

University of Groningen

Tensions in sustainable supply chain management: instrumental, institutional, and paradoxical perspectives

Xiao, Chengyong

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

2019

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Xiao, C. (2019). Tensions in sustainable supply chain management: instrumental, institutional, and paradoxical perspectives. [Groningen]: University of Groningen, SOM research school.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Chapter 1

Introduction

“The greatest threat to our planet is the belief that someone else will save it.”

- Robert Swan

“We are living on this planet as if we had another one to go to.”

- Terry Swearingen

1.1 Sustainability in global supply chains

Global supply chains in industries such as consumer electronics, textile and fashion goods, and automobiles have provided the stimulus of economic development for emerging countries like China, India, and Brazil. Notwithstanding the contributions to overall economic growth, poverty alleviation, and improved living standards for emerging countries, multinational companies orchestrating global supply chains are widely criticized for undermining the environmental integrity and social equity of emerging markets (Locke, 2013; Neilson & Pritchard, 2011). The main reason is that emerging-market suppliers have been generally lax in protecting the environment and safeguarding the physical and financial wellbeing of workers to keep their cost competitiveness (Ngai, 2005; Ngai & Chan, 2012; Yu, 2008). Since the 1990s, as multiple stakeholder groups including consumers, non-governmental organizations, and environmental activists began to hold Western buying firms accountable for the labor standards and environmental practices of their suppliers in emerging countries, sustainability has emerged as an important element of supply chain management (Krause, Vachon, & Klassen, 2009; Wu & Pagell, 2011). That is to say, supply chain management has become *sustainable* supply chain management (Carter & Rogers, 2008).

Sustainable supply chain management (SSCM) is broadly defined as the strategic and transparent integration and achievement of social, environmental, and economic goals in the systemic coordination of key intra- and inter-organizational processes for improving the long-term viability of individual companies and their supply chains (Carter & Rogers, 2008; Golicic & Smith, 2013). Specifically, SSCM covers two main aspects: (1) the environmental aspect refers to the impact of supply chain activities on the natural

environment and covers issues of energy consumption, waste minimization, resource preservation, and pollution abatement (Linton, Klassen, & Jayaraman, 2007); (2) the social or human aspect focuses mainly on the physical, financial, and mental/emotional wellbeing of workers in global supply chains, including labor practices and occupational health and safety (Krause, Vachon, & Klassen, 2009; Wilhelm et al., 2016). In the past two decades, Western buying firms in diverse industries have been making efforts to improve sustainability performance of their global supply chains, but the effects, as well as the efforts, have been rather limited (Lund-Thomsen & Lindgreen, 2014).

Extensive empirical explorations in the past two decades (Abbasi & Nilsson, 2012; Busse *et al.*, 2016; Ngai, 2005; Walker, Di Sisto, & McBain, 2008; Yu, 2008) show that SSCM is an inherently complicated process, mainly due to the multiple tensions that can exist between social/environmental and economic goals (Hahn et al., 2015), tensions between short-term and long-term goals (Slawinski & Bansal, 2015), interest conflicts between different groups of stakeholders (Chung, 2015; Neilson & Pritchard, 2011), and conflicts between sustainability standards and the socio-economic contexts of emerging countries (Lund-Thomsen & Lindgreen, 2014). Besides these tensions, developing sustainable supply chains in an emerging-market context is also impeded by the suppliers' limited slack resources, inadequate management capabilities, and uncondusive institutional environment (Abbasi & Nilsson, 2012; Busse et al., 2016; Ngai, 2005; Walker, Di Sisto, & McBain, 2008; Yu, 2008). In the ensuing sections, we first provide a succinct overview of the SSCM literature, with the aim of highlighting the major barriers to improving sustainability in global supply chains. Specifically, the multiple tensions embedded in SSCM processes are introduced in more detail. Second, we outline the three empirical chapters of this thesis, each of which applies a specific theoretical perspective to explore tensions in SSCM.

1.2 Tensions in sustainable supply chain management

First, significant tensions can exist between the economic and the social/environmental dimensions of sustainability. Providing decent salaries for all workers entails substantial increases in suppliers' operational costs (Ngai, 2005; Ngai & Chan, 2012), and mitigating environmental impact often calls for significant technological and financial investments (Wu & Pagell, 2011). These tensions can unfold themselves more prominently in an emerging-market context, where cost is still the main order winning criteria for small-

and medium-sized manufacturers that have yet to develop core technological capabilities to stand out within fierce competition. Yu (2008) did an in-depth field study of a footwear manufacturer in Fuzhou (China), which was struggling to implement Reebok's Supplier Code of Conduct. It was found that the cut-throat competition in the footwear manufacturing industry had driven down the profitability of manufacturers to a level that compliance with the labor standards of Reebok would almost eradicate the supplier's marginal profitability. Likewise, Ruwanpura and Wrigley (2011) found that cost pressures were so overwhelming in the Sri Lankan apparel industry that most suppliers in the industry had to circumvent the labor and environmental standards of Western buying firms just to survive. Faced with significant tensions in SSCM, emerging-market suppliers would generally choose to suppress sustainability, as they typically have rather limited slack resources for improving sustainability and the institutional pressures for compliance are still relatively weak.

