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# LOVE ME, LOVE ME NOT: A NUANCED VIEW ON COLLABORATION IN SUSTAINABLE SUPPLY CHAINS

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## Abstract

In this paper we investigate the collaborative paradigm in Sustainable Supply Chain Management (SSCM). The depth and quality of the relationship between a firm and its suppliers is widely recognised as a critical facilitator of SSCM. Many authors in the field have argued that a collaborative approach to SC relationship management was likely to be more fruitful in achieving sustainable development goals. However, little research has offered a more nuanced perspective on collaborative SSCM and specifically assessed its feasibility outside the context of large companies collaborating on environmental activities. In this paper, we explore collaboration in SSCs through a qualitative study of a large multinational in the food sector working with small agricultural suppliers. We show that there are both supporting and hindering factors to collaborative SSCM. The study reveals the dynamic nature of SC relationships for sustainability and that collaboration can be developed through time thanks to investment in both formal relationship building mechanisms and more relational aspects. The main contributions of the paper lie in its nuanced view of collaboration for SSCM and systematic application of relational theory (Dyer & Singh, 1998) in SSCM.

**Keywords:** Sustainability, Supply Chains, Buyer-Supplier Relationships, Collaboration, Relational View

## 1. Introduction

In recent years, firms have become increasingly challenged with managing their supply chain (SC) relationships in order to address the widely unethical and unsustainable practices that emerge as part of their operational activities (Krause, Vachon, & Klassen, 2009; Pagell &

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Shevchenko, 2014). The depth and quality of the relationship between a firm and its suppliers was the most commonly cited facilitator of sustainable SC management (SSCM) (Brammer, Hojmosse, & Millington, 2011).

Previous research on SSC relationships has put a strong emphasis on collaboration between SC partners to facilitate sustainability initiatives (e.g. Gold, Seuring, & Beske, 2010; Seuring & Müller, 2008). In particular cooperation and inter-organisational learning have been shown to improve sustainable SC performance. Cooperation with suppliers has been identified as a common best practice of SCM related to better organisational outcomes and therefore, unsurprisingly, has become viewed as a critical component of creating sustainable SCs (Pagell & Wu, 2009). Many examples of collaborative green SC activities have been investigated. Some examples include: collaborative waste reduction (Simpson & Power, 2005; Theyel, 2001), environmental innovation (Lee & Kim, 2011; Verghese & Lewis, 2007), adoption of environmental technologies (Vachon & Klassen, 2007), reduction of toxic material (Pagell, Krumwiede, & Sheu, 2007a), and joint development of recyclable products (Simpson, 2010). This ‘collaborative paradigm’, which had first emerged in more traditional SCM theory (Chen & Paulraj, 2004; Vachon & Klassen, 2006a), has become a predominant view of SSC relationships.

Trust between SC partners has been identified as a critical relational mechanism for collaboration, as opposed to compliance-based relationship orientation relying on power (Simpson & Power, 2005). In much SSCM research, the development of strong forms of collaboration, such as partnerships, has been viewed as the most desirable path to follow (Vachon & Klassen, 2006b; Youn, Yang, Hong, & Park, 2011). On the other hand, compliance is often perceived negatively and associated with coercive approaches to relationship management (Boyd, Spekman, Kamauff, & Werhane, 2007).

Relational exchanges in a SSC context are complex, and it may be too idealistic to think that truly collaborative relationships can be developed easily. Managing SSC relationships raises some unique challenges such as developing stakeholder engagement and buy-in over time (Alvarez, Pilbeam, & Wilding, 2010) in order to engage in, for example, environmental product development (Pagell & Wu, 2009). Organisations are reliant on other SC organisations upon which they have differing degrees of influence. Shifting from SCM to SSCM will thus lead companies to significantly rethink their relationship-management strategies to accommodate changes in the business landscape driven by sustainability needs (Pagell, Wu, & Wasserman, 2010). Some authors have specifically identified the value of

understanding the degree of collaboration in SSC relationships (Hall, 2000; Matopoulos, Vlachopoulou, Manthou, & Manos, 2007).

There is little research however that explores in depth the collaborative paradigm, offering a more nuanced view of collaboration, for instance by including considerations about power imbalances (Hoejmose & Adrien-Kirby, 2012; Walker, Miemczyk, Johnsen, & Spencer, 2012). While true collaboration can arguably be considered the best way forward, it may remain difficult to attain in reality. This is even more relevant when considering that most research in the field has investigated the activities of large corporations often working with small and medium (SME) suppliers at home or overseas to implement sustainable practices (Amaeshi, Osuji, & Nnodim, 2008; Hall, 2001; Lee & Klassen, 2008; Walker & Preuss, 2008).

SMEs account for 99% of the economic fabric of the European Union (European Commission, 2013), and are key players in SCs. While past research has shown mixed evidence regarding the role of size in addressing sustainability in SCs, there seems to be a converging argument towards acknowledging the importance of resource availability for SSCM (Bowen, 2002; Lee, 2008; Lee & Klassen, 2008). It is therefore important to understand what constitute the conditions under which true collaboration for sustainability between large and small companies may be impaired or difficult to achieve, and what may be possible ways forward.

In this paper we propose to examine collaboration in SSCs involving a large multinational working with small suppliers. We aim to develop a better understanding of the specific problems that may arise in SC collaboration on sustainability issues. We pay particular attention to identifying both supporting and hindering factors to collaborative practices in this context. An understanding of these factors is critical to enable collaboration to be effectively developed by SC players. We draw from relational theory (Dyer & Singh, 1998) to analyse our findings.

The contribution of this study is threefold. First, we offer relevant theoretical insights on SSC collaboration by exploring the relational view in sustainable SCM, which has not been used to a great extent (Vachon & Klassen, 2006a). While much research in SSCM remains a-theoretical (Carter & Easton, 2011; Touboulic & Walker, 2015), we offer a theoretically informed discussion of collaboration, which makes for an interesting contribution. Second, we examine both the factors that support and hinder collaborative practice on sustainability and therefore provide a more nuanced view of the collaborative paradigm. Last but not least, we

contribute to developing a better understanding of how SSCM unfolds in practice, rather than of the content of SSCM practices, as called for by Pagell and Shevchenko (2014). This is helpful in viewing SSCM as a change process.

The remainder of the paper is structured as follows. First, we review the literature on collaboration and SSCs from a relational lens. We then highlight gaps in current research and articulate our research questions. The next part of the paper describes the methodology adopted in the study, providing details regarding research design, data collection and analysis. The findings of our study are presented and discussed in the subsequent part in light of the relational framework. Finally we provide answers to our research questions and reflect upon our application of relational theory and draw some conclusions that can inform managers and future research.

## **2. Theoretical background: a relational view of SSCM**

### *2.1 Some background on SC collaboration and SSCM*

There is a large amount of research that has been published on “traditional” SC collaboration that can inform our research. Some studies have focused on the factors enabling collaboration between SC actors, such as coordination mechanisms and benefits sharing (Lehoux, Damours, & Langevin, 2014), information sharing (Kache & Seuring, 2014), joint relationship efforts and dedicated investments (Nyaga, Whipple, & Lynch, 2010), such as investment in technology and measurement systems (Fawcett, Magnan, & McCarter, 2008). ‘People issues’ are fundamental to successful collaboration but are difficult to predict and manage – such as culture, trust, willingness to change, and willingness to collaborate (Fawcett, Fawcett, Watson, & Magnan, 2012; Fawcett et al., 2008). Some authors caution that collaborative relationship practices are susceptible to failure due to wider organisational and behavioural issues (Emberson & Storey, 2006). These issues form part of the process of developing and sustaining a collaborative culture (Barratt, 2004).

Collaboration in SC has been found to have an effect on SC performance (Kache & Seuring, 2014), although often an indirect or mediated one. For instance, trust and commitment developed through collaborative activities lead to improved satisfaction and performance (Nyaga et al., 2010). SC players may also value collaborative aspects differently. Buyers focus more on relationship outcomes while suppliers look to safeguard their transaction specific investments through information sharing and joint relationship effort

(Nyaga et al., 2010).

