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Sustainable Supply Chain Management in Food Retailing

Insights into corporate practice of managing supplier relationships

OLGA CHKANIKOVA | IIIIEE | LUND UNIVERSITY



Sustainable Supply Chain Management in Food Retailing

Insights into corporate practice
of managing supplier relationships

Olga Chkanikova



LUND
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DOCTORAL DISSERTATION

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<p>Abstract</p> <p>Addressing sustainability concerns in supply chain operations can be a matter of long-term business survival for food retailers. However, regardless of whether it is perceived as a risk or market opportunity, acting across the value chain to address unsustainable production and consumption practices has been a constant challenge.</p> <p>This thesis investigated the sustainable supply chain management (SSCM) practices in food retailing as a strategy to create environmentally and socially responsible food supply chains. These practices include ways of managing supplier relationships and associated institutions (third-party sustainability certification and mechanism of private eco-branding) to promote a sustainably produced product supply.</p> <p>SSCM practices have been investigated among Swedish and West European food retailers known for their active engagement with sustainability initiatives in their supply chains. The overarching research design can be best described as a multiple embedded case study design, with 28 semi-structured interviews serving as a primary source of empirical evidence.</p> <p>The study develops a dynamic and contextual perspective on the SSCM phenomenon, building on insights offered by the New Institutional Economics theory and a broader field of institutional analysis, as well as perspectives offered by a Dynamic Capabilities theory. This moves research in the field of SSCM away from simple inventories of SSCM practices towards more theory-building. More specifically, this study demonstrates that corporate choice of relationship management practices with suppliers and associated institutions, with the aim of influencing and controlling product compliance with environmental and social criteria, depends on: 1) the contextual realities of the broader institutional field, 2) the specificity of the supply chain/transactional context, 3) the interplay between these two contexts, and 4) the design of the existing sustainability certification schemes.</p> <p>This study confirms the role of third-party sustainability certification as a vital market institution for facilitating retailer engagement with SSCM practices. However, it also provides evidence that existing sustainability certifications do not always enable retailers to develop sustainability-based supply chains in a competitive and low-risk manner. Consequently, retailers work to develop novel institutions, such as private eco-branding and retail-driven certification schemes. These schemes have greater impact on the availability of a green product supply than when only existing third-party certification institutions are used. Both private eco-brands and novel certifications provide opportunities for developing dynamic capabilities and thereby a sustained competitive advantage.</p> <p>However, in developing novel institutions, retailers still rely heavily on existing third-party sustainability certifications, utilising auditing procedures and tacit knowledge associated with certification development. Based on these findings it is suggested that multiple certification schemes are not necessarily problematic. They may even be advantageous from a SSCM perspective, in that retailers may be encouraged to engage with greening their product supply.</p>		
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Insights into corporate practice
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Olga Chkanikova



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To Yuriy, Elena, Natalia, Wayne and Alexander

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A big thank you to all IIIIEE staff, who contributed to making my workplace such a truly vibrant and inspiring interdisciplinary research environment, furthering my ambitions and interest in advancing knowledge in sustainability issues.

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Popular Science Summary

Food sustainability is on the new Sustainable Development Agenda, ratified by 193 United Nations member states on 25 September 2015. Food sustainability comes under one of the 17th goals, under the heading ‘Responsible production and consumption’, highlighting the need for environmental and social improvements throughout the value chain.

Globalisation and trade liberalisation have gradually diminished the capacity of national and international governments to address food safety and sustainability issues that span state boundaries. As a result, political actors and civil society started searching for market-based solutions, where non-state actors are charged with the task of implementing sustainability improvements along the globalised product chains.

The food retailing industry is growing rapidly, it is a powerful bargaining force, and is the major distribution channel for food products in most European countries. Retailing has become the focus of attention among European stakeholders to bring about desired changes in the agri-food system. Addressing sustainability concerns in supply chain operations has almost become a matter of long-term business survival for some food retailers. However, acting across the value chain to address unsustainable production and consumption practices, whether this is perceived as a risk or a market opportunity, has been a constant challenge for retailers.

This thesis places particular emphasis on investigating the sustainable supply chain management (SSCM) practices as a strategy to implement environmentally and socially accountable food supply chains. These practices include ways of managing supplier relationships and associated institutions (third-party sustainability certification and mechanisms of private eco-branding) to influence the availability of the sustainably produced product supply. Although directed at the upstream part of the supply chain, such research focus also touches upon the agenda of promoting sustainable food consumption. By influencing the availability of the sustainably produced product supply, including higher volumes, competitive pricing, compatible quality and increased ranges of sustainable product options, retailers can bring sustainability to mainstream consumers.

This thesis investigates SSCM practices in food retailing by building on insights offered by the New Institutional Economics (NIE) framework and a broader field of institutional analysis. Dynamic capabilities theory is also employed to demonstrate how SSCM practices, associated with retailers' development of private eco-brands and novel sustainability certification, can help generate a sustained competitive advantage.

The overarching research design can be best described as multiple embedded case-study design. Multiple, as it investigates the SSCM practices in two product groups of fresh fruits & vegetables and coffee, referred to as subcases. Embedded, as each subcase includes a number of studies (five research papers in total), which together contribute to a holistic understanding of the SSCM phenomenon by exploring it from different analytical levels and constructs.

The primary unit of analysis is the business corporation, since SSCM practices have been examined in relation to Swedish and West European food retailers. Companies included in the research, although studied with different degrees of detail, are ICA, COOP and Axfood (Sweden), Waitrose, Morrisons and Tesco (UK), Migros (Switzerland), Royal Ahold (Netherlands) and IRMA (Denmark).

Retailers have to conform to institutional demands and develop sustainable purchasing procedures (e.g. sustainable sourcing codes and programmes) to gain legitimacy. However, the actual response, i.e. inter-organisational management of product-related sustainability issues, would depend on the nature of the inter-firm purchasing context, such as transaction costs and power dependency between retailers and suppliers. This study develops a detailed typology of retailer approaches to managing supplier relationships, aimed at increasing the availability of sustainably produced supply under different inter-firm purchasing contexts.

If existing institutional arrangements relating to inter-firm purchasing context and design of existing third-party sustainability certification schemes do not allow retailers to efficiently respond to stakeholders' demands for greening a product supply, retailers might engage with an institutional entrepreneurship strategy. This strategy, as part of a SSCM practice, is associated with developing novel institutions in the form of private eco-branding and novel sustainability certification. This SSCM practice might be associated with increased transaction costs, but the expected benefits in the long run (e.g. higher economic rents and reputational gains) override the costs of developing these novel institutions.

Private eco-branding and retail-driven certification schemes are presented here as novel institutions that help retailers to overcome unfavourable institutional conditions (such as prohibitive inter-firm power circumstances, constrained availability of certified product supply, limited consumer demand for certified products, and inadequacy of existing certification design) to move forward with

greening a product supply. The co-branding mechanism, in the form of developing privately eco-branded products, certified by existing or novel third-party certification schemes, appears to have greater impact on availability of green product supply, compared when only existing third-party certification institutions are used.

In the long run, novel certification institutions are expected to reduce the transaction costs of greening a product supply, compared to using existing certification schemes. This is achieved by designing novel certifications that better address corporate needs, ambitions and challenges associated with greening a product supply – more specifically, 1) aligning the scope/level of the certification requirements with the retailers' pursuit of product differentiation, mainstreaming or risk management, and 2) improving certification management services to reduce the retailer's investment of resources in communication, motivation, enablement and verification of the sustainability information and performance upstream in the supply chain. At the same time, price and non-price differentiation strategy, applied for privately eco-branded products, help to improve returns on investments in the development of novel certification, through increased sales of sustainability certified products, enhanced brand value, and customer loyalty.

Institutional entrepreneurship, conceptualised in this thesis as developing private eco-brands and new certification schemes, besides contributing to economic efficiency also affords opportunities for developing dynamic capabilities. This harnesses a potential for generating higher economic rents and long-term competitive advantage. However, links between entrepreneurial SSCM practices and development of DCs are only suggested on the basis of observing SSCM practices associated with development of novel institutions. Further research is required to identify any links between proactive entrepreneurial SSCM practices and superior corporate performance.

Last, but not least, this research demonstrates that collaboration with suppliers is not necessarily required for implementing SSCM practices. Such practices are now seen as part of the strategic management in organisations and a source of competitive advantage. The need for collaboration is reduced by including third-party organisations in supply chain operations. These third-party organisations, certification bodies and NGOs, involved in the certification development allow a bundle of practices to be outsourced, such as enabling and monitoring supplier compliance. These practices are regarded as necessary for managing environmental and social issues in the supply chain. Unlike most existing research, this study argues that, in a particular business context, 'arms-length' relationships appear to be more appropriate for greening a product supply while maintaining business competitiveness.

The findings of this thesis are of particular value for food retail companies who are at the start of their journey towards developing sustainability practices in the supply chain. Specifically, this study demonstrates the need for a contextual and dynamic approach to implementation of SSCM practices. Retail strategy for successfully greening a product supply, while retaining the profitability and competitive advantage, requires (re-)adjusting the supplier relationships to fit the characteristics of the business environment. The dynamics of the inter-firm power circumstances, changes in supply of and demand for sustainably produced goods, trends in certifications development, and changes in certifications design should be carefully evaluated by corporate practitioners engaged in greening a product supply.

The research findings will be useful for policy-makers considering how to support food retailers on the way to achieving food sustainability. Third-party sustainability certification plays a vital role as a corporate governance tool for effectively and efficiently influencing sustainability improvements upstream in the supply chain. Attention should be paid to ensuring that certification design sufficiently addresses corporate needs and ambitions relating to greening a product supply. This should improve the certification uptake by large buying companies, including food retailers, and lead to scaling up of sustainability practices across the value chain.

It is also suggested that multiple certification schemes in the market are not necessarily a problem, and can actually be advantageous for facilitating corporate engagement with greening a product supply. This argument is based on the findings that the proliferation of alternative retail-driven certification schemes is explained by corporate efforts to adjust/improve the existing certification design to ensure stakeholder satisfaction and brand assurance, and to help develop certified supply volumes in a competitive way. Furthermore, novel retail-driven certifications are developed on the basis of existing schemes, utilising tacit knowledge associated with certification development.

Policy-makers can stimulate the convergence between multiple schemes, while sustaining the multiplicity of standards, by promoting benchmarking process and collaboration between various certification schemes in the form of joint capacity building (e.g. training) and audits. This would reduce the complexity of certification for producers, while reducing consumer confusion.

List of publications

Publications for PhD thesis¹

5 research papers

- Chkanikova, O. and O. Mont (2015). Corporate supply chain responsibility: drivers and barriers for sustainable food retailing. *Corporate Social Responsibility and Environmental Management*, 22 (2): 65-82.
- Chkanikova, O. (2015). Sustainable purchasing in food retailing: inter-organisational management to green product supply. *Business Strategy and the Environment*, DOI: 10.1002/bse.1877
- Chkanikova, O. and M. Lehner (2015). Private eco-brands and green market development: towards new forms of sustainability governance in the food retailing. *Journal of Cleaner Production*, 107 (2015): 74-84.
- Chkanikova, O. and B. Kogg (2015). Sustainability governance service providers: the role of third-party product certification in facilitating the corporate life cycle action. *International Journal of Life Cycle Management*, DOI: 10.1007/s11367-015-0865-z
- Chkanikova, O. and R. Sroufe (2016) Third-party sustainability certifications in food retailing: the role of standards' multiplicity and corporate stakeholders (Submitted to *Business Strategy and the Environment*).

¹ These five research papers are appended to this publication.

Other publications

1 research report

Chkanikova, O., M. Klintman, B. Kogg, M. Lehner, O. Mont, N. Nebelius & A. Plepys. (2013). Sustainability Landscape of Swedish Food Retailers in the European Union. Lund, IIIIEE, Lund University. ISSN 978-91-87357-07-7.

7 conference papers

Kogg, B. and O. Chkanikova (2013). Responsibility in the supply chain – looking at standards, certifications and the role of third-party service providers from a supply chain management perspective. Life Cycle Management Conference (LCM 2013), August 25-28, Gothenburg.

Chkanikova, O. and M. Lehner. (2012). Private eco-brands and sustainable market development: towards new forms of SCP governance in food retailing. Workshop on Responsible Supply Chains and Networks: Challenges for Governance and Sustainability, November 22-24, Stockholm

Chkanikova, O. (2012). Sustainable purchasing in food retail: inter-organisational management to green food supply chains The 3rd Nordic Retail and Wholesale Conference, November 7-8, Lund

Chkanikova, O. (2012). Drivers and Constraints for food retailers to foster sustainable consumption by developing sustainable product assortment. The 2nd Nordic Conference on Consumer Research (NCCR 2012), May 30-June 1, Gothenburg.

Chkanikova, O. and B. Kogg (2011). Greening food supply chains: Analyzing the potential role of retailers in triggering/ensuring environmentally and socially responsible production of food. Conference on Corporate and Global Responsibility (CR3), April 8-9, Helsinki.

Chkanikova, O. and O. Mont (2011). Sustainability transition towards alternative food regime: The comparative study of organic market development in Germany and Sweden. 2nd International Conference on Sustainability Transitions, June 13-15, Lund.

Chkanikova, O. and O. Mont (2010). Towards sustainable retail: overview of retail practices in Europe. The 2nd Nordic Retail and Wholesale Conference, November 10-11, Gothenburg.

2 working papers

Chkanikova, O. and O. Mont (2011). Overview of Sustainability Initiatives in European Food Retail Sector. IIIIEE Working Paper 2011: 1. Lund, IIIIEE, Lund University. ISBN: 978-91-88902-70-2.

Chkanikova, O. (2012). Sustainable Supply Chain Management: Theoretical literature overview. IIIIEE Working Paper 2012: 1. Lund, IIIIEE, Lund University. ISBN: 978-91-88902-87-0.

1 magazine article

Mont, O., O. Chkanikova, M. Klintman, B. Kogg & M. Karlsson (2010). "Livsmedelshandelns roll för gröna marknader: Avfall bästa gren." Miljöforskning Formas (5).

My contributions to co-authored papers for PhD thesis

Chkanikova, O. and O. Mont (2015). Corporate supply chain responsibility: drivers and barriers for sustainable food retailing. *Corporate Social Responsibility and Environmental Management*, 22 (2): 65-82.

My contribution:

As lead author, I compiled the full draft of the paper. It was then sent for comments to Prof. Mont, who besides providing relevant suggestions for improvement, revised some text in the analysis and conclusions sections. After two more rounds of consultation, when an improved version of the draft was forwarded to Prof. Mont for further comments and editing, the manuscript was submitted for the review process. When comments were received from reviewers, I was responsible for revising the manuscript to incorporate the reviewers' comments, although Prof. Mont provided useful advice on how some of the comments could be addressed.

Chkanikova, O. and M. Lehner (2015). Private eco-brands and green market development: towards new forms of sustainability governance in the food retailing. *Journal of Cleaner Production*, 107 (2015): 74-84

My contribution:

I was responsible for developing this paper from the joint conference paper (see Chkanikova & Lehner, 2012), the idea for which was originally proposed by M. Lehner. However, in taking the lead in developing both the conference paper and subsequent article, the original research questions and the overall argumentation were substantially altered. In working on this article, the work between the two authors was divided according to their research expertise. I was responsible for the part dedicated to greening upstream in the supply chain, while M. Lehner was responsible for the downstream part. As main author, I led the development of the theoretical and analytical framework, and combined the two parts into one manuscript. I was also responsible for the two revisions suggested by the Journal of Cleaner Production.

Chkanikova, O. and B. Kogg (2015). Sustainability governance service providers: the role of third-party product certification in facilitating the corporate life cycle action. *International Journal of Life Cycle Management*, DOI: 10.1007/s11367-015-0865-z

My contribution:

This paper was developed on the basis of the joint conference paper (see Kogg and Chkanikova 2013). However, as with the previous paper, the final manuscript was substantially altered. The overall structure of the paper was agreed upon jointly, and each author conducted part of the analysis according to their area of expertise. I was responsible for presenting and analysing the case of the food retailing industry, while B. Kogg presented and analysed the case of textile industry. As main author, I carried out the literature review, and wrote the cross-case comparison, discussion and conclusions. B. Kogg provided relevant comments and text revision afterwards. I was also responsible for the review process, although B. Kogg helped in addressing a number of reviewers' comments.

Chkanikova, O. and R. Sroufe (2016). Third-party sustainability certifications in food retailing: the role of standards' multiplicity and corporate stakeholders (Submitted to *Business Strategy and the Environment*).

My contribution:

I was responsible for collecting empirical data and writing the paper from the first draft to the final manuscript. Dr. Sroufe provided a lot of useful insights and comments on how the manuscript could be further improved and broader contribution made to the research field. He also assisted with editing and revising the text of the article to improve the overall argumentation.

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1 Introduction

Food supply chains span three major economic sectors: agriculture, food processing and distribution (wholesaling and retailing). Together these sectors account for approximately 6% of gross added value and 11% of employment in the EU (European Commission 2016). By connecting farmers in developing countries with end consumers in the developed world, food supply chains provide the farmers with opportunities to improve their economic and social wellbeing, while consumers benefit from access to a wide variety of food products throughout the year.

Besides being economically and socially important, current systems of food production, distribution, and consumption have significant impact on sustainability, causing depletion of natural resources, deterioration of ecosystems, social health and livelihoods (Khan and Hanjra 2009, Jensen 2010, Foley, Ramankutty et al. 2011). In particular, food supply chains in the EU are responsible for a large share of household-related environmental impacts, e.g. 29% of GHG emissions, 58% of eutrophication, 30% of acidification and 32% of ecotoxicity (Tukker, Huppes et al. 2006, p. 92).

Whereas major impacts arise at the agricultural and food-processing stages, consumers reinforce unsustainable food production by their purchasing choices and lifestyle trends (Meybeck, Burlingame et al. 2012). As presented in a report by European Standing Committee on Agricultural Research:

“Globally, and in many regions including Europe, food production is exceeding environmental limits or is close to doing so. Nitrogen synthesis exceeds the planetary boundary by a factor of four and phosphorus use has reached the planetary boundary. Land use change and land degradation, and the dependence on fossil energy contribute about one-fourth of Greenhouse Gas emissions. Agriculture, including fisheries, is the single largest driver of biodiversity loss. Regionally, water extracted by irrigation exceeds the replenishment of the resource” (Freibauer, Mathijs et al. 2011, p. 130).

Current trends in population growth, along with global expansion of the middle class fuelling consumption and affluence (Kharas 2010), further constrain the ability of natural resources to supply food (Reisch, Eberle et al. 2013). Sustainable

consumption and production² (SCP) in the food sector is one of the top priority issues for EU governments and international organisations. This is demonstrated by the focus on sustainability of food systems³ in the Roadmap to Resource Efficient Europe (European Commission 2011b) and new Sustainable Development Goals (United Nations 2015). Increasing political consensus is complemented by growing environmental awareness of European consumers: eight out of ten EU citizens consider environmental product impact as an important factor in their purchasing decision-making (European Commission 2009a).

In order to meet the unprecedented challenge of feeding an increasing population, while curbing associated environmental impacts, there is a need for a fundamental change in how the system of food production and consumption is governed (Oosterveer and Sonnenfeld 2012, FAO 2016). In the era of globalisation, prevailing neo-liberal ideology and diminished capacity of the state to enforce sustainable consumption and production agenda, political actors and civil society organisations have started searching for market-based solutions, where non-state actors are charged with a task to implement sustainability improvements along the globalised product chains (Oosterveer 2007, Auld 2014, Vermeulen 2015). This ‘recasting’ of regulatory systems is characterised by:

- Increasing attention to the role of large buying companies, including food retailers, acting as ‘green multipliers’ in globally dispersed supply chain networks, encouraging sustainability both in production and consumption practices (Kotzab, Munch et al. 2011, Spaargaren, Loeber et al. 2012);
- Emergence of non-state market-driven governance in the form of third-party sustainability certification schemes, which are believed to liberalise the trading system and contribute to sustainable development (Henson and Humphrey 2010, Ponte, Gibbon et al. 2011, Ransom, Bain et al. 2013).

In the following sections the role of retailers and third-party sustainability certification in transforming food supply chains towards higher levels of sustainability is discussed. Furthermore, the gaps in corporate practice of managing sustainability issues in the supply chain are highlighted, as well as gaps

² Sustainable consumption and production (SCP) is defined by Oslo Symposium in 1994 as "the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of further generations" (Bizikova, Schandl et al. 2014, p. 6).

³ According to the High Level Panel of Experts on food security and nutrition (HLPE), "A sustainable food system (SFS) is a food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised" (FAO 2016).

in research of this practice. The identified gaps comprise the research objectives of this thesis.

1.1 The role of food retailers in promoting SCP

In recent decades, food supply chains have undergone substantial restructuring. Growth in store size, accompanied by retailers' pursuit of an internalisation strategy⁴, have contributed to a high level of concentration in the food retailing industry (Sandberg 2010). In the European context, large-scale retailers form an oligopsony, with three to five major supermarkets representing the main food marketing channels in the Nordic countries and Western Europe (CIAA 2009). The Swedish food sector in particular shows a high level of concentration in the grocery market, with ICA, Axfood and Coop making up 73% of the market shares in 2012 (Chamber Trade Sweden 2013). According to a recent report by European Commission (2014), the top ten European retailers accounted for 31% of market shares in 2011 at pan-European level, with modern grocery retailing⁵ making up 54% of overall food sales in EU in 2012. Increasing concentration can be also observed at the procurement level, as retailers organise themselves into buying groups and cross-border alliances to achieve economies of scales, necessary for remaining competitive in the low-margin business of grocery retailing (European Commission 2014).

Due to the size, oligopolistic structure, and increased bargaining power of the food retailing industry, as well as its strategic positioning at the intersection between globally dispersed supply chain players, food retailers are often ascribed the role of change agents, able to influence the sustainability agenda both in production and consumption practices (Ytterhus, Arnestad et al. 1999, Sustainable Development Commission 2008, CIAA 2009).

Retailers must comply with increasing expectations of key stakeholders to address sustainability impacts at various stages of food supply chain (Hall 2001, Hatanaka, Bain et al. 2005, Chkanikova and Mont 2012), so they are expanding their organisational boundaries beyond the core activity of selling. European food retailers have recently started reporting on the launch of a wide array of sustainability initiatives to reduce environmental and social impacts in the supply chains (Forum for the Future 2008, BIO Intelligence Service 2009, Forum for the Future 2009, European Commission 2010, ERRT and EuroCommerce 2010).

⁴ Internalisation strategy is associated with retailers' aim to expand on the global markets with higher profit margins and less fierce competition (Sandberg 2010).

⁵ Modern grocery retailing covers hypermarkets, supermarkets and discount stores.

However, the reality of corporate ‘greening’ strategies is far from this rhetoric. The full potential to encourage sustainable consumption and production has yet to be unleashed, as current environmental initiatives are still marginal, fragmented and unsystematic (BIO Intelligence Service 2009, Knickel, Schaer et al. 2010).

In particular, retailers’ sustainability initiatives often address the distinct sustainability problems, e.g. waste reduction, energy efficiency and transportation optimisation, focusing on regulatory compliance, easy wins or cost-neutral solutions (Chkanikova and Mont 2011), rather than adopting an integrated life-cycle approach to curb environmental and social impacts of food products from ‘farm to folk’. Furthermore, the most profound impact that arises upstream in the supply chain, i.e. in the farming and food processing, is not sufficiently addressed in practice (European Commission 2011c, The Sustainability Consortium 2016). While the idea of food retailers working as a ‘green multiplier’ is attractive, realisation of supply chain sustainability appears to be difficult and represents a significant managerial challenge (Johnson 2004, Hamner 2006, Smith 2007).

Following the premise that retailers can actively promote the SCP agenda, research interest is growing in sustainable food retailing. Some studies attempted to reveal the corporate motives behind engagement in corporate social responsibility (CSR) (Dijk 2000, Piacentini, MacFadyen et al. 2000) and organisational implications for ecologically sustainable retailing (Bansal and Kilbourne 2001). Another stream of research highlights the growing environmental pressure on retail organisations to green product supply (Ytterhus, Arnestad et al. 1999, Hall 2001, Hatanaka, Bain et al. 2005) and advocates the development of retail-supplier partnerships for implementing sustainability improvements in suppliers’ products and operations (Ytterhus, Arnestad et al. 1999, Hall 2000, Johnson 2004, Leigh and Waddock 2006, Spence 2009). Some research has examined the willingness of retailers to address the challenges of sustainable consumption, and discusses how food shops market sustainable products instore (Jones, Comfort et al. 2003, Jones, Comfort et al. 2007, Jones, Comfort et al. 2009).

Another stream of research investigates what and how retailers communicate their environmental and social strategies in supply chains (Lee, Fairhurst et al. 2009, Jones, Comfort et al. 2011, Mejri and Wolf 2012). Some studies have provided relevant examples of how the sustainability concept is operationalised in the food retailers’ supply chains, but the majority of studies are rather conceptual in nature and based on analysis of CSR reports. Empirical examination and solid evidence of retailer practices to implement sustainability improvements in their supply chain operations are still lacking.

1.1.1 The importance of supply chain management function

The role of the purchasing function, also called supply chain management, has been highlighted as being central in implementing sustainability improvements from the life-cycle perspective. Preuss (2005) has argued that

“... seen from a life-cycle perspective, environmental initiatives are impossible without involvement of the supply chain management function” (Preuss 2005, p.124).

Corporate purchasing strategies have the potential to control the environmental and social attributes of products (the way they were produced in the supplier’s farms and factories), as well as actively influence the consumers’ choices by providing sustainable alternatives in the product assortment. Recent research has revealed that consumption of sustainable products is affected by their availability: the wider range of sustainable goods, the higher level of uptake of these products by consumers (European Commission 2011a, Koos 2011). Moreover, the consumers themselves report that they expect retailers to direct their choices by stocking the ‘right’ products on supermarket shelves (Ipsos MORI 2008).

Corporate work to implement sustainable supply chain management (SSCM), and the associated challenges, are widely discussed in the literature (Preuss 2005, Kogg 2009, Leire and Mont 2010, Pagell, Wu et al. 2010, Walker and Jones 2012). However, research that touches upon actual implementation of sustainable purchasing by food retailers is limited (Ytterhus, Arnestad et al. 1999, Hall 2001, Johnson 2004, Jones, Comfort et al. 2005), and even broader examination of the field of sustainable supply chain management has not provided sufficient explanation of corporate practice of sustainable purchasing (Seuring and Muller 2008). Pagell, Wu et al. (2010) mentioned that

“current theory in supply chain management may neither adequately explain nor predict the behaviour observed with respect to sustainable sourcing” (Pagell, Wu et al. 2010, p. 58).

1.2 The role of third-party sustainability certification in SSCM

Two streams of research emphasise issues of governance in the product chains: supply chain management and Global Value Chain Analysis (GVC). To some extent both streams have contributed to the “myth of the mighty buyer” (Gibbon and Ponte 2008) by mainly focusing on the role of the focal firm in greening

product chains, while neglecting the role of intermediaries and service providers, e.g. certifiers (Seuring 2011). Recently a number of contributors have started to recognise that product and supplier certification schemes play an important role in corporate operations to green their supply chains (Rosen, Beckman et al. 2002, Kogg 2003, Hatanaka, Bain et al. 2005). Although some authors have started to analyse the role of standards and the interplay between them and corporate strategies to green their supply chains (Pagell, Wu et al. 2010, Seuring 2011, Simpson, Power et al. 2012), there is still a lack of empirical data and solid evidence.

Existing literature on environmental standards tends to focus on other issues, such as how successful standards are in altering consumers' purchasing choices towards sustainable products. Standards are often criticised for being inefficient in bringing about changes in consumer behaviour (Amstel, Driessen et al. 2008). Other studies discuss the influence of standards on free trade provisions, on small-scale farmers' access to markets, and legitimacy of standard setting procedures (Fuchs, Kalfagianni et al. 2011). While these are all relevant issues, the prevailing analysis of standards fails to address one important dimension, namely the role of standards in reducing corporate challenges to implementing sustainability improvements upstream in the product chains (Seuring 2011).

Insights from the new institutional economics suggest that standardisation schemes represent an important institutional arrangement that has the potential to support corporate work to green product chains. In particular, certification contributes to reducing transaction costs of defining sustainability parameters, identifying and selecting suppliers, negotiating sustainability criteria with suppliers, and verifying and monitoring their compliance (Kogg 2009, Pagell, Wu et al. 2010). This suggests that certification schemes should not be seen only as information tools for consumers, but also as a business-to-business institutional arrangement that enables and facilitates corporate actions to exercise influence and control over environmental and social issues associated with the life-cycle of supplied products.

