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Towards responsible procurement in relation to chemical risks in textiles?

Findings from an interview study

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Summary

In the present study, we ask whether and how different organizations work with sustainable procurement and how this work relates to the complexity of the product chain. We have chosen to focus on chemical risks in relation to textiles – an issue that increasingly is becoming part of the public discourse and a target for journalists. In the case of textiles, the product chain from raw material to consumption often involves a great number of production steps, sub-contractors and users, often on a global scale. Sustainable management of the supply chain would improve health, quality of life, and labour conditions, for instance in the areas and factories in developing countries where production and processing often take place. However, such management faces great difficulties and challenges in terms of capabilities, knowledge, communication, and policy instruments. These difficulties are related to high uncertainties and other problems that in turn are related to the high complexity of global product chains. The objective of the present report is to gain insights into the opportunities and challenges that private and public organizations face regarding the development of responsible procurement in relation to a complex and uncertain issue. The report focuses on chemicals in textiles and uses a qualitative methodology with semi-structured interviews. Key elements of a pro-active, responsible procurement strategy are defined in the report and include criteria such as using a preventive, systematic, responsive, integrative, and reflective approach. The analysis includes the following topics: (i) priorities and knowledge, (ii) communicative strategies, (iii) policy instruments, (iv) monitoring and trust in relation to suppliers. The results show a fairly modest level of organizational responsibility, although it is possible to observe an initial positive development among the cases investigated. The report ends by suggesting a number of topics that require further investigation.

Foreword

Our inter-disciplinary project – CHEMTEX – aims at increasing our understanding of private and public procurement organizations’ conditions, difficulties and opportunities as regards managing environmental and health risk in different parts of a complex product chain. We focus on chemical risks in textiles. Based on this understanding, we will suggest how to improve learning, communication and management in relation to chemical risks in procurement. Our approach is cross-disciplinary and includes collaboration with actors from civil society, the state and businesses. We use the comparative case study approach, including semi-structured interviews, document studies, and field trips.

The present report is based on a series of interviews that our research group conducted in 2008-2009. The interviews were conducted for explorative reasons, to gain insights into the practical and communicative dilemmas and challenges faced by private and public organizations regarding managing environmental, social and economic risks in the focussed area. We wish to express our warm thanks to all our interviewees and to everyone who has helped us in various ways to complete this report.

1. Introduction

Where does my t-shirt come from? Does it contain any chemicals? What kinds of risks are linked to the production of my t-shirt? We live in a global world, with global markets, global communication networks, a global labour market, and – not least – with global environmental and health risks. Global environmental governance and the work towards a sustainable society involve a complex set of actors with complex relationships. In the sustainability discourse, considerable attention has been paid to the role of organizations, and responsibility has indeed become one of the main catchwords of contemporary global politics and organizational life. Globalization processes also affect the capacity of nation-states to regulate organizations, particularly regarding the regulation of flows of products that stretch over long distances. Product chains have become very complex. In the global market, products often travel over great distances, and the metaphor of ‘footprints’ is used to problematize and describe the environmental effects of consumption and production. As part of the sustainability discourse, we see an increased focus on such issues as green consumerism, corporate (organizational) responsibility, green marketing and green procurement.

Many public and private organizations face increasing pressure from the media, NGOs political consumers, and other stakeholders to assume responsibility and deal responsibly with various kinds of social, environmental, and health risks in their procurement strategies. Indeed, the design and use of procurement policies and strategies among organizations are likely to matter tremendously in the work towards sustainable development regarding its social, environmental, and economic dimensions (Erdmenger, 2003).

In the present study, we address the question of whether and how different organizations work with sustainable procurement and how this work relates to the complexity of the product chain. We have chosen to focus on environmental risks in relation to textiles – a sector that increasingly is becoming part of the public discourse and a target for journalists. In the case of textiles, the product chain from raw material to consumption often involves a great number of production steps, sub-contractors and users, often on a global spatial scale. The textile industry is generally buyer-driven (Gereffi, 1999), to a considerable extent fashion-driven (Kütting, 2008), and notably global in scope in comparison with other sectors (Laudal, 2010). Also of importance here are the industry’s historical roots in colonialism. "Textile production transformed the economic landscapes in both developing and industrialized countries and

encapsulated all the socio-economic changes of the past few centuries in a nutshell: colonialism, technological innovation, scientism, capital accumulation, and the rise of environmental degradation" (Kütting, 2008:60). Since the mid-1990s, the textile sector has increasingly been targeted, particularly by the anti-sweatshop movement, both globally (Micheletti & Stolle, 2007) and in Sweden (Ählström & Egels-Zandén, 2008). The main focus has, accordingly, been on social justice issues (child labour, working conditions, living/minimum wages) rather than environmental ones.

More sustainable supply chain management would improve health, quality of life, and labour conditions, for instance in the areas and factories in developing countries where production and processing often take place. However, such management faces great difficulties and challenges in terms of capabilities, knowledge, communication, and policy instruments. These difficulties are related to high uncertainties and other problems that in turn are related to the high complexity of global product chains. Previous research has also shown how different forms of complexity create challenges for environmental risk governance (Brickman et al., 1985; Allan, 2002; Karlsson, 2005; Hansson & Rudén, 2006; Logan, 2008; Renn, 2008; Eriksson et al., 2010).

According to a dictionary definition (<http://dictionary.reference.com/browse/complex>, Accessed 7 Feb 2011), complexity refers to something that: consists of interconnected or interwoven parts; is composed of two or more units; is characterized by a very complicated or involved arrangement of parts, and so complicated that it is difficult to understand or deal with, e.g., a complex problem. Our point of departure is that complexity itself constitutes a problem (for sustainable procurement) and that complexity, in the present case, mainly concerns the many different steps in the product chain and the many actors involved.

To further illustrate the complexity of the textile product chain, we use a quote from one of our interviewees who works in a company selling clothes. We have asked our interviewees in this sector what they consider to be the greatest difficulties and challenges involved in managing chemical risks. The following answer can be seen as typical, and provides a nice illustration of the complex situation:

Well, for textile products it is the chain; that there are so incredibly many steps involved. If you draw that product chain compared with producing...well, let's

say nails, then this product chain involves incredibly many steps. Garments consist of so many different details; you get buttons from that place and zippers from there and sewing thread there and some material there and other material there. And the material, in turn, has been to a dye works, which in turn has moved to a printing works, which in turn has been somewhere else from ... having become a fabric or yarn, back to the cotton, which has been transported from boats from somewhere. There are incredibly many steps... so therefore you have to sometimes decide to look at 'that', but then it can always happen that someone from outside comes and criticizes "but you're only looking at 'that', you have to look at everything". In other words, there are many steps and that is the biggest challenge, and to find a way to communicate along the chain all the way back. Indeed, that is the big challenge.

There are several different risks in the area of textile production and consumption, and we will focus on *chemical risks*. Chemicals in textiles create a number of environmental, social, health-related, and economic risks in the producing as well as the consuming countries. Chemical risks are not only risks for humans and the environment. There are economic risks as well, in that organizations, including their brands, face a credibility challenge posed by social movement campaigning and extensive mass media communication. The issues of trust and sustainability are central to most organizations acting on the market today. Furthermore, different economic conditions, including material and organizational resources, can provide actors with more or less opportunities, constraints and incentives in their pursuit of successful risk management. Given the complex nature of the topic, what are the possibilities and capabilities as regards working towards more socially and environmentally responsible procurement among public and private procurement organizations? Another aspect to consider is that, in the case of chemicals and textiles, the risks are linked to both the production process and the final product, which makes risk management procedures even more complex.

The present report is based on qualitative methodology with primarily an explorative aim, focusing on risk governance from an organizational perspective and the question of how organizations assess, manage and communicate risks. Our objective is to gain insights into the challenges that private and public organizations face regarding the development of responsible procurement in the complex area of chemicals in textiles. Here, we restrict our

focus to environmental sustainability (and chemicals), although it is relevant to take into account the relation to both economic and social sustainability. Our analysis of responsible procurement in this sector includes a focus on (i) priorities and knowledge – or lack of knowledge – among public and private procurement organizations about chemical risks in different parts of the production chain; (ii) the communicative strategies and channels purchasing organizations use internally and in relation to other actors, (iii) how procurement organizations use, interpret, and combine existing mandatory and voluntary regulatory frameworks; and (iv) how procurement organizations can monitor and develop trust in relation to suppliers.

The report is structured as follows. First, we present our analytical framework, which is based on literature on organizational responsibility and related concepts; this section is followed by a presentation of our method. Then follows an empirical section, which is structured according to the four general topics mentioned above. We then synthesize our findings by analysing the incentives and capabilities to develop pro-active, responsible procurement strategies. In the present study, we also aim to identify the key driving forces behind risk management within the organizations. We conclude by summarizing our findings in a table and by addressing a number of key topics that should be scrutinized in further research.

2. Theory and analytical framework

2.1. Organizations, supply chains, and issues of responsibility

NGOs, journalists, and engaged citizens report on and protest against the misdeeds of powerful organizations and call for ‘greater responsibility and accountability’ (cf. Boström & Garsten, 2008). The most popular concept today is perhaps Corporate Social Responsibility (CSR), but many similar terms are circulating as well (corporate responsibility, social responsibility, business ethics, etc). As our purpose is to discuss both public and private organizations, we found it more relevant to use the term *organizational responsibility*. The increasing societal demand for liability and accountability means that many organizations of different kinds are facing credibility risks and attempting to develop good public relations, trustworthiness, and responsiveness. Organizations may be pressured to assure that they have considered the social and environmental side effects of production, but they may also

voluntarily choose to acknowledge and communicate their responsibilities in these areas. As corporations must satisfy not only shareholders but also stakeholders such as customers, the media, NGOs, suppliers, employees, and states, the demands on and opinions about their activities multiply.

Within studies on organizational responsibility and accountability (e.g., Bendell, 2000; De Bakker & Nijhof, 2002; Pellizzoni, 2004; Mason, 2005; Newell, 2005; Boström & Garsten, 2008), important knowledge has been gained on the challenges involved in holding private and public actors responsible and accountable for their decisions and actions, and the associated consequences. A crucial aspect of the relationship between responsibility and sustainability is captured by Beck's (1992) notion of 'organized irresponsibility', i.e. the growing difficulty to attribute stable, specific liabilities for specific events, acts or omissions to specific actors. This has to do with the growing relevance of uncertainty as a consequence of techno-scientific interaction with nature and with increased social complexity, including new types of global interdependencies among actors. The scholars mentioned above address difficulties such as power and information asymmetries, and stress the importance of efficient, transparent, and 'multi-stakeholder' monitoring, as well as to the key role of establishing prescriptive standards and collaborative learning environments. However, such outcomes are usually difficult to achieve, in part because of the controversies at hand as well as the complex links between production and consumption.