In SSCM, the notion of performance is actually extended to encompass not only economic but also environmental and social dimensions (Carter & Rogers, 2008). Arguably successful SSC relationship management leads to increased value creation at all three levels (Pagell, Krumwiede, & Sheu, 2007b). Seuring (2004: 1059) actually argues that co-operation is “the only way for companies to improve the competitiveness of the chain while reducing environmental burdens”.

## *2.2 Relational theory and its relevance to collaboration in SSCM*

When considering the link between cooperation and SSC performance, authors have essentially studied ways to create sustainable competitive advantage (Solér, Bergström, & Shanahan, 2010a). This view of SSC relationship resonates with the core tenets of relational theory (Dyer & Singh, 1998), which shows that competitive advantage does not emanate solely from within the firm’s boundaries, i.e. through the acquisition and use of unique resources (RBV Barney, 1991), but also from inter-organisational relationships. A key assumption of the relational view is that as firm are embedded in a network of relationships; collaborative efforts between organisations provide an opportunity to create value that could not otherwise be created by the organisations independently. Inter-organisational networks may be more efficient arrangements for achieving competitive advantage than single organisations (Dyer and Nobeoka 2000).

In the relational view, developing a competitive advantage is about generating relational rents, i.e. above normal economic gains emanating from the ‘joint idiosyncratic contributions of specific SC partners’ (Dyer & Singh, 1998: 662). Dyer and Singh (1998) identify four supporting mechanisms for the creation of relational rents and four potential barriers as described in Table 1.

**Table 1: Enablers and barriers to relational rents (Source: adapted from Dyer & Singh, 1998)**

<b>Enablers</b>	<ol style="list-style-type: none"> <li>1. Investing in relationship-specific assets</li> <li>2. Engaging in knowledge-sharing routines, including creating opportunities for joint learning</li> <li>3. Combining complementary resources or capabilities that will result in the joint creation of new products, services or technologies</li> <li>4. Developing effective governance mechanisms to reduce transaction costs, and in particular relying on informal rather than formal self-enforcement mechanisms</li> </ol>
<b>Barriers</b>	<ol style="list-style-type: none"> <li>1. Asset interconnectedness</li> <li>2. Partner scarcity</li> </ol>

	3. Resource indivisibility
	4. Institutional environment

The relational view has been successfully applied to study traditional buyer-supplier relationships, in particular strategic collaboration (Chen, Paulraj, & Lado, 2004; Chen & Paulraj, 2004; Fawcett et al., 2012; Paulraj, Lado, & Chen, 2008; Rosenzweig, 2009; Walker, Schotanus, Bakker, & Harland, 2013). The theory has helped defined some of the key competencies or capabilities supporting successful collaborative SC relationships. For example, communication and inter-organisational learning, in turn supported by partners' levels of absorptive capacity, have been identified as important factors enhancing both buyers' and suppliers' performance (Paulraj et al., 2008; Zacharia, Nix, & Lusch, 2011). Applying the relational view has also helped authors identify barriers to collaborative supply relationships and procurement (e.g. Walker et al., 2013). Some authors have emphasized the importance of building and managing relationships in collaborative SC (Morton, Dainty, Burns, Brookes, & Backhouse, 2006; Nyaga et al., 2010).

The relational view has been applied to a lesser extent in SSCM (Vachon & Klassen, 2006a) but several authors have integrated elements of the theory in their conceptual frameworks to explore relational aspects of SSCM or mentioned the relational view as part of their research on collaboration. For instance, Simpson and Power (2005) used relational theory to conduct some exploratory study on the development of lean and green suppliers. They show that a relational approach is more powerful than coercion when considering environmental performance. They propose that a collaborative buyer-supplier is positively related to both suppliers' lean performance and environmental practice. Vachon and Klassen (2008) drew on relational theory to study environmental collaboration and they showed that collaborative green practices with suppliers comparatively led to higher benefits. Gold et al. (2010) developed a conceptual framework of SSCM showing how strategic collaboration supports the development of inter-firm resources, which in turn ensure simultaneous economic, environmental and social performance. Relational theory has also been considered in developing capabilities for sustainable SCM in considering governance models for sustainable SCM (Vurro, Russo, & Perrini, 2009b). As a final example, Paulraj (2011b) drew on relational theory to conceptualise SSCM as a key relational capability enhancing organisational sustainability performance. None of these studies has systematically examined the congruence between SSCM and the relational framework.

While some authors have mentioned the relational view in their research on collaboration in SSCM (Cheng, Yeh, & Tu, 2008; Simpson, Power, & Samson, 2007; Simpson & Power, 2005; Theyel, 2001; Vachon & Klassen, 2008; Vachon & Klassen, 2007), it is not the underpinning theory in these studies. None of them have conducted a systematic evaluation of whether SSCM research is congruent with the relational framework. In addition, relational theory was identified in a recent literature review as a one of the less adopted theoretical lens in SSCM (Touboulic & Walker, 2015). Hence there is a strong case for adopting the relational view for exploring how collaboration unfolds in SSCM.

### *2.3 A relational view of SSC relationships*

Having made case for the adoption of the relational view, we further analyze collaborative SSCM literature to see if the studies fit with a relational theory framework. Within the relational view, there are potential enablers and barriers of relational rents (Dyer & Singh, 1998). These are summarized in Tables 2. Our analysis of studies of collaboration in SSCM revealed that collaboration could be hindered by a lack of enablers (e.g. lack of ability to share environmental information due to distance and visibility in the SC) rather than actual barriers. As a consequence we distinguish between barriers identified as part of the relational framework and lack of enablers, which correspond to the enablers from the relational framework, to classify themes. Table 2 describes enablers, lack of enablers' (Walker et al., 2013), and barriers to collaboration in SSCM.

Recent studies have investigated how sustainable SCM can be supported by collaboration, and have predominantly focused on environmental issues in manufacturing settings. Several studies have adopted a resource-based view to consider sustainable SC collaborations (Gavronski, Klassen, Vachon, & Nascimento, 2011; Gold et al., 2010).

There has been a focus on different actors in the SC, and different levels of analysis. One study investigated SMEs and found that collaboration capacity (e.g. having a common goal and structuring solutions) is essential for implementing cleaner production in SCs (Van Hoof & Thiell, 2014). Another study incorporated the perspectives of suppliers, logistics and retailers in reducing CO<sub>2</sub> emissions (Ramanathan, Bentley, & Pang, 2014). One study considered multiple actors and found that inter-organizational collaborations within (suppliers and customers) and outside the SC (government agencies and NGOs) are beneficial for a company's overall environmental performance, the management of its environmental



footprint, and a company's environmental reputation (Albino, Dangelico, & Pontrandolfo, 2012).

Collaboration presents benefits for SSCM through a number of relational mechanisms as discussed in the wider SC collaboration literature. In other words, the relationship between SC collaboration and enhanced SSC performance is mediated. A number of authors have shown that improved trust as a result of SC collaboration enhances SSC performance (Alvarez et al., 2010; Cheng et al., 2008; Simpson & Power, 2005). Other mediating relational variables include communication (Cheng et al., 2008; Verghese & Lewis, 2007), commitment (Simpson & Power, 2005), goal congruence (Pedersen & Andersen, 2006), information sharing (Solér et al., 2010a; Theyel, 2001), learning (Carter, 2005; Carter & Rogers, 2008; Theyel, 2001) and participation (Cheng et al., 2008). Some authors have also suggested that greater collaboration on SSCM improves dialogue and relationship quality and constitutes an intangible asset that contributes to superior performance (Alvarez et al., 2010). It appears that a collaborative approach to SSC relationships favours the emergence and preservation of more informal relationship safeguards.

Most recently, a number of articles have broadened the context of SSC collaboration and focused on emerging economies. A study of green SCM in India found that supplier collaboration for environmental sustainability had a positive impact on environmentally sustainable product design and logistics, which in turn was positively related to competitiveness and economic performance of the firm (Mitra & Datta, 2014). A study of green SC collaboration in China found that *guanxi* mediates the effect of asset specificity, volume uncertainty and environmental competition (Luo, Chong, Ngai, & Liu, 2014).