Second, SSCM also entails temporal tension between short-term and long-term goals (Hahn et al., 2015; Slawinski & Bansal, 2015). The Brundtland Commission on Environment and Development had put the temporal tension at the heart of sustainable development, which is defined as "the kind of development that meets the needs of the present without compromising the ability of future generations to meet their needs". Intertemporal tensions at the society or system level unfold more vividly at the organizational level in the processes of managing corporate and supply chain sustainability (Hahn et al., 2015; Slawinski & Bansal, 2015). Firms have to balance their short-term (economic) goals with their long-term needs and those of a wide range of stakeholders, including workers, local community, and the society. It is not surprising to see that economic short-ism (Slawinski & Bansal, 2015) is the dominant approach for individuals and organizations to deal with the intertemporal tensions between short-term and long-term goals. Economic short-ism may well be more rampant in an emerging-market context, where the laws on social equity and environmental integrity are less strictly enforced (Chan, Pun, & Selden, 2013; Ngai & Chan, 2012). However, as several global sustainability issues such as environmental pollution, global warming, and climate change become more salient, it is foreseeable that major stakeholder groups will further pressurize emerging-market suppliers to take more responsibility for sustainable development. As such, economic short-ism may gradually become less rampant in an emerging-market context.

Third, tensions can also emerge between the sustainability standards advocated by Western buying firms and the socio-economic reality in emerging markets (Busse et al., 2016; Neilson & Pritchard, 2011). Sustainability standards are usually developed by Western buying firms or industry associations, using the laws and practices in industrialized countries as the template. The SSCM literature has reported several sustainability standards that are not always compatible with the socio-economic reality in emerging markets. For example, the use of child labor is a taboo in Western countries while it is oftentimes regarded as a supplementary schooling system in Southern Asian countries like India and Bangladesh (Lund-Thomsen & Lindgreen, 2014; Neilson & Pritchard, 2011). Likewise, overtime works are generally regarded as bad for the physical wellbeing of shop-floor workers, while it is widely preferred by Chinese workers as an important way of boosting their take-home incomes (Chung, 2015). As such, tensions can also exist at the individual level between short-term economic wellbeing and long-term physical wellbeing. As such, prior studies (e.g., Chung, 2015; Huq, Stevenson, & Zorzini, 2014) have shown that the social, economic, and institutional environment in emerging countries can shape the stakeholders' interests and preferences in a way that is not always conducive for sustainability improvement as required by Western buying firms and other groups of stakeholders.

To summarize, sustainable supply chain management, *especially in the emerging-country context*, is a complex and complicated process that is impeded by the multiple tensions that are inherent in SSCM (Hahn et al., 2014; Hahn et al., 2015; Rivoli & Waddock, 2011). However, the SSCM literature has yet to systematically explore how the social, economic, and institutional context influences organizational experiences of and responses toward the tensions in developing sustainable supply chains. Moreover, related to the first gap, the way tensions are addressed in the inter- and intra-organizational processes of SSCM by those practitioners who experience them in the emerging-market context has been largely under-explored (Hahn et al., 2015; Matthews et al., 2016). Early studies (e.g., Margolis, Elfenbein, & Walsh, 2007; Orlitzky, Schmidt, & Rynes, 2003) in this field have intentionally or unintentionally overlooked the tensions in SSCM by subordinating social and/or environmental goals under economic goals, exploring questions like “does it pay to be green” and “does it pay to be good”. In other words, this stream of literature has mostly applied an instrumental perspective toward SSCM. Recently, there are increasing calls to go beyond the instrumental perspective and

to apply alternative integrative (Gao & Bansal, 2013) and/or paradoxical perspectives (Hahn et al., 2015; Jay, 2013; Matthews et al., 2016) to explore how practitioners working toward supply chain sustainability are coping with the enduring tensions in SSCM.

To fill these two main gaps, we apply three theoretical perspectives in this thesis to develop thorough understandings of SSCM. In Chapter 2, we re-apply the instrumental perspective to conduct a cross-country comparison on the relationship between corporate sustainability performance and corporate financial performance. Although this chapter does not directly explore how tensions are addressed in SSCM, it helps to develop some valuable insights into the time-contextual variations of sustainability-performance relationships in global supply chains. In Chapter 3, we apply the institutional theory to explore the effect of institutional pressures in driving firms to overcome the intertemporal tensions in SSCM. In Chapter 4, we delve into the buying firm and apply the paradox theory to explore how purchasing and sustainability managers within the buying firm are coping with the tensions in SSCM in an emerging-market context. Detailed introductions of these three empirical chapters are provided in the following section.