Literature on standards does not pay sufficient attention to the diversity of the certification schemes in terms of their institutional forms, i.e. who develops and adopts them, for what purposes, and what issues relating to sustainable product chain governance they address (Henson and Humphrey 2010). Despite recent attempts to fill this gap (Fransen 2011, Turcotte, Reinecke et al. 2013, Djelic and den Hond 2014), the corporate reasons for such diversity are not well understood. In particular, it is unclear how various forms of certification design might cater to different corporate needs and challenges associated with greening the supply chain.

1.3 Gaps in research and practice of SSCM in food retailing

The aforementioned discussion leads to identification of the following gaps in practices of food retailers when greening their supply chains, and in existing research on corporate practices of sustainable supply chain management:

- The practice gap between the rhetoric and reality of corporate ‘greening’ strategies. While food retailers are often ascribed the role of change agents to promote SCP, recent industry reports indicate the lack of life-cycle management action to curb product-related sustainability impacts from ‘farm to folk’;
- The role of the purchasing/supply chain management function is very important for addressing product sustainability impacts from the life-cycle perspective. However, inter-organisational managerial implications of greening a product supply are unclear both from the practice and theory perspectives;
- The role of sustainability certification schemes and their multiple forms are often discussed from the consumer perspective and are consequently criticised, downplaying their role as a business-to-business institutional arrangements that might support and facilitate the corporate engagement with sustainable supply chain management.

These gaps in understanding of SSCM phenomenon further contribute to the lack of understanding among practitioners and policy-makers of how supply chains can be effectively and efficiently governed in order to promote environmentally and socially accountable product chains.

1.4 Research aim and objectives

The identified gaps steer the research aims and questions of this thesis. The overarching aim of this PhD thesis is to further understanding of the SSCM practice in the food retailing industry by explaining its dependency on a set of institutional configurations, both at a level of a broader institutional field in which retailers operate, and at a level of procurement (inter-firm transactional) context. Particular attention in explaining the corporate choice of SSCM practice is given to the role of the certification schemes in these institutional configurations, including certification’s ability to meet corporate needs for greening a product supply. These corporate needs are primarily associated with reducing transaction

costs of greening a product supply and gaining a sustained competitive advantage from SSCM practices.

To achieve this aim, the specific research questions are as follows:

1. What institutional factors affect food retailers' willingness and ability to green a product supply?
2. How do retailers engage with the practice of SSCM? In particular, how do retailers manage supplier relationships in order to green a product supply under different procurement contexts, while maintaining/enhancing corporate competitiveness?
3. In what ways do third-party sustainability certification schemes influence the corporate choice of a SSCM practice?
4. How do SSCM practices associated with development of private eco-brands and novel certification schemes contribute to development of a sustained competitive advantage?

1.5 Scope and limitations

The focus of this thesis is on retailing in Sweden and Western Europe. The retailers studied include ICA, COOP and Axfood (Sweden), Waitrose, Morrisons and Tesco (UK), Migros (Switzerland), Royal Ahold (Netherlands), and IRMA (Denmark). I have chosen these because of their dominant market positions, their proactive strategies in addressing sustainability issues in the supply chain, and their expressed willingness to participate in this research project.

Furthermore, the political environment in Nordic and Western European countries is conducive for facilitating retailers' engagement into promoting SCP (BIO Intelligence Service 2009). In particular, the EU Commission's Action Plan on Sustainable Consumption and Production (European Commission 2008) has facilitated food retailers' voluntary commitment to various sustainability initiatives along the value chain, including improving sustainability performance of food farming and processing (ERRT and EuroCommerce 2010). These initiatives are combined under the umbrella of the Retail Environmental Action Programme, including recent commitments to move the Circular Economy agenda and life-cycle perspective forward (ERRT and EuroCommerce 2016). Sourcing and promoting sustainably produced goods is one of the approaches to which food retailers commit.

The limited empirical focus on corporate practice of SSCM among Swedish and European grocery stores in existing literature further justifies geographical

delimitations to this thesis. For instance, various sustainability initiatives in the supply chain have been researched for British (Jones, Comfort et al. 2005, Spence 2009), Brazilian (Marques, Mendonca et al. 2010) and US supermarkets (Lee, Fairhurst et al. 2009), as well as for large international retail chains, but these do not exclusively operate in the food sector (Lai, Cheng et al. 2010, Kotzab, Munch et al. 2011). However, these studies do not sufficiently illuminate the diversity of retailers' approaches to green product chains. They primarily focus on inventory of sustainability initiatives based on the analysis of existing industry and CSR reports, instead of accounting for the perspective of corporate practitioners working with CSR and procurement of sustainably produced goods.

According to Martinuzzi, Kudlak et al. (2011):

“European retailers are among the most internationally active of all global regions, on average operating in 11.7 countries” (Martinuzzi, Kudlak et al. 2011, p. 3).

Such global proliferation further demonstrates the dominance of European retailers, not only in their own national markets and European regions but all over the globe. Such strategic positioning further implies more power and control over the current system of food production and consumption, making European retailers a pivotal point for addressing sustainability issues in food supply chains.

The analysis of SSCM practice is by design limited to the central procurement level rather than to the individual store level, since most of the product range (about 80% in Sweden) and major sourcing policies are decided at head office, regardless of the ownership structure of the studied retail chains.

In investigating the corporate practices of SSCM, particular focus is placed on corporate approaches to managing inter-organisational relationships (i.e. transactional governance). Managing supplier relationships is one of the key elements to optimising the supply chain based on the triple bottom line performance (Preuss 2005, Carter and Rogers 2008, Gold, Seuring et al. 2010). In particular, Simpson and Power (2005) emphasised that

“... supply relationships may provide a key avenue for business to influence the environmental performance of their key products and services” (Simpson and Power 2005, p. 61).

The research boundaries were set to explore the dyadic supply chain relationships between retailers and first-tier suppliers. While a network approach to investigation of buyer-seller relationships is highly relevant, supply chain networks are recognised as being difficult to manage from the buyer's perspective (Håkansson and Snehota 1995, Lamming, Johnsen et al. 2000), so it was decided

to focus on single inter-firm relationships that represent a manageable entity. Furthermore, as noticed by Gelderman and van Weele (2004),

“a network perspective does not exclude research which seeks to understand the nature of single buyer-supplier relationships” (Gelderman and van Weele 2004, p. 12).

In this collection of research papers, the analysis is centred on, although not limited to, examples of two product categories, namely 1) fresh fruits and vegetables, and 2) coffee⁶. Such focus was motivated by differences in the global structure of the respective supply chains (Vorley 2003)⁷, which can affect the corporate choice of relationship management approaches to green a product supply.

The following limitations of this study incurred by the nature of research objectives should be mentioned. First, the institutional context and transactional context, which affect the corporate practice of SSCM, is explored only from the perspective of the buying company, i.e. supermarkets. Consequently, this study does not include the perspective of other relevant stakeholders, including suppliers. When other stakeholders were interviewed, their opinions were used as expert insights regarding retailers’ practices of SSCM and the role of certification schemes in the context of these practices. More detailed information concerning the number of interviews, interviewed companies, and the occupations of respondents is presented in section 3.3.2.

While the role of the institutional environment and inter-firm transactional circumstances in influencing retailer practices of SSCM is acknowledged, this thesis does not attempt to examine and explain national differences in corporate strategies to green supply chains. The investigation of contextual circumstances in influencing corporate choice of SSCM practice is not exhaustive. Other factors might affect retailers’ decisions regarding the form of relational contracts with suppliers, such as organisational culture or considerations about logistics and inventory management.

This study does not intend to measure the effectiveness of SSCM practices in terms of actual improvements in a product’s environmental performance and supplier’s compliance, nor the increase in the proportion of sustainably produced goods in the retailers’ assortment. There is no attempt to estimate the total costs of retailers’ efforts to green the product supply. At the same time, it is important to

⁶ When respondents have provided examples of managing retail-supplier relationships in the context of other products, e.g. milk, fish, and palm oil, this information was also included in the analysis.

⁷ Fresh fruits and vegetables are characterised by retail-driven value chain, while coffee is an example of a roaster-driven value chain.

acknowledge that such quantitative valuations would benefit this research, by helping to identify which SSCM practice is the most effective and efficient in the given institutional and transactional contexts.

Finally, it should be noted that the terms supply chain, product chain and value chain are used synonymously in this thesis, although their etymology does differ⁸. In Paper I, the supply chain of food retailers is conceptualised from ‘farm to folk’, covering food production, transportation, consumption and the store’s internal operations. In Paper III, the supply chain specifically focuses on ‘upstream’ (production-related) and ‘downstream’ (consumption-related) activities of food retailers. In the other papers, the supply chain refers to upstream operations associated with production of procured goods.

1.6 Research papers

The research for this thesis evolved from a general review of driving and constraining forces that affect the retailers’ launch of various sustainability initiatives both upstream and downstream in the supply chains. The focus became a more specific emphasis on the corporate management of inter-organisational relationships in order to optimise supply chain on the basis of sustainability performance. Papers also complement each other analytically, providing a holistic perspective on understanding the phenomenon of SSCM. In particular, the collection of research papers follows the conceptual model developed on the basis of the multi-level NIE framework presented in more detail in Chapter 2.

Paper I concerns the institutional macro-level, focusing on the retailers’ institutional environment. This provides understanding why food retailers adopt/abandon a variety of sustainability initiatives in the supply chain, and the sustainable purchasing practices in particular. The analysis of institutional pressures draws on categorisation of the firm’s institutional environment proposed by Hoffman (2000), rather than distinguishing between regulatory, normative and cognitive demands traditionally referred to in the institutional theory (Scott 2001). This is because, in practice,

⁸ Value chains are viewed as a set of ‘value added’ activities performed by organisations in order to create a competitive advantage, e.g. inbound and outbound logistics, operations, marketing and sales, servicing (Porter 1985). A company’s product or supply chain can be conceptualised as the complex network of actors involved in flows of materials, products, information and capital to deliver a value to the end customer (Boons 2002; Mentzer, Dewitt et al. 2002).

“isolated consideration of one of the three demands in the institutional environment may not be possible as they coexist”⁹ (Hamprecht 2005, p. 13).

Hoffmans’ classification of institutional environments (2000) appears to be more useful, as it emphasises the interests of various stakeholders in corporate sustainability strategies, while still capturing the ambiguity and conflicting objectives of institutional pressures.

Papers II and IV concern the micro-level of the NIE framework and specifically explore the corporate practices of inter-organisational relationship management, i.e. ways to manage transactions in order to green product supply. In particular, Paper II develops a typology of sustainable purchasing relationships that companies might deploy depending on the transaction-specific circumstances, namely the magnitude of transaction costs (reflected in the corporate perception of the availability of sustainability-certified supply) and purchasers’ perception of power dependency on existing suppliers. Paper IV provides further insights on the impact of the product sustainability certification on the corporate practice of SSCM. Specifically, it elaborates on factors that affect corporate decisions to implement SSCM by simply choosing to procure sustainability-certified goods, or by engaging in collaborative relationships with suppliers, even when sustainability certification schemes are well-developed on the market.

Papers III and V explore the role of private eco-branding and retail-driven certification schemes in motivating and enabling food retailers’ engagement with SSCM. These schemes are conceptualised as new institutional arrangements developed by food retailers to address the tensions between macro- and micro-institutional levels. In particular, these market institutions emerge when demands of the institutional environment make food retailers responsible for implementing environmentally and socially accountable product chains. However, existing institutional arrangements associated with managing inter-firm transactions are perceived as inadequate or lacking for effective and efficient implementation of SSCM. In other words, the retailers’ engagement with development of novel institutions (the practice, which can be also termed as ‘institutional entrepreneurship’) allows coupling between the legitimacy and economic rational logics of business operations.

⁹ For instance, sustainability standards and associated certification schemes can be viewed as a source of regulatory, normative and cognitive demands simultaneously.

1.7 Thesis outline

Chapter 1 provides a background to this research. Main research questions, scope and limitations of this study are outlined.

Chapter 2 presents conceptual and theoretical foundations employed for exploring corporate choices about SSCM practices in food retailing. The main analytical constructs and a-priori selected theories that guide collection of empirical data and development of factual propositions are discussed. This chapter also introduces an overarching conceptual model that interconnects a collection of appended research papers, which together provide a holistic understanding of the SSCM practice.

Chapter 3 describes research methodology. In particular, it introduces a pragmatic instrumental philosophy adopted as a meta-theory in this study and discusses how its ontological and epistemological assumptions are aligned with research into SSCM practices. The chapter also reflects on the overall research design, including methods for data collection and analysis. It concludes with a discussion of validity and generalisability of research findings.

Chapter 4 analyses SSCM practices among studied food retailers. Each section is devoted to answering a particular research question.

In Chapter 5, research findings are discussed in relation to their implications for theory and research in the field of SSCM, food retailers and policy-makers.

In Chapter 6, the major conclusions and directions for further research are presented.

2 Conceptual and theoretical foundations

This chapter reviews the major conceptual and theoretical foundations used to further understanding of the SSCM phenomenon.

While there are many ways to conceptualise sustainability and SSCM practices, a holistic review of associated concepts and definitions is beyond the purview of this research. However, due to plurality of definitions, it is important to explain how these terms are understood and used by the author. The following two sections outline the definitions of sustainability and SSCM practices as adopted in this thesis.

2.1 Foundations of sustainability

Definition of sustainability at the macro-level concerns the concept of sustainable development, defined as

“development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development 1987, p. 16).

Although being crucial for realising the limitations of current technology and social organisation on the environment’s ability to satisfy the essential needs of people, this conceptualisation is difficult to operationalise and provides little guidance on how companies can contribute to it (Shrivastava 1995, Stead and Stead 1996).

The micro-level (and more operational) definition of sustainability corresponds to the corporate level, and is associated with the triple bottom line¹⁰ (TBL). TBL defines three pillars of organisational performance – economic prosperity,

¹⁰ TBL perspective has also been criticised due to difficulty in measuring environmental and especially social performance (Norman and MacDonald 2004).

environmental quality and social justice (Elkington 1998). At the intersection of these three pillars

“there are activities that organisations can engage in which not only positively affect the natural environment and society, but which also result in long-term economic benefits and competitive advantage for the firm” (Carter and Rogers 2008, p. 365).

The TBL perspective has been further operationalised by Dyllick and Hockerts (2002), who suggested three cases and six criteria for corporate sustainability (Figure 1). The three cases mirror TBL, and the six criteria provide indicators that firms can use in their strategy development.

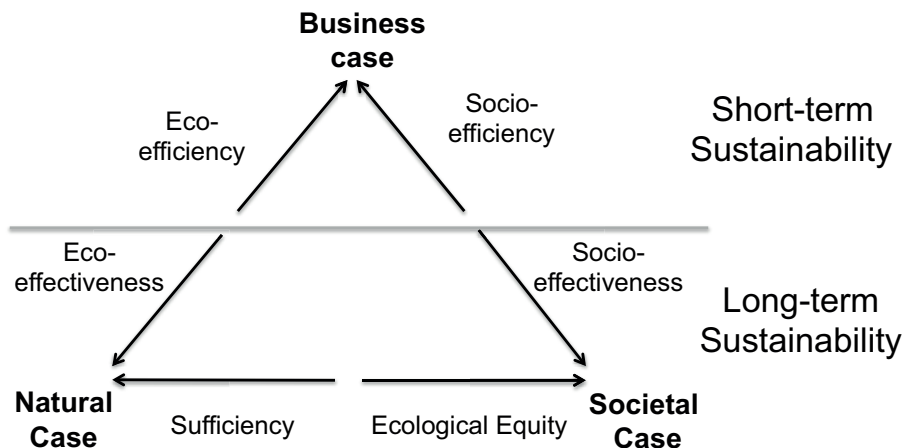


Figure 1. Framework of Corporate Sustainability.
Adapted from Dyllick and Hockerts (2002).

In Dyllick’s and Hockert’s framework (Figure 1), eco- and socio-efficiency are associated with a firm’s ability to create value and deliver competitively-priced products and services that satisfy the needs of mankind and sustain a decent quality of life. At the same time, these goods and services reduce negative environmental and social impacts throughout their life-cycle. Socio-efficiency is also associated with maximising positive social impacts, such as employment creation and donations. Both concepts of eco- and socio-efficiency are mainly concerned with enhancing economic sustainability (Dyllick and Hockerts 2002).

Although being relevant for business operations, efficiency criteria involve relative improvements in terms of energy/material efficiency per value added. Due to non-substitutability, non-linearity and irreversibility of natural capital, these relative improvements are not sufficient, as they overlook the consideration of

system's absolute thresholds – planetary boundaries. When only considering eco-efficiency, firms risk increasing rather than diminishing degradation of natural capital. At the same time, primary focus on socio-efficiency, while leading to relative improvements in social sustainability,

“might lead to islands of social excellence in the sea of social disconnect”¹¹ (Dyllick and Hockerts 2002, p. 137).

Eco- and socio-efficiency measures are therefore only part of the solution, and can be viewed as a precondition for short-term sustainability (Figure 1).

For long-term sustainability, negative impacts should be reduced to prevent exceeding the earth's carrying capacity and leading to system breakdown. Eco- and socio-effectiveness measures, aimed at improving the overall state of the environmental and social systems, and designing efficient processes for 100% sustainable solutions, are required (Dyllick and Hockerts 2002). These authors also indicate criteria of sufficiency (vs. overconsumption) and ecological equity (inter- and intra-generational justice), which also contribute to natural and societal sustainability and form a basis for long-term sustainability.

This thesis adopts the TBL perspective (Elkington 1998) and recognises the need to address all three cases of corporate sustainability simultaneously (Dyllick and Hockerts 2002) to avoid depreciation and consequent collapse of natural and societal capital. However, the research emphasis is still on the business case for corporate (short-term) sustainability – deriving economic value for a retailing company and its shareholders, while reducing environmental and social impacts associated with the life-cycle of supplied products. The same business emphasis is given in a subsequent definition of SSCM, which extends the concept of corporate sustainability to a level of the supply chain.

2.2 Defining SSCM and its strategic orientation

Corporate sustainability, based on managing TBL performance, is increasingly considered as a foundation for strategic management (Savitz and Weber 2006). Strategic management is associated with those managerial aspects

“that have material effects on the survival and success of the business enterprise” (Teece, Pisano et al. 1997, p. 528).

¹¹ Dyllick and Hockerts (2002) provide an example of the pharmaceutical industry, which fails to provide its products to people in poor countries, while improving the well-being of consumers in developed countries. Here, the social issue of inter-generational justice is dismissed.

Accounting for environmental, social and economic performance simultaneously is argued to grow profitability, manage risks, enable innovation and differentiation, and create long-term shareholder value (Ionescu-Somers and Steger 2008, Peters 2010).

As product-related sustainability issues span organisational and geographical boundaries due to global outsourcing, the concept of corporate sustainability has been extended to the level of the supply chain (Kogg 2009, Spence 2009). Many interrelated concepts have sprung up, including green/environmental supply chain management and environmentally and socially responsible purchasing (Touboullic and Walker 2015). However, many of these conceptualisations focused on distinct environmental and social issues, and were not necessarily linked to corporate economic performance (Carter and Rogers 2008). The systematic inclusion of the TBL perspective in supply chain management only appeared in around 2002, giving rise to the concept of SSCM (Carter and Easton 2011).

One of the most cited conceptualisations of sustainable supply chain management (SSCM) is provided by Seuring and Muller (2008). They defined it as

“management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e. economic, environmental and social, into account which are derived from customer and stakeholder requirements” (Seuring and Muller, 2008, p. 1700).

Besides accounting for all three dimensions of corporate sustainability, the strategic importance of SSCM function in this definition is highlighted by its role to ensure product and process compliance with stakeholder (and customer) demands. SSCM practices have been further conceptualised into compliance (risk-management) strategies and proactive (business-opportunity-oriented) strategies (Seuring and Muller 2008, Harms, Hansen et al. 2013). The rationale behind the compliance (or risk-management) strategy is to secure corporate legitimacy to operate and maintain its current competitive position, whereas proactive or opportunity-driven strategies of SSCM concern creation of additional competitive advantage (Peters 2010). Carter and Rogers (2008) clearly view the goal of SSCM as

“improving the long-term performance of the individual company and its supply chain” (Carter and Rogers 2008, p. 368).

The established links between corporate practices to manage sustainability-related issues in the supply chain and creation of inter-organisational resources and dynamic capabilities (Gold, Seuring et al. 2010, Beske 2012, Beske, Land et al.

2014), which are viewed as a source of competitive advantage, further demonstrate that SSCM becomes a strategic business function.

Optimising a supply chain based on the TBL performance and broadening the concept of corporate sustainability from the organisational to inter-organisational level, forms the distinctive feature of SSCM. This requires alternative, rather than conventional, managerial practices (Carter and Rogers 2008). Studies exploring managerial practices associated with SSCM often highlight the necessity of developing collaborative relationships with suppliers to proactively set and implement sustainability agenda in the supply chain (Green, Morton et al. 1998, Ytterhus, Arnestad et al. 1999, Seuring and Muller 2008, Gold, Seuring et al. 2010). Other authors have also found that collaboration is not always effective and appropriate (Kraljic 1983, Cox 1996, Dyer, Cho et al. 1998), and demonstrated evidences of limited opportunities for supply chain integration (Frohlich and Westbrook 2001, Fawcett and Magnan 2002).

From the corporate perspective, the question then arises as to whether SSCM requires collaboration, or whether it can work without collaboration. The term ‘SSCM/sustainable purchasing practices’ is used in this study to refer to *the corporate practices of managing inter-organisational relationships, and associated institutional arrangements to communicate, influence, enable and control the sustainability performance associated with production of procured products, but also to improve the availability of sustainably produced goods, while deriving economic value from these activities*. Availability is associated with volumes, price, quality and range/variety of supplied goods. This definition of SSCM practice, although directed upstream of the product chain, is also associated with the retailers’ role in proactively implementing a sustainability agenda downstream. This actively promotes sustainable consumption among various consumer groups by providing wider and better choices of sustainable alternatives, rather than reactively satisfying the limited demand of environmentally aware customers. A detailed discussion of retailers’ work associated with promoting sustainable consumption can be found in the work of Lehner (2015).

To explain and analyse the corporate choice of SSCM practices in food retailing and how it can contribute to maintaining/enhancing corporate competitiveness, the New Institutional Economics and Dynamic Capabilities theories are applied in this study. The need to conduct research in the field of SSCM on a stronger theoretical basis, and these theories in particular, has been recently highlighted (Seuring and Muller 2008, Beske 2012, Touboulic and Walker 2015). In the following sections both theoretical foundations are reviewed.

2.3 New Institutional Economics (NIE) perspective on SSCM

This section provides a brief description of the NIE paradigm, its major assumptions and the multi-level NIE framework suggested by Williamson (2000). In particular, it elaborates on how the macro- and micro-institutional levels, and the interplay between them, provide a holistic perspective for exploring the SSCM phenomenon. The section is concluded by introducing the conceptual model that bridges together the collection of appended research papers.

NIE is a rapidly growing multidisciplinary field (Klein 1999). Although the term NIE was first introduced by Williamson (1975), the roots of the NIE are found in Coase's article "The nature of the firm" (Coase 1937). NIE considers institutions as key factors that explain and influence economic behaviour and performance. Among the various views on institutions, the most general definition is

"a set of formal (laws, contracts, political systems, organisations, markets, etc.) and informal rules of conduct (norms, traditions, customs, value systems, religions, sociological trends, etc.) that facilitate coordination or govern relationships between individuals or groups" (Kherallah and Kirsten 2001, p. 3-4).

NIE contains an assumption of the 'choice within constraints' behaviour of rational economic actors. On the one hand, the corporate 'logic of instrumentality', i.e. aim to maximise profit margins and operational efficiency, is subject to constraints due to limited cognitive capabilities of decision-makers (the 'bounded rationality'). On the other hand, institutions themselves are considered as an additional constraint on behaviour of economic actors within the NIE framework (Kherallah and Kirsten 2001). According to Langlois (1986),

"the problem with many of the early institutionalists is that they wanted an economics with institutions but without theory; the problem with many neoclassicists is that they want economic theory without institutions; what the New Institutional Economics tries to do is provide an economics with both theory and institutions" (Langlois 1986, p. 5).

According to Williamson (2000), NIE operates at macro- and micro-levels. The macro-level concerns the institutional environment or field, in which economic actors, organisations and transactions are embedded. The focus of the micro-level is on the governance structure and institutional arrangements, which are referred to as the modes of managing transactions and associated forms of contracting between economic units (from 'spot markets' to 'hierarchy'). The following sections elaborate on how each of the levels, and interrelationships between them, help us to understand the SSCM phenomenon.

2.3.1 Institutional environment

In order to understand the very roots of corporate environmentalism and social responsibility, the analysis of institutional environment was found to be of particular relevance (Hoffman 2000, Campbell 2006). The institutional pressures from various entities that share and enforce the rules, such as governmental agencies, media, NGOs, industry forums/associations etc., exert demands with which organisations have to comply in order to increase their survival chances (Meyer and Rowan 1977, DiMaggio and Powell 1983, Hoffman 2000). The institutional demands define which organisational actions are viewed as appropriate/legitimate.

Scott (2001) distinguishes between three aspects of legitimacy: regulative (compliance with regulations), normative (compliance with social norms/values) and cognitive (compliance with industry standards). This is not to suggest that corporate environmental and social initiatives are determined completely externally. Rather, internal decisions to launch these initiatives are very much influenced by the nature of external conditions, which

“... through so complex a web of constituents ... transformed from something external to the market environment to something central to the core objectives of the firm” (Hoffman 2000, p. 10).

As a result of ‘rationalised’ institutional pressures (Scott 2005), food retailers are reproducing similar formal structures that do not necessarily contribute to organisational effectiveness and efficiency – a phenomenon also known as institutional ‘isomorphism’ (DiMaggio and Powell 1983, Oliver 1991). Indeed, similar developments can be observed across Western European supermarkets: an introduction of sustainable sourcing principles and programmes; development of sustainability codes of conduct that outline minimum product and process-related environmental and social criteria for suppliers; launching ethical trade initiatives and community development programs (BIO Intelligence Service 2009). Retailers also actively utilise the developed industry standards (e.g. Fairtrade and Organic labels) by incorporating sustainable products in the store’s assortment. Adoption of supply chain sustainability initiatives becomes one of the crucial elements for the Western European retailers to gain competitive advantage, create brand image and reputation, and establish customer loyalty and retention (Girod and Michael 2003, Smith 2007, Tunçer, Tyson et al. 2007).

At the same time, the formal institutions are not properly established; national governmental policies, which directly outline the role and responsibility of retailers in furthering markets of green products, are rather an exception than a rule. Jones et al. (2008) and the Sustainable Development Commission (2008)

referred to the lack of governmental leadership in supporting retailers' transition towards more sustainable practices in their supply chain operations. In particular, the following constraints have been identified: mixed and unclear messages from policy-makers regarding the areas of retailer's responsibility, lack of governmental support in giving practical guidance about what impacts should be addressed, and a lack of clear vision and action plan developed in collaboration with businesses (Sustainable Development Commission 2008). Lack of harmonisation of regulation between different countries, e.g. on matters of food safety and labelling requirements, impose further complexities and challenges to ensuring sustainability in food supply chains (Danish EPA 2010).

Institutional demands exerted on retailers are not only ambiguous, but sometimes also conflicting, making it difficult for retailers to identify the priority areas for sustainability improvements (Chkanikova, Klintman et al. 2013). Furthermore, the 'logic of appropriateness' to assume responsibility for environmental and social impacts that arise in the supply chain conflicts with the economic rationale of profit maximisation of retailers. Insufficient consumer demands for 'green' products do not justify higher supply chain costs (Smith 2007). Conformity with institutional demands to mainstream the sustainability in the retail industry might lead to undermining the retailer's competitive position in the supply chain. As a result of the tension between what is considered 'appropriate' and 'economically rational', there is a decoupling between retailers 'formal structures' (e.g. sustainable sourcing codes and programs) and actual outcomes. Despite the retailers' commitment to sustainable sourcing, the most profound sustainability impacts that occur at the stage of agricultural production is still not sufficiently addressed (European Commission 2011c, The Sustainability Consortium 2016).

Analysis of the institutional environment opens for an explanation of food retailers' sustainability initiatives in the supply chain beyond the self-interested behaviour (maximisation of profit and operational efficiency), but also as an attempt to obtain legitimacy and stability (because not adopting the sustainability strategies would be viewed as inappropriate and morally unacceptable). Such analysis also helps to reveal the ambiguities and conflicting objectives of the institutional demands, which might inhibit and delay the launch of sustainability initiatives in the supply chain, and sustainable purchasing strategies in particular.

The analysis of institutional environment is performed in Paper I. Based on Hoffman (2000), four major groups of factors that shape the sustainability agenda in the food retail industry are distinguished: regulatory, resource, market, and social forces. Each group depends on 'the type of pressure exerted' (Hoffman 2000, p. 24), namely from: national and international governments; entities associated with input of financial and material resources critical to the firm's operations; market players; and community groups.