Some studies have focused on factors affecting the process of collaboration. One study found that supplier assessment could act as an enabler of collaboration and improve environmental performance (Gimenez & Sierra, 2013). The same authors also investigated the triple bottom line of sustainability, and found that companies need to implement collaborative practices with their SC partners, as assessment alone has been found not to have any impact on the triple bottom line (Gimenez, Sierra, & Rodon, 2012). Some researchers have compared how companies deviate from an optimal profile of sustainable SC collaboration, which is affected by internal sustainable production (Blome, Paulraj, & Schuetz, 2014).

Overall, it seems that relational theory fits with SSCM research that emphasizes enablers to collaboration. However, there are few studies addressing 'lack of enablers' and barriers to collaboration in SSCM. This may suggest a preference for positive findings in academic

journals. It may also suggest fruitful areas for future research, where we may learn more about why collaboration in SSCM may be difficult to achieve and sometimes fails.

**Table 2: Enablers, lack of enablers and barriers to SSCM collaboration, from a relational theory perspective**

Enablers in relational theory	Enablers of collaboration in SSCM literature (Authors)
Investments in relation-specific assets	<p>Environmental SCM symmetrical partnership, with long-term relationships and mutual partnership with a supplier (Klassen &amp; Vachon, 2003)</p> <p>As customer-initiated collaborative activities increases, plant-level investment in environmental management is allocated toward pollution prevention (Pagell et al., 2007b)</p> <p>Firms that are responsible for most of the value added in their SC can leverage environmental investments into improved performance (Rao, 2002)</p> <p>Large corporations have started encouraging, guiding and even funding their suppliers to be green (Simpson et al., 2007)</p> <p>Suppliers are more responsive to their customers' environmental performance requirements where increasing levels of relationship-specific investment occur (Simpson &amp; Power, 2005)</p> <p>Supplier development for environmental performance improvement requires the firms involved to commit financial, capital and personnel resources (Vachon &amp; Klassen, 2007)</p> <p>Environmental collaboration with suppliers is positively associated with greater investment in pollution prevention technologies (Vachon, 2007)</p> <p>Green process management requires the support of other resources, such as environmental investments and top management commitment (Gavronski et al., 2011)</p> <p>The positive relationship between asset specificity and GSCC implementation indicates the willingness of Chinese manufacturing companies to engage in environment-sustaining activities, especially with their investments in both human and physical assets (Luo et al., 2014)</p> <p>Firms can offer assets and benefit from other partners if they have already learned how to implement sustainability within their facilities (Blome et al., 2014)</p>
Substantial knowledge exchange, including exchange that results in joint learning	<p>Involve, inform and train all partners (Faith-Ell, 2005)</p> <p>Trust and knowledge-sharing in green SCs (Cheng et al., 2008)</p> <p>Co-operation improves the competitiveness of the chain while reducing environmental burdens (Seuring, 2004)</p> <p>Inter-firm trust, uncertainty and pro-active environmental management most directly affect the extent to which firms engage in cooperative supply-chain environmental management (Sharfman, Shaft, &amp; Anex, 2009)</p> <p>Organisations need to share timely and sensitive information for environmental performance improvement (Simpson &amp; Power, 2005)</p> <p>A reciprocal learning process between customers and suppliers occurs as firms exchange information to set and meet environmental requirements (Theyel, 2001)</p> <p>External knowledge exchange directly supports both greener process management and environmental collaboration with suppliers (Gavronski et al., 2011)</p> <p>Green SCs are supported by sharing not only technical information, but also the wider requirements of participants, green agendas, and strategies (Ramanathan et al., 2014)</p> <p>Companies seeking to improve their environmental performance should engage in the development of collaborative partnerships aimed at sharing complementary knowledge and capabilities or developing new ones (Albino et al., 2012)</p> <p>Firms can offer their own knowledge to suppliers if they have already learned how to implement sustainability within their facilities (Blome et al., 2014)</p> <p>Knowledge sharing is a dynamic capability that helps sustainable SCM (Beske, 2012; Beske, Land, &amp; Seuring, 2014)</p>
Combining complementary resources or capabilities leading to innovation	<p>Environmental purchasing activities facilitated through increased coordination with suppliers (Carter &amp; Carter, 1998)</p> <p>Strong partnerships with suppliers, supported by appropriate incentive systems, are a significant element of the successful application of innovative environmental technologies (Geffen &amp; Rothenberg, 2000)</p> <p>Buyers should work with suppliers to explore mutually beneficial results of greening purchasing processes as it can spur new ways of thinking (Handfield, Walton, Sroufe, &amp; Melnyk, 2002)</p> <p>Firms must not only develop unique internal resources / capabilities, but they must leverage them to identify strategic</p>

	<p>partners, manage them collaboratively, and further evaluate them to meet future sustainability goals (Paulraj, 2011a)</p> <p>Through a more integrated approach among SC partners the potential in using materials more efficiently and design processes can lead to enhanced productivity without compromising environmental burden (Schliephake, Stevens, &amp; Clay, 2009)</p> <p>Environmental innovation in industrial packaging systems requires a cooperative SC approach to ensure that environmental and commercial</p> <p>Costs are reduced and efficiencies optimized for the chain as a whole (Verghese &amp; Lewis, 2007)</p> <p>Organizational resources and capabilities provide a base for the cumulative capabilities necessary for green SCM (Gavronski et al., 2011)</p> <p>Collaboration capacity (e.g. having a common goal and structuring solutions) is essential for implementing cleaner production in SCs (Van Hoof &amp; Thiel, 2014)</p> <p>Green innovation and greening the supplier leads to better competitive advantage (Chiou, Chan, Lettice, &amp; Chung, 2011)</p>
Effective governance	<p>Informal and formal governance assist SSCM (Alvarez et al., 2010)</p> <p>Governance model support sustainable SCM (Vurro et al., 2009b)</p> <p>Governance mechanisms such as supplier assessment and supplier collaboration have a positive effect on environmental performance (Gimenez &amp; Sierra, 2013)</p> <p>Companies need to implement collaborative practices with their SC partners, as assessment alone has been found not to have any impact on the triple bottom line (Gimenez et al., 2012)</p>
<b>Lack of enablers from relational theory perspective</b>	<b>Lack of enablers of collaboration in SSCM literature</b>
Lack of investments in relation-specific assets	Organisations at a distance from the consumer in the SC perceive greater environmental cost (Solér, Bergström, & Shanahan, 2010b)
Lack of knowledge exchange, including exchange that results in joint learning	Organisations at a distance from the consumer in the SC share limited environmental information (Solér et al., 2010b) GSCM is hindered by the lack of necessary tools, management knowledge, and, most importantly, justification for its economic performance (Luo et al., 2014)
Lack of combining complementary resources or capabilities leading to innovation	None
Lack of effective governance	None
<b>Barriers from relational theory perspective</b>	<b>Barriers to collaboration in SSCM literature</b>
Asset inter-connectedness	A higher level of guanxi among SC members reduces the willingness to implement GSCC (Luo et al., 2014)
Partner scarcity	None
Resource indivisibility	The supplier development task is challenging. The buyer must be convinced that investing company resources in a supplier is a risk worth taking. The supplier must be convinced that their best interest lies in accepting direction and assistance from their customer (Simpson & Power, 2005)
Institutional environment	<p>The culture in South East Asia requires relationship building rather than imposing green supplier initiatives (Rao, 2002)</p> <p>Businesses have different time scales to the implementation of identified green agendas in different areas of operations - futuristic, progressive and basic collaboration (Ramanathan et al., 2014)</p> <p>Companies engaged with green SCM should be wary in undertaking and managing collaborations with universities and research institutions (Albino et al., 2012)</p>

### 3. Research questions

We have shown that relational theory enables classifying relationship factors according to whether they support or hinder the development of a collaborative approach to sustainability. So far however, a rather ideal picture of collaborative SSCM has been painted in the literature, which has been presented as the opposite of more arms' length, coercive and compliance oriented approaches to relationship management. Research in the field has emphasised enablers to collaboration in SSCs, suggesting a preference for positive findings. There are few studies that consider the barriers or lack of enablers to collaboration in SSCM, hence highlighting a gap in exiting research. Matopoulos et al. (2007) raise the interesting point that in a SC relationships multiple elements interact to determine the intensity of the collaboration, calling for a more nuanced understanding.