We are particularly interested in focusing on organizational responsibility in relation to the interactions between actors along different parts of a product chain, for instance the conditions for public and private procurement organizations to communicate with actors along the product chain. Another intriguing topic is how organizational responsibility may be enhanced by the interaction among procuring actors and external stakeholders, for instance how state agencies, NGOs, media and other actors can collaborate with, or assess, procurement organizations, and in that way improve their capability and incentives to develop responsible and sustainable procurement.

The supply chain, value chain, or *commodity chain* literature is useful for our purposes in that it focuses on forces, organizational efforts, and power struggles that affect the shape of product chains and the flow of products (e.g., Hartwick, 1998; Gereffi, 1994, 1999; Conca, 2001; Hughes & Reimer, 2004). Both the material and information flow, up and down the

supply chain, are important to consider (Laudal, 2010). The textile industry has a buyer-driven organizational structure in which trading companies, large retailers, brand-name merchandisers as well as the fashion-industry dominate, and these organizations interact with weak manufacturers in developing countries (Gereffi, 1999; Kütting, 2008; Laudal, 2010; Stigzelius & Mark-Herbert, 2009). Gereffi and others' research indicates the critical role of resources, size, and other factors in explaining how procurement organizations may gain (or lack) insight into and exercise control over product flows, suppliers, and sub-suppliers. The literature also shows how the cultural, organizational and physical distance between production and consumption gives rise to myths and misconceptions (including risk-blindness) about various products, as well as to difficulties in establishing a collaboration among actors.

To the extent that buyers have the power to actually take a leading position in the supply chain and control key resources, it is generally found, both among various stakeholders and in academic writing, that they also have responsibility to do that in a way that is socially and environmentally sustainable (cf. Andersen & Skjoett-Larssen, 2009:77). Indeed, some large clothing retailers go far beyond their original buying functions by actively engaging in, for example, product design and fabric selection, as Laudal (2010) observes. Such market actors can play a significant role in specifying what should be produced, how and by whom (Andersen & Skjoett-Larssen, 2009). Seuring and Muller (2008) argue that 'focal companies' could be held responsible for the environmental and social performance of their suppliers. Focal companies are companies that rule or govern the supply chain, provide direct contact to customers, and design the product or service offered. This is particularly the case for brand-owning companies.

2.2. Aspects of responsible procurement

As our aim is to study organizations' work (or non-work) to develop pro-active, responsible procurement strategies, and thus we need to briefly mention what aspects we **include** when discussing such strategies. On the one hand, our approach is explorative and partly inductive, so our conceptualization of responsible procurement strategies is also affected by our interpretations of the empirical material. Yet we have to depart from an initial theoretical idea of a pro-active, responsible procurement strategy. An article by De Bakker and Nijhof (2002),

in which they suggest a framework for responsible chain management (RCM), provides a useful point of departure. It is clear from their analysis that RCM is far more than just a matter of words (developing codes of conduct and the like). They argue for the critical role of having the 'organizational capabilities' to actually perform responsibly across the entire product life cycle. They also argue, by referring to stakeholder theory, that responsible management needs to take into account the expectations on the firm as expressed by various stakeholders (customers, suppliers, shareholder, employers, the government and other actors). In order to develop such responsibilities, an "organization needs capabilities to perceive, reflect and respond to the different claims of stakeholders" (de Bakker & Nijhof, 2002:65). A responsible strategy should thus acknowledge the importance of **communication**. As we see it, communication should be developed in ways that facilitate 'responsiveness' and the willingness to take part in a dialogue and that accept the possibility that one's activities may have to be reformed as a result of that dialogue (Pellizzoni, 2004). In such communication, a responsible actor would develop the organizational capabilities to perceive or recognize the demands and expectations of stakeholders. Furthermore, a responsible strategy includes elements of learning – both social learning and learning about the topics at hand – and accordingly needs to leave room for **reflection** (including reflective trust in suppliers and instruments; this term is explained later in the report), and to apply a **systematic** and **preventive** approach. Such an approach would also be **integrated** in that it includes a thorough focus on sustainability and responsibilities in the entire organization, which include investment in resources and extensive communication efforts both internally and externally. A responsible strategy entails a time dimension. Various stakeholders' expectations on a firm are never static, but develop over time, and responsible chain management therefore needs to be dynamic (de Bakker & Nijhof, 2002). A responsible strategy should involve preparedness to use policy instruments and take measures that **go beyond the minimum law level**. Some reservations have to be made regarding the last point, however. In many developing countries, compliance with governmental regulations is more the exception than the rule. In such circumstances, mere compliance with the minimum law level can actually be a significant and important part of a CSR agenda (Laudal, 2010; Stigzelius & Mark-Herbert, 2009). Finally, De Bakker and Nijhof also look at monitoring activities (independent auditing, keeping track of data, etc.) for the development of organizational capabilities within responsible chain management. We include all of these aspect in our analysis of the topic.

2.3. Analytical framework

The empirical section that follows the presentation of our method is structured according to four general topics/areas, which all relate to the incentives and capabilities to develop proactive, responsible procurement strategies:

1. Actors' priorities, risk awareness and knowledge (gaps) about chemical risks
2. Internal and external communication: Forms, strategies and barriers
3. The use and development of policy instruments: combination of vertical and horizontal governance
4. The monitoring and trusting of suppliers and products

First, we consider actors' priorities, risk awareness and knowledge – or lack of knowledge – about chemical risks in different parts of the production chain. Priorities are related to, in part, actors' incentives to shoulder a broader notion of responsibility. Information and knowledge are also important if actors are to make reflected priorities. Previous research has focussed on how complexity in the form of, for example, social ambiguity and uncertainty create challenges for environmental risk governance (Brickman et al., 1985; Allan, 2002; Karlsson, 2005; Hansson & Rudén, 2006; Logan, 2008; Renn, 2008). There are, for instance, huge knowledge gaps with regard to chemical risks, including a lack of data on the ecotoxicological and toxicological properties of substances, and on use and exposure patterns, concerning production processes and end products in various sectors. Nonetheless, scientific research has shown that numerous chemicals are hazardous and cause adverse effects in many settings. This knowledge is far from effectively utilized in risk management in Sweden and elsewhere when textiles are produced, traded and used. Owing to the very globality of the textile sector, we expect serious challenges in the gathering of information and development of knowledge. Yet a responsible approach implies that lack of knowledge will result in a learning, preventive and precautionary approach to one's business. How do public and private procurement organizations handle issues such as learning and uncertainties (e.g., with reference to the precautionary principle)?

Second, we argue that a focus on communication is necessary in order to analyse the difficulties and opportunities faced by private and public buyers, to manage environmental and health risks in different parts of a complex commodity chain as well as to develop

responsible procurement practices. Communication is a fundamental part of organizations' activities, relations and their ability to handle risks. The present study considers issues of how organizations communicate internally regarding chemical matters, as well as of how organizations communicate with external actors, including suppliers, sub-suppliers, NGOs, the media, consumers, and so on.

Thus far, theories of risk communication have paid little attention to communication in and between organizations and have focused instead on the relation between experts and the public. To fully understand the risk communication taking place between different actors in a complex product chain, it is essential to combine perspectives from risk communication with theories of organizational communication (which in this case also include perspectives such as PR and communication management). Theories of organizational communication underline the importance of analysing such issues as models, networks, plans and strategies for communication (Kreps, 1990; Weick, 1995).

Questions such as who communicates with whom and through which medium are also essential to address. Different media are required depending on who one wishes to communicate with and what the purpose of the communication is. It has been stated, for example, that interpersonal communication is better for knowledge sharing and education, while digital media are best suited to transmission of information. Also of importance is how managers perceive communication and which communication strategies are used (Heide, 2002; Heide et al., 2005; Sproull & Kiesler, 1992). Because the present project focuses on communication in complex product chains on a global market, we need to analyse communication that is characterized by distance not only in space, but also in time and in terms of cultural contexts. This distance, in different ways, becomes a barrier to communication. Digital media (like Intranet and Internet) are often said to reduce these distances and to be well suited to communication across boundaries. Moreover, it is often stated that digital media like the Internet can be used in different ways, e.g., to transmit information, to communicate, to establish a dialogue, and as a work tool (databases etc). Actors can also play different roles in relation to the Internet and become users, authors, publishers and information brokers (Slevin, 2000).

Risk communication can involve framing strategies, such as explaining which risks exist, how big they are, and how they can be prevented. In relations between buyers and suppliers, the

communication also concerns requirements for risk prevention and access to important information. Previous research has looked at a number of factors, such as mutual trust, that are likely to facilitate risk communication. The so-called asymmetry principle states that it is easier to lose trustworthiness than to gain it. Hence, it is important to take into account the quality of the relation between buyer and supplier (Renn, 2008; Slovic, 1993; Warg, 2000).

Third, we focus on how governance arrangement can cope with the challenges emerging from the need to manage *complex product chains* and how procurement organizations use, interpret, and combine existing mandatory and voluntary regulatory frameworks. We may refer to this as a combination of vertical and horizontal governance. Governance refers to a new type of governing that is emerging; it is complex, involves several levels, and both state and non-state actors take part and sometimes even collaborate in it. Globalization processes impinge on the capacity of nation-states to regulate organizations (e.g., Rosenau, 2003; Djelic & Andersson, 2006), which is particularly true regarding the regulation of flows of products over long distances. The governance literature focuses particularly on the development and design of new regulatory arrangements and tools (e.g., Pattberg, 2007; Boström & Garsten, 2008) and provides a good basis for understanding the historical context and key driving factors. Still, there is surprisingly little focus on how *complex product chains*, in an increasingly globalized economy, affect public or private regulation, policy, and management. This section focusses in part on how public and private organizations use, interpret, and are affected by national (e.g., the Public Procurement Act) and European legislation (e.g., REACH). A key question is whether *vertical governance* (e.g., legislation) can be combined with *horizontal governance* (e.g., labelling, codes of conduct) in developing a pro-active, responsible procurement approach. Horizontal governance refers to (mainly voluntary) policy-making and rule-setting initiatives among networks of actors along and surrounding global product chains. We furthermore aim to shed some light on the similar and different capabilities, incentives, and challenges for governance within private and public organizations, respectively. Some regulatory frameworks and principles (e.g., the principle of public access) will establish different conditions for private and public organizations.