2.3.2 Transactional governance

NIE at the micro-level provides relevant insights into the variation in corporate approaches to governance of inter-organisational relationships, which is recognised to be a ‘key avenue’ for implementing SSCM/greening a product supply (Preuss 2005, Carter and Rogers 2008, Gold, Seuring et al. 2010). In particular, the corporate practices of inter-organisational relationship management to green product supply can be conceptualised as a ‘contracting issue’ between the retailer and supplier, and examined by applying the insights from the Transaction Costs Economics (TCE) theory and power concept. TCE theory is relevant since it illuminates economically rational practices of supplier relationship management, while power concept provides insights into when procurement context is conducive for exercising influence over suppliers. The elaboration on how both logics contribute to better understanding of corporate choice of transactional governance for effective and efficient implementation of sustainable supply chain management is presented below.

2.3.2.1 Transaction costs economics (TCE)

Transaction costs do not merely involve costs of production and distribution. At a broader level, transaction costs can be viewed as a function of asset-specificity and market uncertainty. Asset-specificity depends on whether the product is supplied by general technology or requires investments of specific kind, whereas market uncertainty is connected to the notion of information asymmetry stemming from the risk of supplier’s opportunistic behaviour (Williamson 1979, Williamson 1985).

Following the suggestions provided by Williamson’s contractual schema, purchasing relationships should be governed

“in a transaction costs economizing way” (Williamson 1990, p. 13).

If transaction costs are low, the approaches to procurement should be market-based, i.e. supplier should be chosen on the basis of price. If transaction costs are high, firms have to elaborate on transactional governance structure characterised by reciprocity of inter-organisational relationships, up to non-market-based integration with suppliers, and ensure contractual safeguards. Such safeguards may take various forms, such as fines, penalties, positive incentives, and even

“introducing trading regularities which support and signal continuity intentions” (Williamson 1985, p. 186).

The existing body of research in the field of SSCM reveals that sustainability standards and associated certification schemes can be viewed as such ‘trading

regularities', which reduce transaction costs associated with greening a product supply. For example, Rosen, Beckman et al. (2002) have argued that transaction costs are reduced

“by legitimizing, simplifying, and routinizing the incorporation of environmental elements into supplier management” (Rosen, Beckman et al. 2002, p.113).

Hatanaka, Bain et al. (2005) have further ascertained that sustainability certifications help to reduce transaction costs and enable market efficiency by establishing

“an influential institutional mechanism for monitoring and enforcing standards...throughout the contemporary agrifood system” (Hatanaka, Bain et al. 2005, p. 356).

Based on the TCE theory and the notion of sustainability certification as an institutional arrangement to reduce the transaction costs of greening a product supply, the following propositions may be suggested. When a sustainability certification scheme is established on the market, the selection/deselection of suppliers based on price is a preferable option of inter-organisational relationship management. However, when sustainability certification is lacking, corporate efforts to green a product supply would imply higher transaction costs. Among these costs are: time and financial resources for developing product sustainability specifications; resources spent on supplier search, development, and monitoring of suppliers' and products' compliance with sustainability-related specifications (Rosen, Beckman et al. 2002, Kogg 2009, Pagell, Wu et al. 2010). In such a situation characterised by increased asset-specificity, collaboration with suppliers is viewed as an economically rational approach to managing purchasing relationships. In line with Williamson (2000), this is justified by the need to ensure supply availability and reduce the risk of suppliers behaving opportunistically.

2.3.2.2 Power dependency in buyer-supplier relationships

Another important variable that might influence the organisational choice of governance structure is the relational power distribution between buyer and supplier. Although the notion of power has been criticised for being a vague concept and even incompatible with market logic, a number of contributors have called for incorporating the power concept into the NIE framework (Giulio 2000, Cox 2001a), particularly when NIE is applied to investigating developments in the agricultural sector (Hubbard 1997).

Far from being conclusive, the definition of power is generally associated with firm's ability to induce changes in behaviour of another firm in order to attain a particular objective, which otherwise would not happen (Wilemon 1972).

Although researchers in the field of supply chain management and global value chain governance have started turning their attention to issues of power imbalance between trading parties (Gereffi, Humphrey et al. 2005, Caniels and Gelderman 2007), very little insight is available on how this relational power imbalance can be assessed (Gelderman and van Weele 2004, Pilbeam, Alvarez et al. 2012). One exception is the work of Cox (2001a, 2001b, 2001c). In his purchasing matrix, Cox (2001c) shows how characteristics of the purchasing context (e.g. the number of buyers and sellers, financial magnitude of transaction for each of the trading partners, availability of alternative partners and switching costs) affect the relational power structures (Figure 2).

Attributes of buyer power relative to supplier	High	BUYER DOMINANCE: <ul style="list-style-type: none"> • Few buyers/many suppliers • Buyer has high % share of total market for supplier • Supplier is highly dependent on buyer for revenue with limited alternatives • Supplier switching costs are high • Buyer switching costs are low • Buyer account is attractive to supplier • Supplier offerings are commoditised and standardised • Buyer search costs are low 	INTERDEPENDENCE: <ul style="list-style-type: none"> • Few buyers/few suppliers • Buyer has relatively high % share of total market for supplier • Supplier is highly dependent on buyer for revenue with few alternatives • Supplier switching costs are high • Buyer switching costs are high • Buyer account is attractive to supplier • Supplier offerings are not commoditised and customised • Buyer search costs are high
	Low	INDEPENDENCE: <ul style="list-style-type: none"> • Many buyers/many suppliers • Buyer has relatively low % share of total market for supplier • Supplier is not dependent on buyer for revenue and has many alternatives • Supplier switching costs are low • Buyer switching costs are low • Buyer account is not particularly attractive to supplier • Supplier offerings are commoditised and standardised • Buyer search costs are relatively low 	SUPPLIER DOMINANCE: <ul style="list-style-type: none"> • Many buyers/few suppliers • Buyer has low % share of total market for supplier • Supplier is not at all dependent on buyer for revenue and has many alternatives • Supplier switching costs are low • Buyer switching costs are high • Buyer account is not attractive to supplier • Supplier offerings are not commoditised and customised • Buyer search costs are very high
		Low	High
		Attributes of supplier power relative to buyer	

Figure 2. A framework for assessing relational power imbalance between corporate buyers and sellers.
Adapted from Cox (2011c).

The construct of relational power imbalance is of particular relevance for understanding whether the supply chain context is conducive for the corporate ability to exercise a desired influence on suppliers (Cox 2001c). In this thesis, a desired influence is associated with motivating and enabling suppliers to increase the availability of the sustainably produced food supply, whereas availability implies higher volumes, broader ranges and affordable prices of procured goods. According to Cox's power matrix (Figure 2), retailers are able to influence suppliers' sustainability performance, and engage in collaborative supplier relationships, only when supply chain context is characterised by buyer dominance or buyer-supplier interdependence. When a procurement situation is associated with supplier dominance or buyer-supplier independence, suppliers are unlikely to

“have any real incentive to undertake specific innovations for any one customer” (Cox 2001a, p. 46).

In such ‘unfavourable’ power circumstances, Cox (2001c) elaborates on a number of avenues through which buyers can augment their relative power over suppliers. These include provision of positive incentives to increase the attractiveness of buyer's account to suppliers, creation of jointly owned product differentiation, or encouraging product substitutes (Cox 2001 c).

While the power concept and attributes of relational power imbalance seem to provide relevant insights into how transactional context might affect a SSCM practice, or even ability to engage with such practice, further empirical investigation is required to understand what relationship management approaches can be pursued by food retailers under different power circumstances.

It should be noted, however, that attributes of power dependence listed by Cox, such as availability of alternative trading partners and switching costs, could also be viewed as attributes that define the magnitude of transaction costs. Furthermore, standardisation of product supply, which according to previous research reduces transaction costs associated with implementation of SSCM (Hatanaka, Bain et al. 2005, Pagell, Wu et al. 2010), may also augment the buyer's power over the supplier (Cox 2001a). However, the two perspectives of power dependence and transaction costs are not mutually exclusive. For instance, when switching opportunities are limited, development of collaborative relationships with suppliers, justified from the perspective of higher transaction costs, might not always be possible. This is because limited supplier switching opportunities can also be treated as a factor that enhances the perception of suppliers' power by the buyer, preventing partnerships being formed. Consequently, both the power dependence concept and transaction costs economics theory help to improve understanding of the corporate interpretation of the purchasing context, which in

turn affects selection of effective and efficient governance structures (i.e. relationship management practices) for greening a product supply.

2.3.2.3 Portfolios of sustainable purchasing relationships

Pagell, Wu et al. (2010) has confirmed empirically that, in order to implement sustainability in the upstream supply chain, companies reconfigure their external contractual relationships, from commodity spot markets to strategic partnerships with suppliers as the context of transaction changes (Figure 3). In particular, companies may engage in strategic partnerships with suppliers of ‘commodity’ products (which should be procured based on the market competition). They do so if stakeholder expectations towards product sustainability, and thereby importance of purchasing in terms of the threat to triple bottom line, is increasing, but supply risk is high due to information asymmetry regarding the supplier’s sustainability performance.

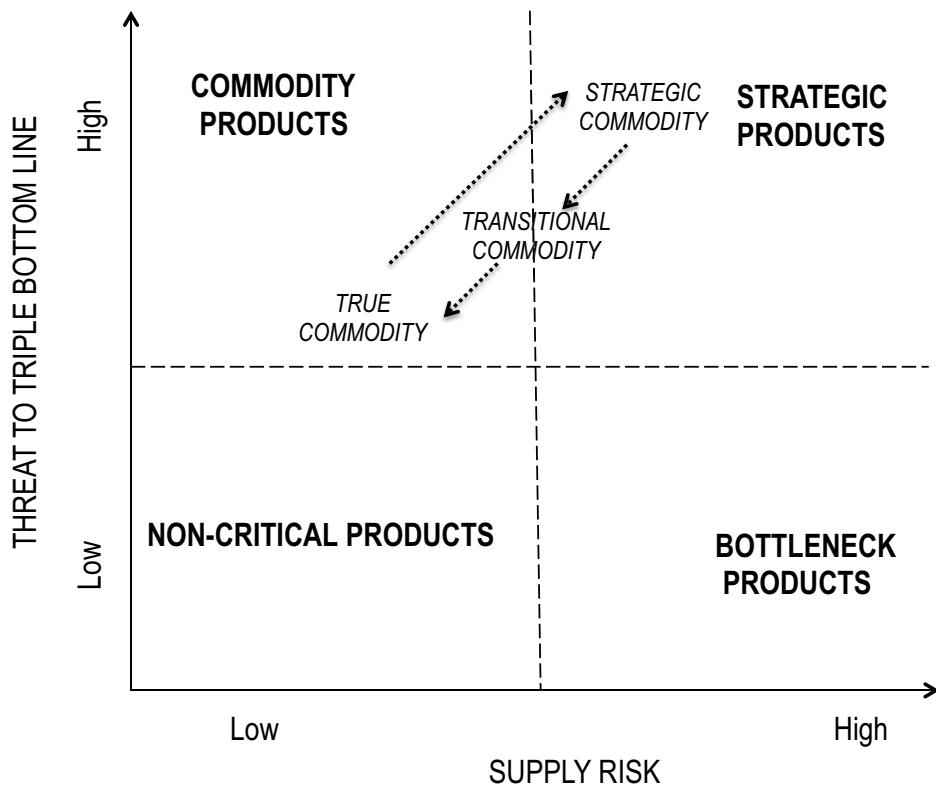


Figure 3. Sustainable purchasing portfolios. Adapted from Pagell, Wu et al. (2010)

As sustainability standards and assurance schemes become diffused on the market,

“policing and enforcement costs of insuring sustainability” decrease (Pagell, Wu et al. 2010, p. 65).

As result, a ‘strategic’ commodity eventually becomes a ‘true’ commodity (Figure 3). However, Pagell, Wu et al. (2010) have also observed that some companies have been engaged in collaborative relationships with suppliers for decades, and that such a partnership approach is not only explained by the purpose of reducing information asymmetry regarding product sustainability performance. Long-term collaboration between buyers and suppliers is also motivated by mutual benefits, such as trust and common prosperity (Pagell, Wu et al. 2010). A more detailed discussion of conceptual categories in a portfolio of sustainable purchasing relationships, proposed by Pagell, Wu et al. (2010) and depicted in Figure 3, is presented in Box 1.

The sustainable purchasing portfolios model developed by Pagell, Wu et al. (2010) supports the argument that collaboration is not always necessary for effective implementation of sustainability in the upstream supply chain. However, the model does not clearly address the underlying relationship management practices, such as how much collaboration and corporate incentives are required to improve the product sustainability performance. Pagell, Wu et al. (2010) did not account for the importance of power dependency in buyer-supplier relationships, which could inhibit the development of collaborative approaches. The question then becomes if and how buyers might exercise influence over sustainability aspects of supplied goods if there are limited collaboration opportunities combined with a lack of developed standards and systems to police compliance. The sustainable purchasing portfolios must be further refined in order to learn more about relationship management approaches that companies might adopt to implement SSCM.

Papers II and IV specifically explore the corporate practices of inter-organisational relationships management to implement SSCM. In particular, Paper II develops a typology of sustainable purchasing relationships that companies might deploy depending on the magnitude of transaction costs (reflected in corporate perception of the availability of sustainability-certified supply) and purchaser perception of power dependency on existing suppliers. Paper IV provides further insights on the impact of certification on the corporate governance approaches for implementation of SSCM. Specifically, it elaborates on factors that affect corporate decisions to implement SSCM by simply choosing to procure sustainability-certified goods, or by engaging in collaborative relationships with suppliers, even when sustainability standards and associated certification schemes are well-developed on the market.

**Box 1. Legend to conceptual categories in
Sustainable Purchasing Portfolios (Figure 3) by Pagell, Wu et al. (2010)**

Sustainable purchasing portfolios (Figure 3) was developed by Pagell, Wu et al. (2010) on the basis of the Kraljic purchasing matrix (Kraljic1983), which is widely recognised and used by corporate practitioners to optimise corporate purchasing performance. Kraljic (1983) advised basing the purchasing strategy on considerations of purchasing impact on financial performance (i.e. profit impact) and supply risk.

More specifically, the **profit impact** attributed to procurement of particular supply item is assessed "in terms of the volume purchased, percentage of total purchase cost, or impact on product quality and business growth" (Kraljic 1983, p. 112).

Supply risk is conceptualised by Kraljic (1983) very broadly in "terms of availability, number of suppliers, competitive demand, make-or-buy opportunities, and storage risks and substitution possibilities" (Kraljic 1983, p. 112). The availability issue is related to "countless economic and political disruptions" to product supply (Kraljic 1983, p. 109).

Depending on the degree of profit impact and supply risk, Kraljic's model suggests four different approaches to outsourcing strategic, bottleneck, non-critical and leverage products.

For **strategic products**, long-term and close relationships should be built up with limited number of suppliers, with focus on high level of commitment and trust. For **bottleneck products** the suggested approach is to both minimise costs and mitigate supply risks through safety stocks and inventory planning. For **non-critical inputs**, characterised by both low supply risk and financial impact, the sourcing tactics involve product selection from multiple suppliers based on price consideration. For **leverage items**, associated with high profit impact, there are multiple suppliers, with little to differentiate between, except on price and delivery arrangements. The suggested purchasing strategy for this type of product is supplier leverage on transaction-by-transaction basis to pursue cost minimisation.

In comparison to Kraljic's model, a key distinction in the model developed by Pagell, Wu et. al. (2010) depicted in Figure 3 is that profit impact has been substituted by purchasing impact on all three parameters of triple bottom line, i.e. economic (financial), environmental and social performance. In model of Pagell, Wu et al. (2010), the concept of supply risk remains very broad and is often referred to the information asymmetry regarding product sustainability performance between corporate buyers and sellers.

With regards to purchasing strategies, Pagell, Wu et al. (2010) suggested a change to the only category of commodity products, which is subdivided into strategic, transitional and true commodity. Such a change is argued to occur in the so-called transition period when a firm commits to optimising a supply chain based on the sustainability performance.

For **true commodity**, which in principal retains the characteristics of leverage products, supply risk is described as low whereas high impact exists only within one dimension of the TBL. In this case the viable purchasing strategy is to switch between suppliers of best environmental and social performance within the same price range. Commodity would be considered as **transitional commodity** in the short-term situation of information asymmetry regarding the sustainability performance of supplied products, which leads to corporate consideration of high supply risk. While supply risk is viewed as high, companies can make relationship-based investments in relation to inputs that were previously procured as commodity-type items. However, with time the supply risk is lowered, as information asymmetry decreases and a number of suppliers complied with stakeholders' sustainability demands increases. As supply risk diminishes, the procurement tactics should be changed back to the 'true commodity' strategy. "In the short term, this may be the most difficult category to manage.... Recognizing the transition will be the key to avoiding either unnecessary costs or risks" (Pagell, Wu et al. 2010, p. 69).

Treating commodity-type inputs as a **strategic commodity** (e.g. in the form of making asset-specific investments) is explained by corporate efforts to improve long-term competitive advantage by committing to product improvements on more than one TBL dimensions. Improvements on multiple TBL dimensions are distinctive features of a **strategic commodity** compared to true and transitional commodities, where differentiation is sought only on price, environmental, or social performance (Pagell, Wu et al. 2010, p. 69).

2.3.3 The practice of ‘institutional entrepreneurship’

Firms placed under institutional demands do not simply adopt a ‘conformity’ strategy and develop organisational isomorphism (i.e. reproduce organisational structure and activities). According to Oliver (1991), a firm’s strategic responses might differ if to assume

“a potential for variation in the resistance, awareness, proactiveness, influence, and self-interest of organisations” (Oliver 1991, p. 151).

This implies

“that organisational responses will vary from conforming to resistant, from passive to active, from precocious to controlling, from impotent to influential, and from habitual to opportunistic, depending on the institutional pressures toward conformity that are exerted on organisations” (Oliver 1991, p. 151).

Consequently, it is not only the institutional environment that influences the firm’s strategic behaviour. A firm might aim to reconfigure the institutional environment to better serve particular organisational needs, through a practice also known as ‘institutional entrepreneurship’ (DiMaggio 1988, Lawrence 1999, Scott 2001).

Examples of institutional entrepreneurship practices undertaken by food retailers include engagement with development of product sustainability certification schemes and launching their own eco-branded products that can bear the requirements of multiple certifications, or even exceed the criteria stipulated by the available certification schemes. By developing private sustainability certification schemes and eco-brands, food retailers are setting a new regulatory framework for governing standards and quality (Burch and Lawrence 2005), reconfiguring the demands of the institutional environment and adjusting it to their own needs.

In this thesis, retailer engagement with development of third-party sustainability certification schemes (Paper V) and launching their own eco-branded products (Paper III) is conceptualised as a practice of institutional entrepreneurship. In particular, retailer-driven third-party certification schemes and private eco-brands emerge when existing institutional arrangements for managing inter-firm transactions (micro-institutional level) do not allow retail organisations to effectively and efficiently respond to institutional demands for greening product chains (macro-institutional level). These novel market institutions help resolve the tensions that arise at and between macro- and micro-institutional levels. The development of these novel institutions might increase transaction costs associated with implementation of sustainable purchasing/SSCM, but the expected benefits

(e.g. higher economic rents and reputational gains) override the costs associated with their development.

2.4 Summary of the NIE insights on the SSCM phenomenon: conceptual model

Adopting the NIE perspective to exploring the corporate practices of SSCM permits the consideration of the two conflicting, but equally important rationales of food retailers' operations. Retailers need to conform with institutional demands for greening product chains (the logic of appropriateness), while at least retaining a competitive position in the supply chain and at best increasing the value appropriation from associated SSCM strategies (economic-rational logic). According to the NIE multi-level framework, the way in which food retailers should approach the reconciliation of these two rationales in practicing SSCM depends on the macro- and micro-institutional contexts.

In the following section, we introduce the conceptual model (Figure 4), which is based on the summary of the NIE insights on the SSCM phenomenon. This model envisages and explains the variation in corporate SSCM practices. In particular, it explicates the conditions at the macro- and micro-institutional levels that affect the retailers' approaches to optimising their supply chains on the basis of sustainability performance. This in turn provides an avenue for moving the existing research in the field of SSCM towards greater theorisation, away from simple inventory and abstract conceptualisation of sustainable supply chain initiatives, including preoccupation with supplier collaboration as better way to greening a product supply.

The macro-level of the conceptual model sheds light on the retailer's external environment, which is either conducive or constraining for launching sustainability initiatives in the supply chain, and SSCM strategies in particular. The micro-level of the model specifically focuses on issues of managing inter-organisational (contractual) relationships, which in turn are recognised to be a key avenue for implementation of SSCM. The macro-level analysis forms the basis of Paper I, while Paper II considers the micro-level analysis.

Assuming the interplay between the macro- and micro-institutional levels helps to reveal how the 'rules of the game', which are established at national and international levels, are 'played' in the contractual relationships between retailers and their suppliers. Institutional gaps at macro-level (e.g. insufficiently defined player responsibilities, underdevelopment of certification schemes, 'thin' or 'absent' markets of sustainably certified products, and lack of certification bodies

in developing countries) might complicate the governance of sustainability aspects at the transactional (micro-institutional) level.

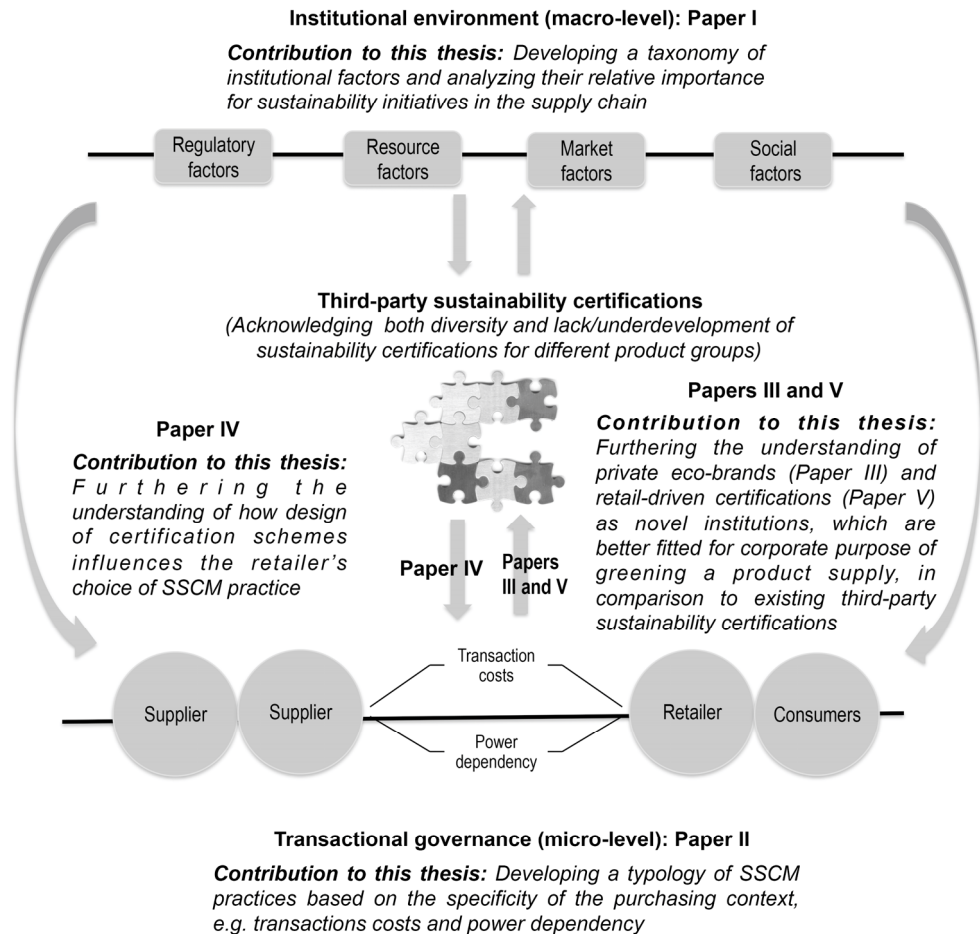


Figure 4. Conceptual model for analysis of SSCM practices in the food retailing.
 Compiled by author.

The major focus of the conceptual model (Figure 4) for analysing the interplay between micro- and macro-institutional levels is on the role of the third-party sustainability certification schemes. These schemes can be viewed as a source of regulatory, normative and cognitive legitimacy, and thereby classified as belonging to the institutional environment (macro-level). Their adoption by retailers signals their conformity to institutional demands, and grants retailers ‘license to operate’. At the same time, third-party sustainability certification

schemes have been conceptualised by previous researchers as institutions that facilitate coordination of sustainability issues in retailer's transactions with suppliers, so can be classified as belonging to the micro-institutional level. Therefore, the certification schemes are positioned between the two levels in the conceptual model. The particular research focus on the role of sustainability certification in influencing the corporate practice of SSCM also relates to research objectives outlined in the introductory chapter of this thesis.

In Paper II, SSCM is conceptualised as the 'contracting issue', and insights from the TCE theory and power dependency concepts are applied to reveal the differences in corporate practice in exercising influence over sustainability performance of supplied products and supplier operations. The availability of the sustainably certified product supply is viewed in Paper II as a parameter that reflects the magnitude of the transaction costs. This factors in the role of the certification schemes in influencing the SSCM practice.

By analysing the transactional governance associated with SSCM in Paper II, we follow the suggestion by Cox (1996) on how firms should arrange their relational contracts with suppliers. In line with Cox's argument (1996), relational contracts with suppliers should be 'fit for purpose', i.e. aligned with specific market (macro-level) and inter-firm purchasing circumstances (micro-level). This implies that corporate approaches to SSCM should not simply be based on the rationale to reduce transaction costs, as suggested by Williamson (1985, 1990). Instead, if a transaction is particularly important to a firm's competitive advantage on the market, companies might intentionally increase the existing transaction costs, particularly if expected benefits (e.g. economic or reputational assets) in the long run override the gains associated with utilising existing institutional arrangements¹².

Paper IV also concerns the micro-level analysis and considers in more detail how third-party sustainability certification schemes affect the transactional governance in order to influence environmental and social responsibility upstream in the supply chain. Other factors are considered that might affect the corporate choice of inter-organisational relationship management to implement SSCM. These other factors relate to why retailers adopt the certification scheme, but also to aspects associated with the design of the certification scheme, such as market coverage, scope of requirements, and services provided to motivate, enable and control supplier compliance with the certification requirements.

¹² Here, institutional arrangements refer to both modes of governing inter-firm transactions (from 'spot markets' to 'hierarchy') and associated institutions, e.g. existing third-party sustainability certification schemes.

Viewing macro- and micro-levels of the conceptual models as interrelated also helps us explain the practice of institutional entrepreneurship as part of the food retailers' SSCM strategies. Although we do not delve into specific insights offered by the institutional entrepreneurship theory, this perspective appeared to be useful for conceptualising retailers' eco-brands and retail-driven sustainability certifications schemes as novel market institutions. Such institutions help food retailers resolve the tension between the 'logic of instrumentality' and the 'logic of appropriateness' in the light of the imminent challenge to optimise the supply chain on the basis of the sustainability performance. Papers III and V particularly explore the issues of how these novel market institutions motivate and enable food retailers to engage with the practice of SSCM. It is shown how novel institutions developed by food retailers better cater to corporate needs and challenges associated with greening a product supply, in comparison to existing third-party sustainability certification schemes.

Although Dynamic Capabilities (DC) theory was not considered at the outset of the research inquiry, results of this study (specifically Papers III and V, concerned with entrepreneurial SSCM practices of developing private eco-brands and alternative certifications) are consistent with elements outlined in the dynamic capabilities (DC) theory. A brief review of the DC theory is presented below, including its compatibility with NIE theory, adopted as an overarching framework to this thesis. DC theory further contributes to understanding of the corporate choice of entrepreneurial SSCM practices. Firms are interested in developing novel institutions since, besides reconciling the logic of appropriateness and rationality (through aligning TCs with institutional conditions at micro- and macro-levels), it affords opportunities for development of dynamic capabilities and a sustained competitive advantage.

2.5 Dynamic capabilities (DCs) in SSCM

When used to generate a sustained competitive advantage, SSCM practice becomes an issue of strategic management. According to Barney (1991):

“A firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy” (Barney 1991, p. 102).

In line with NIE framework and associated institutional entrepreneurship logic, firms will attempt to develop and adopt SSCM practices that would reconcile the competing logics of instrumentality and appropriateness. This reconciliation,

necessary in order to retain or create an additional competitive advantage, is supported by several salient theoretical perspectives described below.

Theories that explore and explain the sources of sustained competitive advantage are the Resource Based View (RBV) (Barney 1991) and the Dynamic Capabilities (DC) theories (Teece, Pisano et al. 1997). Both are compatible with fundamental NIE logic of instrumentality and suggest that firms can develop enduring advantages only through efficiency improvements. In NIE, corporate efficiency stems from TC optimisation and the

“ability to assemble competences using markets” (Teece, Pisano et al. 1997, p. 517).