Furthermore, the conditions and context under which true collaboration for sustainability can be achieved are often left unquestioned. It is very likely that most SC relationships that have been researched in SSCM involve a large buyer working with SME suppliers. A number of authors have pointed to the lack of research that specifically considers the activities of small firms in sustainable SCs (Pedersen, 2009; Walker & Jones, 2012; Walker & Preuss, 2008). While some research reports on how SMEs deal with CSR activities, their willingness to engage with sustainability or how they manage sustainability in their own SCs (Cassells & Lewis, 2011; Ciliberti, Groot, Haan, & Pontrandolfo, 2009; Ciliberti, Pontrandolfo, & Scozzi, 2008), there is a clear lack of research on their explicit interaction with large buyers. This type of context is particularly interesting when attempting to understand how collaboration for sustainability plays out.

Finally, when considering the question of evolving SC relationships for sustainability, there are a number of critical issues that can be related to collaboration. As pointed out by Touboulic & Walker (2015), SSCM requires some consideration of the change aspects of sustainability. There are additional gaps related to this idea of transformation at the SC relationship level. Most research has focussed on what practices would be most effective in achieving environmental and social performance with suppliers, without comprising on profitability (Pagell & Shevchenko, 2014). Van Bommel (2011: 899) points out that "only limited frameworks in the literature analyze and describe the process of implementing sustainability in supply networks." In particular, literature has emphasised the issue of how companies should screen and select their suppliers against their social and environmental requirements. The implementation of social and environmental practices cannot be reduced to problems of screening and selection and there is a need to investigated "how buyers

are dealing with long-term legacy suppliers” (Hoejmose & Adrien-Kirby, 2012: 240). Relational theory is an appropriate lens to shed light on these issues.

Hence, taking into account the research opportunities highlighted above and the theoretical background presented in the previous section, we set out to answer the following research questions:

*RQ1. How collaborative is the relationship on sustainability between a large buyer and its small suppliers?*

*RQ2. Which factors support or hinder collaboration on sustainability between a large buyer and its small suppliers?*

#### **4. Methodology**

This paper draws on the qualitative insights gained as part of an Action Research (AR) project involving a large buyer and its small suppliers. While AR has a clear emancipation aspects and seeks to improve particular situations (Reason & Bradbury, 2008), it also enables gathering rich qualitative insights through a combination of different methods (Näslund, 2002; Näslund, Kale, & Paulraj, 2010). This section follows an adaptation of Näslund et al.’s (2010) AR framework to describe the main aspects of our research approach, namely: design, data collection and data analysis aspects.

##### *4.1 Design aspects*

###### *4.1.1 Motivation and suitability of in-depth case approach*

AR is consistent with an embedded case study design (Yin, 2003), which is appropriate to explore situational and context-specific factors related to a complex phenomenon (Voss, Tsiriktsis, & Frohlich, 2002). Our research questions emphasise the need to provide a deep understanding of how SC relationships for sustainability unfold, therefore an embedding single case is appropriate. Single cases have been used previously in previous SSCM research because they provide access to multiple context and units of analysis and are valuable for their longitudinal orientation and for theory testing (Alvarez et al., 2010; Byron, Ali, Anton, & Tim, 2008; Sigala, 2008). In this study, we use the single case to systematically explore relational theory (Dyer & Singh, 1998) in the context of SSCM, but also as a context to explore potential ways forward for the organisations involved.

#### *4.1.2 Research context*

The AR project in this paper was conducted with a multinational company (MC) in the food industry between 2010-2013. MC is a multinational food and drinks company operating worldwide while their agricultural suppliers are in majority family-owned businesses operating solely in the UK with revenues ranging from tens of thousands to a few million pounds. In recent years, MC has been quite proactive regarding sustainability initiatives and has set itself a number of ambitious targets and has been recognised for its engagement on sustainability in the public sphere, notably by its presence on the Dow Jones Sustainability Index and its commitment to the UN Global Compact.

While MC cannot be considered an agricultural business, as a food company, the vast majority of its upstream SC relations are with agricultural businesses. This view has supported the development of MC's strong stance on sustainable farming. A number of elements are presented in their 2010 Sustainable Farming Report to support the focus on agriculture. First, agricultural raw materials are a critical part of MC's UK operations with approximately 475,000 tonnes of different crops bought yearly from UK growers. Second, the farmers represent a large and diverse part of MC's UK SCs with over 350 suppliers across the UK. Last, when considering the carbon footprint of each of its products, MC realised that a large part (36% in 2010) of the emissions was down to agricultural production.

In light of these issues and strong commitment, the company initiated a number of UK-focused sustainability projects in 2010, specifically aimed at improving agricultural sustainability and hence requiring working with growers. It has worked in collaboration with consultancies and non-governmental organizations (NGOs) to develop its strategy and tools. The two main of the projects that MC initiated in 2010 are the adoption of a tool to measure carbon emissions on farms and another innovative tool to monitor soil moisture and crop water requirements. MC has been fully involved in the development of the tools but is relying on their growers to fill in questionnaires and put in place improvements. This research context is particularly rich to explore the question of collaboration. These examples already reveal the criticality of the relationship to move towards sustainable production systems.

#### *4.2 Data collection aspects*

##### *4.2.1 Methods and triangulation*

Similar to the case study method, one of the strength of AR is the ability to engage in triangulation (Patton, 2002). We focus on the relationships between MC and 11 small agricultural

suppliers in three distinct SCs (A potatoes, B oats, C apples). The aim was to be able to analyse a number of relationships that would provide enough comparative evidence for the research without compromising on the depth of the findings. Supplier participants were selected because they represented important suppliers in the different chains, not on their sustainability achievements. Importance was defined in terms of share of supply, position as head of supplier groups, and/or relational history with MC (see Table 3 below). The suppliers included as participants in the research offer a representation of 100% of supplier groups in both A and B, and there is only one supplier missing in C.

**Table 3. Description of participating companies and number of interviews**

	Ownership	% turnover Attributed to MC	Annual Turnover 2010	Number of Employees	Length of Relation with MC	Size (European Commission, 2003)	N Interviews
MC	Public	N/A	\$58bn	> 5,000 UK	-	Large	15
Supplier A1	Private (family)	35%	< £35m	< 250	> 40 years	Medium	2
A1.1	Private (family)	35%	< £500k	< 10	> 10 years	Micro	1
A2	Private	6%	< £30m	< 250	> 40 years	Medium	1
A3	Private (family)	90%	< £3m	< 50	> 30 years	Small	1
A4	Private (family)	20%	< £5m	< 50	> 30 years	Small	2
A5	Private	40%	< £8m	< 50	> 40 years	Small	2
A6	Private (family)	40%	< £40m	< 250	> 30 years	Medium	1
B1	Private (family)	3%	< £40m	< 250	> 20 years	Medium	2
B2	Private (family)	10%	< £8m	< 10	> 10 years	Small	1
C1	Private	3%	< £8m	< 50	> 10 years	Small	1
C2	Private (family)	40%	< £8m	< 50	> 30 years	Small	1
External stakeholders							7



The primary methods in the research were semi-structured interviews and participatory workshops. Interviews lasted between 30 minutes and more than 2 hours and were all digitally recorded. In total, 37 semi-structured interviews were conducted during this cycle that led to analysing the current state of the relationships. Interview participants were selected because of their level of engagement or expertise in relation to the relationship with MC and because they had been involved in the sustainability projects described earlier.

