some progress in strengthening the industry's capacity to adapt to climate change and the environmental impact on fisheries. As argued by the authors, stringent and conservative quotas are a "rush" to environmental sustainability, which, however, shunts social aspects – such as small-scale fishers and the cultural identity of coastal communities – to the sidelines. The chapter concludes that trade-offs among key actors notwithstanding, the maritime operations of Greenland's fisheries are moving unduly slowly toward sustainability.

As a global seafood supply chain governance mechanism, the Marine Stewardship Council's (MSC) standards are the primary focus of an in-depth

study by Antonina Tsvetkova, Svetlana Tulaeva, and Igor Khodachek (Chapter 8). Shining a spotlight on the global–local nexus, the chapter deliberates on how MSC standards have enabled sustainable local fishery practices in Arctic waters. Preached by institutional theorists, a “following standards” framework serves as a theoretical backdrop. The empirical evidence is based on nine semi-structured interviews and archival data. The findings reveal that the multiplicity of governance arrangements, which have ensued as a result of exposure to global standards and the local response to them, have provided a stimulus for nascent integration mechanisms. Instead of exerting coercive pressures on fishermen, MSC standards have displayed such symbolic power locally that fishermen have found it beneficial to adopt a more socially responsible attitude toward fishing activities in the Russian Barents Sea. The most notable conclusion of the study is that a hybrid form of state and private sustainability governance institutions and arrangements has been gradually formed, contributing to synchronization between the actors within the fishing and supply practice and their sustainability commitment.

In her study of the healthcare delivery system to mitigate risks associated with remote childbirth for rural Alaska Native maternal patients, Lisa Schwarzburg (Chapter 9) seeks to explore how this social transport policy figures in the sustainable provision of safe maternity services. The chapter shines a light on how the notion of “social responsibility” has morphed from its onset to the present and questions sustainability over time. Content analysis is used as a versatile tool to gauge findings from ethnographic interviews of impacted Alaska Native mothers. From an anthropological perspective, the findings reveal the unique social and political driving forces involved in the supply and value chain networks of indigenous healthcare in the Arctic Alaskan surface. The chapter also provides a more sustainable, equitable Arctic SCM framework, with benchmarks that supplement the long-term efficiency of perinatal healthcare service supply in remote Arctic areas with more inclusive measures. By revealing overlooked socio-cultural elements in delivering healthcare, the author persistently and disingenuously calls for the inclusion of social responsibility in making supply chains truly sustainable.

Antonina Tsvetkova and Alexandra Middleton (Chapter 10) are inspired by the idea of contributing to a heated debate on the feasibility of adopting costly, advertiser-rich technologies and practices geared toward curbing the adverse effects of CO₂ and driving climate-resilient carbon cycle strategies. Leveraging empirical evidence from the realization of a carbon capture, transport, and storage project on the Norwegian seabed, the chapter ponders how SCM facilitates the implementation of global sustainable and climate strategies in the North Sea, with subsequent application in the Arctic Ocean. The authors caution that, despite the lack of a legal framework, political ambitions and forces make such projects politically feasible, but this frequently runs counter to the basic tenets of sustainable development. Against the backdrop of burgeoning concerns about debilitating environmental and social impacts

on coastal communities and Indigenous Peoples, the chapter underscores the importance of social values and attitudes.

Applying a comparative perspective, the chapter by Frédéric Lasserre (Chapter 11) provides in-depth insights into Arctic shipping along the Canadian and Russian coasts, their constraints, challenges, and dimensions, including in terms of logistics operations and sustainability goals. Particular attention is paid to juxtaposing traffic along the Northwest Passage and the Northern Sea Route over time. The chapter is equipped with a wide panoply of data sources, encompassing various datasets and interviews. A host of challenges that Arctic shipping faces are presented by the author, ranging from natural conditions to high costs to structural constraints. To surmount them, transport companies in both the Canadian and Russian Arctic are forced to adapt to these peculiar conditions and become acquainted with nascent, unique ways of doing business. The chapter provides compelling evidence that, notwithstanding the enormous challenges, there is a distinct trend toward the increasingly confident involvement of overseas-based shipping companies in the Arctic, indicating that the globalization of economic activity in the region is accelerating. Like other contributors to the volume, the author is in favor of creating meaningful social sustainability orientation in the Arctic – supporting the availability of more affordable consumer goods and construction materials to address the housing crisis and the development of a reliable two-way service that could support burgeoning small-scale manufacturing with shipping to southern markets, in the frame of low-impact corridors to protect the environment.

Centering around the temporal and spatial variations in shipping in the Russian Arctic, the penultimate chapter, by Ebru Caymaz, Barbaros Y. Buyuksagnak, and Burcu Ozsoy (Chapter 12), endeavors to elucidate the nexus between supply chain resilience and sustainability. It is built on a case study approach that is further enriched by archival data. The findings demonstrate that existing projects unequivocally put the business function on a pedestal, as if that were the chief – if not the sole – dimension of sustainability, thereby deprioritizing the environmental and social aspects of the concept. The authors identify several social factors that are often overlooked, including the insufficient qualification of crew members on international vessels, numerous human navigation failures, and Arctic peoples and communities, on whom supply chain operations have the most direct impact. The chapter advocates for the research community to calibrate an adaptive and inclusive governance model that can effectively bolster resilience measures and ensure the sustainability of supply chain operations.

A critical reflection on the key findings expounded in the preceding thematic chapters of the present volume is brought to light in the epilogue (Chapter 13). By revisiting the themes and questions originally laid out in this introductory chapter, it illuminates a handful of lessons learned and future directions surrounding the pursuit of social sustainability in Arctic supply chain operations and potentially beyond.

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