RBV and DC perspectives emphasise the role of firm-specific resources, capabilities and competences that

“cannot be readily assembled through markets” (Teece, Pisano et al. 1997, p. 517).

These scarce resources, unique expertise, skills, and capabilities found inside an organisation and difficult for competitors to imitate, are viewed as major determinants of a firm’s performance (e.g. markedly lower costs or markedly higher product quality/performance) and a source of economic rents (Barney 1991, Teece, Pisano et al. 1997)

DC theory builds on and expands the static RBV perspective. More specifically, in comparison to RBV, DC theory acknowledges the rapid changes in the business environment and assigns strategic importance to organisational and managerial processes, which allow timely renewal of corporate skills, resources, and competences to meet the requirements of a changing business environment. Dynamic capabilities are defined by Teece, Pisano et al. (1997) as a

“firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments” (Teece, Pisano et al. 1997, p. 516).

The RBV suggests the presence of isolating mechanisms that allow a competitive advantage and entrepreneurial rents to be sustained. In this regard, the DC framework further complements the RBV perspective by identifying

“the foundations upon which distinctive and difficult-to-replicate advantages can be built, maintained and enhanced” (Teece, Pisano et al. 1997, p. 516).

In particular, the DC framework suggests that the content of organisational and managerial processes, which afford opportunities for developing competitive advantage at particular point in time,

“are shaped significantly by the assets the firm possesses (internal and market) and by the evolutionary path it has adopted/inherited. Hence, the organisational processes, shaped by the firm’s asset positions and molded in its evolutionary and co-evolutionary paths explain the essence of the firm’s dynamic capabilities and its competitive advantage” (Teece, Pisano et al. 1997, p. 518).

While particular focus is given to firm’s assets/positions that are not easily available through the market, not all of them are entirely firm-specific. However, their unique combination, accompanied by the path dependencies, which lead to such a combination, result in DCs that are difficult to replicate and imitate (Figure 5). Replication and imitation are especially difficult when the tacit component of knowledge and procedures is high.

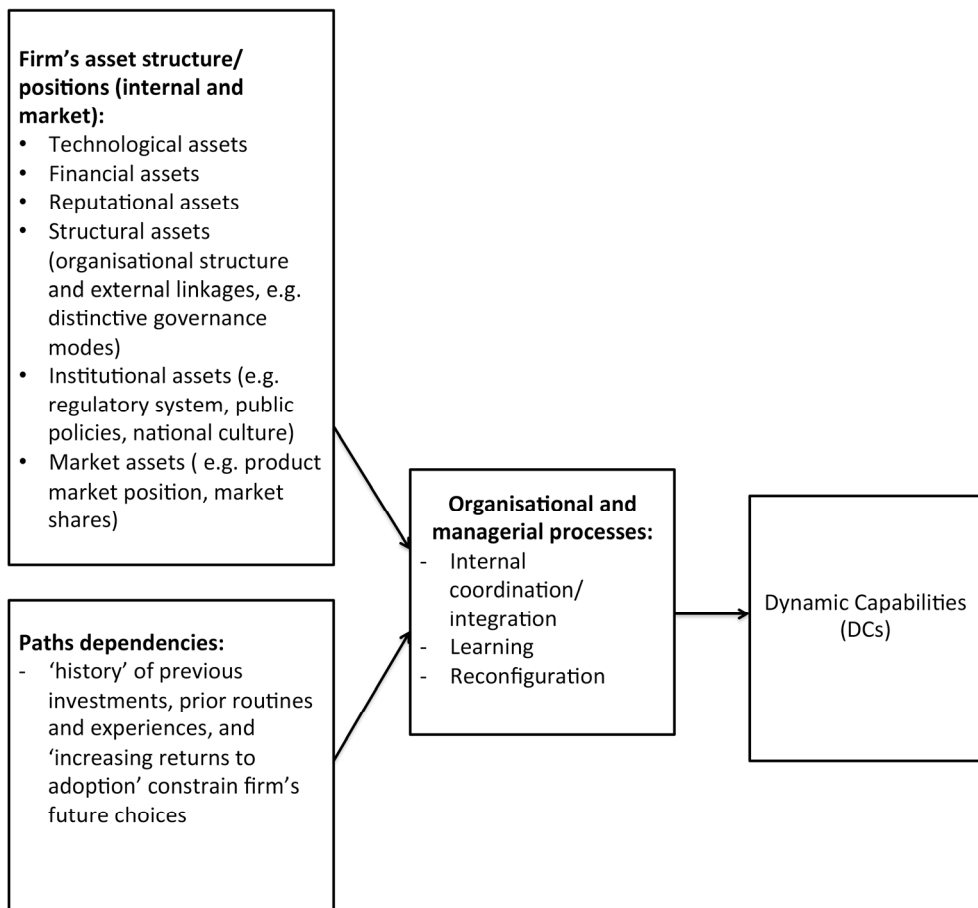


Figure 5. Sources of DCs.
Based on Teece, Pisano et al. (1997).

While acknowledging the importance of aligning firm-specific resources, skills and capabilities with requirements of institutional environment to attain a sustained competitive advantage, Teece, Pisano et al. (1997) do not consider that DCs can be embedded in routines and processes that span organisational boundaries. Assuming that inter-organisational resources, processes and procedures might represent a source of DCs becomes particularly relevant in the era of dynamic supply chains. Here we find support for a firm's competitive advantage being linked to the performance of its supply chain (Gold, Seuring et al. 2010). Assuming supply chain dynamics and competition at supply chain level, Defee and Fugate (2010) suggest a theoretical model of cross-organisational capabilities and two specific types of dynamic supply chain capabilities (DSCCs) – knowledge accessing and co-evolving.

The DSCCs framework has been further extended by Beske (2012) through integration of DCs and SSCM practices (Figure 6), with early empirical investigation of its relevance in the context of food industry¹³ (Beske, Land et al. 2014). Besides 'knowledge accessing' and 'co-evolving', the framework by Beske, Land et al. (2014) puts forward additional explicit DCs embedded in and enacted through the (bundle of) SSCM practices (Figure 6). In the following, each of the DCs mentioned in the framework by Beske, Land et al. (2014) is defined:

1) *SC (Supply Chain)–Re-Conceptualisation* is associated with inclusion of new partners, e.g. NGOs and local communities, that are not directly included in the supply chain operations, but can contribute with relevant (e.g. local and tacit) knowledge.

2) *Partner Development* encompasses capabilities for developing SC partners to be able perform their purposes, e.g. supplying products that meet stakeholder requirements for sustainability.

3) *Knowledge Management* consists of practices of knowledge accessing, assessment (which enables knowledge understanding) and, if necessary, acquisition. However, Defee and Fugate (2010) argued that knowledge acquisition is likely to reduce the overall efficiency of SC relationships, and that knowledge accessing capability

“makes the supply chain more efficient and ensures the strength of each partner can be brought to bear on issues that partner is best prepared to handle. Each firm can

¹³ The food industry appears to be a suitable terrain for investigating DCs in SSCM, since it is characterised by a dynamic and turbulent business environment, including diverse and changing stakeholder expectations with regards to sustainability of food products and related production processes. A review of existing literature and its context analysis served as a basis for early empirical investigation of the suitability of the proposed framework (Beske, Land et al. 2014).

focus its attention on continuing to improve their own static capabilities, while also realizing the benefits of partner’s capabilities” (Defee and Fugate 2010, p. 190).

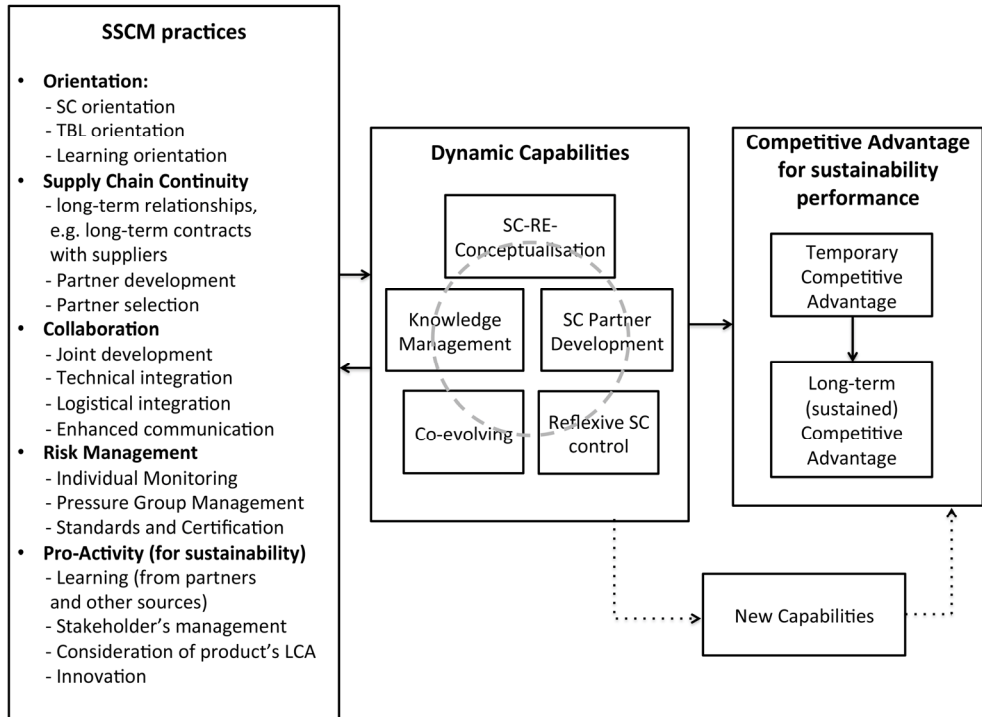


Figure 6. Framework of DCs in SSCM.
Based on Beske (2012) and Beske, Land et al. (2014)

4) *Co-Evolving* capability is conceptualised by Beske, Land et al. (2014) on the basis of previous definitions as

“a dynamic capability used by a firm to reconnect webs of collaborations among multiple members of the supply chain for the purpose of generating novel capabilities” (Defee and Fugate 2010, p. 191).

Learning orientation is considered of particular relevance for ‘co-evolving’, associated with re-configuration of obsolete capabilities and development of novel ones.

5) *Reflexive control* embeds resources and capabilities, which allow a firm

“to constantly check and evaluate their business practices and strategy against the requirements of the business environment to maintain its functionality” (Beske, Land et al. 2014, p. 134).

As a learning orientation, reflexive control is a necessary prerequisite for co-evolving associated with generation of new capabilities to ensure that SC competences match the fast changing requirements of the business environment.

The argument that DCs and sources of competitive advantage are embedded in the inter-firm relational processes further amplifies the role of collaboration in sustainable supply chain management (Gold, Seuring et al. 2010). Both Defee and Fugate (2010), and Beske, Land et al. (2014) highlighted the need for SC orientation, where supply chain members need to adopt a culture of working “as a systemic whole” (Defee and Fugate 2010, p. 192). A framework developed by Beske, Land et al. (2014) through integration of DCs and SSCM practices identified in previous research, further emphasises the need for collaborative relationship management practices to establish DCs in a supply chain (Figure 6).

The framework of DCs in SSCM (Figure 6) will be utilised to analyse entrepreneurial SSCM practices to reveal whether development of private eco-brands and alternative certification schemes enable the creation of DCs, which are viewed as a source of a competitive advantage.

3 Research methodology

“(I)t is somehow ironic that sustainability researchers frequently encounter criticism because their research is intentional, value-based and driven by desire to contribute to a better world. They are advised by colleagues that ‘good research’ is objective, value-free and dispassionate” (Franklin and Blyton 2011, p. 27).

This chapter positions this study at the junction of multiple scientific disciplines and justifies its adherence to the cluster of ‘user-oriented research for sustainable development’. The meta-theoretical assumptions of the author are made explicit, including clarifications of how ontological and epistemological views are reflected in the way this research inquiry has been undertaken. Overall research design is presented, including clarification of the main techniques employed for data collection and analysis. The chapter concludes with a discussion on the validity and generalisability of the research results.

3.1 User-oriented research for sustainable development

Research conducted in this thesis is placed at the intersection between the domains of sustainability and purchasing management. The research also engages insights from the NIE framework and broader field of institutional analysis, as the main theoretical underpinnings and overarching conceptual model. Researchers in these fields borrow liberally from different theories and employ a variety of research techniques to explore the inter-related phenomena (Ramsay 1998, Kherallah and Kirsten 2001, Wolf 2008). Such pluralism might be viewed as problematic by the traditional basic research, which lies within particular disciplinary boundaries, follows rigid meta-theoretical considerations, and aims to generate system-based knowledge (Hirsch Hadorn, Hoffmann-Riem et al. 2008).

At the same time, academic inquiry conducted within the frames of this thesis can be also framed as intentional and user-oriented research for sustainable development. Intentional in the way that it aims to contribute to transformation of current unsustainable patterns of production and consumption in sustainable ones. User-oriented as it focuses on providing corporate practitioners and policy makers

involved in governing product-related sustainability issues with applied knowledge. This knowledge pertains to how sustainability performance of the food supply chains can be improved through the effective and efficient practice of managing supplier relationships.

Intentional, user-oriented research seems to be a necessary avenue for academic inquiry when dealing with the sustainability-related challenges, which can be described as real-life complex problems of a persistent nature. This is not to suggest that basic research concerned with generation of system knowledge is not relevant for sustainable development (UNESCO 2014). However, the common mismatch between scientific knowledge production and problems experienced by users (stakeholders) in the real-life context delays the implementation of improvements necessary to avert imminent environmental and social degradation (Hirsch Hadorn, Hoffmann-Riem et al. 2008).

Dealing with real-life complex sustainability challenges, which are deeply rooted in existing societal practices and are not simply theory driven, further requires inter- and trans-discipline approaches. No single discipline can provide exhaustive answers and solutions to sustainability challenges (Max-Neef 2005, Shrivastava, Silvester et al. 2013). Ecological and social systems are open, reflexive and behave in non-linear way, so the traditional linear logic employed by basic uni-disciplinary science is not sufficient to understand and resolve the sustainability challenges (Max-Neef 2005, Rockström, Steffen et al. 2009).

The applied, inter-disciplinary approach to scientific inquiry undertaken in this thesis has its strength in generating context-dependent and user-specific knowledge, which is more likely to support necessary societal transformation to higher levels of sustainability performance. However, such research for ‘sustainable development’, while laying

“the foundation for new approaches, solutions and technologies to identify, clarify and tackle global challenges for the future” (UNESCO 2014, p. 3),

is associated with new ways of scientific knowledge production and might invoke a number of contradictions with traditional indicators of scientific quality, such as e.g. ‘objectivity’, ‘value-neutrality’ and generalisation.

In the following section, the author’s meta-theoretical considerations are made explicit. In particular, how philosophical assumptions address such contradictions is explicated.

3.2 Meta-theoretical considerations

The dominant meta-theoretical considerations applied by the author in this study are presented. This has implications for how the research was designed and how results of the study can be interpreted (Ramsay 1998).

Meta-theoretical considerations or research positioning within scientific theory reflects the researcher's assumptions in terms of ontology and epistemology. The former refers to the nature of beings, namely what type(s) of reality exist(s). The latter is associated with the very foundation of knowledge and sets forth the relationship between the knower and the known, in other words between the researcher and the phenomenon under investigation.

In general, the author of this thesis shares the ontological and epistemological views expressed by scholars who engage with transdisciplinary and sustainability research, such as Nicolescu (2002), Max-Neef (2005) and Shrivastava, Silvester et al. (2013). According to these scholars, reality embodies multiple levels (not only physical, but also social, emotional and spiritual etc.), each guided by different types of logic, amalgamation of which is not possible under a single traditional meta-physical formula. From an epistemological perspective, the author also agrees with these scholars that understanding sustainability challenges requires different types of knowledge.

This study is primarily concerned with the notion of practical or experienced reality, as defined by the title and research objectives of this thesis. In addition to advancing the scientific understanding of the SSCM phenomenon, this study is also guided by the quest for applied, user-oriented knowledge that can support corporate practitioners in optimising their supply chains on the basis of the sustainability performance. Based on this, this study could be best referred to as being conducted within the tradition of *pragmatic instrumental philosophy*, a research methodology dominant in the literature of American institutionalists in the 19th century (Bush 1993). Pragmatism, as a philosophical perspective, emphasises the practical function of knowledge. Rather than favouring scientific knowledge production for its own sake, and valuing knowledge for its accurate representation of reality, knowledge is viewed by pragmatists as an instrument for solving problems and aiding human actions (Bush 1993).

Pragmatic instrumental philosophy redefines the relationships between the reality and cognition (Joas 1993). Specifically, it rejects the metaphysical premises of traditional epistemological industry of positivism that separates

“knowing from doing, subject from object, fact from value, and theory from practice” (Bush 1993, p. 65).

Furthermore, the very purpose of the academic inquiry for the pragmatists is to critically revise the relationships between the two with purpose to adapt to, control and change existential circumstances (Busch 1993).

As pragmatism is not a coherent meta-theory, and includes diverse and at times conflicting philosophical standpoints, it is relevant to clarify which tenets of pragmatism this particular study embraces. However, by being explicitly instrumentalistic and action-oriented, pragmatists themselves are not very concerned with expressing

“certainties based on some philosophy of history, or theory of Reason, and did not regard the end of these certainties as a cause for desperation” (Joas 1993, p. 1).

In line with the pragmatic *ontological position*, the author acknowledges that the real world exists but it is difficult to fully and objectively grasp due to its complexity. The existing world

“is not in its primary phases a world that is known, a world that is understood, and is intellectually coherent and secure... Knowledge then does not encompass the world as a whole. But the fact that it is not coextensive with experienced existence is no defect nor failure on its part” (Boydston 1984, p. 229).

The logic of experienced existence, to which the author of this thesis ascribes, implies that objects or ‘indeterminate situations’¹⁴ acquire meanings through interactions with humans, who define them in practice. This further entails that reality is context dependent and apprehended a-posteriori, rather than given a-priori. Pragmatism further adopts the ontology process, where reality is also viewed as dynamic and changing, rather than being static and fixed. The purpose of the inquiry does not lie in the acquisition of the fixed and immutable universal truths. Instead, truths are modified in the course of inquiry(-ies) and are relative to time, place and research purpose. To be appraised as true, knowledge has to possess instrumental capacity to aid in resolving problematic situations (Joas 1993, Bush 1993). As one of the founders of pragmatism, John Dewey himself preferred to use the word ‘warranted assertions’ instead of ‘knowledge’ (Boydston 1984), so as

“to emphasize the idea that inquiry is an ongoing process”, and that “there is no belief so settled as not to be exposed to further inquiry” (Bush 1993, p. 64).

¹⁴ According to John Dewey, one of the founders of pragmatic instrumental philosophy, an ‘indeterminate situation’ is a precognitive one and allows us, as humans, to develop a sensed awareness of the real-life problems that need to be resolved (Boydston 1984).

Let us now draw the parallel between this ontological view of pragmatic instrumental philosophy and the way in which research inquiry has been undertaken in this thesis. Negative sustainability consequences that are reflected in real changes of physical and biological environment and sensed by humans as ‘wrong’ are regarded as an ‘indeterminate situation’. However, the problematic situation addressed by this thesis, although derived from the need to resolve this ‘indeterminate situation’, does not define itself in a precognitive way. Instead, research objectives stem from how the problems are conceptualised in existing practices of supply chain management, but also research of this practice and related theories.

This thesis follows the pragmatic ontology as it studies experienced reality engrained in practices of corporate practitioners. The ultimate aim of this research inquiry is to provide knowledge that does not simply explain SSCM phenomena but also aids practitioners in governing sustainability issues and implementing sustainability improvements in their supply chains. Generation of instrumental knowledge relevant from the practitioners’ perspective¹⁵ will contribute to tackling the real-life sustainability challenges, associated with unsustainable food production and consumption, and observed in the degradation of physical and biological environment, and deterioration of social livelihoods.

This study develops the dynamic, context-dependent perspective on the practice of SSCM, and thus ascribes to the process context-dependent ontology of pragmatic instrumental philosophy. Specifically, it does so by acknowledging how the macro- and micro-institutional context and changes in this context, both over time¹⁶ and across two product categories, may affect the corporate choice of SSCM practice (as a result of corporate practitioners experiencing, perceiving and interpreting this context in daily operations).

With regards to *epistemology*, in line with pragmatism, this thesis acknowledges that real-world phenomena can be categorized into cause and effects, and that this causal relationships between constituent elements can and should be studied (Holden and Lynch 2004). This is in contrast to anti-positivism (radical constructivism), which views categorisation of phenomena into cause and effect as pointless (Hirschman 1986). In that sense, the collection of research papers holistically investigates the casual relationships between the characteristics of macro- and micro-context on the one hand, and the corporate choice of SSCM

¹⁵ Such as providing solutions that can help food retailers to turn the supply chain context from prohibiting to conducive for proactive development of green supply.

¹⁶ Although some changes in corporate interpretation of the stakeholder and supply chain context over time are acknowledged, namely in Paper V (by adopting political-institutional logic), this study does not take a longitudinal perspective, nor does it provide a systematic overview of historical changes in supply chain management practice and associated institutions.

practice, on the other. However, these relationships are viewed in pragmatism as probabilistic ('imperfectly known'), rather than deterministic in positivistic science. In line with the epistemological view of pragmatism, relationships between contextual factors and corporate choice of SSCM practice are affected by the system of author's beliefs, including a choice of selected theories to explore and explain observed dependencies. In Dewey's pragmatism, theory is ascribed an important role to navigate among the myriads of facts in the course of observation. A-priori determined theoretical assumptions help to select the evidence that is relevant for the specific research case and to guide the development of factual propositions (Boydston 1984, Bush 1993).

For identifying dependencies between institutional settings and SSCM practice, semi-structured interviews served as a primary source of the empirical evidence. This is also justified from the perspective of pragmatic instrumental philosophy, according to which the reality can be only known or recreated through dialogue with practitioners, who define the meaning of contextual reality in daily practice. Interviews conducted in this study are described in subsection 3.3.2.

In line with pragmatic instrumental philosophy and research for sustainable development, this study is not values-free, and so can be described as normative (Bush 1993). It is normative as it aims to produce knowledge that directs our actions in a 'desired' direction, and what is 'desired' is embedded in values shared by researchers and studied practitioners who are born into pre-structured societies. To aid problem-solving, the research has to take into consideration the values and beliefs of corporate practitioners, which are formed in the process of choosing the practice of SSCM to attain the end, which is worth, i.e. to enhance the sustainability performance of the supply chain and increase availability¹⁷ of the sustainably produced products in the retailer's assortment. According to Dewey's pragmatic philosophy (Boydston 1984), such values do not impair research objectivity. Biases and subjectivity occur when values and judgments of value

“are not determined in and by the process of inquiry” (Bush 1993, p. 86).

¹⁷ Availability refers to volumes, but also price and range of sustainably produced goods

3.3 Research design

3.3.1 Case study as an overarching research strategy

An overarching approach to the research design is based on the qualitative case study methodology, although not each of the papers explicitly state the use of this method in the methodology section. Nevertheless, each of the papers, as illustrated in the conceptual framework (Figure 4), contributes to the holistic investigation of the contemporary SSCM phenomenon within its real-world complex context and from different analytical levels (Yin 2009). The contemporary SSCM phenomenon, defined here as *corporate practice of managing inter-organisational (i.e. supplier) relationships to green a product supply*, represents a ‘case’ at the aggregate level of this study.

Case study research methodology appears to be appropriate due to the kind of research question that this study aims to address (i.e. how companies manage supplier relationships to green a supply chain), but also because the boundaries between the contemporary SSCM phenomenon and its contextual conditions are not clearly evident (Yin 2009). In other words,

“investigating ongoing business operations does not allow conditions to be controlled or variables to be manipulated (that is, “treatments” to be performed) to affect outcomes” (McCutcheon and Meredith 1993, p. 240).

Case study research allows us to perform a detailed investigation of the contextual conditions that are integral to understanding the case, not by controlling, but by observing a multitude of the variables and interactions between them (Dooley 2002).

This research is also guided by the quest for applied, user-oriented knowledge. In this regard,

“... case study research provides an excellent platform to nurture the research-practitioner partnership” (Dooley 2002, p.351-352)

by generating practical knowledge and relevant theories that serve as a basis for well-informed decision-making by managers and policy-makers.

This research mainly focuses on two product groups, which can be described as subcases - coffee, and fresh fruits and vegetables. The rationale for sampling these two subcases is also based on two out of three criteria offered by Pettigrew (1990) for case selection. First, these cases are polar cases as they account for different structure and power regimes in the supply chain (producer-driven vs. buyer-

driven). This, in theory, should impact the corporate choice of managerial means to exercise influence over the supply chain sustainability performance, and should also show how patterns of SSCM practice differ from one case to the other. The second criterion is that these cases are associated with high experience levels for food retailers, since both of them have a long history of sustainability movements, such as Organic and Fairtrade. Both of these movements originated outside the food retailing industry, but have penetrated food retailer operations as sustainability discourse has moved into mainstream.

Each of the appended papers aims to contribute to holistic understanding of our main case – a SSCM phenomenon. In doing so, each of the papers has its own analytical focus on constituent elements of the SSCM practice, namely *modes of managing supplier transactions* and *associated institutional arrangements* (in the form of third-party sustainability certification schemes and private eco-brands) to green a product supply. In particular, the analytical focus of Papers II and IV is on modes of managing supplier transactions to influence and ensure the adherence of food products to sustainability criteria as required by salient stakeholders. Paper III provides insights into the role of eco-branding in affecting retailers' willingness and ability to engage with greening a product supply. Paper V explores corporate reasoning on engaging with design of novel certification schemes for greening a product supply. Paper I focuses on the corporate institutional field. In discussing the state of institutional demands for SSCM, Paper I does not specifically focus on product groups of fresh fruits and vegetables, and coffee. Instead, it aims to provide a systematic overview of a variety of institutional forces that drive food retailers' actions towards/away from SSCM. The corporate institutional field has important implications for the nature of institutional arrangements between retailer and supplier, so affects the retailer's choice of SSCM practice.

The research design at the overarching level can be best described as a multiple embedded case study (Figure 7), according to basic types of case study research designs described by Yin (2009). Multiple, as it investigates the contemporary phenomenon of SSCM in two product groups referred to as subcases, each characterised by a different supply chain context. Embedded, as each subcase includes a number of studies (i.e. papers), with analytical focus on various constituent elements of SSCM practices (modes of managing transactions and associated institutional arrangements in form of third-party certification schemes and private eco-brands). The primary unit of analysis is business corporation, since SSCM practice have been investigated among Swedish and Western European food retailers. In Paper V, an additional unit of analysis is certification schemes.

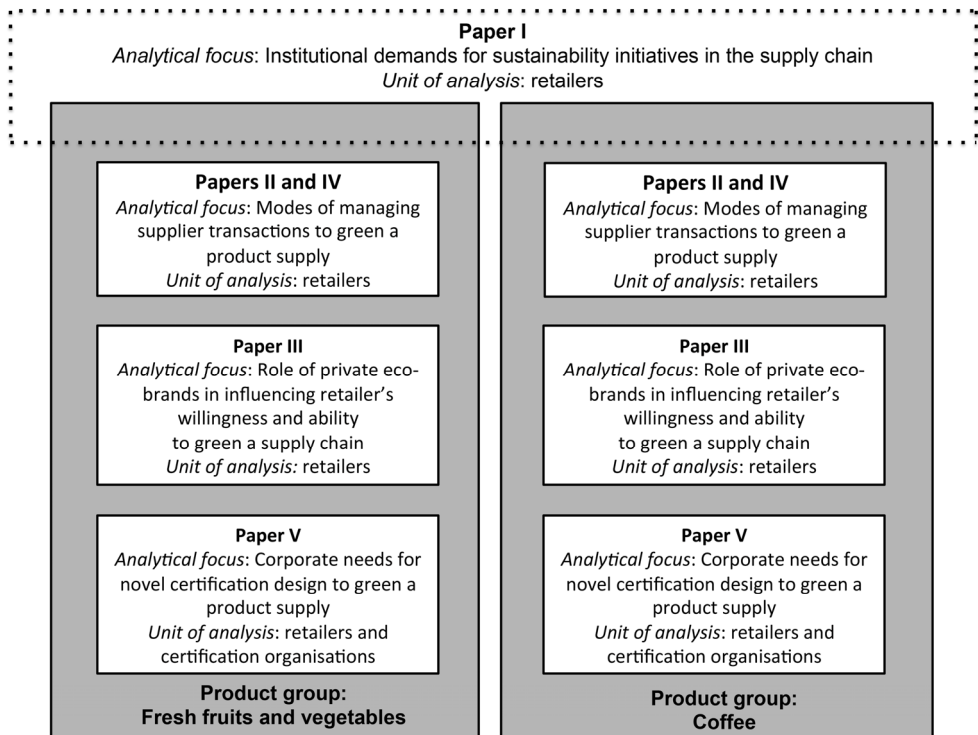


Figure 7. Multiple embedded case study as an overarching research design for exploring the major case of SSCM practice.
 Compiled by author.