A semi-structured interview protocol was developed around both collaborative and power dimensions, with themes previously identified in the literature. A final group of questions on relationship management for SSCM allowed exploring instances of collaboration and compliance in the structure and transaction processes of the relationship on sustainability (Premkumar & Ramamurthy, 1995: 307). In this paper we report on the findings related to collaborative aspects. The interview themes related to collaboration and relationship management are presented in Table 4.

**Table 4. Interview themes**

<b>Collaborative aspects</b>		
<i>Theme</i>	<i>Description</i>	<i>Literature</i>
Relationship history	The history of interaction between partners is likely to influence present conditions and future exchange.	(Benton & Maloni, 2005; Heide & John, 1990; Wu & Choi, 2005)
Trust	The level of confidence that the parties have in each other. Perceptions of the other's reliability and integrity are indications of the level of trust in the relationship. Trust acts as an informal mechanism that contributes to higher relationship quality and facilitates knowledge sharing.	(Alvarez et al., 2010; Benton & Maloni, 2005; Cheng et al., 2008; Dyer & Singh, 1998; Fynes, De Búrca, & Marshall, 2004; Kottila & Rönni, 2008; Simpson & Power, 2005; Spence & Bourlakis, 2009)
Shared values and goals	The extent to which the SC partners have common views and beliefs about what goals, behaviours and policies are important and appropriate. When perceptions are shared and compatible, the willingness to work together is higher. On the other hand a lack of shared values and goals can lead to misunderstandings.	(Cao & Zhang, 2011; Cheng et al., 2008; Lindgreen, 2001; Premkumar & Ramamurthy, 1995)
Communication	Evaluate the communication and information-sharing processes in place in a given relationship. The quantity and quality of communication impacts the quality of the relationship. Also serves to understand the level of interaction (one-way, two-way communication, type of information exchanged).	(Benton & Maloni, 2005; Cao & Zhang, 2011; Cheng et al., 2008; Dyer & Singh, 1998; Frazier, 1999; Fynes et al., 2004; Lindgreen, 2001; Monczka, Petersen, Handfield, & Ragatz, 1998)
Commitment	Dimension that shows the willingness of both buyers and suppliers to cooperate and exert efforts for the relationship. Relationship-specific investments and adaptation are reflections of commitment. Power use influences the level of commitment of partners.	(Benton & Maloni, 2005; Chicksand, 2009; Dyer & Singh, 1998; Frazier, 1999; Fynes et al., 2004; Lindgreen, 2001; Monczka et al., 1998; Simpson et al., 2007)
Participation	This shows the extent to which partners cooperate in activities (level of joint and individual activities) such as development and design of	(Benton & Maloni, 2005; El-Ansary & Stern, 1972; Frazier, 1999; Fynes et al.,

sustainability programs. It also reveals the time orientation of the relation (short or long term). 2004; Heide & John, 1990; Lindgreen, 2001)

Continuity/mutual expectations This measures both parties' expectations of future interactions and the perceptions of the durability of the relationship. This is a future-oriented dimension, complementing the historical duration dimension. (Forman & Jørgensen, 2004; Heide & John, 1990)

**Relationship Management for SSCM**

<i>Construct</i>	<i>Description</i>	<i>Literature</i>
Contractual arrangements	Understanding the contractual arrangements as formal inter-firm governance mechanisms revealing the relationship orientation (adversarial, collaborative, etc.). Terms and enforcement of contracts can be influenced by the power structure of the relationship and reveal the equal or unequal sharing of costs and benefits. They also reveal the time orientation of the relationship (short or long-term).	(Benton & Maloni, 2005; Chicksand, 2009; Frazier, 1999; Monczka et al., 1998; Simpson et al., 2007)
Implementation process & monitoring	Understanding governance mechanisms in place to reduce opportunistic behaviours and information asymmetry. Evaluation is viewed as an important mechanism in SSCM and, in particular, supplier assessments are often conducted to increase performance. Also indicates use of compliance and engagement mechanisms.	(Chicksand, 2009; Frazier, 1999; Heide & John, 1990; Simpson et al., 2007)
Problem resolution	The problem- and conflict-resolution techniques will influence the quality of the relationship and performance. The way problems are addressed reveals if there are coercive influences or more constructive joint approaches.	(Benton & Maloni, 2005; Chicksand, 2009; Lindgreen, 2001; Monczka et al., 1998)
Sharing of benefits & risks	Level to which costs and performance gains of the relationship are shared between partners. Understanding if relationship-specific investments and adaptation are equally or unequally shared.	(Benton & Maloni, 2005; Chicksand, 2009; Pullman, Maloni, & Carter, 2009)
Continuity/Future expectations	This measures both parties expectations of future interactions. It shows the perceptions of the durability of the relationship. This is a future oriented dimension, which complements the historical duration dimension that looks at past association.	(Heide & John, 1990)

Participatory workshops with the primary stakeholders of MC and crop A, representing suppliers for the most critical UK brand for MC, were held after the interview cycles in order to collectively reflect on the themes that had emerged from the interviews. Group methods facilitated by the researcher are a key component of participative methods such as AR (Heron, 2004).

*4.2.2 Researchers' role, access and trust*

In AR the role of the researcher is not merely being an observer but also being a facilitator of change (Näslund et al., 2010). There is most definitely an interplay between longitudinal access and trust, as working alongside organisations make it more likely for researchers to capture the “inaccessible ” information that the participants are willing to share (Van de Ven & Johnson, 2006). In this research, it was particularly critical to gain the trust of the suppliers, who at first found it difficult to accept that the researchers were not acting on behalf of MC.

*4.3 Data analysis aspects*

### *4.3.1 Level of analysis*

In SSCM research, there has been a predominant focus on the dyadic level (Carter & Easton, 2011; Miemczyk, Johnsen, & Macquet, 2012). There is actually a dearth of studies that captures both sides of the collaboration story in SSCM, i.e. offering true dyadic insights (Carter & Easton, 2011; Miemczyk et al., 2012). However the value of capturing both the supplier's and buyer's perspectives has been demonstrated previously (Nyaga et al., 2010). In this research we have not only been able to capture a vertical dyadic view of collaboration for sustainability, but we have also been able to observe the horizontal relationships between the suppliers, as well as gather the views of external stakeholders. This is in line with Miemczyk et al. (2012) who call for an understanding beyond the dyad and the inclusion of not only SC actors such as buyers and suppliers but also external stakeholders in SSCM research.

### *4.3.2 Categorisation, themes and patterns*

All the recorded interviews were then transcribed to facilitate analysis. A grid of analysis using the constructs from the interview protocol was used to facilitate the analysis of transcripts. Additional themes were added as they emerged from the data. Particular attention was paid to identifying the factors that were either supporting or hindering collaboration. It was therefore necessary to examine within each construct what aspects were positive and could be built upon and which aspects were on the contrary barriers to developing a collaborative approach to SSCM. Finally considering the lack of systematic application of the relational view to SSCM, it we reflected back on the enablers, lack of enablers and barriers to relational rents presented in Tables 2. We grouped the themes according to these higher-level constructs

### *4.3.3 Quality: cycles, reflections and feedback*

The overall quality has been ensured in several ways. First, we have identified and addressed a problem that is relevant to both theory and practice, which is the main concern in AR (Koplin, 2005). By feeding back insights from the research to participants and including them in the workshops, we guaranteed that the issues discussed were relevant to them. Second, we have made sure to build on existing literature and knowledge to build our research protocol. Third, we have used different triangulation approaches as a way to ensure the credibility of the evidence collected (Shah & Corley, 2006). Finally, we analysed the data and theory in an iterative comparative process (Kaufmann & Denk, 2011). The authors agreed on the coding grid for analysis and compared their respective analyses and additional themes in order to reach agreement.

## 5. Findings

The findings from the interviews relating to enablers, lack of enablers and barriers to SSCM collaboration are presented in Table 5 below. Our findings have uncovered themes that have not been identified previously in the SSCM literature in particular related to lack of enablers and barriers to collaboration. These are highlighted bold italic in the tables. It is possible to note that the lack of enablers plays a more critical role in preventing further collaboration on sustainability than actual barriers.