Fourth and finally, we focus on how procurement organizations can monitor and develop trusting, long-term and mutually supportive relations to suppliers, which include their ability to check products that are delivered by suppliers. We expect that the huge complexities and uncertainties that we indicated above, as well as power and information asymmetries along

product chains and possible communication barriers, will create serious challenges to ensuring that suppliers and products comply with expectations, agreements, and the relevant policy instruments. It is relevant here to refer to Mike Power and his notion of the audit society (1997). Power discusses the risk of having excessive trust in certification and auditing. Because of problems such as information asymmetry (the audited/certified actors have exclusive access to the information needed for inspection and auditing) or built-in bias towards approval rather than rejection (for various reasons), the expectations of certification and auditing greatly exceed their capacity. Power and other scholars have looked at factors that can contribute to independent and effective auditing. For example, stringently and precisely formulated standard criteria reduce the risk of excessive interpretative flexibility (Humphrey & Owen, 2000). Another factor is whether the auditing actor has an autonomous discursive base (epistemic independence) in relation to and is economically independent from those being audited (the latter notion is particularly relevant regarding certification bodies). Applied to our case, it is relevant to ask whether the procurement organization has both the economic means and the relevant expertise to effectively monitor and inspect suppliers and their products. Rather than focussing on economic independence as such, it is relevant to ask about the cost of and preconditions for actually being able to replace suppliers in the event of non-compliance with expectations, agreements, and policy instruments.

As we expect that auditing and inspection will create considerable economic costs, an alternative – and potentially a cost-effective one – to direct monitoring of suppliers is the development of trusting, long-term relationship. When analysing and discussing trust, it is useful to distinguish between blind trust and reflective trust (Boström & Klintman, 2008). The latter type of trust involves reflection and choice to a greater extent, i.e. one chooses to place trust in an actor or system. Such trust is then provisional, and may include more or less conscious and continuous evaluations of the trusted actors and systems.

3. Method

Empirically, the present article is primarily based on 16 qualitative, semi-structured interviews with representatives of 13 Swedish public and private procurement organizations and two other organizations. Because we, for explorative reasons, aimed at including a diversity of experiences, ambitions, and contexts in relation to procurement activities, the

organizations were selected according to three varying dimensions: 1) public and private organizations; 2) size of the organization; and 3) core and periphery. The latter dimension concerns whether the organization has textiles as its core business activity, such as selling clothes, or whether the organization procures a large amount of textiles, but has another core business activity. One example of the latter could be hotel chains. Included in our material are 6 private organizations that sell clothes (2 of which are oriented towards sports and outdoor life), 1 hotel chain, 3 public and private organizations that run train service, 1 municipality, 1 county council and 1 company working with procurement for that county council, as well as 2 other organizations (one NGO and one researcher/expert consultant) that are actively working in this field. In the present report, our aim is not to make a systematic comparison of the different conditions for the organizations that differ along these dimensions, but instead to shed light on observed key differences when they are relevant. Moreover, we will formulate hypotheses related to these dimensions in the concluding part of the paper.

The interviews were conducted in 2008-2009. We interviewed in total of 19 persons during 16 interviews (3 group interviews). 2 individual interviews concerned one and the same organization. Within the procurement organizations, we interviewed staff responsible for procurement, environmental issues or CSR. We used a general interview guide, which was the same for all interviews, but the questions were slightly adjusted and specified according to the activity of the particular organization. The interview guide, which was prepared by all members of the interdisciplinary research group, included questions related to such aspects as risk perception, knowledge, information gathering, uncertainty, learning, the monitoring of and relation to suppliers, capacity building (networking, education activities), internal and external communication, and use and interpretation of external and internal policy instruments (mandatory and voluntary). We also asked questions about driving forces and general challenges in the work towards developing pro-active risk management.

Despite the fact that the interviewees were ensured anonymity, we experienced difficulties in finding people and organizations that were willing to take part. Several potential interviewees argued they know too little about the topic under study. When we insisted that an interview was nonetheless very valuable to us, they still refrained. Some forwarded our request to others within the organization, but despite assurances that we would be answered, these individuals never replied. Other potential informants could not find the time, even with the option of being interviewed anytime within a range of 6 months or more. Finally, about 20% of the

potential interviewees did not answer at all. We suspected that many were afraid to talk about issues concerning chemicals in textiles, which had been covered extensively in the media reporting in Sweden recently through ‘name and shame’ campaigning. From a methodological viewpoint, there is a risk that our material may be somewhat biased towards more progressive organizations in this area. However, this is not a great methodological problem given our explorative approach. As our aim is to understand the challenges that occur along the pathways towards more responsible procurement, thus a greater problem would be if we should fail to observe such challenges.

The interviews were taped and transcribed verbatim. The transcripts were read, analysed, and discussed by all members of the interdisciplinary research group.

4. General background to the case of chemical regulation in textiles

The production of textiles is chemical intensive. Besides traditional use of substances for, for example, dyeing fibres, a large number of industrial chemicals are used today to meet new performance requirements for textiles, such as multifunctional weather protecting.

The societal control of chemicals has a long history. In Sweden, for example, hazardous substances were regulated in products already in the 18th century (Karlsson, 2006). However, comprehensive regulatory frameworks for chemicals did not emerge until the 1960s. In the EU, this was driven by market harmonization efforts and initially included a directive on the classification and labelling of substances in 1967 (EEC 1967). Since then, a rich flora of laws on chemicals in general, and on their use in specific sectors, has developed.

During this period, the legislation has mainly been reactive and based on individual scientific or media-based claims concerning risks. The consequent burden of the past is huge, which became obvious in 1981 when over 100 000 substances were classified as “existing” in the EU. Since then, “new” substances have to meet demands for notification of basic data. For existing substances, a risk assessment process was set up in the 1990s, but it included less than one percent of the substances and was strikingly inefficient, which led to calls for regulatory reform (Environment Council 1999). After a lengthy debate, the RECH regulation (EC 2006) for industrial chemicals was enacted.

REACH is directly binding throughout the EU and applies to many substances in textiles, for example, through demands for registration, evaluation, authorization and restriction, which come into force gradually until 2018. For substances used and produced in high volumes, the registration provision forces importers and manufacturers to deliver basic data on substance properties, and promotes sharing and dissemination of data. Registered data serve as input for evaluations and stimulate pro-active organizations to work on substitution. Authorization under REACH is a slow starter that suffers from notorious implementation problems, such as placing a strong burden of proof on the regulator, which applies to the restriction title as well (Karlsson, 2010). Concerning products such as textiles, the provisions depend on substance properties. Producers and importers must, for example, inform downstream users and consumers about the presence of ‘substances of high concern’ that are placed on the REACH ‘candidate list’, if substance levels exceed 0.1 weight percent¹. The demands are generally weaker for imports than for products produced within the EU, with the previously enacted restrictions on cadmium being a notable exception, mostly applying to production outside EU as well (see also SFS 1998:944). Furthermore, the current REACH restriction list includes previously restricted substances, e.g., PFOS, pentaBDE, octaBDE, PBB, Nickel, nonyl phenol and nonyl phenol ethoxylates.

Besides REACH, chemicals in textiles are regulated in several national and EU laws on, for example, product safety (SFS 2004:541), which stipulates that consumer products generally must be safe, as well as on pesticides (EEC 1991) and biocides (EC 1998), both prescribing permits for use of substances.

The Swedish Public Procurement Act (SFS 2007:1091) implements the corresponding EU directive (EC 2004) and states (since July 2010) that public procurers ‘ought to’ consider environmental and social aspects when relevant, but that duty goes no further than what common EU principles stipulate with regard to equal treatment, non-discrimination, proportionality, transparency and mutual recognition permits, as interpreted by the European Court of Justice. In Sweden, the semi-governmental company the Swedish Environmental Management Council (SEMCO; see www.msr.se) issues green procurement criteria, both general ones and particular ‘spearhead criteria’ for top environmental performance. Concerning chemicals in textiles, draft criteria have been developed by SEMCO in

¹ A debate is ongoing as to whether this concentration should be measured in relation to the entire product or to the part of it in question, the former being defended by the EU Commission and the latter by the Swedish Government.

collaboration with the Textile Importers, SLL, the Nordic Ecolabel and others. SEMCO also promotes application of the substitution principles, as set out in the Swedish Environmental Code, which is a stipulation that, if correctly applied, is more general and stricter in terms of protection of health and environment than the corresponding REACH provisions.

5. Prioritizing, risk Awareness, and knowledge (gaps)

5.1. Are chemical risks a prioritized concern?

An initial observation based on the interviews is that chemical risks, although occasionally highlighted in the media, are still not among the key concerns of the investigated organizations, although several interviewees maintain that increasing attention is being paid to such risks. It appears that the textile sector is being increasingly targeted by journalists, but the specific object of their reporting is not always chemicals or environmental risks. Such risks have to struggle for attention in competition with other risks and aspects. Regarding textiles, there are several other aspects that private and public buyers perceive they generally have to prioritize before they emphasize reducing chemical risks, unless there has been extensive media reporting on a particular dangerous chemical. We can see that the following six factors are important priorities in the area of textiles.

First, there is always, of course, the issue of *price*. In an extensive literature review on sustainable supply chain management, it is found that higher costs are frequently mentioned as a barrier to implementing sustainable supply chains (Seuring & Muller, 2008:1704). Likewise, our interviewees worry that an increasing need to gather information on chemicals along product chains and to take various kinds of preventive measures will result in higher prices of end products. Some of the interviewees work in rather large public or private organizations (for example on the group level), and we note similar concerns among them. They believe or experience that many procurers within their organization worry that if new preventive measures were adopted, prices would rise significantly.

Second, there is the issue of *functionality* of the products, which may relate to security, quality and durability. Many chemicals are used for needs that can be seen as more important than the issue of reducing the amount of chemicals in the product or finding substitutes.

Third, the strong focus on *fashion* (fit, form, style, colour, etc.) may in various ways create challenges for responsible procurement, particularly for organizations selling clothes. Clothes are a substantial part of fashion – a primary indicator of a person's personality, image and social status (Kütting, 2008). Although organic could be trendy and create business opportunities, interviewees report that the need to incessantly keep up with new trends and regularly change the assortment creates challenges both for updating knowledge and for designing relevant regulatory instruments.

Fourth, the focus on chemicals competes with a focus on *social sustainability*. In the textile industry, we can easily see from our interviews that, thus far, demands for increased organizational responsibility have been more focussed on sweatshop conditions, including aspects such as child labour, working hours, and security (see also Micheletti & Stolle, 2007; Kütting, 2008:63-6; Ählström & Egels-Zandén, 2008). On the other hand, as chemicals often imply health risks, there need not be a trade-off between attention to social sustainability goals and environmental sustainability goals.

Fifth, chemical risks compete for attention in relation to *other environmental risks*. Other environmental aspects that better correspond with the core business of a particular private or public organization, or that receive more attention in the media, such as climate change, may in effect prevent attention being paid to chemical risks. Whereas chemicals in textiles are of central concern to clothing retailers, companies that run trains tend to be more focussed on green electricity than on chemicals in textiles in the seats or personnel uniforms. Likewise, hotels may know something about chemicals in sheets, but nothing about chemicals in uniforms.