Besides the opportunity to obtain a holistic understanding of the SSCM practice by in-depth investigation of different constituent elements of this complex real-life phenomenon, the multiple embedded case study design offers opportunities to further theory formulation in the field of SSCM research, which has been recognised as being at an ‘inadequate’ level (Pagell, Wu et al. 2010, Touboulic and Walker 2015).

According to Eisenhardt and Graebner (2007), inclusion of polar cases (represented by two product groups) are particularly important for the theory building, as it allows for

“clear pattern recognition of the central constructs, relationships, and logic of the focal phenomenon” (Eisenhardt and Graebner 2007, p. 27).

In a similar vein, McCutcheon and Meredith (1993) have argued that

“... commonalities and differences across the varied settings help to outline the patterns upon which to develop theory” (McCutcheon and Meredith 1993, p. 243).

The multiple embedded case-study design therefore offers opportunities for theory formulation, in line with the aim of this thesis to further academic and practitioners' knowledge regarding SSCM practices.

Although this type of research would benefit from the inclusion of more than two subcases (e.g. in terms of greater generalisability), it should be remembered that case study research is rich in data and so might lead to the generation of complex theories that are difficult to comprehend and apply in practice (Eisenhardt 1989, Yin 2009). The use of two polar types of subcases, with embedded studies of SSCM practice across multiple food retailing companies, appears to be a suitable approach for devising the links between the supply chain and broader institutional contexts on the one hand, and the selected SSCM practice on the other.

The inability to include more subcases (i.e. product groups) and units of analysis (i.e. retailers and certification schemes) was also associated with the type of business on which this research focuses. Food retailers operate in highly turbulent and competitive product markets, and some of the contacted firms either never replied or declined interviews on the grounds of lack of time due to other business priorities. Some of the contacted retailers mentioned their inability to disclose information because of business privacy. This includes signing confidentiality agreements with suppliers and certification organisations (if retailer's representatives participated in the standard committee meetings where decisions on certification design were made).

Case study research, by being an interpretative approach to understanding and explaining the collected data (Meredith 1998), is compatible with the logic of pragmatic instrumental philosophy adopted as the meta-theoretical foundation of this thesis. In case study research, the understanding about phenomena is constructed through

“the framework of assumptions, beliefs, and perspectives specified by the researcher” (Meredith 1998, p. 443).

In line with both pragmatic instrumental philosophy and case study research approach, this perceptual framework is specified by the author of this thesis through interviews with corporate practitioners, but is also based on a-priori selected theories. These theories guide the selection of variables to observe and suggest possible explanations for how these variables and observed interactions between them affect the studied outcome, i.e. the corporate choice of SSCM practice.

The following section describes in more detail the techniques employed in data collection and analysis across the collection of appended papers.

3.3.2 Techniques for data collection and analysis

The main methods for data collection include *literature review* and *interviews*. Although not explicitly mentioned in the papers, the author's understanding of the SSCM phenomenon was also shaped by *participants' observations* and *short informal communications* with corporate practitioners and researchers at a number of conferences, workshops, and one focus group discussion. A more detailed summary of the employed methods for data collection and analysis is presented below. More specific information on the type of data sought and how analysis was performed can be found in the methodology sections of appended papers.

The *reviewed literature* comprised academic peer-reviewed articles and books, but also non-academic information sources. More specifically, academic literature encompassing comprehensive literature reviews, case studies, theoretical and conceptual works was predominantly used for the overall research framing, and developing analytical framework to guide data collection and analysis for each paper. Non-academic literature includes food retailers' sustainability and annual reports, working documents from the project on Green Nordic Retail (Danish EPA 2010), issue papers and press-releases on sustainability from European Retail Forum, third-party reports prepared by UNEP/Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production, by European Topic Centre on Sustainable Consumption and Production and by Dutch Sustainable Trade Initiatives (Anstey 2009). In addition, a number of relevant information sources available at the website of the European Commission and information database 'Standards Map' by International Trade Centre¹⁸ were consulted. Non-academic literature was also used as an additional source of empirical data for triangulation and corroboration of research findings.

Semi-structured interviews served as the main source of empirical evidence. The author herself conducted 28 semi-structured interviews, although a number of interviews reported in joint papers might exceed this number due to contribution of an accompanying author in the data collection process. Each interview lasted approximately one hour, with all interviews being carefully transcribed and, if agreed upon, reviewed by informants to ensure reliability of collected empirical data. Follow-ups by e-mail were conducted, if necessary, to obtain further clarifications. All citations were approved by interviewed respondents and included in the text of appended papers with their consent.

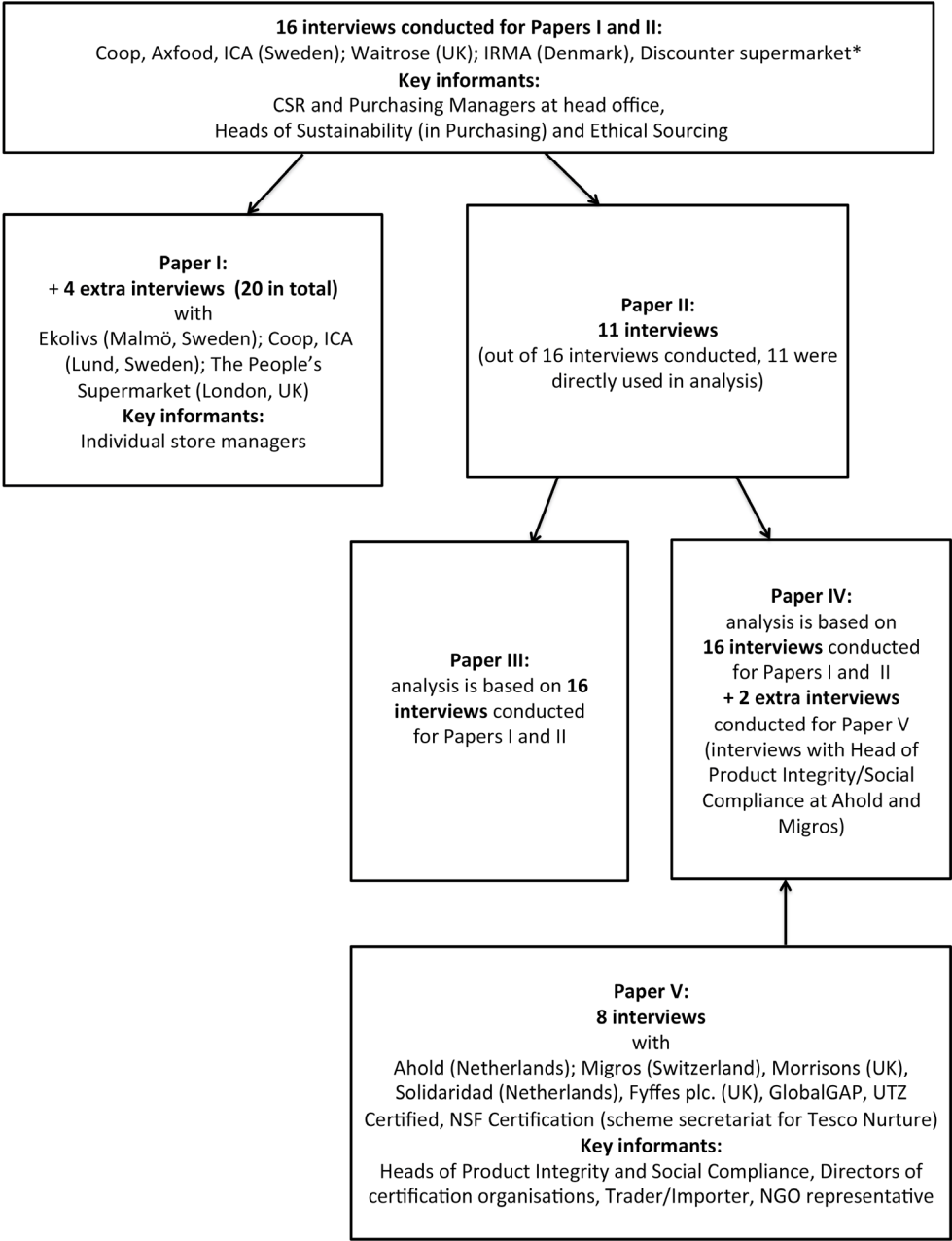
Informants interviewed include key persons at food retailing and third-party certification organisations, such as corporate sustainability and purchasing

¹⁸ 'Standards Map' available at <http://www.standardsmap.org/> is the tool developed for corporate practitioners. It provides detailed information on existing certifications and allows for comparison of aspects pertained to the certification design.

managers at retailer's head offices, individual store managers, directors of the certification organisations and representatives at the certification development boards and associated meetings, where decisions on certification design took place. These representatives included executives of retailing companies, such as Heads of Product Integrity and Social Compliance, but also traders (i.e. product importers) and NGO representatives, who contributed by providing relevant insights regarding discussions and conflicts in the process of developing third-party sustainability certification schemes. More information on interviews performed by the author and used as a primary data source in respective papers is provided in Figure 8, which also shows the overlaps in data collection among the five appended papers.

The cornerstone for analysis conducted in the first four papers was data collected through 16 interviews. The protocol of these interviews was designed to answer the research questions of Papers I and II, but the obtained data were used for analysis in subsequent Papers III and IV. Additional data, relevant to analysis performed in Papers III and IV, were provided by the respective co-authors. For Paper V, a different interview protocol was designed and eight interviews were carried out. Two of these interviews were used as additional input data for Paper IV¹⁹ (Figure 8). Overlaps in data collection demonstrate that the case study research approach generated detailed data, with multiple emerging themes, which were used for the various types of analysis performed in the five appended papers.

¹⁹ This was possible because interviews for Paper V were conducted at the time of writing Paper IV and provided relevant perspectives that could be included in the analysis for Paper IV.



* Interviewed respondent at Discounter supermarket chain preferred remain anonymous

Figure 8. Overlaps in empirical data collection for the five appended papers.
Compiled by author.

Participants' observations and short informal communications with researchers and practitioners took place at the following events, where the author also presented the intermediate findings of this study:

- The 2nd Nordic Retail and Wholesale Conference, Centre for Retailing, University of Gothenburg, November 10-11, 2010, Gothenburg, Sweden
- The first CR3 Conference on Corporate and Global Responsibility, Hanken School of Economics, April 8-9, 2011, Helsinki, Finland
- The 2nd International Conference on Sustainability Transitions, Lund University, June 13-15, 2011, Lund, Sweden
- The 2nd Nordic Conference on Consumer Research, The Centre for Consumer Science, University of Gothenburg, May 30- June 1, 2012, Gothenburg, Sweden
- OSPC Workshop (Organising Sustainable Production and Consumption), International Society for Industrial Ecology (ISIE), Erasmus University, June 14-15, 2012, Rotterdam, Netherlands
- The 3rd Nordic Retail and Wholesale Conference, School of Economics and Management, Lund University, November 7-8, 2012, Lund, Sweden
- Workshop on Responsible Supply Chain and Networks: Challenges for Governance and Sustainability, November 22-24, 2012, Stockholm, Sweden
- The 6th International Conference on Life Cycle Management, Swedish Life Cycle Center, August 25-28, 2013, Gothenburg, Sweden
- Focus group discussions with Swedish food retailers and NGOs on the problems of Sustainable Production and Consumption, 2013, Stockholm, Sweden
- The 4th Nordic Retail and Wholesale Conference, Center for Retailing, Stockholm School of Economics, November 5-6, 2014, Stockholm, Sweden

Multiple data sources, including informants from various organisations, but also different informants within same organisations, enable triangulation –

“establishing the converging lines of evidence” to ensure that research findings are as robust as possible (Yin 2012, p. 13).

Furthermore, in all appended papers, qualitative interviews were combined with analysis of academic literature, industry and third-party reports to ensure the rigour in interpreting the empirical findings. In joint papers, data collection by an additional researcher and his/her participation in data analysis is viewed as another source of data triangulation.

Although data triangulation based on interviews with multiple informants was used as an approach to ensure internal validity, in one case a single respondent was used to perform the within-case analysis. This was in Paper V and concerned the decision of Tesco (UK) to design a unilateral Tesco Nurture certification. Although being aware of the risk of bias associated with single respondent, it was nevertheless decided to include the case of Tesco Nurture in the analysis. This helped to present an additional type of unilateral certification design (as a complement to other types of collective and multi-stakeholder certifications) and therefore enriched empirical evidence on corporate needs for various certification designs to green a product supply.

Attempts were made to gain access to other contact persons engaged with the Tesco Nurture certification development or other examples of unilateral certification schemes to mitigate the risk of single respondent bias. These include unilateral standard 'Field-to-Fork' for fresh fruits and vegetables by M&S (UK) and 'Peche Responsable' – a unilateral standard for sustainably sourced fish developed by Carrefour (France) and applied to only four species of fish. However, the contacted persons either never replied or declined the request for an interview. To some extent, the single respondent bias was mitigated by the interview with the highly knowledgeable informant when examining the case of Tesco Nurture. This informant can be described as the key person in designing, pilot-testing and administering the Tesco Nurture certification, together with Tesco executives, from the very start in the 1990s and up to the present day. The interview with this informant lasted over an hour and was followed up with two emails to check the understanding of collected data. To ensure correct interpretation of the data in subsequent analysis, interview transcripts and the draft version of Paper V were sent to the interviewed respondent for review.

Paper I followed the combination of deductive and inductive logics in data analysis. In particular, categorisation of firm's institutional environment suggested by Hoffman (2000) was used to guide the literature review on drivers and barriers for food retailers to engage with sustainability initiatives in the supply chain. The same framework was then utilised to collect empirical evidence from food retailers themselves, felt to be lacking in existing academic literature. The collected empirical data were then compared with findings from the initial literature review to discuss confirmed and additionally identified forces that drive food retailers' actions towards/away from sustainability practices in the supply chain. The

relative importance of multiple institutional factors was analysed in relation to upstream, in-store, and downstream sustainability initiatives.

Analysis performed in Paper III can be described as deductive, since it utilised a pre-defined analytical framework to discuss the advantages and limitations of private eco-brands (in comparison to third-party certification) for motivating and enabling food retailers to green a product supply and demand. However, the analytical framework was constructed partially inductively by the authors as it was based on insights obtained through data collection for other papers (e.g. Paper II). The developed framework was based on NIE theory and analysis of pertinent literature that discussed functionality of private eco-brands and third-party sustainability certification in the supply chain.

The analysis performed in Papers II, IV and V, which explicitly states the use of case study methodology, can be best described as a cross-case synthesis, which follows the *logic of theoretical replication* (Yin 2009). A number of patterns or factual propositions within each case were predicted a-priori on the basis of the selected theories and reviewed literature, but each of the chosen cases was predicted to produce the contrasting findings. The predicted patterns or factual propositions developed at the outset of the research inquiry were then compared with the ones empirically discovered. During the cross-case synthesis, the detailed case study texts were produced, with further reduction and analysis of data using the analytical frameworks developed beforehand and grounded in the a-priori selected theories. In particular, the author assembled data and prepared tables according to particular analytical constructs/theoretical categories, following the suggestion of tabular data displays by Miles and Huberman (1984).

The process of pattern-matching within and across cases is not only based on the hypothetical deduction from theory and logical empiricism, where empirical observations are used to prove or reject the deduced hypothesis, and in that sense nothing new can be ever learned. Instead, the process of pattern-matching was based on the *logic of abduction* discovered in pragmatic philosophy, first mentioned in the work of Peirce (1998). Relationships between facts and ideation are only guided, not determined by selected theories, and influence each other in the course of the inquiry. In that sense, in comparison to positivist and idealist assumptions, the relationships between observation (human senses and the logic of insight) and mind/cognition (instrumental brains' logic) are conceived anew (Bush 1993).

Decisions on research closure in terms of delimiting the number of cases investigated and interviews performed, as well as stopping the iteration between theory and data in Paper II, were based on the author's perception of theoretical saturation combined with pragmatic considerations (Eisenhardt 1989). Theoretical saturation means that including additional interviews and cases, and continuing

iteration between theory and data, only lead to incremental improvements in data analysis and theory-building. Pragmatic considerations concerned the inability to gain access to additional respondents and time constraints, associated with expectations to develop five research papers on which the thesis is based.

3.3.3 On validity and generalisability of research findings

This study ensures the validity of research findings in various ways, associated with whether the correct cause-and-effect relationships were proposed (Yin, 2009) between the set of the contextual conditions and the studied affected outcome, i.e. the corporate choice of SSCM practices. The methods included: 1) utilisation of theories for developing factual propositions; 2) data triangulation from multiple sources, including interviews, academic literature, industry and third-party reports; 3) involving two researchers separately in analysing collected data in Paper IV, with subsequent comparison and discussion of findings; 4) sharing a draft of Paper V with interviewed practitioners for feedback on results of performed analysis; and 5) discussion of intermediate results of each paper with researchers and practitioners at a number of conferences and workshops, including one focus group discussion with representatives of the food retailing organisations. Validity was further strengthened by considering existing literature (Eisenhardt 1989), namely by discussing similar and contradicting findings in the discussion sections of appended research papers.

In pragmatic instrumental philosophy, adopted as meta-theory for this study, the truth is viewed as relativistic and temporalistic, and the process of scientific knowledge production is not value-free. However, this does not mean that research findings have no relevance in terms of their applicability beyond a particular place, context or point in time. By discovering probabilistic, rather than deterministic relationships, and relating the research findings to the body of collective research that explores the same or related phenomenon, generalisations can be drawn. These are not drawn in the form of universal truths or laws, unlike the aim of ‘statistical’ generalisation, but in the form of establishing a logic that might be applicable in a similar set of existential circumstances (Bush 1993). This view on generalisation of research findings in pragmatic instrumental philosophy is in line with ‘analytical’ generalisation (Yin 2009, McCutcheon and Meredith 1993), which can be drawn on the basis of all kinds of case study research design (Yin 2012).

The ultimate outcome of analytical generalisation may only be a series of hypotheses or theoretical propositions (Yin 2012). Confidence in these outcomes can be further tested by designing new case studies. In line with this argument, this study aims at analytical generalisation only in the form of establishing

dependencies between sets of contextual circumstances and selected SSCM practices. These dependencies should be further tested in other product groups and among larger number of food retailers to enhance generalisability.

To strengthen the analytical generalisability of results of Papers II and IV, supplementary interviews were conducted in order to check on the replication of the established logic, which explains relationships between contextual circumstances and modes of managing supplier relationships. The generalisability of the research findings in Paper II, which contributes to theory formulation by suggesting a typology of sustainable purchasing relationships (i.e. modes of managing transactions with suppliers), is also enhanced by the level of the interview data. In particular, some of the interviewed purchasing managers at head office level were involved in the wholesale business responsible for implementing a grocery import for the group of food retailers, demonstrating high level of centralisation of procurement function. It can be argued that perspectives on the corporate approaches to managing supplier relationships reflect on the SSCM practices among a broader number of retailers than those interviewed.

4 Analysis of SSCM practices in food retailing

Each paper contributes to the holistic understanding of the SSCM practice by addressing this corporate phenomenon from the perspective of different analytical levels and constructs. A brief summary of research papers (including objectives, employed theories/perspectives, methods and contribution to this thesis) is provided in Table 1. The rest of this section aims to provide a synthesis of research findings, linking back to the overarching research questions:

1. What institutional factors affect food retailers' willingness and ability to green a product supply?
2. How do retailers engage with the practice of SSCM? In particular, how do retailers manage supplier relationships in order to green a product supply under different procurement contexts, while maintaining/enhancing corporate competitiveness?
3. In what ways do third-party sustainability certification schemes influence the corporate choice of a SSCM practice?
4. How do SSCM practices, associated with development of private eco-brands and novel certification schemes, contribute to development of a sustained competitive advantage?

Tabel 1. Summary of research papers

Papers	Analytical focus	Employed theories/ perspectives	Methods	Contribution to this thesis
Paper I: Chkanikova and Mont, 2015	Institutional demands for sustainability initiatives in the supply chain	Institutional theory: drawing on categorization of firms institutional environment as suggested by Hoffman (2000)	Semi-structured interviews; Literature review	Developing a taxonomy of institutional factors, analyzing their relative importance and influence on SSCM practice
Paper II: Chkanikova, 2015	Modes of managing supplier relationships to develop availability of green product supply	Transactions Costs Economics (TCE) theory; Power Dependency perspective	Case studies; Supplementary semi-structured interviews	Developing a typology of SSCM practices, explaining its dependency on the specificity of the purchasing context
Paper III: Chkanikova and Lehner, 2015	Role of private eco-brands in motivating and enabling retailers to develop markets for sustainability certified products	New Institutional Economics theory: drawing on principal functions of institutions to meet both corporate logics of instrumentality and appropriateness	Semi-structured interviews; Literature review	Furthering the understanding of private eco-brands as novel institutions which facilitate retailers efforts to green a supply chain
Paper IV: Chkanikova and Kogg, 2015	Modes of managing supplier relationships for procurement of sustainability certified products	NIE theory: mapping purchasing context based on review of SSCM and Value Chain Governance literature	Case studies; Supplementary semi-structured interviews	Furthering the understanding of how design of certification schemes influences SSCM practice
Paper V: Chkanikova and Sroufe (Submitted)	Corporate needs for novel certification design to green a product supply	New Institutional Economics theory: assuming re-iteration of corporate logic of instrumentality in the context of other actors' strategies to pursue a particular certification design; Dynamic Capabilities (DC) theory	Case studies; Literature review	Furthering the understanding of retail-driven certifications as novel institutions, which are better aligned with greening a product supply, in comparison to existing certifications

In answering these research questions, the analysis at the aggregate level can be subdivided into a number of interrelated themes. Section 4.1 discusses the relative importance and inconsistency of institutional factors for SSCM, answering the first research question. Section 4.2 focuses on the second research question and introduces a typology of sustainable purchasing relationships developed by the author. Based on this typology, an update is proposed to the model of sustainable purchasing portfolios (Pagell, Wu et. al. 2010). Section 4.3 addresses the third research question by discussing how design aspects of the existing certification schemes influence the perceived corporate need for supplier collaboration and development of alternative sustainability certification. Section 4.4 provides a summary of insights on the role of certification and novel institutional arrangements (in form of private eco-brands and alternative certification) on SSCM practice. Section 4.5 addresses the fourth research question, demonstrating in particular how SSCM practices, associated with development of private eco-brands and novel certification (and defined in subsequent analysis as proactive, or novel entrepreneurial, practices), contribute to development of dynamic capabilities and a sustained competitive advantage.

4.1 Relative importance and inconsistency of institutional factors for SSCM

A detailed analysis of the corporate institutional field, including taxonomy of drivers and barriers for corporate engagement with a number of sustainability strategies in the supply chain, both upstream and downstream, is presented in Paper I. An overview of all identified institutional factors, both in literature and interviews, is presented in Table 2. Numbers in brackets indicate the number of interviews in which the listed drivers and barriers have been confirmed. The total number of interviews was 20 interviews.

Table 2. Drivers and barriers to implement sustainability initiatives in the supply chain by food retailers

Driver/ barrier	Confirmed	Also identified	Not confirmed
Regulatory drivers	Existing national and international regulations (15) Expectation of new regulations (2)		
Regulatory barriers	Lack of governmental initiative to harmonise labelling requirements (10) Regulation per se as a hinder to innovate (1) Conflict of interests between product sustainability policy and free trade provisions (1)		Lack of governmental leadership in outlining the vision for sustainability and responsibilities of food retailers
Resource drivers	Cost savings associated with operational & material efficiencies (20) Brand and reputation (16)	Managing high risk product supply, e.g. depleting fish stocks (2) Reputation as good employer (1)	Increased investor appeal
Resource barriers	Lack of financial resources (14) Lack of knowledge and expertise (10)	Lack of power over suppliers (8) Lack of availability of sustainable supply (8) Lack of high quality sustainable supply (5)	
Market drivers	Customer demand and expectations (20) Industrial norms (standards and voluntary industry agreements) (9)	Supplier sustainability values (5)	Retail awards by third-party organisations Competitors' strategies
Market barriers	Higher prices for sustainable products (20) Customer confusions due to high number of labelling schemes (13)	Tradition of established supplier relationships (2) Risk of weakened competitive position due to losing customers because of removal of unsustainable products (1)	Complexity of supply chain configuration
Social drivers	Food scares regarding GMOs, pesticide use, etc. (14) NGO campaigns (7) Risk of negative publicity (4) Scientific alerts (4)		Bringing retail company to court
Social barriers	Lack of consumer awareness & interest about sustainability (7) Lack of scientific framework to identify the most profound sustainability impacts (5)		

Here, the aim is to reflect on the relative importance of institutional factors for retailers' willingness and ability to green a product supply²⁰. Another aim is to reflect on the ambiguity and conflicting rationale of diverse institutional forces. This is done by demonstrating how the interplay of various factors might further complicate the corporate governance of sustainability issues in the supply chain, and how negative or positive stimuli for SSCM in the presence of other institutional conditions can be re-interpreted, redirecting retailers' actions towards or away from SSCM practices.

The analysis in this section is aimed at highlighting the interrelationships between institutional drivers and barriers at the macro-institutional level that play out at the micro-institutional level. These affect the willingness and ability of food retailers to exercise sustainability governance in their transactions with suppliers.

Retailers view *market* and *resource factors* as being of primary importance for directing their efforts towards or away from SSCM practices, because these factors are connected with the economic-rational logic of business operations, such as profit-generation and cost-savings potential. Market drivers, in terms of *consumer demand*, were regarded as very significant, followed by resource drivers, such as *brand image and reputation* (Table 2). The resource drivers can also be assigned a secondary role, as they clearly derive from consumer demands and expectations for retailers to act responsibly.

Consumer demand and the opportunity to increase sales through green product differentiation have been mentioned as the major stimuli for SSCM, but the influence of this market driver has also been highlighted as being insufficient for retailers to engage with further development of sustainable production volumes (i.e. beyond the existing limited demand of 'green' consumers). The interviews showed that current levels of consumer uptake of sustainably produced goods is not sufficient to justify higher investments into greening product supply, mainly due to *higher price*, but also *lower quality* in comparison to conventional products. *Lack of financial resources* to cover these investments imposes further constraints on food retailers to expand their sustainable purchasing practices (Table 2).

Food retailers rely heavily on the use of available market institutions in the form of *third-party sustainability standards and associated certification schemes*. This is to reduce the costs of greening a product supply, but also to signal their business conformity to sector norms. Interviewed food retailers acknowledged that third-party sustainability certification schemes facilitate their engagement with SSCM,

²⁰ Greening a product supply refers to exercising influence and control over suppliers to provide products that are better from the sustainability perspective, but also to increasing the procurement of sustainably produced goods.

by allowing outsourcing of the following critical resource-intensive tasks: 1) setting sustainability criteria, 2) establishing systems for enabling, verifying and tracing sustainability compliance in the supply chain, and 3) managing the stock of labels that communicate credibility attributes of sustainably produced goods to consumers in a trusted way. This reduces the associated liability risks for retailers should a problem occur.

The crucial role of third-party certification schemes in facilitating the practice of SSCM is demonstrated in situations when these market institutions are/were absent or underdeveloped, coupled with lack of retailer power to motivate a supplier's compliance with sustainability requirements. For instance, Axfood identified the lack of Marine Stewardship Council (MSC) certification for farmed salmon, combined with retailer dependence on a large supplier in Norway, as an obstacle to increasing the procurement volumes of sustainably produced farmed salmon²¹. Retailers' collaborative attempts to place sustainability requirements on suppliers, deemed necessary to overcoming unfavourable power circumstances, are further constrained by national anti-competition policies, which favour free-trade provisions. Under such institutional conditions, food retailers are placed in a critical situation, where implementation of sustainable purchasing is delayed.

Regulatory factors, although often mentioned in interviews as necessary for acquiring a 'license to operate', are viewed by food retailers as being less important nowadays compared to other institutional factors. In particular, *national and international regulations* that put responsibility on retailers to address sustainability concerns upstream in the supply chain are exceptions rather than a rule. Moreover, the focus of regulation is mainly limited to food safety and labelling provisions²². Food retailers said that contemporary regulatory factors facilitated only minimum baseline practices of SSCM²³, such as delisting certain ingredients and chemicals from products, and outlining a number of minimum environmental and social principles in retailers' codes of conduct. However, adoption of social principles is often a matter of ceremonial conformity, as implementation of social sustainability is difficult in practice, e.g. due to the lack

²¹ The only currently available certification for farmed salmon is organic (KRAV in Sweden), which is characterised by low consumer demand due to price issues. Retailers therefore regard this as a constraint to increasing certified procurement volumes.

²² According to these provisions food retailers are assigned the responsibility to ensure that minimum national food safety requirements are met, and that products are labelled in accordance with regulatory requirements of sourcing countries.