**Table 5: Enablers, lack of enablers and barriers to SSCM collaboration in present study**

<b>Enablers from relational theory perspective</b>	<b>Enablers of collaborative SSCM with illustrative quotes</b>
Investments in relation-specific assets	Relationship history* Commitment of members* Trust between members Proactive behaviour from buyer to engage in green and social initiatives* <b><i>Desire from suppliers to develop new knowledge</i></b>  <i>A.5 “Our motivation to continue supplying is loyalty to our business relationship”</i> <i>B2 “I fully expect in the longer term sustainability will become perhaps even a contract requirement to some extent. (...) And it’s probably the best way, as it’s simply just building into the whole production system for their customers to do this.”</i> <i>B1 “Discussing sustainability with MC had an impact on us in terms of making us think differently about where our industry is headed (...) I think that MC are several steps ahead of everyone else. And we’re very much looking at the relationship that we have with MC now as being probably quite a good insight into the way we will trade with a lot more people in the future.”</i>
Knowledge exchange, including exchange that results in joint learning	Supplier development activities on sustainability (training, assessment...)* Existence of forums and meetings to support sustainability communication  <i>MC “We work in partnership with an agricultural consultancy to run training sessions on the carbon measurement tool”</i>
Combining complementary resources or capabilities leading to innovation	Adoption and diffusion of IT based tool to measure carbon emissions Suppliers expertise and environmental accreditations  <i>MC “These are some of the best growers in the country and they have the expertise. They have been farming for generations”</i> <i>“The adoption carbon measurement tool has enabled building a baseline for the entire SC</i>
Effective governance	Top management support at the buying firm <b><i>Supplier groups structure of the SCs as a platform for horizontal collaboration and communication</i></b>  <i>MC “You know the whole sustainability thing, it comes directly from the top, the CEO.”</i>
<b>Lack of enablers from relational theory</b>	<b>Lack of enablers of collaborative SSCM with illustrative quotes</b>

<b>perspective</b>	
Lack of investments in relation-specific assets	<p><b>Lack of visibility beyond 1<sup>st</sup> tier suppliers</b>  <b>Lack of trust in authenticity of buyer's sustainability agenda</b></p> <p>MC " We have got this structure of the grower group and you trust that when you convey something to the grower group that it filters down to the growers below it. It doesn't."  A5 "If we thought that they were being genuine about things...You always think there's a secondary motive, there's an ulterior motive somewhere behind what they're actually saying."</p>
Lack of knowledge exchange, including exchange that results in joint learning	<p>Limited growers' absorptive capacity related to environmental and social management*  Lack of two-way cooperation on sustainability issues*  Lack of informal communication  Lack of environmental information sharing between competing suppliers</p> <p>A1 "We tend to be more the recipients of their expectations."  A.5 "Farmers haven't got a clue what to do. So our new employee is now actually doing the carbon measurement for the farm 'cause the farmers don't have the time, don't have the resources or the knowledge to actually complete what's being done."</p>
Lack of combining complementary resources or capabilities leading to innovation	<p><b>Lack of financial resources to invest in sustainable technologies*</b>  <b>Lack of standardised mechanisms to capture suppliers' expertise on the natural environment</b>  <b>Lack of procurement skills to deal with sustainability questions*</b></p> <p>A.5 "We get the sustainability bit, really we do, genuinely we do, we want to make a difference but you'll bankrupt yourself doing it, you know they'll just move on and take someone else on."</p>
Lack of effective governance	<p><b>Lack of informal governance mechanisms to manage sustainability</b>  <b>Lack of attention to suppliers resistance</b>  <b>Misalignment of time frames for achieving sustainable goals*</b></p> <p>MC "if you go back, the tradition is a one-year contract and there were never any thoughts for anything else."  A5 "And don't get me wrong I'm not living in the dark ages, but we used to do contracts around a bottle of wine, sitting down somewhere and we would chat about... Your word was your word."  A4 "This is not the sort of negotiations need to be doing. This is hugely short termist. They are very short-termist considering what they are trying to achieve the other side on the carbon reduction and sustainability."</p>
<b>Barriers from relational theory perspective</b>	<b>Barriers to Collaborative SSCM with illustrative quotes</b>
Asset inter-connectedness	<p>Increasing dependence over suppliers to access environmental and social data results in loss of control by buying firm*</p> <p>MC "It is not us delivering because we are not farming anything, we don't farm things."</p>
Partner scarcity	<p><b>Limited number of "good" suppliers who are able to comply with the requirements</b></p> <p>MC "We are committed to sourcing A from the UK and there is only a limited number of growers of A. So if we loose one of our growers and we have to get another one on board, it will be difficult for them to catch up with all the work that has been done on sustainability."</p>
Resource indivisibility	<p><b>Perceived inequity of pain and gain sharing regarding sustainability</b></p>

	<p><b><i>Suppliers resistance to change*</i></b></p> <p><i>A6 “And we’re we are all aware that we need to invest in technology to improve but we need the commercial angle to cover that. We will we all struggle to resource massive investments without some sort of payback.”</i></p>
Institutional environment	<p>Geographic dispersion and isolation of suppliers UK legislation on renewable energy as a disincentive to investment in agriculture</p> <p><i>MC “The big concern from me is how you get out to all the growers because this is the agriculture team [pointing at 3 members] so physically we cannot do it ourselves.”</i></p>

Note: \* denotes particularly critical themes in the study

Going back to the progress of the projects implemented by MC, there have been some substantial publicised achievements regarding reduction of carbon (38%) and water consumption (31%) by the end of 2013. While this is undeniably positive and therefore may lead to question whether full collaboration is actually needed for SSCM, there are internal concerns at MC regarding the process of data collection and how to create more proactive engagement from the suppliers. While there has been progress regarding environmental measurement, more radical changes such as new more environmentally friendly crops, are still at early stages and face strong resistance from the suppliers. In light of the lack of enablers and barriers identified, MC does not control and is not fully involved in supporting the change of infrastructure that the suppliers need to make to achieve more energy and water efficient. This creates a limit to how much radical change can actually be achieved.

## **6. Discussion**

Linking our findings to the literature discussed previously enables answering our initial research questions.

*6.1 Which factors support or hinder collaboration on sustainability between a large buyer and its small suppliers?*

### *6.1.1 Enablers*

The relationship history between MC and the suppliers is an intangible asset but there is a feeling of nostalgia from the growers’ perspective about “the way things used to be” and impression that relationship has weakened. There is a strong feeling of trust between the multinational and the growers, which is mainly related to the history of the relationship and linked to some key people or personalities who have worked in these relationships for a long time.

Commitment is another prominent theme in the conversations with the research participants. In particular, many examples were given where growers have shown their commitment to supplying MC – e.g. harsh weather conditions, etc. Growers also talked about how they viewed MC as a reliable buyer, paying on time and respecting contract terms. In addition, as the relationships have been ongoing for several decades, both parties have invested substantially in the relationship. In particular, crops like potatoes and apples are capital-intensive and therefore imply long-term commitment for payback. This constitutes a fertile ground to build long-term collaborative relationship on sustainability, as also identified by previous research (Simpson & Power, 2005).

There is also strong connection that is emerging through the various projects led by MC such as their new crop management system to help farmers have more water efficient production, and there are relationship-specific investments, in time and money, made in this direction. MC has specifically invested in supplier development activities such as training on how to use the new tools, which they coordinate in partnership with a third party (agricultural consultancy). This supports findings from previous research that shows the importance of having and developing relationship specific assets for sustainability (Vachon & Klassen, 2008)

MC and the growers benefit from complementary resources and capabilities, which is a strong foundation for a collaborative approach to sustainability. The growers have the expertise and connection with the land that complement the technological and innovative knowledge brought by MC. Several growers are also quite proactive regarding environmental protection with for instance a grower running a separate 100% fossil-fuel free business and many growers having received LEAF (Linking Environment and Farming) accreditation. This shows the importance of each party bringing its knowledge and assets to the table in order to build more successful collaboration on sustainability (Blome et al., 2014).