Sixth, forming a long-term and secure *relationship with suppliers* may be seen as a more important aspiration than setting stringent requirements regarding the chemical content of products. When making agreements with suppliers, environmental aspects in general, and chemical risks in particular, are generally not the top priority. Besides price and product quality, the suppliers' ability to deliver products within an accepted time-frame and especially being *on time* are generally highly prioritized. Other aspects of such relationships may also be important: mutual trust, ease of access and understanding, long-term relationships. Contracting new suppliers also implies huge transaction costs. Some of these aspects are, however, qualities that may facilitate responsible and sustainable procurement in the long run.

But there is no universal ranking among these concerns. Procurers take into account and weigh the various parameters. A substantial environmental improvement at a low cost is more likely to occur than a small improvement at a high cost. And intensive public debate can change priorities fundamentally, at least in the short run.

5.2. Risk awareness and knowledge

This section is based on how the interviewees perceive risks and their knowledge about risks. What is their risk perspective? What kind of knowledge do they believe they have? What knowledge gaps do they face? What are they doing to gather information and knowledge about chemical risks, in general and for specific product chains?

Our impression is that most interviewees express a fairly good understanding of the chemical risks associated with textiles and textiles production in different parts of the production chain. Indeed, interviewees seem to have recently (during the past year or so) become increasingly aware of general risks, in large part thanks to increasing media attention, public debate and campaigning by Swedish NGOs (which have conducted testing of some targeted products). Interviewees mentioned both risks that relate to the products – that consumers or workers using the products may be exposed to – and risks that appear in manufacturing in various parts of the production chain. The very fact that huge volumes of products come from low-cost countries is a matter that is integral to this risk understanding. In such countries, there are strong price pressures and the regulation is seen as poor and not trustworthy. So in this sense, interviewees tend to see the risks as both local and global. Moreover, interviewees perceive that risks are related to the huge number of chemicals that appear on the global market, that product chains are particularly complex and stretched in the textile sector, and that many products are quite complex as such, for instance outdoor multifunctional clothes that are designed in various layers and contain different chemical substances with well-known user-related properties (e.g., waterproofing capacity), but with unknown environmental and health properties.

Interviewees also generally perceive an *economic risk* that is related to the chemical risks. Economic sustainability is tied to somehow addressing environmental and social

sustainability: *'you're not part of the game in the long run if you don't keep an eye out.'* Some interviewees think that, generally speaking, the public has recently become more risk conscious, although that does not necessarily lead to a changed demand from customers (discussed in later sections). Still, such increased risk awareness among the public could imply a risk to the company, including its brands and public image.

However, although risk awareness is fairly good, the situation is different when it comes to detailed information and knowledge about various risks as well as effective risk management. On the one hand, it is clear from our study that the interviewees and organizations did not lack external advisors. They relied on external databases and expertise (The Swedish Chemicals Agency, The Swedish Environmental Management Council, The Research Institute Swerea-IVF, Textil- och Läderlabb [a private company that makes textiles and leather tests], Textile Importers' Association in Sweden, the Nordic Ecolabel, the Swedish Society for Nature Conservation), and some mentioned the newsletters, seminars, and courses provided by some of these experts. Such databases and external advice are instrumental in obtaining useful information about *what to avoid*, and what to emphasize in the requirements addressed to suppliers. Basically, all interviewees seem to be aware of some chemicals that definitely must not appear in their products (e.g., toxic substances). By following the advice of expert consultants such as the research institute Swerea-IVF, one also gets, as one interviewee maintained, a kind of guarantee that you are up-to-date and complying with the law, because the expert advice is perceived to be a bit ahead of the legislation.

I think following the information flow is rather easy. I've never experienced, so to speak, that we've never heard about something or been completely taken by surprise. Of course, that might happen, but you often have, so to speak, a good idea about which substances you shouldn't use or which ones may be problematic.

Despite such external advice, most interviewees reported a huge knowledge gap as well as an anxious feeling of having a very shaky knowledge basis.

One has to admit, when all these things with REACH became the subject of discussion, we felt that 'here we are sort of winging it a bit'

Just being able to say nonyl phenol ethoxylate is not very easy (laughing). So I think the entire area feels hard, tough and complicated.

Most interviewees felt they need ‘more knowledge’, although it was not always easy to know exactly what they need to know more about. However, and perhaps not so surprisingly, basically everyone referred to the *complexity of the production chains as a barrier to receiving information and knowledge about chemical risks*, and that it is *more difficult to receive information and know about what sub-suppliers do than about what suppliers do*. In addition to that, the interviewees reported having a scarcity of information and knowledge about a number of related or other topics:

- Information regarding specific products and their chemical contents, as well as the skill to gather such information
 - what the products are made of, how they are treated, what chemical substances the dyes contain, and so on
 - knowledge of how to pose relevant questions to suppliers
 - how to respond to suppliers when they do not comply with one’s requirements
 - while interviewees reported having fairly good knowledge about what to avoid, they experience a general knowledge gap concerning *what is good*, and even *what is good in what quantities*
 - LCA on some types of fibres

- General knowledge
 - how chemicals interact with each other
 - what authorities (Sweden and EU) actually require
 - knowledge of alternative chemicals
 - of better ways to communicate (see next section)

Interviewees also express frustration over the fact that it takes time to close this knowledge gap. Many do not know how to go about acquiring more knowledge, or what to ask about. Others have started, or plan to start, by making a kind of chemical inventory in their own organization. It is particularly difficult to get relevant information regarding manufacturing stages earlier in the product chain, that is, for sub-suppliers. Indeed, some organizations have no clue as to who the sub-suppliers are. According to a few other interviewees, their

organizations have just begun a process of trying to understand who the sub-suppliers are. Still others have recently started trying to determine how both suppliers and sub-suppliers deal with social issues. Trying to acquire extensive knowledge about chemical risks along the entire production chain appears to be a tremendously challenging task.

However, it is not necessarily, or always, just lack of information that is the problem, it may also be the ability to digest and interpret available information. Very big buyers may indeed even have an abundance of information and data, acquired over several years of experience. At the same time, they may lack the cognitive or organizational capacity to make effective use of this information. Learning is not necessarily the outcome of having more information. In general, however, the common experience is that there is a lack of relevant information. If there is an information gathering process, it tends to be more focussed on the domestic organization and network than on looking for information on chemical risks earlier in the production chain. An example:

Interviewer: Do you conduct any kind of mapping or analysis of the production chain, or inventories or field trips?

Interviewee: No, we don't make any field trips. We look at various available reports and look what the Chemical Agency has... and yeah, one actually looks for information on the Internet and from one's social network. And then also from environmental criteria and such... we work a lot with the Environmental Council... their criteria ... and we participate in several working groups there to develop environmental criteria.

A few organizations are able to hire their own chemical expertise, which is obviously related to their access to sufficient economic resources. In general, only big organizations can do this, and some have increased their own expertise rather dramatically during recent years. External networks (including going to seminars, courses, etc.) and using Internet sources (see next section on communication) can serve as a substitute. Some interviewees say it is useful to network with other companies and learn about their experiences.

One important question is how actors prioritize given the gaps in knowledge and knowledge uncertainty. Is the precautionary principle taken into consideration (implicitly or explicitly),

or do actors require strict scientific evidence? Reliance on scientific expertise may not always be sufficient, because scientists may be ignorant of the precautionary principle. They may furthermore be reluctant to state that a product is risky if they feel there is too little evidence to support such a claim. Scientists rely on scientific evidence from scientific publications, and such results may be ambiguous. The scientific attitude would then be to remain silent on the issue, whereas the role of the NGO would be to warn about risks if sufficient indications exist. One interviewee now working for an NGO, but with a background in scientific research, said it was not particularly easy to switch roles. However, following a principle such as the precautionary principle does not seem to be very common among procurement organizations. The prioritizing that is done generally seems to be an effect of advice coming from external advisors and regulators (see above). Still, there are other possible ways to prioritize:

- Alternative chemicals
- Alternative materials (choosing flax rather than cotton; choosing natural fibre rather than synthetic or vice versa; indeed the interviewees had different opinions on this matter)
- Alternative products
- Alternative dyes, designs...

Yet the interviewees report that they generally lack knowledge about all such alternatives. Our impression is that some interviewees had reflected on such possibilities, but that actions are seldom taken in this area, and that lack of knowledge often prevents measures.

6. Communication: forms, strategies and barriers

What communication strategies and forms do organizations use to handle the key dilemmas they face in the communication processes surrounding chemical risks and textiles? Do such communicative forms and strategies facilitate the development of a pro-active, responsible approach to procurement? In this section, we analyse the structure and outcomes of communication and their link to issues of communication strategies, basic views on communication, what kinds of communication exist (interpersonal/mediated, formal/informal, etc.), what kinds of media (e.g., print and digital media) are used, and what communication barriers are experienced. One main starting point is that if communication is to be successful, it must be adapted to the issue at hand and who the receiver is.

6.1. Communicative forms and strategies

Communication is a fundamental part of all organizations, and it can sometimes be hard (and unnecessary) to isolate the communication directed at the issue of chemical risks and textiles from other kinds of communication. Therefore, many of the conclusions concerning the forms of communication used are also valid for general communication in the organizations. With that being said, we observe from the interview study that most organizations do not have an explicit communication strategy specific to the area of chemical risks and textiles, but rather (if there is a communication strategy at all, which is more common in larger than in smaller organisations) a communication strategy for the organization as a whole and/or a strategy for the environmental area. Some organizations also have a chemical strategy for the use of chemicals in the organization in general. Communication strategies can be used in different ways and for different reasons. Some communication strategies would seem to serve the purpose of creating an image and impression of a green, responsible organization, rather than actually developing a truly responsible organization.

Based on our interviews, we note that organizations generally communicate with their suppliers, which in turn communicate with their suppliers (sub-suppliers). Several procurement organizations had no idea who their sub-suppliers are. Accordingly, the different parts of the chain generally only communicate with the actors directly before or after them in the product chain. The main channels for organizations' communication with their suppliers are through codes of conduct, agreements, quality manuals and terms for procurement. Some also use a questionnaire to follow up the demands in the contract, and/or audits that are either pre-announced or not. Courses and different kinds of education are also used by some as forms and arenas for communication between procurement organizations and their suppliers as well as internally within bigger procurement organizations.

Communication with suppliers comes in the form of both personal and mediated communication. Personal communication is often preferable when it comes to complex matters; this is the experience of an expert consultant in the area of chemicals in textiles:

“...the best forum is the, so to speak, personal, direct conversation ... that is due to the complicated questions ... they are difficult to write on paper. If there are complex issues, one has to sit down and talk about matters.