²³ Previously, there were exceptions when regulatory pressure resulted in food retailers' actions to develop novel collaborative approaches to SSCM, such as GlobalGAP certification. However, even before the regulatory provisions that facilitated the development of the GlobalGAP were imposed (for more details on this, see Paper V), food retailers were engaged into managing food safety and sustainability issues upstream in their supply chain on an individual basis.

of financial resources, time and expertise to conduct social audits. One respondent did not perceive regulation as a driver per se, rather a ‘must’, and another respondent referred to coercive regulatory measures as hindering sustainability innovation upstream in the supply chain.

While food retailers were sceptical about the role of coercive regulatory measures for facilitating SSCM, they clearly expressed the need for governmental leadership, mainly in the form of soft policy measures and instruments, which they felt were lacking. In particular, interviewed retailers highlighted the following institutional gaps: a lack of unified assessment methodologies for evaluating sustainability impacts associated with life-cycle of products²⁴; a lack of production protocols for farmers about how to produce sustainable, e.g. organic, products; and a lack of harmonisation of regulation between different countries, specifically on matters of food safety and labelling requirements.

In addition to the potential areas of governmental support to SSCM, governmental leadership in directing retailers’ actions towards SSCM practices can be realised in the form of national and supra-national action plans. For instance, the organic national action plans in Sweden and Germany have led to increases in sustainably produced supply volumes and stimulated consumer acceptance of the organic culture, thereby creating a business case for procuring these types of products (Källander and Rundgren 2008). Another example is the Sustainable Consumption, Production and Sustainable Industrial Policy Action Plan²⁵ adopted by the European Commission in 2008. This initiative facilitated the establishment of the European Retail Roundtable (ERRT) in 2009 and subsequently the Retailers Environmental Action Programme to promote sustainable production and consumption practices by food retail organisations (ERRT and EuroCommerce 2010). ERRT represents a voluntary forum for European retailers to share best practices in sustainability work in food supply chains and to discuss associated challenges (European Commission 2009b).

In addition to *a lack of governmental leadership* to support retailers in greening product supply, the sporadic attempts of national policy-makers to further SSCM practices are constrained by the conflicting rationale of the free trade policies, as stipulated in the WTO rules. In this regard, efforts of the Swedish Food Authority (Livsmedelsverket) to develop guidelines on eco-smart food choices that favour local food sourcing have been rejected by the European Commission, which interprets this action as protectionist (Naturskyddsforeningen 2011).

²⁴ To address this challenge, the International Reference Life Cycle Data System was officially launched by the European Commission.

²⁵ The overarching objective of this Action Plan is to promote environmentally friendly products and production technologies, raise consumer demand for eco-products, and encourage EU industry to engage in sustainability innovation.

As in the case of regulatory compliance, retailer conformity to social demands to launch SSCM practices is driven by the institutional logic of appropriateness. Social drivers in the form of *consumers' food scares*, *NGO campaigns* or *media attention* can play an important role in creating an urgency for retailers to address particular sustainability concerns upstream in the supply chain, which otherwise might not be addressed.

The following example illustrates how hindering market factors through negative competitive implications, in the presence of a social driver associated with NGO pressure, has been re-interpreted to redirect retailer actions towards sustainable purchasing practices. *The risk of losing the customer base* and therefore income prevents retailers from terminating the sourcing of unsustainable products on a wide scale. In particular, Axfood has stated that total removal of certain products might weaken its competitive position on the market, as customers might start buying missing products and other goods (due to convenience) at the competitor's store. At the same time, phasing out unsustainable fish is viewed by large interviewed Northern and Western European supermarkets as a necessary measure. In the interview, Swedish retailer Axfood characterised such measure as

“a service to the customers... (who) won't buy unsustainable fish if they had more information about it” (Head of Environmental and Social Responsibility at Axfood).

Such justification is due to the complementary influence of the social driver in form of NGO campaigns, e.g. by WWF and Greenpeace. These campaigns, which ‘name and shame’ irresponsible fish sourcing practices that lead to depletion of fish stocks, made retailers phase out certain fish species from their product assortment.

Although social factors, as illustrated above, can play a crucial role in motivating retailers to address particular sustainability concerns upstream, their overall importance in furthering corporate engagement with SSCM beyond limited number of issues, product categories and low procurement volumes is generally questioned. This is not least due to *a lack of awareness and interest in sustainability issues among the general public*. High-profile concerns, as defined by the public and environmental advocacy groups, do not necessarily account for the most profound sustainability impacts, with ‘unemotional’ and ‘perceptually uninteresting’ issues and firms often not being under societal pressure (Hall 2001, p. 108). According to the key respondent at a large supermarket chain in the UK:

“The challenge is to define what is sustainable, how relevant and urgent the issue is, and whether it is just a fashionable fact or true sustainability” (Head of Sustainability and Ethical Sourcing at Waitrose).

Nevertheless, there is an example where a social factor has played a vitally important role in making sustainable purchasing a mainstream practice in the food retailing industry. This is the case of the development of the UTZ Certified scheme for coffee. Its development was triggered by the interest-based strategic work of Dutch NGO Solidaridad, which in pursuit of its own goal to mainstream environmentally and socially produced coffee on the market was able to create a forum for multiple competing stakeholders (including retailers) and unite their efforts on developing an alternative to the Fairtrade certification. Nowadays, UTZ certification allows a number of food retailers (e.g. Ahold and Migros) to source 100% UTZ certified coffee. ICA in Sweden has followed this trend by making its overall private brand coffee assortment UTZ Certified²⁶.

When distinguishing between the relative importance of social and regulatory factors in directing food retailers' efforts towards or away from SSCM practice, the role of regulatory factors can be described as being of somewhat secondary for a number of reasons. Firstly, the reference to social factors has occurred more often in the collected empirical evidence (Table 2). Secondly, there are instances when regulatory pressure exerted on retailers was actually facilitated by societal pressure. For instance, regulatory provisions, which outline food retailers' responsibility for food safety and correct labelling, came about because of the general public losing trust in governmental food inspection systems.

The relative importance of institutional factors for retailer engagement with SSCM practices can be allocated in the following order: market, resource, social and regulatory (Figure 9). This allocation is based on 1) a number of respondents who mentioned particular institutional factors (Table 2) and 2) their personal reflections regarding their importance, which were discussed above. The collected empirical evidence also suggests that relative importance of the institutional factors for SSCM is influenced by the retailers' perception of the key attributes of these factors, such as urgency, power and legitimacy (Figure 9). These identified attributes of institutional factors conform to aspects of salience discussed in stakeholder theory (Mitchell, Agle et al. 1997). Research findings regarding driving and constraining forces for retailer engagement with SSCM practices go beyond the trivial driver-barrier dichotomy.

²⁶ The case of UTZ certification, including discussion of various institutional factors that facilitated its development, is described in more detail in Paper V.

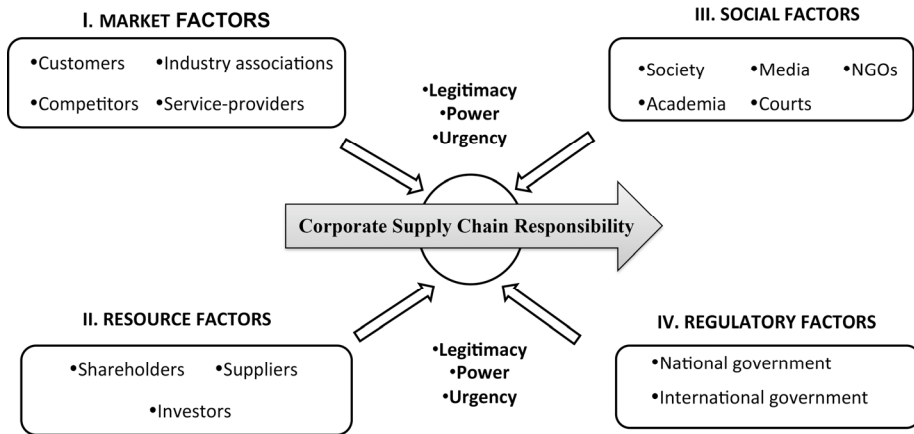


Figure 9. Relative importance of institutional factors for SSCM.
Compiled by author.

As demonstrated, the institutional conditions under which SSCM practices are likely to emerge are not simply attributed to a particular group of institutional factors, but are shaped by the complex interplay between them. In some instances, such interplay will have a positive complementary influence, reinforcing corporate engagement with SSCM practices, which otherwise would not occur. In other cases, the interplay of institutional factors would create highly prohibitive institutional circumstances that could delay implementation of SSCM by food retailers.

Another important insight gained through this study is that the institutional environment, besides affecting corporate willingness and ability to implement a SSCM practice, has important implications for the corporate choice of this practice. The SSCM practices can be divided into reactive and proactive (or novel entrepreneurial) practices. A more detailed typology of SSCM practices is presented in the next section.

Reactive SSCM practices are defined as corporate approaches to managing supplier relationships, which aim to ensure retailers' passive conformity to the conditions of the institutional environment. More specifically, reactive SSCM practices aim: 1) to satisfy, rather than go beyond, the limited market demand of 'green' consumers, and 2) to retain (rather than enhance) the competitive market position and business legitimacy. Reactive sustainability strategies do not aim to exceed existing sustainability norms codified in the regulatory provisions, industry and third-party sustainability standards.

In contrast, *proactive or novel entrepreneurial SSCM practices* are associated with retailer practices of managing supplier relationships, which aim to create novel

institutions pertaining to transactional governance. The objective of proactive or novel entrepreneurial practices of SSCM is to redefine the institutional conditions – to make them conducive for encouraging and enabling corporate efforts to green a product supply beyond the limited demand of ‘green’ consumers. Such proactive SSCM practices are associated with improving availability of the sustainably produced supply in terms of higher volumes, but also wider ranges, better quality and more affordable pricing of sustainably produced goods compared with the already existing sustainability-certified alternatives. Proactive or novel entrepreneurial SSCM practices might be associated with requiring product compliance with multiple certifications and/or with additional, sometimes more stringent, sustainability specifications than those defined by existing certification institutions. Better availability, improved quality, lower price, compliance of products with multiple sustainability certifications and additional sustainability criteria help to meet broader demands of the general public. Proactive SSCM practices can therefore offer an opportunity to create an additional competitive advantage.

Both reactive and proactive or novel entrepreneurial SSCM practices, can be viewed as elements of strategic management since they aim to either maintain or improve corporate competitiveness.

Reactive practices usually occur when market and resource factors, governed by the economic-rational logic, do not conflict with market, social and regulatory factors, governed by the logic of appropriateness (Figure 10). However, when these sets of institutional factors conflict due to clashing institutional logics, the window of opportunity is created for retailers’ engagement with proactive SSCM strategies (Figure 10). Development of novel institutions (in the form of private eco-brands and retail-driven third-party sustainability certification schemes), is vital for proactive SSCM practices and to help retailers manage tensions and inconsistencies in the corporate institutional field.

The following two sections elaborate on the specificity of the relationship-management approaches and novel institutions associated with reactive and proactive SSCM practices. It is examined how these practices are dependent on the characteristics of the inter-firm procurement context. In relation to the overarching conceptual model, the analysis concerns the micro-institutional level of transactional governance.

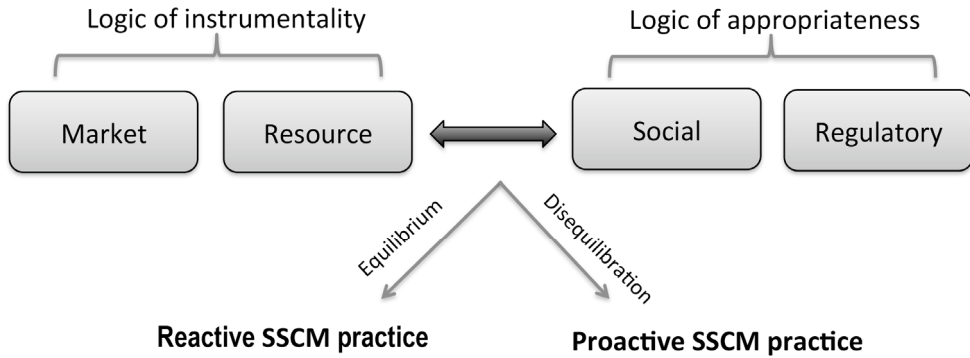


Figure 10. Implications of the institutional environment for the corporate choice of SSCM practice.
Compiled by author.

4.2 Typology of sustainable purchasing relationships – an update to sustainable purchasing portfolios

This thesis has shown that food retailers deploy a variety of SSCM practices to influence product sustainability characteristics and to improve the availability of the sustainably produced supply. A typology of the sustainable purchasing relationships was developed, which is presented in Figure 11. Each type of SSCM practice differs in the degree of collaboration, level of the sustainability ambition (conformity to existing industry standards or beyond), incentive structure (prevalence of negative vs. positive incentives), and level of corporate engagement with verification of the sustainability compliance (first-tier suppliers or beyond, as well as frequency of conducted audits).

The corporate choice of SSCM practices depends on the purchasers' judgment of the inter-firm procurement context, which is also affected by the characteristics of the institutional environment at the macro-level. Specifically, the thesis identifies probabilistic dependency of chosen SSCM practice on the presence of well-established sustainability certification schemes, perceived situation with availability of the sustainability-certified supply, and interpretation of the state of the power dependence on existing suppliers.

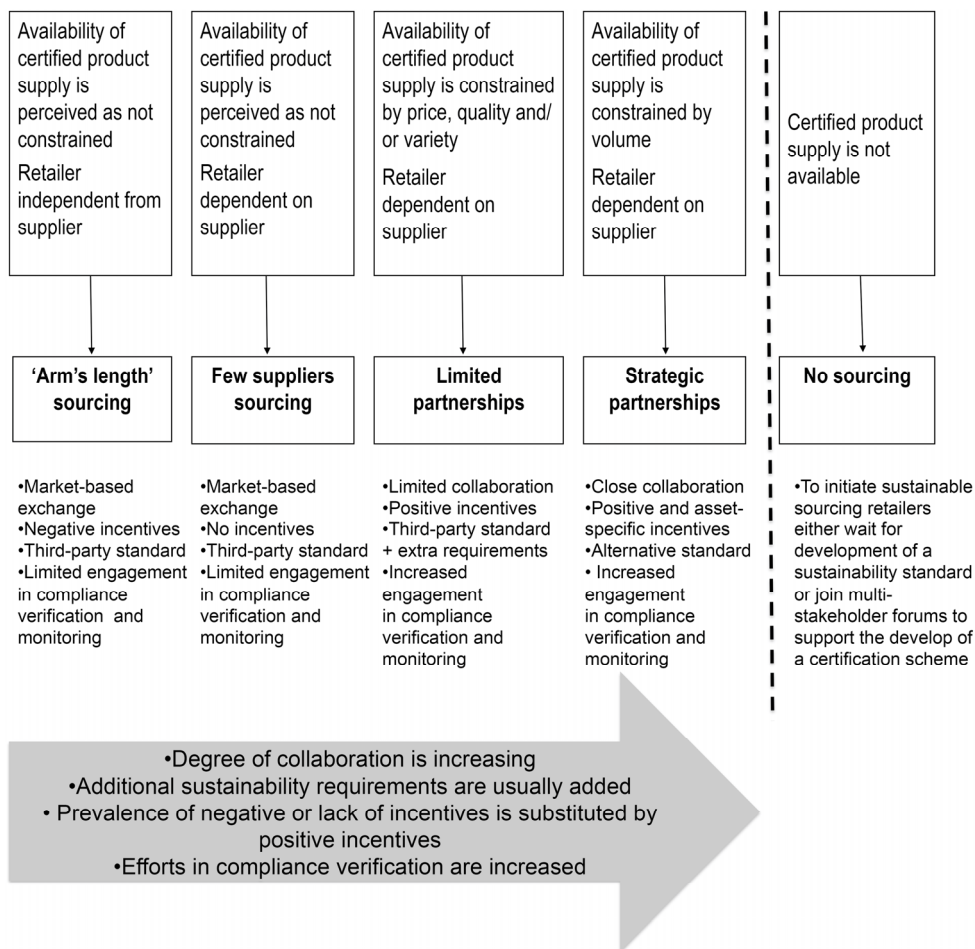


Figure 11. Typology of SSCM practices.
Compiled by author.

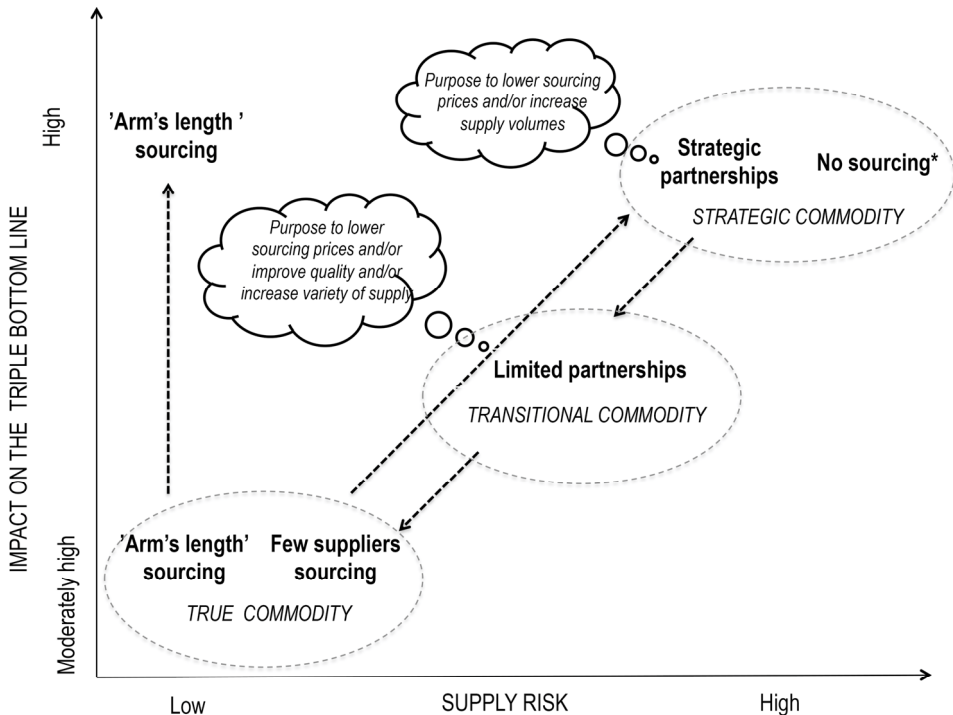
To demonstrate how purchasers' judgment of the inter-firm procurement context is affected by the institutional environment, let us look closer at how perception regarding availability of the sustainably certified supply is shaped. Low supply volumes are not necessarily perceived as a constraint if they satisfy limited consumer demand for green products, as is often the case for Fairtrade certified coffee. However, when a retailer is driven by the desire to increase its market competitiveness by developing the assortment of sustainability-certified coffee, along with being influenced by NGO strategies to mainstream responsibly produced coffee (e.g. the Ahold retailer and UTZ Certified scheme discussed in more detail in Paper V), low certified supply volumes begin to be perceived as a constraint. Supply constraints could be further attributed to the cost of

certification, lack of certification institutions in developing countries, and investments needed to adjust production practices in accordance with the certification requirements. Supply constraints could be associated with design of the certification scheme itself, which does not allow retailers to procure higher volumes of the sustainably produced goods in an economically feasible way and with reduced liability risks. The role of the design of certification institutions in influencing the SSCM practices will be described in more detail in section 4.3.

Detailed descriptions of each type of SSCM practice, with examples of product groups to which they are applied, are presented in Paper II. The focus of discussion later in this section is on how these findings from the food retail sector contribute to sustainable purchasing portfolios, developed by Pagell, Wu et al. (2010). In Figure 12 three types of commodities ('true', 'transitional' and 'strategic') are conceptual categories suggested in the original purchasing portfolios²⁷, while five different types of SSCM practice (identified as a result of the study conducted in Paper II) are added as additional layer to provide a more nuanced picture of managing supplier relationships.

It is important to note that the suggested update to sustainable purchasing portfolios (Figure 12) only applies to products that have a moderately high to high impact on the triple bottom line (TBL) performance. Since the very competence of supermarkets lies in providing consumers with food products in small quantities as required by their needs, food items in themselves add significant value to the organisational output. Regardless of the procured volumes, procurement costs and percentage of revenue generated, food products have significant implications for the retailer's competitive advantage in relation to other retailers. For instance, respondents have expressed that catering for the demands of small percentage of 'green consumers' is considered of strategic importance for long-term business survival. Even if they do not generate high profits in monetary terms, these products help generate non-tangible benefits, e.g. image, which have important implications for future business development. Following this logic, food items are considered to have a moderately high to high impact on the retailer's TBL performance, especially when stakeholder expectations towards product sustainability qualities are increasing. In line with Pagell, Wu et al. (2010), moderately high impact on the TBL performance is associated with product impact on only one dimension, but product impact on TBL performance grows when more than one dimension is affected.

²⁷ The original sustainable purchasing portfolios, developed by Pagell, Wu et al. (2010), is discussed in more detail in section 2.3.2.3, including definitions of three types of commodities.



*Retailer might join multi-stakeholder initiative to support the development of the sustainability standard

Figure 12. An update to sustainable purchasing portfolios of Pagell, Wu et al. (2010).
Compiled by author.

Another issue to mention is how supply risk is defined in this study, as the definition is very broad. Kraljic (1983) defines supply risk

“ in terms of availability, number of suppliers, competitive demand, make-or-buy opportunities, and storage risks and substitution possibilities”²⁸ (Kraljic 1983, p. 112).

Pagell, Wu et al. (2010) discuss supply risk primarily in terms of information asymmetry regarding the product sustainability performance. In Figure 12 supply risk is defined in terms of availability of the sustainably certified supply. Such a definition has a close connotation with how supply risk is conceptualised by Pagell, Wu et al. (2010), as the higher availability of sustainability-certified supply is associated with lower information asymmetry and thereby lower transaction

²⁸ Availability in this definition relates to “countless economic and political disruptions” to product supply (Kraljic 1983, p. 109).

costs. In the reverse situation, lower availability of sustainably certified supply is associated with higher information asymmetry and consequently higher transactions costs.

The definition of supply risk suggested in this study and implied in Figure 12 is more operational than the mere notion of information asymmetry, as it clearly indicates which market conditions reflect higher or lower transaction costs, and therefore guide corporate approaches to supplier relationship management. Availability of product supply refers not only to volumes but also to quality, price and ranges/variety of the sustainability-certified product options.

According to Pagell, Wu et al. (2010), the implementation of sustainable purchasing can be based on market competition (i.e. supplier selection/deselection depending on price, quality and convenience of logistics arrangements). Such purchasing relationships are inherent for sustainable products that acquire features of a 'true' commodity when sustainability standards and systems for compliance verification are well established and diffused among market players, i.e. when transaction costs are low. However, the empirical evidence from the supermarkets demonstrates that power asymmetry in retail-supplier relationships is a precondition for two different types of the market-based exchange, namely 'arm's length' sourcing and few suppliers sourcing (Figure 12).

This difference in sourcing relationships has bearing on the retailer's ability to influence green product supply. In the case of 'arm's length' sourcing, the retail organisation has more leverage and control over the supplier's sustainability performance. For example, retailers can apply coercive measures, e.g. fines and supplier delisting, in the case of supplier failure to meet sustainability requirements. The primary challenge to greening product supply in terms of developing the procurement volumes lies not upstream in the supply chain, but downstream, and is informed by limited consumer demand for environmentally and socially-benign products. Unless societal/market expectations towards increasing the share of sustainably produced assortment rise, retailers will probably continue procuring sustainable products based on an 'arm's length' approach (Figure 12), until supply availability becomes constrained.

When procurement of sustainability-certified products is based on few suppliers sourcing (Figure 12), the purchasers' perceived ability to influence and control product adherence to sustainability criteria is limited. For instance, suppliers' non-compliance with sustainability requirements outlined in the code of conduct would not necessarily lead to delisting suppliers. Interviewed respondents also report that the retailers' ability to motivate higher production volumes, better quality and wider ranges of the sustainably certified goods is constrained. Limited supply availability implies higher retailing prices, thereby reinforcing low level of consumer demand for sustainability-certified goods.

Both ‘arms-length’ and ‘few suppliers’ sourcing relationships are associated with *reactive SSCM practice*, as in these situations retailers usually passively satisfy limited consumer demand for green products. In particular, retail organisations do not seek to address characteristics of the sustainably produced goods, which might facilitate consumer demand (e.g. better quality, lower price and wider ranges), and do not aim to exceed/widen the scope of the sustainability requirements codified in the existing certification schemes.

The findings from this study confirm the results of Pagell, Wu et al. (2010) that the corporate decision to engage in collaborative relationships with suppliers is not always guided by a desire to reduce transaction costs. According to the collected empirical evidence, even if third-party sustainability certifications are established on the market (information asymmetry is low) and supply satisfies demand, retailers would not necessarily procure the sustainability-certified products based on market competition.

To explain such contradiction to the TCE logic behaviour, Pagell, Wu et al. (2010) engaged insights from resource-based theory, arguing that companies stay in partnerships with suppliers because this promotes mutual benefits, such as trust and common prosperity. This study identifies the corporate decision to engage in supplier collaboration is motivated by the following intentions: to decrease sourcing prices, improve the quality and variety of the sustainability-certified supply, and to support the development of certified supply volumes beyond the limited consumer demand. Such intentions partially stemmed from the corporate rationale to boost competitiveness in relation to other retailers and to enhance brand image by increasing the stocks of green products in the assortment. However, the intentions could also be facilitated by institutional entrepreneurship strategies of NGOs, interested in mainstreaming sustainably produced goods and seeking partnerships with retailers to attain their own goals²⁹.

However, intentions associated with facilitating the availability of the sustainability-certified supply were perceived as constrained, since procurement practice is based on the few suppliers sourcing characterised by supplier dominance. As a strategy developing out of unfavourable power circumstances, some of the interviewed retailers have engaged in limited supplier partnerships (Figure 12) to develop privately eco-branded products. These are certified according to existing third-party sustainability standards, but often supplemented with complementary sustainability requirements. Since these complementary requirements are not codified by the existing certification schemes, the perceived impact on the TBL performance and supply risk is increasing, thereby increasing collaboration. Superficial forms of collaboration are required to communicate and

²⁹ As in the case of UTZ certification described in more detail in Paper V.

monitor supplier compliance with the additional set of sustainability specifications. Although the task of monitoring the supplier's compliance with additional sustainability provisions can be outsourced to existing certification bodies, retailer representatives still often participate at these audits.

The mechanism of private eco-branding, besides enhancing retailer power over suppliers, often allows retailers to negotiate more competitive sourcing and thereby retailing prices, compared with conventional certified products. More affordable pricing of sustainably produced options allows retailers to overcome low consumer demand for the sustainability-certified products, which is one of the major constraints for motivating retailer engagement with SSCM practices. Private eco-brands nowadays often bear multiple certifications, thereby accounting for sustainability concerns of various consumer groups and eliminating the customer need to choose between different certification options.

When availability of sustainability-certified supply was perceived as particularly constrained, so that desired price, quality and supply volumes could not be negotiated even for privately eco-branded products, a couple of interviewed retail organisations made a decision to develop an alternative sustainability standard for privately eco-branded products. Novel sustainability standard redefines the product's environmental and social performance in accordance with growing stakeholder expectations. However, supplier compliance with redefined levels of environmental and social performance is not easily verified at the start due to the lack of properly established certification bodies to police compliance. Impact on the multiple dimensions of the sustainability performance is therefore high. Supply risk also increases, as suppliers of products that adhere to requirements of novel standards, are not readily available on the market. In line with the TCE logic, these market conditions explain the empirically confirmed corporate tactics to develop strategic partnerships with suppliers (Figure 12). In our empirically observed cases, novel sustainability standards did not lower the bar of the existing certification schemes, and have positive implications for price, quality, ranges and volumes of the privately eco-branded goods.

The collaborative approaches to relationship management associated with development of private eco-brands and alternative sustainability certification schemes, can be termed *proactive or novel entrepreneurial SSCM practices*. These practices, through introducing new trading rules, establish new institutional arrangements and allow retailers to proactively engage with developing a sustainably produced supply beyond limited market demand for sustainability-certified goods. New rules are associated with exceeding/widening the scope of the sustainability criteria, codified in the existing certification(s). Making privately eco-branded products more competitive in terms of both price and non-price differentiation (e.g. better quality, additional sustainability attributes) compared

with other sustainably certified products, enables generation of higher profits. The mechanism of co-branding also allows retailers to capture benefits in the form of enhanced corporate image, brand value and customer loyalty.