#### *6.1.2 Barriers and lack of enablers*

The main challenge to further collaboration is the lack of alignment of systems and technologies between MC and the growers and even between the growers themselves, which makes it difficult to work in a unified manner towards the same goals.

In terms of knowledge sharing mechanisms, there are still barriers to transparency mainly arising from the tension around commercial negotiations. Much information has been collected from the growers regarding carbon and water, but there seems to lack a feedback loop or regular points of contact and updates about progress and how the data is used. The growers therefore feel that much of their efforts are pointless and they are disincentivised to provide further data. It is also

possible to notice that the focus has primarily been put on gathering hard facts and data and little on capturing the tacit know-how that has emerged from the long-standing relationships. This confirms the difficulty to transition to sustainability in situations of buyers working with legacy suppliers (Hoejmose & Adrien-Kirby, 2012).

Growers seem to lack the resources to appropriately develop an absorptive capacity that would allow them to get the new information and apply it successfully. They particularly struggle when it comes to finding the financial resources to invest in new infrastructure that would help them achieve the sustainability goals, for example more energy efficient storage. Furthermore, as many of the growers are small businesses, addressing MC's sustainability requirements represents more work for them and they often do not have the expertise to deal with it and/or lack the resources to hire additional personnel who would be dedicated to it. One of the main factors that also prevents the development of the growers' absorptive capacity is that they tend to consider additional relationship-specific investments as highly risky as they do not benefit from the formal assurance of a long-term commitment from MC. While absorptive capacity has previously been identified as a facilitator of collaboration for sustainability (Paulraj et al., 2008; Zacharia et al., 2011), our findings show that it may not be obvious to develop, especially in the context of large buyers working with small suppliers.

Despite obvious complementarities, there is a lack of channels and mechanisms to actually capture the growers' expertise. This is related to the way that communication and participation on sustainability are orchestrated in the relationships. A clear distinction can be made between existing formal means of communication (general meetings) and informal ways of communicating (conversations between individuals). In the context of the relationships between MC and the growers, sustainability tends to be discussed in formal meetings organised by MC while informal communication remains centred around commercial aspects of the relationship. The growers are not consulted or involved to a great extent in the development of sustainability strategies, which results in many of them not understanding fully what is expected of them and/or actually resisting the change that they perceive as dictatorial. Communication and participation around sustainability is unilateral and it remains general rather than focussed individualised exchanges. This is a particularly challenging aspect, as it appears that no common frame of understanding about sustainability exists between MC and the growers.

### *6.1.3 Newly identified factors*



Overall, findings from the interviews have shown that although there exist supporting conditions for successful collaboration on sustainability, a number of factors are impeding a truly collaborative approach to SSCM between the large company and its small suppliers. In particular, we have been able to identify barriers and lack of enablers not previously identified in the literature, as shown by the gaps in table 2 that can now be filled in with our data.

In terms of newly identified barriers, participants in this study expressed their concerns about partner scarcity and asset inter-connectedness when considering the achievement of long-term sustainable goals. On the one hand, managing the growing interdependence between MC and the suppliers regarding the management of environmental and social issues is proving difficult, and it results in tensions. On the other hand, it appears difficult for the buying company to find agricultural suppliers with an appropriate level of awareness regarding the management of environmental and social issues, which are also able to match the standards of crop quality.

Regarding the lack of enablers, we found several factors translating into a lack of ability to combine complementary resources or capabilities leading to innovation. The first is the inability to access the financial resources to invest in sustainable technologies and infrastructures, confirming previous research (Bowen, 2002; Lee & Klassen, 2008) This theme can be linked with the “perceived inequity of pain and gain sharing regarding sustainability” identified in the barriers. The other factors are the “lack of standardised mechanisms to capture growers’ expertise on the natural environment” and also the “lack of procurement skills to deal with sustainability questions”. Both these aspects mean that the approach to sustainability in the SCs tends to remain unilateral and not fully integrated with the commercial aspects of the relationships. In terms of lack of effective governance, the “misalignment of time frames for achieving sustainable goals” is closely related to this divide between commercial and sustainability aspects. The “lack of informal governance mechanisms to manage sustainability” and the “lack of attention to growers resistance” support the finding about the unilateral approach to sustainability and reveal the difficulty to achieve collaboration in asymmetric SC relationships. These findings are particularly valuable in response to calls for further investigation of the relational dynamics at play in this type of relationships (Pullman et al., 2009).

## *6.2 How collaborative is the relationship on sustainability between a large buyer and its small suppliers?*

Overall, findings from the interviews with research participants revealed the multifaceted nature of the relationships between MC and the suppliers. The findings showed that within each theme

there exist subtle dimensions (or factors) that support or hinder a collaborative approach to SSCM. In addition to the themes from the interview protocol, resources and capabilities were identified as a critical element influencing the collaboration between MC and the suppliers. This supports previous research on small suppliers (Lee & Klassen, 2008) The differential in available resources and capabilities between the large buyer and small suppliers was found to hinder collaboration rather than their actual size, confirming previous research (Bowen, 2002; Bowen, 2001). The large buyer and small suppliers have complementary resources, for instance regarding access to innovative knowledge technologies (large buyer) and expertise of working with the natural environment (small suppliers), which can support collaboration.

There is also a striking interconnection between the different aspects of collaboration explored. For example, on the positive side, the length of the relationship over generations has favoured mutual trust and the development of relation-specific assets. On the other hand, there is a clear link between the fact that communication on sustainability tends to be top-down and one way, and the lack of involvement of the suppliers in the design and development of the sustainability strategy. These findings very much complement research that has identified the interplay between both hard and soft aspects of SC collaboration (Barratt, 2004).

More specifically they reveal that the transition to sustainability is not straightforward with legacy suppliers (Hoejmose & Adrien-Kirby, 2012). Leading buyers, attempting to drive sustainability through their existing relationships should not take those for granted. While there may exist strong relational capital from previous interactions, the sustainability agenda does increase the resource requirements, at least for changing practices in the first instance, of SC relationships and therefore it needs to be accompanied by the appropriate formal relational mechanisms. The paradox of trust (Dyer & Singh, 1998) is strongly evidenced here as the existing collaborations between MC and the growers may have led to a perception by the growers of a relatively comfortable and risk limited situation. This has enabled MC to push their sustainability agenda without necessarily putting in place the appropriate relational mechanisms, for instance through an adaptation of contracts.

At the horizontal level, i.e. supplier-supplier relationships, supplier groups coordinated by MC represent an effective platform for horizontal collaboration and communication on sustainability, but also to compare between different suppliers' level of performance. The suppliers are gathered during forums and meetings a few times a year and they appear to be willingly sharing their frustrations, achievements or simply their comments regarding MC's initiatives. There is a certain level of openness between the suppliers when it comes to sustainability but mostly related to the

impact of the new initiatives on their operations and the difficulties they face rather than actual performance achievements. While the existing relationships between the suppliers can help MC diffuse their sustainability strategy and can also facilitate the gathering of feedback as suppliers may feel less comfortable to share their problems individually. However there is also a sense that there are limits to building strong collaboration with suppliers when these suppliers are connected to one another. While information sharing between them is desirable, it is likely that suppliers become reluctant to share environmental information as a way to maintain their competitive edge over the others. On the other hand, increased communication between the suppliers leads to a shared feeling of frustration regarding the way in which the sustainability agenda is driven, hence creating resistance. These findings regarding the influence of supplier-supplier relationships on collaboration for sustainability are valuable in offering more detailed insights into the enablers and barriers to relational rents (Dyer & Singh, 1998). These initial findings can also help towards a better definition of the boundaries of a buyer's responsibility in a supply network (Amaeshi et al., 2008) and serve to show that it is important to move beyond a dyadic view of SSCM (Miemczyk et al., 2012).