One necessary element of a responsible organization is indeed the acknowledgement and achievement of a two-way communication, that is, responsiveness (Pellizzoni, 2004) in relation to both internal and external audiences. In principle, many organizations also underline the importance of dialogue. In practice, however, and in contrast to the above quote from the expert consultant, communication tends rather to resemble a linear model with a focus on transmission of information (cf. Falkheimer & Heide, 2007). A great deal of communication takes shape as a kind of one-way communication that allows for some limited feedback, for example in the form of follow-up questionnaires.

All organizations communicate both formally and informally, using formal and informal networks. Formal communication is often mediated, while informal communication more often comes in the form of interpersonal, face-to-face communication. Regarding the forms of communication and the role of different media for communication, organizations' Internet websites are widely used both for external and internal (intranet) purposes. The Internet and different databases are also common sources of information on chemical facts.

We certainly search for lots of information on the Internet. I mean, if something happens, if attention is paid to a chemical such as nonyl phenol ethoxylate, then we investigate everything we can investigate about that chemical... we search on the Net, read in books and talk with people.

Other main media for communication on chemical risks and textiles in organizations are organization policies (internal communication), leaflets, 'newspapers', seminars and meetings. Annual reports (sometimes together with sustainability reports) and press-releases are used to communicate with actors outside the organization, but occasionally also indirectly with those inside the organization – a communication strategy that seems to be particularly efficient in larger organizations where many of the employees, for example, read the same local daily newspaper. Otherwise communication to and through the news media is generally a tool for influencing public opinion (often used by, e.g., NGOs) or reacting to some kind of action. There are also interviewees who claim that their organizations do not engage in any active external communication (meaning to customers, the media, etc.): *'Externally to customers and so on, we communicate, you could say, nothing'*. Others communicate actively to customers:

I have oriented myself quite a lot towards shops, because I think those working in the shops, who meet the customers, need to know how we work and what we do so that they are prepared for questions and so... although they don't have to be experts. So I have made a folder so that they have something more... and which is no secret. All customers can browse through it.

Communication with suppliers takes place through personal visits (interpersonal communication) or different forms of mediated communication like telephone calls, email, codes of conduct, leaflets with product information, etc. The general impression is that the Internet and different databases (such as Swerea, toxnet, The Chemical Agency's Prio-database) are common tools for *information* provision, while *communication* mainly takes place through meetings and other kinds of personal encounters.

Different networks on chemical risks and specific co-operations concerning, for example, codes of conduct can also be seen as arenas and forms for communication. Several organizations in the study are part of a network under the research institute and consultant Swerea-IVF, and some organizations are part of different CSR networks. Apart from this, many organizations mention that they work with SEMCO and that they participate in different conferences (e.g., research). There are also a number of informal networks based on interpersonal communication: *'There are no particular networks but rather scattered persons here and there, whom you contact depending on what kind of help you need'*. According to the interviewees, networks are useful for gaining information, increasing knowledge and improving one's ability to exercise influence: *'The more we are, the bigger the group who are raising the same demands, and the bigger effect it will be'*.

Green marketing and labelling (like, e.g., Ökotex, the Nordic Ecolabel, the EU Eco Label) are often considered a guarantee for good conduct (see next section) and can therefore also be seen as a tool for communication between different actors. Authorities or NGOs (for example) can in this way communicate that this is a risk-reducing or risk-minimizing product.

Most organizations have recognized the importance of communication even if there are differences between them in terms of the form and extent of communication activities. One major reason for differences between organizations in this area seems to be whether textiles

and chemicals constitute central or more peripheral issues. Another important aspect is the fact that there are different forms of textiles with different areas of usage (and therefore with different conditions), such as textiles versus clothes, fashion versus working clothes, etc. For instance, in the business of procurement working clothes (e.g., in public organizations), labour organizations often become influential actors.

Also the size of the organization seems to be very important to the management and communication of chemical risks. Big companies, for example, have more resources for gathering knowledge, while smaller companies often are less complex, which makes it easier for them to communicate internally. Another important dimension is whether the organization is public or private. Public and private organizations work under different regulations and different terms; public organizations, for example, have to take the Public Procurement Act and the principle of public access into account (see the section on policy instruments). Moreover, public organizations do not have to be concerned with competition and market advantages and are more interested in co-operation (in order to, e.g., save resources).

6.2. Communication barriers

Communication is a fundamental part of all organizations, but communication is organized in different ways in different kinds of organizations. Communication opportunities and barriers, thus, are expected to emerge owing to the specific organizational arrangements made for communication and dialogue, including the resources that are allocated to this task. In their literature review on sustainable supply chain management (SSCM), Seuring and Muller (2008:1704) found that it is frequently reported that insufficient or missing communication in the supply chain prevents SSCM. The clothing sector has also been described as having low transparency. According to Laudal (2010), few clothing companies disclose the names of their suppliers, which prevents communication as well as monitoring of CSR implementation. Earlier we stated that several potential informants did not wish to take part in our investigation, which may confirm the observations mentioned above.

Although communicative forms and media are used, we have identified a number of key dilemmas or barriers regarding communication. Such barriers hinder the development of communication as an integral part of responsible procurement. Organizations seem to be

struggling with their role as educators of suppliers, and the need for mutual trust is a key factor in the relationship between purchasing organizations and suppliers, sub-suppliers, etc. Some of the respondents also feel that their organization lacks knowledge about how to communicate successfully and how to ask the right questions.

One obvious difficulty with communication in the product chain is that actors have different mother tongues and professional ‘languages’, have different backgrounds and work in different contexts, thus also communicate through different discourses. The issue of not speaking the ‘same language’ also constitutes a problem for communication inside organizations, for example depending on educational background (e.g., whether or not one is a trained scientist). Many of those responsible for environmental issues in organizations do not have an education in chemistry and do not always know a great deal about chemicals. If they do, they sometimes find it difficult to communicate their knowledge to others in the organization and to “...*translate the chemical language into ordinary language...*”

...if a media hype appears about something, then we always try to inform the shops because they can get questions in the shop. It is sometimes difficult to explain something very complex to the shops, because the message has to be concise.

Also, there seem to be several cases in which the person or persons responsible for sustainable issues, environment, CSR and so on work more or less in isolation in the organizations, and in which their work is considered peripheral and not always prioritized by other parts of the organization.

... and there is an internal network with environmental representatives from different staff and divisions. But what they do exactly; hell I don't know

They don't have a big interest in the chemical bit, in ... the other departments“

Another possible problem is a lack of knowledge of what other parts of the organization are doing:

I think many work in parallel. That they don't know about each other

Communication barriers may also come up as a result of the complexity of the product chain, and in this case complexity means the number of actors and steps in the chain, the physical distances between different actors, the various regulatory and communicative environments, the variations in market demands and expectations, etc. Another barrier is the cultural differences in power relations

The difficult thing is to get answers that you can actually make some sense of. Really. I mean, the thing is if you send an e-mail to China, the answers you get are more or less the result of what they have figured out that you wish to know, but you don't really know if it is actually the case... This is a general problem with, well let's say Asian suppliers.

Communication generally stops at the management level, and is not expanded to the workforce in the production country. Indeed, the clothing sector is strikingly labour intensive, implying that the labour force is relatively unskilled and easy to replace (Laudal, 2010), which in itself constitutes a major communication barrier.

For large organizations, there also seem to be internal communication barriers that can be explained by the size of the organizations and the number of employees. This seems to be especially true for public organizations.

... we are in fact about 10- 11 000 employees here. So there are really a lot of people who are supposed to get information and obviously it, well, doesn't get there all the time.

Different models for communication can be identified in different organizations, and one common model is where every executive is responsible for informing his or her employees.

To sum up, communication is a complex issue with different forms and meanings, and in the case of risk management in the textile sector, it seems as though communication generally means information, education or dialogue (through, e.g., networks). It is also obvious that communication is closely related to and intertwined with issues of knowledge. Information is often considered a form of one-way communication, and it is clear that when interviewees

talk about lack of knowledge they sometimes (but not always) mean lack of information. Communication and knowledge also go hand in hand in discussions on organizations' educational or pedagogical role in relation to co-workers or suppliers. Courses and seminars are presented both as communicative tools and ways to increase or gain knowledge.

Several interviewees mentioned that they feel a need to assume an educational role in relation to suppliers, which may also work as a substitute for expensive inspections. Interviewees report that they have to clearly explain to suppliers what their requirements are, why they have certain requirements, why suppliers sometimes should go beyond the national legislation or beyond what other buyers require, what substitutes the suppliers can use, and what will happen if they fail to change their practices, and so on. However, this role creates some dilemmas. When the buyers are not themselves experts on these matters, they may not be seen as having sufficient authority, or they may have difficulties explaining the complex matter in an adequate or accessible way. One interviewee also mentions that this pedagogical role is difficult because the level of education among workers in developing countries may be low. The capacity to assume a pedagogical role and even engage in training of suppliers (and sub-suppliers) is obviously related to the size of the buyer.

Communication is a complex activity, and if it is to be successful, it needs to be adapted to such aspects as the issue at hand, the aim of the communication, and who the receiver is. Although many, if not all, organizations acknowledge the importance of communication, at least some of the communication dilemmas and barriers we have shed light on can be explained by an unproblematized and non-reflexive view of communication and the communication process. It is obvious that, for organizations, communicating about chemical risks and textiles poses great challenges and requires special competences if it is to be successful.

Distance in space and culture creates communication difficulties. In order to succeed, communication needs to be diverse, using different media for different audiences and messages, and the organization also needs to be reflexive in recognizing the role of communication and its own position in the communication chain. Complex issues require dialogue and personal encounters, but work with chemical risks and textiles also gains a great deal from the communication and information potential offered by digital media and the

Internet. We can also conclude that communication probably improves with long-term relations with suppliers and consumers.

7. Policy instruments

This section will analyse, based on the findings from the interview study, what regulatory tools are used, referred to, developed, and combined. We are particularly interested in investigating how governance arrangement can cope with the challenges posed by the need to manage *complex product chains*. How do public and private organizations use and interpret national (e.g., the Public Procurement Act) and European legislation (e.g., REACH) and how are they affected by such legislation. One key question is how such *vertical governance* (e.g., legislation) can be combined or comes into conflict with *horizontal governance*. The latter refers to policy-making and rule-setting initiatives among networks of actors along and surrounding global product chains.

First, there are a few key *external* instruments and regulatory frameworks that affect the operations of private and public organizations. These include

- REACH
- The Public Procurement Act (for public organizations)
- Chemical limitation lists (e.g., the Textile Importers' chemical guide)
- Labelling (the Nordic Ecolabel, Öko-tex, Good Environmental Choice, Bluesign)

Second, the procurement organizations develop *internal* instruments, which include

- Policies (environmental, procurement, CSR, etc.).
- Codes of Conduct, such as IKEA's IWAY
- Sustainability reporting

External, mandatory regulation may be seen as an unwelcome burden. However, for a person working with procurement who is not an expert on chemicals, external regulation may not be seen as a bad thing, which the following interviewee from a public procurement company expresses:

We are trying to follow standards as much as we can, you could say. That's our attitude, in general. Thus, if there is a standard, for example an EU standard, we try to follow it. Then we see it as good enough.