1.3 Instrumental, institutional, and paradoxical perspectives toward SSCM

Chapter 2 analyzes the time-contextual dynamics of the relationship between corporate sustainability performance and corporate financial performance. We revisit a classic question in the SSCM literature: Does it pay to be green (good)? Drawing on **instrumental stakeholder theory**, we develop a focal hypothesis arguing that the financial effect of sustainability improvement is negatively impacted by country-level sustainability performance, because stakeholders will take a firm's sustainability improvement for granted in countries with good social and environmental performance. We test this focal hypothesis in a cross-country setting drawing on the 6th International Manufacturing Strategy Survey. This chapter supplements these data with secondary data drawn from the Human Development Index and the Environmental Performance Index. The results support our hypothesis that firms in countries with higher levels of sustainability performance generally find it more difficult to capitalize on corporate sustainability performance than do their counterparts in countries with relatively low levels of sustainability performance. This chapter suggests that sustainability management can be a source of competitive advantage for firms located in emerging countries, where in general the level of sustainability performance is relatively low. Moreover, this chapter suggests that individual companies can experience increasing

levels of tensions in SSCM along with the institutionalization of sustainability within a broader socio-economic context. On the one hand, companies will have to go beyond low-hanging fruits and to make substantial and probably costly investments to meet higher sustainability standards. On the other hand, financial returns from such investments will gradually attenuate, partly due to changes in stakeholder responses.

In Chapter 3, we focus on the effect of institutional pressures in driving firms to overcome the tensions in SSCM. Drawing upon institutional theory and slack resources theory, we theorize that country-level sustainability performance can profoundly influence how firms allocate slack resources to address stakeholders' requests on supply chain sustainability. Empirical results based on the data from 6th International Manufacturing Strategy Survey and secondary data of the Human Development Index and the Environmental Performance Index support our hypotheses. As hypothesized, in countries with low levels of sustainability performance, firms with considerable slack resources are more responsive to stakeholder pressures than their peers with limited slack resources. In contrast, in countries with high levels of sustainability performance, there are no significant differences between firms with and without considerable slack resources in their responsiveness to stakeholder pressures. Having used **institutional theory** to develop a boundary condition of slack resources theory (Waddock & Graves, 1997; Seifert, Morris, & Bartkus, 2004), this chapter contributes to a better understanding of organizational responses to stakeholder pressures. Moreover, this study suggests that institutional pressures are effective in driving firms to overcome temporal tensions in SSCM. More specifically, in countries with low levels of sustainability performance, firms with limited slack resources are more likely to focus on short-term goals and overlook stakeholder requests for long-term supply chain sustainability. In contrast, in countries with high levels of sustainability performance, firms are generally responsive toward stakeholder requests for long-term supply chain sustainability, irrespective of the levels of slack resources at hand.

In Chapter 4, we present a **paradoxical perspective** and argue that sustainability and other business aims are not always compatible, particularly in an emerging-market context. Often, tensions originate in conflicts between the socio-economic environment of emerging-market suppliers and their Western customers' demands for both cost competitiveness and sustainability. We argue that Western buying firms can play a key role in moderating such tensions, as experienced by emerging-market suppliers.

Specifically, we explore how purchasing and sustainability managers within buying firms make sense of and respond to paradoxical tensions in SSCM. We conduct an in-depth case study of a Western multinational company that sources substantially from Chinese suppliers. While we find strong evidence for a persisting instrumental perspective in both the sensemaking and practices of purchasing and sustainability managers, we also observe an alternative response, taken primarily by sustainability managers that we labelled as “contextualizing”. Contextualizing can make sustainability standards more workable in an emerging-market context and help individual managers to move toward paradoxical sensemaking. Thereby, it can alleviate the tensions otherwise present in SSCM. We outline the value of paradoxical sensemaking in bringing about changes toward “true sustainability” (Montabon, Pagell, & Wu, 2016; Pagell & Shevchenko, 2014) in SSCM.

Figure 1.1 provides a visual summary of the three empirical chapters. To be specific, this figure highlights the theoretical perspective, the research focus, and the level of analysis of the three empirical chapters. Moreover, it provides a succinct summary of the theoretical implications for managing tensions in SSCM.