Overall, the existence of lack of enablers and barriers to full collaboration on sustainability between MC and suppliers also affects the type of sustainability engagement in the context of these relationships. The projects implemented seem currently limited to measuring a reduction of environmental impacts, while there would be room to explore more innovative approaches based on capturing both parties' expertise. Hence the relationship situations described in this research do limit the creation of sustainable value, and radical change for sustainability (Pagell & Shevchenko, 2014).

## **7. Conclusion**

### *7.1 Theoretical Implications*

This research contributes to exploring the process of implementing sustainability in SCs (van Bommel, 2011). Our findings showed that there are various factors that support or hinder a collaborative approach to SSCM. In line with previous research, the findings highlight the importance of relational capital (i.e. trust, relationship history) and commitment in supporting collaborative efforts for sustainability (Sharfman et al., 2009; Simpson & Power, 2005). The most critical factors hindering collaboration on sustainability from the suppliers' perspective are the perceived unilateral approach (one-way communication and lack of involvement) and the inability

to invest in new resources or adapt to new requirements. From the multinational's perspective, the most critical hindering factors were the perceived suppliers' resistance to change and the limited growers' absorptive capacity in the context of their increased reliance on the growers to achieve sustainability goals. These findings confirm the importance of putting in place the right incentives and facilitate joint and knowledge sharing activities in order to overcome barriers (or lack of enablers) to collaboration (Cheng et al., 2008; Simpson & Power, 2005).

We hence offer a more nuanced view of collaboration for SSCM, which is one of the main contributions of this research. By considering both supporting and hindering factors, we have been able to understand the degree of collaboration between the organisations in the SC (Hall, 2000; Matopoulos et al., 2007). This shows that it is important to understand contextual dynamics in order to evaluate the feasibility of a governance model, in this case a collaborative approach to SSCM (Vurro, Russo, & Perrini, 2009a).

The relational framework (Dyer & Singh, 1998) has been applied in the context of SC relationships for sustainability and we have been able to extend existing knowledge of the factors that may impede the full realisation of a collaborative advantage in this context. In addition, applying the relational view in the context of our this research has increased knowledge around the boundary conditions of the theory, which appears more suited to the context of large firms working together in more balanced relationships. Furthermore, we have shown that in such limited types of collaboration, engagement on sustainability may remain limited to measurement and prevent more radical change for sustainability. Finally, the influence of horizontal relationships on aspects of the relational framework has been discussed, showing the importance of developing a network perspective of SSCM (Carter & Easton, 2011; Miemczyk et al., 2012). This may constitute a fruitful avenue to explore in developing theory regarding SSCM as a relational capability (Paulraj, 2011b).

The findings from this study suggest that although the relational view is an interesting framework to understand how SSC relationships are managed, it may not be sufficient to understand all the factors at play in this context. It is important to note that in practice it is often difficult to find cases that clearly fall within full collaboration, and SC relationships for sustainability tend to exhibit a mix of both collaborative and compliance mechanisms (Alvarez et al., 2010; Sharfman et al., 2009). A good example of this would be supplier development practices for sustainability, which usually include some form of assessment of suppliers' social and environmental performance (compliance) and providing training and technical assistance with regards to new sustainability requirements (collaboration) (Simpson & Power, 2005). It would therefore be interesting to extend the relational framework by including considerations about the

varying degrees of collaboration, for instance by taking into account factors such as power and business environment, and how these may impact on the achievement of relational advantage. A further step would be to try and examine how one might conceptualise relational rents, as the extra value emanating from collaboration, in the context of sustainability where environmental and social aspects need to be taken into account. This may in turn help shed light on the cases where companies may want to manage a portfolio of relationships depending on their different sustainability goals.

## *7.2 Managerial Implications*

This research offers some valuable insights for policy and practice. The findings discussed previously reveal the dynamic nature of SC relationships for sustainability and the necessity for governance mechanisms to evolve (Alvarez et al., 2010). A successful approach to SSCM very much depends on the ability of the SC parties to understand the relational specificities of their relationships and capitalise on complementary abilities. Collaboration can be developed through time thanks to investment in both formal relationship building mechanisms (e.g. right contracts, financial incentives, etc.) and more relational aspects such as trust (Alvarez et al., 2010; Geffen & Rothenberg, 2000).

The study certainly serves to show that there are different shades of collaboration (Hall, 2000; Matopoulos et al., 2007) and it is important for managers to understand which is appropriate to which relationships. While a stronger collaborative approach, which would resemble a partnership, may be more feasible with organisations in the same level of the SC and having to equal levels of resources, a mixed approach, combining both collaborative and coercive mechanisms, may suit those relationships that are characterised by resource imbalance.

It may be the case that a company perceives a collaborative approach as the best way forward to develop more sustainable SCs. Nonetheless, companies often deal with legacy suppliers when implementing sustainable SC practices (Hoejmose & Adrien-Kirby, 2012) and understanding the way in which these relationships evolve is crucial to ensure long-term sustainability. In many cases, despite collaborative mechanisms already in place and strong relational capital, developing a collaborative approach to sustainability may not be evident. Buyers and procurement managers may face resistance from long-term suppliers on the basis of evolving requirements to encompass sustainability.

Finally, lessons can be learned from this study regarding the interplay between the organisational and individual levels related to the implementation of sustainability initiatives in a

SC context. While formal relationship mechanisms for sustainability are at the inter-organisational level (e.g. contracts), practitioners must remain aware of the criticality of interpersonal relationships in developing more informal safeguards to ensure the successful achievement of sustainability goals. In particular, in the context of SME suppliers dealing with buyers from large multinationals, the quality of interpersonal relationships can make or break the transformation to a sustainable SC.

### *7.3 Limitations and future research*

There exist multiple promising avenues for further research. One of the clear limitations of this study is its scope as it reports solely on the case of one leading company and its suppliers. In particular, the research has been conducted in the context of the food industry, which presents relatively specific features with regard to sustainability and power/trust relationships between buyers and suppliers (Lindgreen, 2003; Pullman et al., 2009). It would be beneficial to extend the research to include collaborations between companies in different industries, and even draw comparisons between the public and private sectors, or between overseas buyer–supplier. This may lead to different and complementary insights.

Certainly AR presents limitations compared to other methodologies such as traditional case studies and surveys regarding replication but also generalisability, as the findings are contextual and embedded. Hence we call for more efforts to systematically apply and test the relational framework using other methods to offer complementary evidence.

While the study reports on engagement with several organisations in a SC, there are limited insights into the actual impact of the research on the relationships for sustainability. It would therefore be interesting to return in a few years to see how things may have evolved.

Our study differs from much research on collaboration in SSCM, which has so far lacked theoretical underpinnings and has primarily depicted an overly positive image of collaboration. Efforts should be made to continue theory testing and development, for example by developing a more thorough understanding of the conditions and antecedents that are conducive or on the contrary that are less favourable to collaboration on sustainability between organisations. There are also many cases where an alternative paradigm to collaboration would be more appropriate, such as for instance viewing SSCM from a power/dependence perspective (Cox, 2004; Cox & Chicksand, 2007).

A more systematic recording of the specific relational mechanisms that support SSCM could be gained through survey research. Finally, more participatory approaches could assist in helping

organisations identify relational antecedents they can build upon to develop suitable relationship-management strategies for sustainability.

While this study advances our understanding of the implementation of sustainability in SCs, further efforts are needed to explore how change unfolds between SC actors. Additional theoretical perspectives may be useful in this respect. Social exchange theory (Emerson, 1976) or social network theory (SNT) (Granovetter, 1973) could be used to investigate how organisations adapt and respond to the sustainability challenge through their social relationships and the development of social capital.

Finally, this research remains focused at the inter-organisational level. Transforming SC relationships for sustainability requires understanding the underlying behavioural and human issues that are part and parcel of such change (Touboulic & Walker, 2015). There would be value in exploring the role of individuals in preventing and/or supporting collaboration on sustainability in supply networks. As pointed out by Vlaar et al. (2006) problems of understanding are likely to emerge in inter-organisational settings and therefore create the need for formal mechanisms to be put in place as ways to make sense. It would be interesting to explore how such dynamics play out in SSCM.

## 8. References

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