External standards can be seen as standardized expert systems (Jacobsson, 2000), and following such standards may be seen as a substitute for investing in that specific expert knowledge. Several interviewees express, at least implicitly, high levels of trust in European legislation and appreciate that it is harmonized within the European Union (see next section on trust). One regulatory obstacle concerns the existence of different rules in different countries outside the EU. The clothing sector is among the most globalized industries in the world, with great variations in governmental regulation and social and environmental protection, meaning that clothing companies must deal with a multitude of legal and moral standards (Laudal, 2010). One pro-active way to cope with this – a strategy of one big private company we studied – is to consistently follow one's own code of conduct, and to ensure that the criteria underlying this code of conduct are always at least as strict as the criteria found within the nation (within which the buyer operates) with the strictest legislation. This requires, however, that the buyer be continuously up-to-date regarding the legislation in the various countries, which requires substantial resources.

The European chemicals regulation REACH has a number of implications for textile users, as noted in section 4 earlier. Although interviewees appreciate the harmonized European legislation, several interviewees maintain that REACH is complex, confusing and does not give sufficient guidance. An interviewee from an NGO also feels that getting a substance restricted or forbidden through REACH is complicated, and that it requires a huge body of evidence. Several interviewees conclude that they cannot rely on merely complying with the legislation, but that they need to be one step ahead of it. A positive development due to REACH, which is mentioned by some interviewees, may be that companies need to be more aware of the chemical content of products.

The Public Procurement Act (the PPA) concerns public organizations, and creates both opportunities and problems. The PPA affects possibilities to refer to hazardous chemicals when making orders. One interviewee from a Swedish municipality argues that the PPA does not necessarily restrict possibilities to require reduction of chemical risks, but that it can be

interpreted as such. The law certainly does not forbid establishing environmental requirements, but it has to be done in the right way.

When one establishes requirements in procurement, one has to choose what is most relevant so that there is a connection to the item. Because it mustn't conflict with the public procurement act and such things.

One interviewee from a municipality reports that the municipality uses various criteria found in different labelling schemes, such as Öko-tex, the EU Ecolabel or the Nordic Ecolabel. It would be illegal – defined as discriminatory – to strictly require labelled products, but they can nonetheless include the criteria found in labelling schemes. Interviewees representing public buyers said that they used the criteria of SEMCO, which gave them confidence that they were also complying with the PPA, as these criteria respect the requirement of not being discriminatory. These criteria are divided into mandatory (general) and higher (spearhead) criteria, and references are made to the criteria of various labelling schemes regarding the higher criteria.² The first quoted interviewee in this section who likes to follow external standard comes from a public procurement company. The interviewee continues:

Accordingly, we like to work with standards. We think that it is very practical and very... in our world when we have to treat all suppliers equally – we always have in mind in our procurement that we have to comply with the public procurement act and it has to be transparent, predictable, and non-discriminatory and so – then it is tremendously important that we are very exact and then we also try to follow the regulatory framework of The Swedish Environmental Management Council. When there is something developed, we use it and we don't invent something of our own.' This is the requirement and if you comply with it, it is sufficiently good.' We rarely go further than that, I would say.

One limitation of the public regulation, however, is that one can only establish requirements regarding chemical contents that exist in the end product. You cannot forbid chemicals that are used in the manufacturing process but do not appear in the end product. As a consequence,

² See <http://www.msr.se/sv/Upphandling/Kriterier/Inredning-och-textil/Textilier-och-lader/>. Accessed 2011 02 02.

a Life Cycle Analysis does not fit in very easily with the legislation, but as LCA is implied in some labelling schemes, the above-mentioned interviewee referred to such labelling criteria as a way out of this dilemma.

Private companies, however, do not face this regulatory limitation. They can set requirements that are addressed to suppliers regarding both ‘process chemicals’ and ‘function chemicals’, as one of our interviewees from a company selling sports products expressed it.

The PPA can do more than create restrictions; it can also facilitate the establishment of environmental requirements in that it can help to formalize the contracting procedure. A formalized procedure may assist in the actual follow-up of the different offers. *‘To be sure, I follow all requirements that we set, I make a follow-up directly when I gather and evaluate the offers’*. But naturally, it is only possible to follow up based on criteria that were actually included in the order, and exactly according to how these were formulated. Thus, it is important to address the key sustainability issue right at the start of the procurement process (Preuss, 2009:220).

Basically all organizations make use of various limitation lists, as described earlier. Such lists seem to be indispensable, but not sufficient, as several interviewees also demand knowledge and tools regarding *good alternatives* and best practices.

What I consider somehow the core problem in textile production, ...that is that you work with a forbidden list. Actually the chemicals guide of the Textile Importers’ Association is a kind of forbidden list or limitation list. But we never know what exactly they [the suppliers] use in the entire production chain.

A few interviewees referred to an extensive limitation list, called the Sin*list. One interviewee felt the list cannot be used in practice, because it is impossible to control all of the approximately 350 chemicals included on the list.³

In the textile sector, eco-labelling has played a limited role thus far (Kütting, 2008: 69). However, several interviewees view labelling as a pro-active strategy to deal with chemical

³ See <http://www.sinlist.org/> 2011 02 28.

risks. Having an assortment of labelled clothes, for instance, can be seen as an important goal and as a strategy for the future. By using labels such as the the Nordic Ecolabel, Ökotex, Bluesign, one receives a guarantee that a number of chemicals have not been used. The different labelling schemes require detailed information about subsequent stages of the life-cycle (Seuring & Muller, 2008:1705). For example, the schemes generally require that suppliers can deliver safety data sheets for all chemicals used in the entire manufacturing process. Such information gathering also facilitates the development of capabilities, as well as cooperation among a wider range of companies along the supply chain (ibid.). By going in for labels, a procurer receives some level of guarantee that suppliers have some control over their own suppliers. By using labels for certain products, the procurer also receives a guarantee that one has complied with REACH regarding these products, as some interviewees mentioned. Still, all labelling schemes were considered by respondents to have their respective gaps. Regarding chemicals, Öko-tex only focuses on the end-products, as one interviewee from another labelling scheme stated, arguing for the importance of considering the entire manufacturing process. Another interviewee wondered why the Nordic Ecolabel does not allow synthetic material but accepts cotton, despite the fact that more chemicals tend to be used in cotton production than in production of polyester and polyamid, for example. Yet another interviewee thought that Nordic Ecolabel's criteria for clothes were too general and did not consider that different types of clothes may have different functional requirements. Still another interviewee discussed the fact that the Nordic Ecolabel used threshold values, whereas Good Environmental Choice had strictly qualitative requirements. A pro-active strategy requires awareness of the usefulness and limitations of the schemes, and the ability to complement them in various ways. One interviewee who is well-informed about the Bluesign initiative (with an extensive list of chemicals to avoid, and with extensive certification and auditing operations in South East Asia) maintains that *'To me, this is by far the best existing management of these issues'* and makes a comparison with, for example, REACH. Besides including many chemicals in the limitation list, Bluesign also offers manufacturers one search engine for alternative chemicals. Bluesign is, however, a recent initiative and during the interview less than 5% of this company's stock of fabrics was Bluesign certified.

However, labelling also creates difficulties that are specific to this sector, which is strongly marked by being organized around fashion. Fashion gives rise to short lead times and low predictability in ordering procedures. Laudal (2010) notes the increased frequency of orders and smaller averages volumes in the international clothing business. The labelling instrument

can be difficult to use owing to the cycle of fashion: *'the products are very quickly introduced to and removed from the shops, so there is a completely different pace in this sector compared with other consumerist sectors'*. One problem, which several interviewees mention, is that it takes considerable time to label a product and apply for a certificate, and once the cloth is labelled it may be out of fashion. An expert from an NGO reports:

Regarding textiles, at least when it comes to clothes, apart from home textiles, these are volume products where there is rapidly growing fashion. And the licences... they have to apply for new licences over and over again for new products that have very rapid turnovers. They may not even have time to get a license for a product before it is about to be replaced.

An interviewee from a private clothing company confirms this picture:

I think it was quite new for the Nordic Eco-label to work with these kinds of products that spin so awfully fast. Because you kind of get a licence for this product in this colour for this print... earlier when I've worked – I've worked a lot with the Nordic Eco-label – then it maybe concerned detergents, which is the same for three-four years and thereafter the Nordic eco-label changed the criteria. Then maybe you had to tinker somewhat with the detergent. But the assortment [regarding clothes] is constantly changing and it is quite an unwieldy system to kind of send in new applications all the time or complementary applications just because the colour has changed, for example.

Another interviewee from a company that did not use labels was hesitant about this type of tool, because using it might disturb the relationship with suppliers. This interviewee nevertheless reflected on having a smaller assortment of labelled clothes.

The use of tools such as labels is often linked to an environmental policy, sustainability policy, CSR policy, and so on. Such internal tools may be important, particularly in big organizations, in that they direct attention to environmental and social considerations in procurement. Such policies may include acknowledgement of the key negative environmental effects associated with the activity of the company, notions of responsibilities that the company shoulders and that may include the performance of suppliers, what general

principles to follow (preventive, substitution principle), key general measures that are taken, and they may contain an expressed intention to work for continuous improvement. ISO 14 000 could also be used in this way. Internal policies may be important for directing attention to environmental aspirations and strategies and as communicative tools, but they are not concrete on the detail level and are therefore not sufficient in themselves.

Another common internal tool found within many big organizations are codes of conduct. Codes of conduct are typically based on the values with which the individual firm wishes to be associated (Andersen & Skjoett-Larsen, 2009, p. 78). In contrast to ‘third-party’ eco-labels, codes of conduct are internal (self-regulatory) policy instruments that lack some credibility, as they are generally less prescriptive and not issued independent of the producing company (Boström & Klintman, 2008). As an effort to increase trustworthiness, the principles within codes of conduct are often derived from local legislation and international conventions, standards, and principles such as the UN’s Global Compact, the Global Sullivan Principles, Social Accountability 8000, ISO 14001, Global Reporting Initiative, and the ILO Declaration on Fundamental Principles and Rights at Work (Andersen & Skjoett-Larsen, 2009). Still, although such principles may direct attention to general key issues, they are not as such sufficiently concrete to give guidance regarding the chemical content and processing of textiles.