Finally, the empirical data from the interviews demonstrates that retailers will not necessarily develop partnerships with suppliers if there is a lack or underdevelopment of third-party sustainability certification schemes on the market, while stakeholder expectations of sustainability are increasing. For instance, before the UTZ Certified scheme was established on the market, some of the interviewed retailers perceived the need to develop the volumes of sustainably produced coffee, but there was no certification option available, except Fairtrade. At that time, Fairtrade focused on ethical issues, and disregarded a multitude of environmental impacts associated with coffee farming. Furthermore, supply volumes of Fairtrade certified coffee were constrained and the coffee roasting industry was highly concentrated. These purchasing circumstances prevented the retailers' ability to develop collaborative relationships for procurement, where existing certification schemes are complemented with additional sustainability specifications.

The concern that companies will not always be able to develop supplier collaboration when there is a lack of institutions for enforcing and policing compliance was also foreseen by Pagell, Wu et al. (2010) but not confirmed empirically. In the sample of interviewed retailers, the limited corporate efforts to develop supplier partnerships (with the aim of motivating and enabling suppliers to 'green' their products and operations) have been attributed to a number of factors. These factors include the substantial financial resources required, shortage of knowledge about sustainability issues and production protocols, and lack of unilateral corporate power over suppliers. These constraints might place the retailer in the critical situation where sourcing of sustainably produced goods is not implemented (Figure 12). To overcome these constraints and to affirm corporate adherence to demands of the institutional field, retailers might join industrial/multi-stakeholder initiatives to develop a sustainability certification.

4.3 The role of certification design in SSCM practice

This section elaborates on the role of the certification design in influencing the retailer's choice of the SSCM practices. Section 4.3.1 provides insights into how design of existing certification schemes might affect the degree of required collaboration with regard to procurement of privately eco-branded products. Section 4.3.2 discusses how development of novel certification institutions (as part of a SSCM practice by food retailers) is associated with the perception of the

existing certification schemes as not being sufficient to satisfy corporate needs and ambitions for greening a product supply.

4.3.1 Influence on degree of retailer-supplier collaboration

Besides the role of inter-firm purchasing circumstances, which affect whether sustainability-certified products would be procured on the basis of ‘hands-off’ or collaborative relationships, this thesis also identified a number of factors concerning the design of the certification scheme itself in affecting the degree of retailer-supplier collaboration.

More specifically, a retailer’s decision to engage in collaboration for procurement of sustainability-certified goods is influenced by *some degree of the misalignment between the corporate ambition for product differentiation and scope of the certification requirements*. For instance, in the case of the Fairtrade certification, food retailers wanted to differentiate their privately branded ethical coffee by ensuring high quality of certified coffee beans. However, the existing Fairtrade certification scheme does not include provisions on high quality. Due to the ‘minimum’ price guarantee, Fairtrade certification opens a window for the farmers’ opportunistic behaviour to sell low-quality certified coffee as Fairtrade. This situation occurs because high quality Fairtrade-certified coffee beans can be sold by farmers as a specialty coffee, if current market prices for it are higher than the Fairtrade premium, in order to maximise net income. In some, but not all, instances, food retailers also had the ambition to add extra sustainability requirements to the Fairtrade certification criteria. In order to ensure quality and/or secure compliance with additional sustainability criteria not covered by the certification scheme, food retailers became more engaged in communicating quality and sustainability requirements to suppliers, discussing production methods, and visiting farmers to verify their sustainability performance.

This contrasts with procurement of the privately eco-branded products under the UTZ Certified scheme, where collaboration with suppliers to ensure quality and control of sustainability compliance was usually viewed as unnecessary. The lack of need for collaboration is explained by *alignment between the corporate ambition for product differentiation, as well as motivation behind the certification adoption (mainstreaming sustainably produced coffee) with the scope of the certification requirements*. In particular, UTZ Certified, in comparison to Fairtrade, was designed to improve farming practices, with specific focus on operational efficiency requirements. These have positive implications for satisfying corporate ambition for higher quality of certified coffee beans, while at the same time lowering coffee price.

The lack of guaranteed price premiums in the UTZ requirements also allows retailers to negotiate more competitive market prices depending on supply/demand fluctuations, while eliminating the risk of the supplier's opportunistic behaviour (selling low quality certified coffee, as in case with the Fairtrade certification). At the same time, improved efficiency of production motivates suppliers, as it benefits farmers by allowing production of higher volumes of better quality coffee, something that attracts big buyers and guarantees a stable income. UTZ requirements allow certification for all types of farmers, unlike the Fairtrade certification which only applies to smallholders. UTZ requirements thereby align with corporate motivation behind the certification adoption, which is facilitating market demand through higher production volumes. Since current supply volumes of the UTZ certified coffee actually exceed consumer demand, retailers usually do not perceive the need to engage in supplier collaboration with the aim of facilitating supply availability.

Collaboration with suppliers of sustainability-certified products is also partially explained by the *inability of the certification scheme to provide a retailing company with a full/satisfactory level of services to motivate, enable and verify product/supplier compliance with certification requirements*. Here, retailers have perceived the Fairtrade certification monitoring services as being not sufficiently frequent and comprehensive to guarantee sustainability compliance of privately eco-branded products. The increased liability risks due to shared product ownership have affected corporate decisions to become more engaged with monitoring of compliance throughout the supply chain (i.e. beyond the first-tier suppliers).

At the same time, GlobalGAP and UTZ Certified schemes seem to generally provide a retailer with a *full/satisfactory level of services to motivate, enable and verify supplier compliance with certification requirements* (even with regards to privately eco-branded products). For instance, UTZ and GlobalGAP certifications enable suppliers to develop required competences and to comply with certification through, for example, training, adaptation of criteria to the local context and by providing group certification options. However, the nature of the incentives to motivate suppliers to join the schemes varies. For instance, UTZ certification offers market premiums and improved efficiency of business operations, whereas GlobalGAP is mandatory if suppliers want to gain access to the market. In addition, UTZ schemes provide the buying companies with the relevant services of monitoring, verifying, and tracing compliance along the whole supply chain by incorporating 'chain of custody' requirements. GlobalGAP also provides add-on services to ensure that the specific/additional concerns and preferences of buyers are addressed and catered for. As result, UTZ- and GlobalGAP-certified products (including privately eco-branded alternatives) are procured on the basis of 'hands-off' relationships.

In Paper IV it was argued that the limited (e.g. regional) market scope of the certification scheme increased the need for supplier collaboration, but this primarily concerned the example of the Nordic Swan certification in the textile industry. This argument has been brought into question somewhat by the findings presented in Paper V. More specifically, supplier collaboration in case of procurement of Nordic Swan certified textiles was necessary in order to motivate certification adoption and secure supply access, since relatively limited demand for green products prevented the commoditisation of the sustainably certified goods on the global supplier market. However, as demonstrated in Paper V, Tesco's Nurture certification, although limited to the UK consumer market, has not increased Tesco's collaboration with its suppliers. On the one hand, it can be argued that there is no need for collaboration because of the larger size of the British consumer market (in comparison to Sweden), which enabled commoditisation of Tesco's Nurture certified products. On the other hand, our findings in Paper V indicate a number of other possible explanations.

The lack of need to collaborate on procuring products with the Tesco Nurture certification is explained by a conducive supply chain structure, but also a number of other certification design features. Supply chain structure is characterised as being amenable to proactive supplier development, due to great retailer focus on the private eco-branding strategy, as well as Tesco's high level of control in the UK over its distribution chain (compared with Tesco supermarkets in other countries). In addition, Tesco's Nurture scheme incorporates the following *design features that facilitate adoption and ease the certification and auditing processes for suppliers*: 1) building on and resembling a widely adopted GlobalGAP scheme, 2) no official ISO 65 accreditation, 3) three compliance levels to allow for gradual improvement of the agricultural practices, 4) agreement with other certification bodies (e.g. BRC, GlobalGAP) to allow suppliers to retain already established commercial arrangements, and 5) reward in the form of reducing the frequency of audits for the best performing suppliers. The certification services provided by the Tesco Nurture scheme to control sustainability compliance are characterised as being of high integrity (due to established full supply chain transparency³⁰ and steering certification process by one official certifier), which further removes the need for supply chain integration.

The next section considers corporate reasoning behind the development of alternative certification schemes, with particular focus on how this decision is influenced by the inability of existing certification schemes to cater for corporate ambitions, needs and challenges associated with greening a product supply. We

³⁰ In comparison to GlobalGAP, which requires only registration of farmers, Tesco Nurture requires annual registration of crop, area, farm, in-country packer and importer. This contributes to improved supply chain transparency.

also consider a number of reasons that affect corporate choice to engage with a particular type of certification design. The analysis contributes to the debate on the role of the multiplicity of certification schemes in greening a product supply.

4.3.2 Influence on development of alternative certification

The decision to develop alternative certification is associated with particularly constrained supply availability, so that desired price, quality, ranges and/or volumes of sustainability-certified products cannot be influenced, even for privately eco-branded products. Constrained availability of certified product supply is not only attributed to unfavourable power circumstances, but also limited consumer demand for sustainability-certified goods. Another crucial factor for constrained availability of certified supply is associated with the design of the existing certification schemes, which fail to cater for specific corporate needs, ambitions and challenges associated with greening a product supply. In this situation some retailers might consider developing an alternative sustainability certification, which better caters for business concerns, as part of proactive SSCM practices to green a product supply.

An example is when Ahold wanted to mainstream environmentally and socially produced coffee. Existing Fairtrade certification did not allow mainstreaming due to its inbuilt price premium for farmers, which has negative implications for the price competitiveness of the sustainability-certified goods in comparison to conventional alternatives. Increasing Fairtrade production volumes was constrained because certification only applies to smallholders. Large plantations that could increase production volumes are not covered by the certification requirements. Another problem of Fairtrade-certified coffee is the risk of lower quality being reflected in taste, which further jeopardises market competitiveness and potential for mainstreaming.

To overcome the constraints of the Fairtrade certification, Ahold helped develop the UTZ Certified scheme in collaboration with other market and non-market players. The design of UTZ Certified has positive implications for price and non-price (e.g. quality) differentiation of responsibly grown coffee, as well as its supply volumes. Initially, collaboration with suppliers was viewed as necessary, mainly because of the need to communicate certification requirements and provide incentives in form of long-term contracts. Over time, as certified supply volumes increased, procurement practices started to resemble market competition, with certification being used as a qualifying criterion for suppliers. Although private brands are usually associated with higher level of liability risks, market-based approaches to procurement apply even for privately eco-branded products certified under the UTZ scheme.

Examining the case of GlobalGAP also demonstrates that retailers' decision to develop this collaborative certification was partially explained by the perception that existing schemes were not commercially feasible for greening a product supply and that they did not offer sufficient guarantees of legal compliance. Existing certifications were not considered suitable for the complex realities of the global supply chains³¹ and did not account for emerging stakeholder demands for sustainability. In addition, available schemes were national in scope, producer-driven and did not focus sufficiently on good agricultural practices at farm level, but instead outlined 'post-farm' requirements.

By developing the Tesco Nurture certification as an alternative to Global GAP, Tesco UK could better meet its private needs and ambitions for brand assurance and customer satisfaction. In particular, Tesco UK perceived the level and scope of the GlobalGAP requirements as insufficient for meeting the increasing concern of British consumers regarding food safety and sustainability. Furthermore, as mentioned by key respondent in the case of Tesco Nurture, GlobalGAP was perceived by Tesco

“at the start of the initiative as not being able to articulate responses in a sufficiently rapid manner... to changing stakeholder and consumer demands when required” (International Development & Quality Director at NSF Certification, scheme secretariat for Tesco Nurture).

In comparison to GlobalGAP, Tesco Nurture has a much greater focus on environment and worker's welfare, and stricter provisions regarding pesticide use. It also requires full supply chain transparency to ensure that fresh produce comes from the certified sources. Standard requirements can be changed more quickly, which allowed Tesco to become more proactive in responding to market signals, thereby improving corporate competitiveness.

Tesco was able to change the design of the auditing process, involving a shift towards a risk-based approach for evaluating supplier performance. In comparison to GlobalGAP, this type of approach to performance validation allows for

“much more granularity and offers the possibility to detect compliance trends... It is also a management tool for producers that serves not only to attain the status in the system, but also helps understanding of the areas for improvement” (International Development & Quality Director at NSF Certification, scheme secretariat for Tesco Nurture).

³¹ For instance, existing schemes did not provide a group certification option for small farmers. In some sourcing countries, many landholders are small and unorganised, making the certification process difficult and costly.

Steering a certification process by only one official certifier (NSF certification) enables better consistency in the auditing process, unlike the GlobalGAP, which delegates audits to numerous certifiers operating globally.

Development of novel certification does not necessarily lead to supplier collaboration for procurement. Development of GlobalGAP and Tesco Nurture certification did not require collaborative practices with suppliers, since the supply chain context was retailer-driven. In the case of UTZ Certified, collaboration took place initially but decreased as supply volumes started increasing; collaboration is no longer deemed necessary, even for privately eco-branded products.

Consequently, the development of retail-driven certification schemes is explained by the inability of retailers to influence and control a number of desired attributes of the sustainability-certified product supply, such as price, quality, supply volumes, additional/higher sustainability requirements. This is due to unfavourable transactional context: prohibitive inter-firm power circumstances and/or design of the existing certification schemes. At the same time, the retailer's ambitions/needs to pursue these supply attributes are affected by diverse factors at the macro-level of institutional environment. These factors include regulation and consumer scares (e.g. GlobalGAP), consumer demands (e.g. Tesco Nurture), competition, and political interests of non-market players such as NGOs (e.g. UTZ Certified).

Alternative certification schemes are therefore triggered by retailers' attempts to address tensions between macro- and micro-institutional levels. These tensions are associated with the clash between two institutional logics – logic of appropriateness and logic of instrumentality. The former is associated with conformity to stakeholder demands to become a pivotal player for addressing sustainability concerns upstream in the supply chain and mainstreaming the sustainably produced supply. The latter implies achieving this conformity in the economic-rational manner, in order to retain market competitiveness or even to generate higher profit margins. The design of existing certification schemes does not always allow retailers to develop a supply of sustainably produced goods in an economically feasible and low-risk manner.

Corporate decisions to develop alternative certification designs are also influenced by a variety of forces that can be ascribed to the political-institutional logic (2010). The corporate decisions are situational in the context of other actors' strategies, who themselves are pursuing their own political interests and agendas in the process of developing certification. As demonstrated in the analysis section of Paper V, interest-based strategies of market and non-market players led to 're-iteration' of corporate logic of instrumentality and appropriateness, resulting in certification design, which was not necessarily foreseen by retailers.

In line with political-institutional logic, development of the Tesco Nurture certification was partly driven by Tesco's inability to ensure sufficient representation of their own interests in the final design of the GlobalGAP scheme. The unilateral approach to standard-setting has enhanced corporate power to influence the existing discourse regarding the certification design, and allowed Tesco to adjust the certification provisions to better match its corporate needs and ambitions to run its business successfully.

In the case of UTZ Certified, Ahold's efforts to develop novel certification were facilitated by the political interests of the Dutch NGO Solidaridad. For some time, Solidaridad had been trying to introduce Fairtrade certified coffee in the mainstream market, but without success. After realising that Fairtrade certification was not compatible with business logics, Solidaridad sought collaboration with large corporate buyers, including the Ahold retail company, to devise new institutional arrangements for developing a market share for responsibly produced coffee. At that time, retail executives and coffee purchasers at head office level acknowledged the need to address sustainability issues of the mainstream coffee supply. Participation of Solidaridad was crucial for establishment of UTZ Certified, as it managed to create a forum that brought together multiple competing stakeholders.

Although alternative certification schemes appear to help retailers overcome unfavourable institutional conditions for greening a product supply, this SSCM practice is not easy, and not every retailer will be willing and able to undertake it. Factors influencing a retailer's decision to engage with such a proactive SSCM practice include: 1) the perception that alternative certification development is of strategic importance for corporate prospects, 2) resource availability to make necessary investments, and 3) the ability to establish the 'right' connections with other market and non-market players, to capitalise on their knowledge and experience.

Of the three certification schemes developed by retailers and examined in this study – GlobalGAP, UTZ Certified, and Tesco Nurture – the latter two were clearly developed on the basis of existing certification schemes, thereby capitalising on the associated experiences and knowledge. UTZ Certified and Tesco Nurture were based on the GlobalGAP code. Tesco Nurture is administrated by the NSF certification body, which has much experience of the GlobalGAP certification. UTZ Certified relied on the GlobalGAP certification bodies to conduct supplier audits before independent UTZ certification bodies were established.³² Compared with situations where sustainable purchasing is delayed

³² When developing GlobalGAP, retailers also tried to collaborate with the UK Tractor scheme to capitalise on their experience. However, suppliers who developed it were reluctant to collaboration.

because of the lack or underdevelopment of certification schemes on the market, our empirical evidence implies that proactive SSCM practices associated with novel certification schemes are extremely constrained, if there is no existing certification scheme to build on or benchmark with.

4.4 Final remarks on the role of certification and novel institutional arrangements in SSCM practice

At the aggregate level of analysis, our findings identify the importance of third-party sustainability certification for facilitating the practice of SSCM. By lowering the transaction costs associated with greening a supply chain, third-party certification allows retailers to overcome significant resource barriers, such as lack of time, money and knowledge to address sustainability issues that arise upstream in the supply chain.

Although collaboration with suppliers can yield strategic resources that enhance competitiveness of the overall supply chain (Gold, Seuring et al. 2010, Beske, Land et al. 2014), development of partnerships with each individual supplier to green a product supply would be extremely difficult, if not impossible, for retailers, due to the sheer number of globally procured products in the retailer's assortment. Here, certification institutions are very important for facilitating corporate engagement with SSCM practices on a wider scale, since they enable procurement of sustainably produced goods on the basis of market competition, without adjusting conventional sourcing practices. Where the inter-firm power conditions relating to greening product supply are perceived as somewhat constrained, third-party certification can substitute the retailers' unilateral power with the market power of consumer demand.

However, third-party certification alone does not necessarily enable significant improvement to the sustainability performance upstream, as suggested by Kogg and Mont (2012). This is demonstrated in situations when low consumer demand for sustainability-certified products is coupled with an inability of retailers to affect the availability of the sustainably certified supply due to prohibitive power circumstances and/or design of the existing certification schemes.

Food retailers do not always perceive that the design of third-party certification caters sufficiently for corporate needs and ambitions associated with greening a food supply chain. Buyers may not be able to fully outsource work relating to communication, motivation, enablement and control of sustainability compliance. Consequently, certification schemes do not always eliminate the need for collaboration with suppliers.

Private eco-branding and retail-driven certification schemes are novel institutions. They are associated with proactive or novel entrepreneurial SSCM practices that help retailers overcome unfavourable institutional conditions and manage its inconsistencies/tensions in order to move forward with greening a product supply. The co-branding mechanism for privately eco-branded products, certified by existing or novel third-party certification schemes, appears to have greater impact upstream in the supply chain³³ compared with only using existing third-party certification institutions. These findings need to be further investigated in quantitative studies that evaluate positive sustainability improvements that have been achieved and complemented by suppliers' own perspectives.

Development of novel institutions for greening a product supply might also require superficial or strategic partnerships with suppliers. However, in the long run, transaction costs are expected to decrease in comparison to using existing certification. Reduction in transaction costs is achieved through improved certification design. Novel certification design is better at addressing corporate needs, ambitions and challenges associated with greening a product supply. These include aligning the scope/level of certification requirements with the buyer's pursuit of product differentiation, mainstreaming or risk management. Certification management services are improved to reduce retailer engagement with communication, motivation, enablement and verification of the sustainability information and performance upstream in the supply chain. At the same time, price and non-price differentiation strategy applied for privately eco-branded products generates returns on investment in novel certification, in the form of increased sales of sustainability-certified products, enhanced brand value and customer loyalty.

Retailers still heavily rely on existing certification institutions when engaging in proactive SSCM practices to encourage more and better sustainability-certified products substitutes in the form of private eco-brands and/or novel certification schemes. Existing certifications are widely applied for privately eco-branded products to reduce the retailer's liability risk³⁴ and to establish consumer trust for sustainability claims. Existing certification schemes also seem to provide retailers with learning experience that can later be applied when developing novel certification schemes. These examples demonstrate the importance of well-established certification schemes when retailers switch reactive to proactive SSCM practices.

³³ The greater impact is associated with improved availability of green product supply, but also increased level of sustainability performance due to wider scope/ higher level of sustainability requirements codified in novel institutions.

³⁴ The liability risk in case of noncompliance is transferred from the retailing company to the certificate holder or certification organisation.

4.5 Proactive or novel entrepreneurial SSCM practices as a source of sustained competitive advantage

This section elaborates on how the entrepreneurial (proactive) SSCM practices associated with creation of novel institutions (e.g. private eco-brands and alternative certification schemes) are linked to development of DCs in SSCM, thereby contributing to a sustained competitive advantage. More specifically it develops a framework that shows the link between entrepreneurial SSCM practices, existing certification institutions and sources of competitive advantage. This framework is presented in Figure 13 and will be discussed in more detail below.

Existing sustainability certification schemes help retailing companies gain access to assets, skills, and procedures that not only reduce TCs associated with SSCM, but also enable development of DCs. Our research findings indicate that certification schemes increasingly consider organisational processes and procedures, similar to SSCM practices associated with generation of DCs in frameworks by Beske (2012) and Beske, Land et al (2014). These include supply chain, TBL and learning orientation, partner development, enhanced communication, risk management and stakeholder management.

The combination and level of performance of these practices appears to vary between the certification options available on the market. This enables variation in DCs acquired by firms that adopt and implement different certifications in their supply chains. Implementation of a certification scheme is not always easy, and might require (inter-)firm specific capabilities. The unique combination of knowledge and routines engrained in the design of the chosen certification option, with DCs possessed and shared between partners in the supply chain and necessary for certification adoption, serve as a source of *certification-enabled DCs* (Figure 13). Certification-enabled DCs in the suggested framework are based on the framework of DCs in SSCM proposed by Beske, Land et al. (2014) and discussed in more detail in Section 2.5.

The potential of *certification-enabled DCs* as a source of sustained competitive advantage (e.g. from early adoption) dissipates as more firms implement the same certification in their respective supply chains. When certified product supply becomes easily available on the market and SSCM can be implemented based on selection/de-selection of sustainability-certified goods, certification-enabled capabilities lose their strategic purpose and become fully outsourced to certification organisations and associated certification bodies. Firms continuing to invest in retaining or developing these capabilities, which could be easily acquired

through the market, would undermine their business efficiency in line with TCE theory.

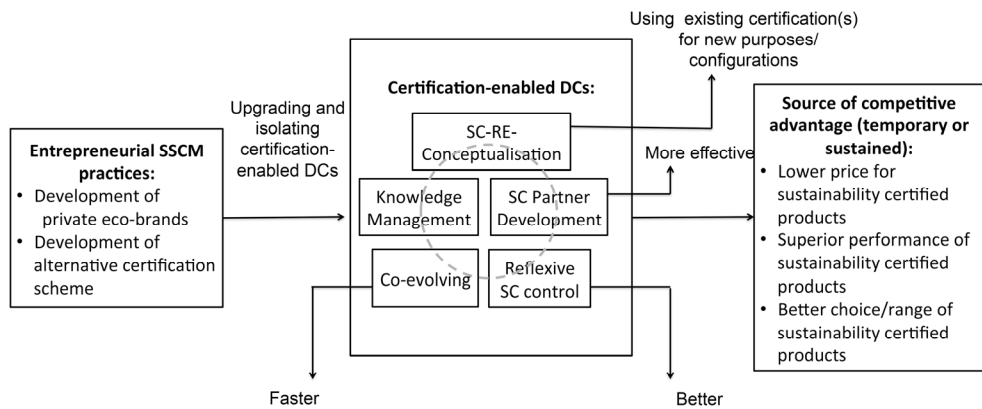


Figure 13. The role of entrepreneurial SSCM practices and existing certification(s) in generating DCs.
Compiled by author based on conceptualisation of DCs in SSCM by Beske (2012) and Beske, Land et al. (2014).

Based on the research findings in Papers III and V, entrepreneurial SSCM practices, associated with development of private eco-brands and alternative certification schemes, can be viewed as a source of upgrading and isolating certification-enabled DCs to retain their strategic orientation. In the following section, we show how some of certification-enabled DCs are upgraded by developing entrepreneurial SSCM practices. The findings are summarised in Figure 13:

1) *SC-RE-Conceptualisation* does not simply involve new partners (e.g. NGOs and certification organisations) that are not traditionally part of the supply chain, but using these partners in new configurations and/or for renewed purposes. For example, multiple certifications can be combined under an umbrella of privately eco-branded products. Additional requirements (sustainability and/or quality related) can be added for private eco-brands, and existing certification bodies are asked to verify and monitor compliance with these requirements.

Other examples of using non-traditional SC partners in new ways are the UTZ and Tesco Nurture certifications. In particular, NGO Solidaridad, originally engaged with development of the Fairtrade scheme, was involved in developing the alternative UTZ Certified scheme. Before UTZ auditing services were established, GlobalGAP certification bodies were used to ensure compliance with UTZ requirements. Tesco UK collaborated with the NSF certification body when

designing Tesco Nurture, its novel certification scheme. NSF was chosen as a partner because of its extensive experience with Global GAP implementation.

The use of NGOs and existing certification organisations in new ways is explained by corporate needs to access knowledge that is otherwise difficult to acquire because of its local and tacit nature. *Knowledge Management capability* is still outsourced to existing certification bodies or NGOs.

2) *Effective SC Partner Development* is reflected in provision of additional support for suppliers to implement novel SSCM practices, codified in requirements for privately eco-branded and sustainability-certified products. In particular, partner development, which is usually provided by certification schemes in the form of education and training, can be supplemented by long-term contracts as a form of business guarantee, as well as provision of positive incentives, including better shelf placement and more tolerant shelf policies. The design of novel certification schemes might in itself provide suppliers with an incentive to join. Due to its focus on improving efficiency of business practices, UTZ Certified allows suppliers to produce higher volumes of coffee of better quality and at a competitive price. This helps establish contracts with large buyers and benefits farmers by guaranteeing a stable income. With regard to private eco-brands, more effective SC Partner Development is associated with corporate perception of an increased level of power over suppliers to influence product and process compliance with sustainability criteria.

3) *Better Reflexive SC Control* is associated with improved ability to assess and evaluate whether the design of novel institutions helps maintain sustainability practices in the supply chain, as required by key stakeholders in the corporate institutional field. Interviewed respondents indicated a higher degree of involvement in reviewing, assessing and negotiating product quality, price and compliance with sustainability requirements. Suppliers of privately eco-branded products are audited more often in relation to sustainability requirements, with corporate practitioners attending audits carried out by the certification bodies.

Entrepreneurial SSCM practices associated with development of novel certification schemes also allow for a better Reflexive SC Control. The UTZ Certified scheme is the first one to introduce an option of 'chain of custody' certification. This certification guarantees 100% traceability by ensuring that coffee originates from the certified sources and has not been mixed with uncertified ingredients at any point in the supply chain. Tesco Nurture is another novel certification that improved traceability of sustainability practices in comparison to GlobalGAP.

The Tesco Nurture auditing process also improves ways to assess and evaluate the sustainability performance of suppliers. Tesco Nurture auditing services are more

consistent compared to services of performance validation provided by GlobalGAP. This is achieved by steering the certification process by NSF organisations, the only one official certifier for Tesco Nurture³⁵, whereas GlobalGAP audits are performed by numerous globally widespread certification bodies.

4) *Faster Co-evolving* is reflected in the ability to incorporate changes in the design of novel institutional arrangements faster than in existing certification(s), to ensure that business practices in the supply chain match stakeholder sustainability expectations. Existing certification schemes are usually updated every four years to account for changes in the business environment and to maintain their functionality. According to respondents, private eco-brands (e.g. ‘I love ICA’ by ICA Sweden, and ‘Ånglamark’ by COOP Sweden) and the unilateral Tesco Nurture certification can be quicker adapted to corporate needs and ambitions for brand assurance and customer satisfaction. Quicker adjustments of business practices in the upstream supply chain to match regularly updated sustainability requirements are further enabled by the improved capability of effective SC partner development.

According to Deffee and Fugate (2010), the co-evolving capability is also associated with a firm’s ability

“to reconnect webs of collaborations among multiple members of the supply chain for the purpose of generating novel capabilities” (Deffee and Fugate 2010, p. 191).

In the case of entrepreneurial SSCM practices, the co-evolving capability clearly depends on the retailer’s ability to develop partnerships with existing certification bodies and/or other NGOs (e.g. the Swedish Society for Nature Conservation (Naturskyddsföreningen), WWF, Solidaridad). These provide updated information and advice on which sustainability issues should be addressed and how. The dynamic capability of faster co-evolving, upgraded by developing entrepreneurial SSCM practices, depends on the firms’ internal capability to access knowledge.