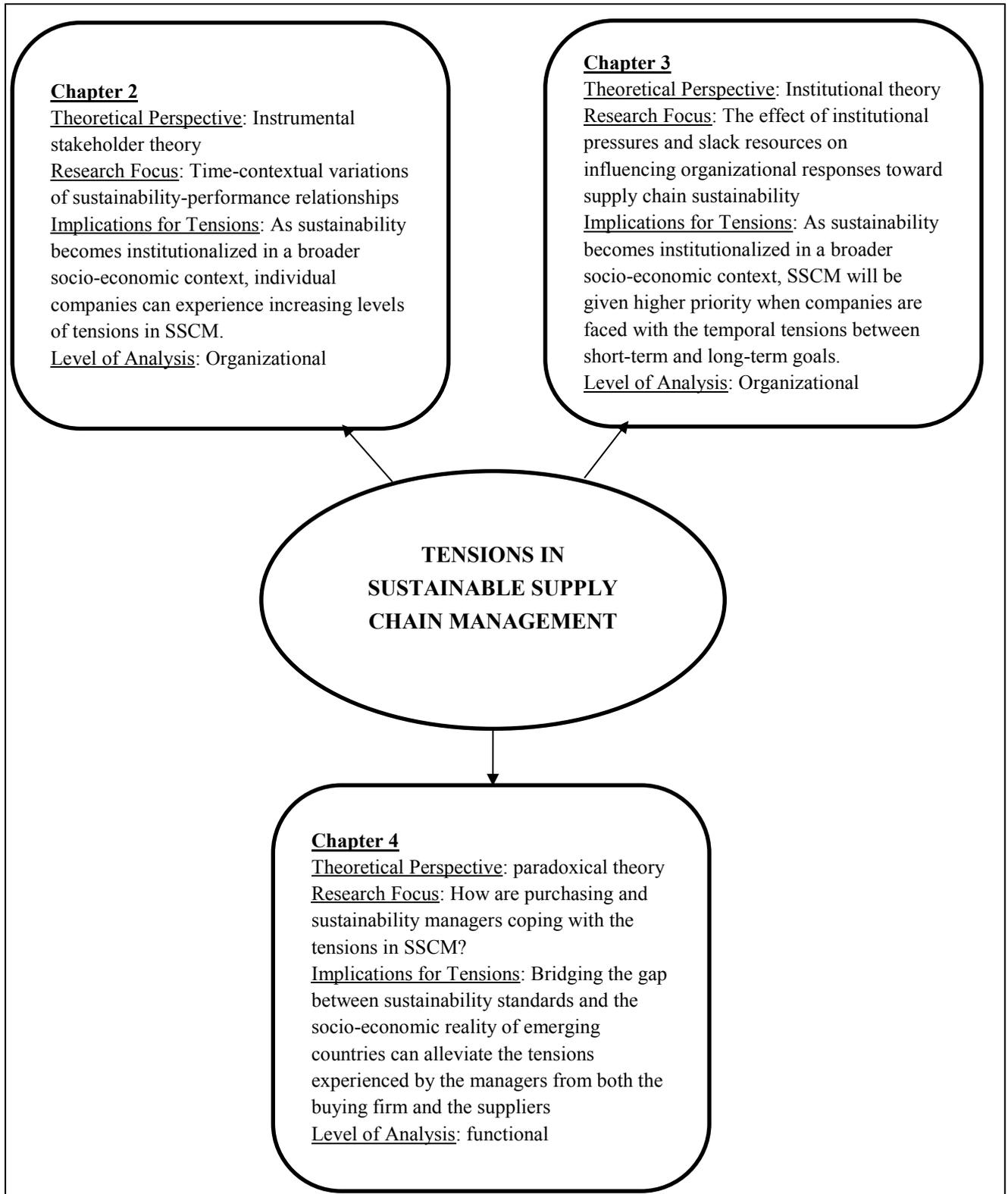


Figure 1.1. Instrumental, institutional, and paradoxical perspectives toward tensions in sustainable supply chain management

Chapters 2 – 4 are the core of this thesis and are based on the following publications:

Chapter 2 --- Xiao, C., Wang, Q., Van der Vaart, T., Van Donk, D. P., 2018. When does corporate sustainability performance pay off? The impact of country-level sustainability performance. *Ecological Economics*, **146**, 325 – 333.

Chapter 3 --- Xiao, C., Wang, Q., Van Donk, D. P., Van der Vaart, T., 2018. When are stakeholder pressures effective? An extension of slack resources theory. *International Journal of Production Economics*, **199**, 138 – 149.

Chapter 4 --- Xiao, C., Wilhelm, M., Van der Vaart, T., Van Donk, D. P., 2018. Inside the buying firm: exploring responses toward paradoxical tensions in sustainable supply chain management. *Journal of Supply Chain Management*, **in press**.

Chapter 5 concludes this thesis. First, we shortly summarize the three empirical chapters. Second, we elaborate on the practical implications of this thesis on managing tensions in SSCM. As developing sustainable supply chains entails addressing tensions, we provide several suggestions that can help supply chain practitioners to cope with tensions in more constructive ways. Third, as tensions are yet to be subject to extensive empirical explorations in the SSCM literature, we provide several promising avenues of further research into tensions.