In Sweden, several major garment retailers, including H&M, Lindex, KappAhl and Indiska, initiated a joint effort in 1998 with Fair Trade Centre – who took the initiative as part of the international Clean Clothes Campaign – and other civil society actors to standardize a code of conduct for the industry (Ählström & Egels-Zandén, 2008). This initiative only included social aspects (working conditions in the production context). The idea was to establish a joint code, called DressCode, but the process failed. The critical moment came when labour union participants, in 2002, eventually withdrew from the working process, arguing that a binding global collective agreement with firms was a preferable option and that they did not feel they had the mandate to enter into agreements on behalf of workers in developing countries. Accordingly, no definition of Swedish garment retailers' responsibilities for workers' right at their suppliers could be agreed upon. Yet Ählström and Egels-Zandén argue that this process at least established that the garment retailers should also assume some responsibility for the rights of workers employed by their suppliers. Such experiences of engaging in processes of code definition could arguably make actors more sensitive to environmental issues as well.

In big organizations, such as municipalities, one may have to work with frame agreements with suppliers. Then it is up to individual buyers to depart from the frame agreement and specify concrete requirements that are sent to potential suppliers. It is usually difficult or impossible to achieve a sufficient level of detail of requirements connected to chemical contents in the frame agreement as well as enough specific expertise among the personnel at the organizational body dealing with these frame agreements. There is a clear risk that the focus on chemicals will be ignored altogether or that it will be up to the individual buyer to decide whether such concerns should be considered. One interviewee from a public procurement company admits:

We haven't developed any particular manuals for what should be considered regarding chemicals when one is buying clothes. Nor do we inform about it.

In sum, we have seen that both mandatory and voluntary external instruments exist that can assist in managing the use of chemicals. REACH, the PPA and labelling schemes do have their respective limitations, however, and users need to develop an understanding of these limitations. Still, labelling is an example of horizontal governance in the sense that it can go beyond EU- or nation-state-centred legislation. This type of instrument can assist in the regulation of flows across the globe, and is therefore an important complement to vertical governance. Internal instruments such as policies and codes of conduct can also function in this way. We have also seen that regulations such as the PPA make references to labelling schemes and their criteria (through the advice of SEMCO). Nevertheless, the regulatory strategy of labelling has its own limitations. It relies on voluntariness, and we have seen, for example, that the cycle of fashion may be another barrier in this specific sector.

8. Monitoring and trusting suppliers and products

With high priorities and relevant knowledge (section 5), communication strategies (section 6), and policy instruments (section 7), a procurement organization may have developed the capability to pursue effective risk management, including auditing suppliers and products. In this section, we investigate further the possibilities and challenges involved in responsible management of the supply chain by addressing the issue of auditing and trust.

8.1. Testing and inspection

We can begin by mentioning one interviewee from a public organization who says that it is not particularly difficult to *establish* requirements that are addressed to suppliers. The challenging task is to check whether these requirements really are being complied with:

The difficulty is found in the follow-up and in knowing that “this” is correct. That is the challenge.

It certainly confirms our expectations that interviewees talk in various ways about the great difficulties involved in traceability and receiving information on risks along the production chain as well as in being able to actually audit suppliers and sub-suppliers along the product chain in this area of complex textile products. In addition, the ability to monitor the sub-suppliers as well accentuates these difficulties: *’it is very difficult because there is such an enormous number of sub-suppliers’* .

In the first place, it is difficult to motivate suppliers to answer questions. Receiving adequate answers requires extensive work, as the following interviewee indicates:

It’s not the case that they stand up and cheer when we send our requirements to the suppliers, and it’s not the case that the responses just drop in, but it is very hard work to get any response at all and that they guarantee that things are going according to our guidelines.

One doesn’t want to share one’s little hokus-pokus formula.

Regulations, such as REACH, do not provide assistance in formulating such requirements, interviewees say.

Moreover, interviewees report that making inspections and random testing are difficult. Such testing requires considerable administrative resources and takes a great deal of time. Several of the organizations in the present study do carry out tests of the final products (particularly those that are selling clothes, thus having textiles in their core business). But it is impossible

to test all products and for all kinds of chemicals in the products, so they have to make a selection. The following quote illustrates the level of complexity involved in testing products:

*The sin*list includes about 600-650 chemicals,⁴ which corresponds quite well with the one bluesign® has. We have looked at sin*list and considered if we should use it as a requirement in our terms of agreement with our suppliers. But we haven't done that, because we think that would be sort of like a play to the gallery actually, because no one can control 650 chemicals. That is completely impossible... because that would imply that in principle all ingredients in a product... if you take a coat for example, it includes let's say 30 pieces of different materials, and then each of these 30 materials should be tested for 650 chemicals.*

So how are selections made? Based on the interviews, it is clear that the companies largely make tests based on the current risk communication (cf. section 6):

That [tests] have been somewhat adjusted according to needs and it can be the debate, public debate, when one has discovered a new problem or if the fashion has changed so that one... yeah, you notice that the products change the appearance, then you can add that [to the testing].

If there is a trend of very glossy prints, then you can begin to think that it is fabric softener that is the topic of the day... and that we have, so to speak, some control over it.

A couple of the studied companies had a rather pro-active approach when it came to testing. One interviewee referred to a 'test plan', and other interviewees referred to something similar but more implicit. Such plans may include a kind of risk analysis based on the aspects mentioned above and also knowledge about the differences in rules in different countries. If one knows that a particular risky chemical is not forbidden in the production country, it may be wise to include that product in the test plan. In general, they take their current (or upcoming) assortment as the point of departure and may prioritize making tests of products

⁴ According to their web-site, by Feb 28, 2011, the list actually includes 356 chemicals. See <http://www.sinlist.org/>

that are important, have high volumes, will remain in the assortment for a longer period, and that may have particular colours or prints that give rise to suspicions. However, the rapid fashion cycle creates difficulties, because if they only sell products for half a year, it is more expensive to make the tests in relative terms.

Another problem with conducting tests and analysis of end products is that many chemicals that have been used only for the manufacturing process may be nearly impossible to detect in the end products. For that and other reasons, several interviewees discussed the importance of making trips to suppliers to see the factories and communicate with the staff face-to-face. Obviously, such trips also require extensive resources:

one can do a lot actually, by looking more at the process and into how people are working, what equipment they have, what machines are used, what sewage system is in place, and the consumption; actually, it involves very extensive work.

Even if organizations have the resources to make field trips to producers and visit factories, they must have the relevant expertise to know what to look for. The first quotation above shows that if you have relevant expertise you can at least assess *the capacity of the factory* to carry out its activities in an environmentally and socially responsible manner. Still, when one makes the visits, how does one know that the producers are really revealing a true picture of how they operate?

We aren't there all the time and we make announced visits.

One has to know what one is looking at, ...being at a factory 3000 kilometres inside China somewhere and getting a picture of what they are doing there, or how old the workers are or what it looks like or whether it's just a side-show.

Making unannounced visits may be the solution to that problem, but that is normally only feasible if the buyer is big and buys a large share of the seller's production.

Even if effective auditing and testing are carried out, for instance in relation to labelling and certification schemes, this monitoring does not necessarily focus on chemical risks. Other

concerns, for example social concerns (child labour, working hours), may be more prioritized. Given that it is difficult to actually assess what is going on in the factories (and some production is not even done in factories, but is rather homemade, which accentuates the auditing problem), visiting suppliers may be more instrumental in assessing the *motivations* and *capacity* of the factories (good equipment, good procedures, expertise of the staff, etc) and in *developing relationships, communication* and some level of *mutual trust* with suppliers. One interviewee indicates that such field trips and auditing are becoming more institutionalized:

I think that the whole CSR bit and auditing the factories is becoming easier just because it's been going on for a while and there are many who have these requirements and they are, so to speak, getting used to this type of control. Then the environmental auditing is getting easier as well.

Still, the challenges involved in making such monitoring feasible and effective are huge. Furthermore, it is important to bear in mind that receiving useful and trustworthy information about activities in developing countries may be difficult due to, for example, corruption.

A large part of the assortment among sellers of end-products may also be impossible to scrutinize for other reasons. A couple of chains we investigated sold both their own brands and others' brands. The focus of inspection and testing then tended to be on their own brands, whereas one must simply trust the other trademarks and their respective monitoring systems. In the same manner, it may only be possible to visit the factories of one's own suppliers and production: *'we cannot show up and demand to walk into the factories of Hugo Boss'*.

The issue of traceability creates challenges. One of our interviewees provided an example of a problem that was highlighted when an NGO tested one of the company's items and found chemicals that were not supposed to be in them. The company looked for the source, but it proved to be very difficult for the supplier to find out what was actually failing. Finally, they noticed that the item had been washed in a washing machine that also had been used for other products containing the chemical in focus.

At the end of the day, inspection and testing cannot be the panacea, as the following interviewee indicates:

You can employ hundreds of inspectors that are out there every day the whole year and travel around the earth, but I don't think... that is the solution. You can test everything and spend large amounts of money and make analyses, but I don't think that's the solution either.

8.2. Trust

A partial substitute for (or complement to) both regulation and inspection is to rely on *trust*. The topic of trust is very common in our interviews. A buyer may choose among suppliers that are seen as trustworthy and that accordingly do not need to be audited and inspected. Likewise, it is common for interviewees to refer to labels and other certificates (ISO 14000) as a way to invest in trust (rather than relying on inspection and testing). If a supplier is certified according to a standard, such as ISO 14000, this certificate can be seen as a substitute for asking questions and conducting audits and inspections. One interviewee placed rather great trust in the suppliers from India that her company had contracts with, because they deliver quality products rather than cheap products.

They are among those who make almost the most expensive things in India. It is definitely not cheap, we turn to someone who can make it the way we want it. I think... these factories have as a rule a completely different orientation from the start, they have, as a rule, good control of working hours, salaries, environment, everything. I think you are more in the risk zone when you look for the cheapest... then you're in a much bigger risk zone... I feel quite confident with the suppliers I am working with.

We can see from basically all our interviews that companies also choose to place trust in products that come from a particular region (for instance Europe, with the exception of the above quoted interviewee), while assuming some level of distrust regarding producers and products from other regions (South-East Asia). This is evident in that they tend to allocate resources for field trips to make audits and inspections mainly in the latter region.

Then one is thinking also a little that these suppliers I trust ...I know that they have a lot of certifications or that they sell to Germans, and then I know it is usually ok.

Europe certainly has a stricter legislation.

To be sure, one is making a risk analysis and departing from that, and then, certainly, it is that legislation outside Europe... Everything inside EU is surely largely embraced by common rules. If it's outside the EU, you don't always know what the regulation looks like.

It may arguably be claimed that excessive trust is being placed in some instruments (and the use of these instruments), regions and actors. Equating Europe with good quality may be seen as an overly simplistic heuristic. Still, particularly small companies may have to rely on this kind of trust, owing to a lack of resources, knowledge and the power to actually make a strong impact on suppliers. They may send a list of requirements to suppliers, but may have to rely on the words and guarantees, as well as safety declarations, that the suppliers give them.