Another prerequisite for ‘co-evolving’, associated with re-configuration of obsolete and development of new DCs, is learning orientation (Beske, Land et al. 2014). Novel certifications, instigated by the food retailing industry, clearly show signs of learning from existing auditing and certification schemes. Learning is demonstrated in screening, reviewing and evaluating the feasibility of existing food safety (e.g. British Red Tractor) and sustainability schemes (e.g. Rainforest Alliance) in the process of developing the GlobalGAP certification. GlobalGAP

³⁵ However, suppliers are allowed to retain established commercial relationships with other certification bodies. These certification bodies are sub-contracted by NSF, which reviews the consistency of the auditing process based on the associated documentation.

also provided learning and was used as a basis for drafting both UTZ Certified and Tesco Nurture requirements. Before rolling out the Tesco Nurture scheme globally, the pilot certification process was run in Spain to test its feasibility.

Private eco-brands and retail-driven certification schemes, alone and in combination (i.e. applying novel certification for privately eco-branded products), also serve as a foundation for isolating (i.e. protecting) upgraded DCs in SC from being easily imitated and replicated by competitors with access to the same certification schemes. In line with Teece, Pisano et al. (1997), isolating mechanisms for a specific bundle of processes, through which DCs are enacted, are enabled by a firm's specific assets/positions, and path dependency (Figure 13).

Reputational, structural and market assets/positions contribute to inimitability of upgraded DCs in the case of private eco-brands and Tesco Nurture. Reputational assets are associated with a brand image of a particular supermarket. Structural assets pertain to specific structures of the supply chain that enable retailers to exercise influence on suppliers to produce goods in accordance with corporate exclusive requirements. For example, the high level of operational control Tesco UK exerts over its distribution chain enabled the company to impose Tesco Nurture certification criteria, which are stricter and more often updated than the GlobalGAP requirements. Market assets associated with leading market positions of firms, enabling them to develop entrepreneurial SSCM practices, represent another foundation for protecting DCs enabled by these practices.

Research findings of Paper V also show that the development of entrepreneurial SSCM practices is path dependent. More specifically, corporate decisions for a certification design to account for a number of sustainability-related practices (such as stakeholder composition/management, services for supplier development and risk management), which in turn enable specific DCs, co-evolve in the context of other stakeholders' strategies to pursue their own interests. The empirical evidence also shows that novel certification design builds on and thereby inevitably inherits some of the parameters of the existing certification options. There is a tendency to include sustainability values and practices adopted and appreciated by suppliers and consumers in the already available certification options.

Another indication of path-dependency in developing DCs is that, once a particular decision on certification design is made, the next decision is dependent on the previous one. Tesco UK started developing proactive SSCM practices prior to GlobalGAP. This commitment and associated resource investments, together with other considerations (e.g. regarding GlobalGAP requirements as insufficient for meeting corporate needs for brand assurance and customer satisfaction), influenced the decision to design an alternative certification. In the case of UTZ certification, Ahold's decision to collaborate with Solidaridad was critical for the

subsequent resolution to open up the certification development forum to other retailers.

To summarize, empirical evidence demonstrates that ‘history matters’ in developing novel certification institutions, bundling sustainability-related practices codified in certification design, and enabling DCs. Although food retailers are free to choose, their options for certification design are limited/influenced by 1) other players’ strategies in pursuit of their own interests, 2) the existing certification options, and 3) previous corporate decisions/investments. Such path dependency, coupled with firms specific assets/positions helps isolate mechanisms for creation of DCs, which are enabled by retailers’ entrepreneurial SSCM practices.

As mentioned earlier in the analysis section, and discussed in more detail in Papers III and V, entrepreneurial SSCM practices associated with development of private eco-brands and alternative certification schemes afford opportunities for pursuing a competitive advantage. According to some interviewee’s responses, these institutions allow for business practices that enhance supply chain efficiency, lower product price, and enable superior product performance (e.g. in terms of quality, taste and level of sustainability requirements in comparison to the rest of the sustainability-certified assortment). Entrepreneurial SSCM practices also allow for better choice/increased ranges of sustainability-certified products (Figure 13). Markedly lower price and differentiation in terms of superior product performance are strategic management options discussed by Porter (1985). Improved and wider choice (i.e. range) of sustainability-certified options can be also viewed as diversification strategy for enabling superior corporate performance (Porter 1985). Besides improving the way customers perceive and are attracted to a particular store, better choice of sustainable alternatives boosts investor appeal (Triodos Bank 2010).

Further research is needed to explore the link between entrepreneurial SSCM practices in the form of developing private eco-brands and alternative certification schemes, DCs, and to examine whether these practices help retailers derive temporary or long-term economic rents and a sustained competitive advantage.

Our findings also show that development of DCs does not necessarily require development of close partnerships, as is often argued (Gold, Seuring et al. 2010, Beske, Land et al. 2014). Removal of collaboration, which is also often viewed as necessary part of SSCM (Seuring and Muller 2008, Vachon and Klassen 2008) is achieved by including a NGO, a stakeholder that originally had weak economic ties to the supply chain. These NGOs include certification organisations and certification bodies, as well as traditional NGOs involved in certification development. The development and implementation of unilateral Tesco Nurture certification does not require close collaborative practices with suppliers. Yet, practices enabled by certification are linked to development of DCs, such as Reflexive SC control and Co-evolving.

5 Discussion

This section discusses the contribution of this thesis in terms of its scientific and practical relevance. In particular, it outlines the implications of the findings for research and theory-building in the field of SSCM management, for retailers, and policy-makers. In doing so, additional insights are provided on how the research findings could be interpreted.

5.1 Implications for theory and research in the field of SSCM

The major contribution of this study lies in developing a contextual and dynamic perspective on the SSCM phenomenon. In particular, it demonstrates that corporate choice of relationship management practices with suppliers and associated institutional arrangements to influence and control products adherence to environmental and social criteria depend on: 1) the contextual realities of the broader institutional field, 2) the specificity of the supply chain/transactional context, 3) the interplay between these two contexts, and 4) the design of the existing sustainability certification schemes.

In developing a contextual and dynamic³⁶ perspective on the SSCM phenomenon, this study builds on insights offered by the New Institutional Economics theory and the broader field of the institutional analysis, as well as perspectives offered by a Dynamic Capabilities theory. This makes research into SSCM more theoretical, moving away from a simple inventory of SSCM practices and focus on supplier collaboration as a superior approach to implementing environmentally and socially accountable food supply chains. More specifically, the contribution of this thesis to research and theory-building, which is often referred to as inadequate in the SSCM literature (Seuring and Muller 2008, Pagell, Wu et al. 2010, Touboulic and Walker 2015), is as follows:

³⁶ The dynamic perspective implies here that companies do (and should) re-consider the choice of SSCM practices as the macro- and micro-level context of their transactions with suppliers changes. This is to ensure competitiveness within their supply chain, as well as between their supply chains, in relation to supply chains of other retailers.

1) *Systematic conceptualisation of institutional factors and analysis of their relative importance*, both for affecting retailer willingness and ability to engage with SSCM, but also for the corporate choice of this practice (reactive vs. proactive). Such analysis is based on first-hand data – empirical evidence from the food retailers themselves – which so far has been relatively limited in the academic literature.

2) *Developing a typology of SSCM practices* (i.e. relationship management approaches with suppliers to green a product supply), with detailed insights on the degree of collaboration required, nature of incentives, level of the sustainability ambition, and level of retailers' involvement in compliance verification. The typology of SSCM practices developed here further establishes *a dependency of the corporate choice of SSCM practice on characteristics of the inter-firm procurement context*. This shows that collaboration, often argued in SSCM literature as being prerequisite for greening a product supply (Seuring and Muller 2008, Vachon and Klassen 2008, Beske, Land et al. 2014), is not always economically rational or possible. However, suggested dependency is probabilistic rather than deterministic and prescriptive in its predictability of the corporate choice of SSCM practices. Retailers might engage in collaborative supplier relationships even when procurement conditions permit for the leveraging of suppliers based on market competition. This can be attributed to other factors, that were not considered in this study, e.g. corporate culture and values (Muller, Vermeulen et al. 2012). When opting for relational contracts with suppliers, purchasing managers must consider the great diversity of goods and many other factors, e.g. logistics, inventory management. Therefore, approaches to greening a product supply can be very complex and are not limited to the typology of SSCM practice developed in this study.

3) Based on the typology of SSCM practices developed in this study, *an update to the sustainable purchasing portfolios* proposed by Pagell, Wu et al. (2010) is suggested. More specifically, this update accounts for the influence of the inter-firm power circumstances on the retailers' ability to green a product supply. Consideration of the inter-firm power circumstances has been recognised as important for enhancing effective procurement (Cox 2001c), but it has yet to be properly considered in the SSCM literature. Our updated model of sustainable purchasing portfolios includes a more operational definition of supply risk associated with availability of the sustainability-certified product supply. This allows a better illustration of market conditions associated with higher or lower transaction costs, and helps to explain the corporate choice of a SSCM practice.

4) By devoting particular attention to the role of third-party sustainability certifications, this thesis responds to the pronounced needs of the academic community *to better understand the role of the certification institutions for*

motivating and enabling the corporate sustainability governance upstream in the supply chain (Seuring 2011, Steering Committee of the State-of-Knowledge Assessment of Standards and Certification 2012), rather than exclusively focusing on its role and critique for promoting sustainable consumption. While demonstrating the crucial importance of third-party sustainability certification for the retailers' ability to address product sustainability improvements, this study also provide evidence of the modest role of certification in facilitating retailers' proactive practices of greening a product supply (i.e. beyond currently limited consumer demand for sustainability-certified products). At the same time, this study provides examples of the mechanism of co-branding that helps retailers to address institutional shortcomings of third-party sustainability certification for engagement with SSCM practices on a wider scale. More specifically, this study demonstrates the importance of eco-branding as an important complementary institution to third-party sustainability certification that motivates and enables retailers to engage with developing availability of sustainability-certified supply. This perspective on private eco-branding as a complementary institution to sustainability certification for facilitating corporate sustainability governance is currently lacking.

5) Given the inconclusive evidence on the role of certification in corporate sustainability governance (Hagen and Alvarez 2011), and especially in the context of food retailing industry, *this study provides better understanding of when certification does and does not relieve companies from additional work to green a product supply. This research also provides insights into factors, which explain retailer's engagement with development of a novel certification.* A range of factors pertaining to intention of the buying company and complex realities of the supply chain context have previously been discussed in the literature. However, our consideration of the design features of the certification schemes, especially the ones attributed to the ability of the certification to provide a buying company with a full/satisfactory level of services to motivate, enable, and verify supplier compliance, is rather new.

6) Research that examines the link between SSCM practices and DC theory is limited (Beske 2012, Beske, Land et al. 2014). This thesis turns the spotlight on this link, and more specifically on the role of entrepreneurial SSCM practices associated with development of novel institutions (such as private eco-brands and retail-driven certification schemes), in affording opportunities to develop DCs. The framework presented here suggests the *link between entrepreneurial SSCM practices, existing certification institutions, and generation of dynamic capabilities in the supply chain.* The DC perspective further contributes to the argument that SSCM practices to implement environmentally responsible product chains should be regularly reviewed and updated. This should be in response to changes in the business environment (i.e. corporate institutional field) if the

company intends to create additional value from these practices, rather than simply obtaining a ‘license to operate’. Corporate practices of SSCM should also be adjusted in order to retain an operating license, as the conception of what constitutes an appropriate environmental performance and management practices might change over time.

5.2 Implications for food retailers

The study yields a number of implications for the retail strategy to green a product supply. These findings are of particular value for food retail companies at the start of their journey to develop sustainability practices in their supply chain. The comprehensive and systematic overview of drivers and barriers for SSCM might help retailers to evaluate potential pros and cons, and to justify associated investments to shareholders.

The typology of SSCM practices further informs corporate practitioners about the choice of relationship management practices that may be appropriate for greening a product supply in the given procurement context. Our findings demonstrate that the development of strategic partnerships with suppliers (often recommended by the proponents of collaborative approaches to SSCM) is not always the viable business option. A retail strategy to successfully green a product supply, while retaining profitability and competitive advantage, requires (re-)adjusting the purchasing relationships to fit the characteristics of the transactional context. The dynamics of the inter-firm power circumstances, changes in supply of and demand for sustainably produced goods, trends in certification development and certification design changes should be carefully evaluated by corporate practitioners greening a product supply.

If sustainability-certified products are widely available on the supplier market at relatively competitive prices and good quality, the development of strategic partnerships with suppliers might incur unnecessary transaction costs and undermine business efficiency. A retailer’s action to green a product supply might be focused on facilitating consumer demand in order to create a business case for increasing the procurement volumes of sustainability-certified products. Besides promotion and advertisement campaigns, this might include more tolerant shelf policies for green products, or price adjustment strategies, where prices of sustainably produced goods are slightly reduced, while prices of conventional products are slightly increased, to reduce the relative difference. Double certification is another way to boost consumer demand. Certification with higher level of uptake on the market can be combined with certification associated with lower sales levels. An example is Axfood in Sweden, which double-certified

bananas as organic and Fairtrade to increase the uptake of the latter certification by consumers.

The developed typology of SSCM practices (including proposed update to sustainable purchasing portfolios) also suggests possible ways in which retailers can transform unfavourable market conditions into a more conducive environment for greening product supply. Unfavourable conditions include: a lack of power over suppliers; low consumer demand for sustainability-certified products; and misalignment of existing certification design with corporate needs for greening a product supply.

The potential to increase the retailer's power over supplier to green a product supply, while also boosting demand for sustainability-certified goods, involves the mechanism of co-branding. This means creating a jointly owned product differentiation in the form of retail own/private eco-brands, certified by the already existing certification schemes.

Co-branding can improve the retailer's ability to influence product compliance with sustainability requirements, even beyond those codified in existing certification schemes. It also helps to develop supply availability in terms of higher volumes, better quality, wider ranges and more competitive prices of sustainability-certified products. These have positive implications for facilitating consumer demand and creating a business case for greening a product supply. Privately eco-branded products can bear multiple certifications. This also contributes to boosting consumer demand via enhancing green product differentiation, catering for various consumer niches and reducing customer confusion over multiple sustainability choices. In addition, co-branding seems to allow faster response than existing certification schemes to changing sustainability expectations of salient stakeholders.

Retailers may encourage substitutes in the form of new sustainability certification schemes, whose design caters better for corporate needs, ambitions and challenges associated with greening a product supply. Novel certification can be applied to privately eco-branded products (as part of co-branding mechanisms), but also to other products. However, developing alternative certification is not an easy task, and requires strategic considerations, including whether to develop a novel certification unilaterally or to seek collaboration with other stakeholders. Corporate strategic considerations would require further re-adjustments during the certification development procedure, as other market and non-market players would probably affect corporate decisions in the pursuit of their own interests and agendas.

Another implication for a retailer's strategy when greening a product supply is that a corporate decision on a certification scheme will have consequences not only for

the company's reputation, but also for business efficiency of greening a product supply. When selecting which certification scheme to adopt (or what certification development initiative to join), retailers should consider not only issues of credibility and trust of certification scheme among stakeholders, but also whether certification design reduces the amount of work involved in greening a product supply to a required/desired extent (e.g. in terms of pursued level of sustainability ambition, volumes, quality, and price of sustainability-certified goods). The results of the study show that specific attention should be paid to: reviewing the scope of certification requirements and checking whether they align with the retailer's motivation behind the certification adoption; and evaluating the certification management services. It is important to consider whether these services would suffice for communicating, motivating, enabling and verifying required/desired sustainability information and performance upstream in the supply chain.

5.3 Implications for policy-makers

Globalisation and trade liberalisation are continually diminishing the capacity of national and international governments to address food-related sustainability issues spanning state boundaries. Clearly, corporate involvement is crucial to delivering sustainability improvements through the market and by working within established structures of supply chains. However, left alone, without support of policy-makers who can assist retailers in a number of ways, retailers are unlikely to achieve much impact on sustainability performance upstream in the supply chain.

Although each paper appended in this thesis suggests a number of general and specific implications for policy-makers, this section considers two aspects that are particularly relevant and novel. Both concern the role of certification schemes in enabling corporate sustainability governance in the supply chain.

This study argues that in order to realise the potential of the certification scheme to deliver sustainability improvements through the market (Ponte, Gibbon et al. 2011, Ransom, Bain et al. 2013, Auld 2014), certification should be designed by policy-makers not only as an information tool for consumers, but also as a supply chain management tool for retailers. UTZ Certified is an example of a successful certification scheme that managed to mainstream sustainably produced coffee, and is now applied to other commodities, e.g. tea and cocoa, with plans for palm oil. Its success was largely attributed to its design, which was aimed at attracting uptake by large buying companies, including food retailers. More specifically, the design allowed buyers to procure desired volumes of responsibly grown coffee at a

competitive price and quality, without substantially adjusting their conventional sourcing practices.

The certification management services are deemed sufficient to motivate and guarantee supplier compliance, while the traceability tool and ‘chain of custody’ certification, first introduced on the market by the UTZ Certified scheme, provides retailers with further assurance that coffee beans came from certified sources. Different grades of ‘chain of custody’ certification allow gradual growth in sustainably produced volumes, and retailers also see this as another source of product differentiation (e.g. whether 50% or 100% of packaged ingredients came from certified source). By joining the scheme, suppliers are able to benefit by producing responsible coffee more efficiently, and this allows them to produce higher volumes and attracts large buyers. To ensure inclusion of various types of farmers, certification provides group certification options, allows gradual compliance with certification provisions, and offers training and support services. Therefore, UTZ Certified was designed to enable market efficiency (both for producers and buying companies, including food retailers), rather than informing consumers about ‘green’ product attributes. This was key factor behind its successful upscaling on the market.

This study contributes to the debate on the multiplicity of standards. In the quest to harmonise certification, very often in general terms, to reduce consumer confusion and producer costs associated with certification, it is often forgotten that sustaining a co-existence of multiple certifications (i.e. standards multiplicity) can have a number of advantages. This study provides a positive perspective on sustaining the standards multiplicity by: 1) indicating the corporate need to engage with development of alternative certification schemes from the SSCM perspective, 2) providing examples of how a novel certification allowed retailers to move from reactive to proactive SSCM practices (e.g. UTZ Certified and Tesco Nurture), and 3) demonstrating how development of novel certifications was enabled in situation of the already existing schemes (through e.g. learning), while halted when no certification options have existed.

This study found no evidence discrediting multiple certifications (or proliferation of retail-driven schemes), including the ‘race to the bottom’ in terms of lowering the bar of certification requirements. It can be due to the fact that suppliers perspective was not considered and only three certification schemes were examined. The results of this thesis suggest that multiple certification schemes seem to allow retailers to choose the ones most appropriate to their institutional configurations at macro- and micro-levels, encouraging companies to engage with greening a product supply. However, this proposition requires further exploration.

Policy-makers can stimulate the work to converge multiple schemes while sustaining the multiplicity of standards. They can do this by promoting

benchmarking processes and collaboration between various certification schemes in the form of joint capacity building (e.g. training) and audits. This would decrease the complexity of certification work for producers and reduce consumer confusion. Successful examples include the Common Code for the Coffee Community (4C) set up in 2003, which was facilitated by the Dutch, Swiss and Danish government-funded IDH Program (Sustainable Trade Initiative). The aim was to align efforts of multiple competing stakeholders (including certification institutions) in expanding the market for sustainability-certified coffee. Both Fairtrade and UTZ Certified are part of the 4C, which is viewed by both schemes as the 'entry' standard with the main aim of raising the bar of certification requirements.

6 Conclusions

6.1 Main findings

This study demonstrates that retailers operate in a highly competitive, dynamic and inconsistent institutional environment that channels their work towards a variety of SSCM practices. At the aggregate level of this study, these practices are divided into reactive and proactive (or novel entrepreneurial) SSCM practices, and require various degree of retailer-supplier collaboration.

The relative importance of the multitude of institutional factors, which affect retailers' willingness and ability to engage with SSCM practices, could be presented in the following order: market, resource, social and regulatory. However, such a representation of the relative importance of institutional factors is rather general. The relative weight of institutional factors in retailers' decisions is also affected by key attributes of institutional demands, such as urgency, power and legitimacy. Different stakeholders can increase the significance of particular institutional demands for specific sustainability concerns at different points in time by engaging in interest-based strategies in pursuit of their own political goals and agenda.

This study demonstrates that a major challenge for retailers addressing the sustainability performance upstream in the supply chain and developing a green product supply arises from the clash of two institutional logics behind diversity of institutional factors. On the one hand, the logic of appropriateness means that the retailer must conform to stakeholder expectations and become a pivotal actor in implementing and upscaling sustainable production and consumption practices. On the other hand, the logic of instrumentality necessitates achieving this conformity in an economically rational way, to maintain or enhance business competitiveness. Existing institutional configurations do not always allow retailers to move forward with greening a product supply. This study supports a critique of the 'mighty buyers' story (Gibbon and Ponte 2008) by demonstrating that a significant impact on the sustainability performance upstream in the supply chain is difficult to achieve, even for large-volume buying companies like retailers.

SSCM practices explored in this study, from 'hands-off' to collaboration, including retailers' decisions to engage with development of novel institutions

(such as private eco-branding and alternatives to the already existing certification schemes), are influenced by the complex interplay and tensions of various institutional factors. These work at both macro-level (corporate institutional field) and micro-level (retailer-supplier transactions). The interplay of institutional factors shapes a level of corporate needs and ambitions and affects purchasers' interpretation of the supply chain context, and the study shows how the tensions between the two³⁷ can be addressed/resolved by the mechanism of co-branding. The latter is associated with retailers' development of privately eco-branded products, certified by an existing or a novel certification scheme. The findings of this study imply that co-branding is likely to motivate and enable retailers to achieve a greater impact on sustainability performance upstream in the supply chain than if the existing certification schemes are used alone.

In analysing the factors that affect the corporate choice of SSCM practice, this study shows the crucial importance of certification institutions in facilitating both reactive and proactive, or novel entrepreneurial, practices of greening a product supply. Certification institutions set industry norms to which retailers have to conform in order to maintain competitiveness. Retailers would find it hard to set such norms themselves, given the contentious, complex and dynamic nature of the sustainability debate for different product groups. Certification institutions are nowadays governed by meta-governance organisations, which ensure that standards are based on the principles of all-inclusiveness, transparency, local adaptation and accountability, aiming to combat the most profound sustainability impacts and to benefit suppliers in developing countries. The institution of third-party sustainability certification helps guide retailers' true commitment to sustainability.

Certification institutions allow outsourcing of the critical and resource-intensive tasks associated with coordinating and controlling a sustainability performance upstream in the supply chain to certification service-providers. Retailers can green a product supply by simply choosing to procure sustainability-certified products, without any need to engage in supplier collaboration, which might incur a number of business risks, such as increased transaction costs and reduced flexibility in sourcing. If the supply chain context allows, procurement of sustainability-certified products can be based on supplier leverage, i.e. the sourcing decision is based on product price, quality, convenience of logistics arrangements and review of relevant documentation that shows compliance with sustainability criteria. Collaboration with each supplier to green a product supply would be highly difficult, if not impossible, in view of the diverse product portfolios of retailing companies and global complex structure of supply chains.

³⁷ The tensions between the corporate ambitions to develop availability of a green product supply and supply chain context, which is prohibitive for realisation of such an ambition.

However, this study demonstrates that existing certification institutions do not always allow retailers to develop a green product supply, due to prohibitive inter-firm power circumstances. The ability of retailers to exercise influence over ‘powerful’ suppliers to provide more and better sustainability-certified products is further constrained when accompanied by limited market demand for sustainability-certified products. Furthermore, the design features of the existing certification schemes might in itself constrain retailer’s engagement with greening a supply chain. For instance, the scope/level of the certification requirements might not be aligned with perceived corporate needs for product differentiation, mainstreaming or risk management. The design of the certification management services might be also viewed by retailers as insufficient/unsatisfactory for motivating, enabling and controlling sustainability performance upstream in the supply chain.

The attempt to re-configure unfavourable institutional configuration³⁸ and thereby move forward with greening a product supply explains the proliferation of retailers’ efforts to develop alternative certification. The retail-driven sustainability certification schemes explored in this study appear to be well-aligned with the business logic of retail operations, pursuing such objectives as ensuring better quality of products, facilitating supply availability in terms of higher volumes and wider ranges, and negotiating competitive prices of the sustainability-certified goods. Their design also allows for a quicker response to customer demands, improved traceability and better consistency in the auditing process. However, in designing novel certification schemes explored in this paper retailers relied on the existing certifications and utilised the associated knowledge and experience. The multiplicity of certification schemes, although often criticised, is considered advantageous from the SSCM perspective. It is suggested that sustaining the multiplicity of certification schemes might actually increase the corporate propensity to engage with greening a product supply.

The practice of institutional entrepreneurship associated with development of private eco-brands and novel certification schemes is further demonstrated to allow for development of dynamic capabilities (DCs), thereby harnessing a potential to generate a sustained competitive advantage. These DCs include supply chain re-conceptualisation, effective supply chain partner development, improved reflexive supply chain control and fast co-evolving.

³⁸ Among unfavourable institutional configurations are prohibitive inter-firm power circumstances, constrained availability of certified product supply along with limited consumers’ demand for sustainably produced goods, and mismatch between design of certification schemes and corporate needs/ambitions for greening a product supply.

6.2 Suggestions for future research

The results of this study suggest a number of directions for future research:

1) *Better understanding of the relative importance of drivers and barriers and their implications for sustainability initiatives in the supply chain.* This can be applied to other types of retail business models, e.g. discounters and specialist stores that sell only sustainability-certified products. Thorough research is needed on the variety of sustainability initiatives implemented by leading food retailers in Europe, not only upstream, but also downstream in the supply chain. While existing academic literature presents examples of retailers' sustainability initiatives along the food chains, the broad landscape of these initiatives has not yet been systematised and analysed. At the same time, *research on how various sustainability initiatives in the supply chain are widespread among European food retailers*, including dependency on national and supply chain characteristics, would provide important empirical insights into the actual challenges involved in developing sustainable production and consumption practices.

2) *Accounting for additional factors that can influence the corporate practice of inter-organisational relationship management for greening a product supply.* Previous research indicates that these factors might relate to characteristics of the national context (Iles 2007) and organisational culture (Haake and Seuring 2009). There is also a need to explore the SSCM practices for various product groups (Haake and Seuring 2009) and industrial sectors, where sustainability-related risks can be conceptualised and managed differently in the supply chain (Hofmann, Busse et al. 2014). Another need is better understanding of the determinants of inter-firm power dependencies. It is important to consider the suppliers' perspective, which was lacking in this study, and to examine how the power regime in the supply chain affects the ability of both buyers and suppliers to optimise a product supply based on the 'triple bottom line' performance.

3) *Accounting for the perspective of the broader number of food retailers, as well as conducting a quantitative assessment on the role of co-branding in enabling retailers to exert a greater impact on sustainability performance upstream in the supply chain (in comparison to deployment of existing certification schemes only).* In evaluating the market efficiency and net environmental and social benefits delivered by the mechanism of co-branding, it is important *to account for the perspective of the agricultural producers* in terms of what private eco-branding means for them. Such research would help to resolve the controversy about whether private eco-branding strategies should be perceived as green-washing or a retailer attempt to enhance bargaining power. On the other hand, such strategies may be trustworthy attempts to motivate and support suppliers in their transition towards sustainable production practices. *Analysing the interplay between private*

eco-branding and third-party certification in the different national and industrial contexts would help to show how the content, functionality and legitimisation of these market tools have co-evolved in the broader institutional settings.

4) *Considering a broader spectrum of certification schemes and investigating their influence on the corporate choice of SSCM practice* in different industrial contexts would identify additional corporate needs and challenges associated with procurement of sustainability-certified products. This would improve understanding of how design of third-party product sustainability certification schemes can be improved to cater for corporate needs and concerns, thereby motivating and enabling their uptake of certification and, through this, expanding their work on greening a product supply.

5) *Analysing the role of the multiplicity of standards from the perspective of corporate needs and ambitions associated with SSCM.* Such research should focus on furthering our understanding of what drives the corporate decision to engage with development of various novel types of certification. This would also provide knowledge about whether sustaining the ‘market of standards’ does actually increase corporate propensity to green a product supply in a number of ways (e.g. reactive vs. proactive approaches), and thereby increasing positive cumulative impact on sustainability performance upstream in the supply chain.

6) *Further exploration of links between entrepreneurial SSCM practices (in the form of private eco-brands and novel sustainability certification) and the DCs it enables.* Such research should identify any suggested links and investigate whether entrepreneurial SSCM practices actually help retailers to derive temporary or long-term economic rents and a sustained competitive advantage.

7) *Further exploration of the relationships between the contextual circumstances and the choice of SSCM practices* in other product groups and among more food retailers. This would make the research findings more generalisable and help develop theories on supplier relationships and greening of supply chains. Further research should use a variety of methods to collect data, including case studies and surveys, while also using multivariate data analysis to test for the relationships suggested in the analysis.

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Globalisation and trade liberalisation are continually diminishing the capacity of national and international governments to address unsustainable patterns of food production and consumption. Market-based approaches to governing sustainability issues across the value chain may be the answer. This thesis investigates how retailers can facilitate the availability of sustainably produced food via different approaches to managing supplier relationships.