To be sure, this problem is not unique to small companies. Even labelling schemes and certification bodies must rely on some level of trust. As one interviewee from a labelling organization says, it is the responsibility of the licence taker to make sure that it can gather all of the necessary information from suppliers. But the interviewee's experience is that gathering such information sometimes requires very hard work. Later we get back to this topic of trust and discuss *reflective trust* as a way to cope with this dilemma.

9. Towards a pro-active approach to responsible procurement?

It is truly a complex matter that the investigated organizations have to deal with, as illustrated in the very first quotation in our report. A single product chain in the area of textiles is usually complex in itself. Added to that is the fact that different product chains may look very different. The businesses also have to cope with the rapid cycle of fashion. Without a doubt, all this complexity creates huge challenges for regulating and managing chemical risks in textiles as well as for communicating about them. At the same time, it may also be easy to hide behind this complexity. Practitioners may refer to complexity as a way – or a frame – to

avoid pro-active measures, and to stick to a defensive, irresponsible attitude. Before we analyse to what extent there are signs of a development towards a pro-active approach to responsible procurement, it is relevant to try to identify how the actors themselves perceive their responsibility and the distribution of responsibility. Do they perceive they should assume responsibility for what suppliers and sub-suppliers are doing?

9.1. Whose responsibility?

First of all, for a small company it may seem overwhelming to assume responsibility that covers several steps. The following quotation represents the common view that one has to delimit one's responsibility - *a delimitation strategy* - to one's own organization, or to not go beyond the operations of one's own supplier (excluding sub-suppliers):

Interviewer: And how much responsibility along the chain do you think your company should assume?

Respondent: Eh, no, I think that it can be quite unreasonable for companies, for example of our size, to maintain a larger circle than to the supplier one is working with and to the product one is making. Then, so to speak, to sub-suppliers, no that might... that would require, then then then you really have to invest in that and employ people who work only with that in one's company. I feel... we aren't big enough yet to reach several steps away.

Others represented more of a *denial strategy*, questioning whether all the responsibilities one is expected to shoulder, according to the mass media, are really fair. The following comments were made by two interviewees from a procurement company that is hired by a big municipality in Sweden:

Then another thing that one can think of or that we at least reflect on sometimes, that is if society at large can't manage to solve a problem, then the procurement people are expected to solve it.

It is certainly difficult for us who are almost last in the chain to make an impact very far away, somewhere where the product starts to be produced. Are we

supposed to pull the entire load ourselves, I think that feels a little... [respondent didn't complete the sentence]

We only procure what already exists.

Indeed, the last statement rests on the assumption that consumers – individual or organizational – have no power to affect what is produced. Maybe it is no coincidence that we found this view among a few actors dealing with procurement within the public sector. To be sure, in his study of sustainable procurement among local government actors in the UK, Preuss (2009) found a range of initiatives that local public actors undertook to address all aspects of sustainability. Yet his study also indicated that thinking in terms of 'supply-chain management' is at best quite a recent topic among public actors: "In some cases, sustainability challenges require procurement managers to reach further along the supply chain than had previously been the case. In theoretical terms, the paper thus argues that sustainability pushes local government along the road from purchasing to SCM [sustainable chain management]" (p. 220).

A few other interviewees also stressed the importance of somewhat delimiting one's own responsibility, but gave other reasons for it. Rather than addressing powerlessness, they made almost the opposite argument and discussed the risk of too much involvement.

Respondent: what we can sense is the risk that if we go in and, if we buy a garment and say it mustn't contain this and then we test it and find these chemicals nevertheless and say 'yes, but do it like this and this instead', then we have assumed responsibility for their process.

Interviewer: Exactly

Respondent: Then it has sort of circumvented their responsibility. We may even have to go to their sub-suppliers and say 'do it like this and this' instead. Then if something else happens, let's say that the dye is coming off or that we get another bad chemical in the garment, then it's our responsibility. Then we've sort of entangled ourselves in the whole thing... yeah, if you understand.

The quote expresses the commonly perceived risk of shouldering too much responsibility. This feeling may be accentuated if the procurement actor experiences having the power to actually affect the behaviour of suppliers and sub-suppliers, but lacks the expertise to establish the relevant requirements.

However, to the extent that buyers have the power to actually take a leading position in the supply chain and control key resources, one might argue they also have the responsibility to do so in a way that is socially and environmentally sustainable (cf. Andersen & Skjoett-Larssen, 2009:77). Indeed, some large clothing retailers go far beyond their original buying functions because they are actively engaged in, for example, product design and fabric selection, as Laudal (2010) observes. Such market actors can play a significant role in specifying what should be produced, how and by whom (Andersen & Skjoett-Larssen, 2009). Seuring and Muller (2008) argue that ‘focal companies’ may be held responsible for the environmental and social performance of their suppliers. Focal companies are companies that rule or govern the supply chain, provide direct contact to customers, and design the product or service offered. This is particularly the case for brand-owning companies. Indeed, some level of acceptance of moral responsibility for the operations of suppliers and sub-suppliers was also seen among our cases. There were, for example, pragmatic answers to the dilemmas surrounding (lack of) power and expertise, such as: *you have to start where you have the greatest opportunities to make an impact*.

9.2. Signs of a pro-active approach?

Do we see any development towards a more *pro-active, responsible approach* – an approach that could facilitate sustainable procurement – among the procurement organizations?

First, such an approach would be preventive (including precautionary measures) and systematic, but we instead see considerable evidence of the opposite: reactive and ad-hoc approaches to problem-solving. In general, the entire field is characterized by reacting to unexpected incidents, using ad-hoc strategies such as testing products when confronted with a media alarm. A systematic approach implies long-term thinking and planning, whereas the ad-hoc strategy is characterized by the lack of any long-term perspective. Moreover, the pro-

active responsible approach would have to be integrated, in that it entails a comprehensive focus on sustainability and responsibility in the entire organization, which includes extensive communication efforts internally and externally and a conscious effort to establish a sustainability-affirmative organizational culture. Based on a case study of IKEA, Andersen and Skjoett-Larsen found that “practicing CSR in supply chains requires that the concept is embedded within the entire organisation” (Andersen & Skjoett-Larsen, 2009:81). Most, if not all, of our investigated cases are very far from taking such a systematic and integrated approach. In contrast, as noted above, some did not even acknowledge the idea that responsibility is something that goes beyond, or should go beyond, one’s own organizational borders. What they procure has already been produced; it already exists and the damage is done, the argument goes. From a normative perspective, one could argue that responsibility increases to the extent that the organization exercises market power, or power within and over the supply chain (as a focal organization; Seuring & Muller, 2008), and that, for small organizations, it may be overwhelming to assume responsibility for things occurring much earlier in the production chain. Still, a pragmatic answer to such considerations could be that one is actually searching for and taking the opportunities that emerge (such as procurement labelled products).

A pro-active, responsible approach would develop communication strategies in a way that paves the way not only for information sharing, but also for genuine dialogue with suppliers, sub-suppliers, customers, and other stakeholders. In contrast, we observe a considerable amount of sticking one’s head in the sand. Again, there were many organizations that did not wish to take part in our study, despite the fact they were assured anonymity. Procurement organizations tend to prevent themselves from engaging in internal and external communication.

A pro-active approach would seek ways to complement vertical and horizontal governance, and we can indeed note the development and combination of various tools, particularly labelling. Yet most organizations and most activities are focussed solely on trying to avoid the worst chemicals rather than on trying to develop knowledge and tools to use the best alternatives (alternative chemicals, products, raw material, design, etc.) as well as reflecting upon one’s assortment. The various tools have their specific limitations, and they users need to develop a reflective and situational awareness of these limitations.

Finally, a pro-active approach would involve investing resources in monitoring activities such as product testing and field trips as well as fostering long-term relationships with suppliers and developing mutual trust. The pro-active approach would have to go beyond a simple (blind) trust in suppliers, sub-suppliers, regions, and policy instruments and rather develop some level of reflective trust (Boström & Klintman, 2008). Reflective trust would involve choice; that is, that one chooses to place trust in an actor, for example. Such trust would be provisional, and may include more or less conscious and continuous evaluations of the trusted actor's incentives and capacities. Assessing incentives ('are they really motivated to invest in preventive strategies') and capacities ('do they have the equipment, skill, etc.') would require two-way communication and face-to-face interaction. What we generally see, despite a rather reflective risk awareness, is surprisingly naïve trust being placed in certain actors, systems and regions (Europe).

The pro-active responsible approach as well as such aspects as communication and the fostering of reflective trust may be facilitated by the development of long-term relationships with suppliers. For example, as Andersen and Skjoett Larsen (2009) have observed, IKEA has adopted a strategy of going from "trading to purchasing", which implies long-term relationships with fewer suppliers, where the focus is on buying capacities rather than buying articles. This strategy entails a movement away from demanding a certain level of quality, service, price and environmental and social responsibility of its suppliers towards developing these issues together with suppliers.

However, taken together, we note a fairly modest level of organizational responsibility, and it is important to consider also that there were several cases that could not be included in the study because of their unwillingness to be interviewed. Indeed, our material is probably biased towards forerunners rather than laggards, which further confirms our picture of the rather low level of organizational responsibility in this sector.

On a more positive note, we can at the same time observe what could be interpreted as a movement towards a more pro-active approach. Several interviewees expressed a willingness, commitment, and also increasing capability (such as hiring chemical experts; developing networks) to move away from the defensive strategy, although this appears to be a very slow process. Several interviewees could clearly imagine and reflect on possible ways to more proactively take into account chemical risks in their procurement, but in several cases the very

same interviewee reported the opposite strategies, appearing preventive in one (core) area and reactive in another, and totally blind to the risk in yet another area: *'it is actually this interview that got me to think about it'*. Accordingly, the choice of strategy tends to be inconsistent. Interviewees also say that they cannot do everything at once, but have to take one step at a time. This sounds like a feasible and pragmatic approach. Reacting to incidents and developing one's risk awareness may be a first step towards developing more pro-active, responsible strategies in the longer term. Just being aware, expecting and being prepared for coming changes may be important: *'it feels like a big change is happening'*.

How are indications of (some level of) a pro-active responsible approach related to various background factors? One rather clear pattern is the extent to which textiles concern the core activity of the organization (which in our cases also happens to be the private organizations). In such cases, the organization seems to be more likely to develop a pro-active, responsible approach to procurement. In general, though with some exceptions, the most reflection and action were found among the organizations selling clothes. On the other hand, having textiles in the core business also creates certain key dilemmas and challenges. We have particularly discussed how the rapid pace of fashion creates problems for activities such as labelling and inspection. Furthermore, it appears that the choice of strategy – a tendency towards pro-active rather than defensive – relates to capacities and driving forces, which we will now discuss in two sections.

9.3. Driving forces

We have identified a number of different driving forces behind the organizations' work with managing chemical risks in purchasing textiles. These are related to internal and external sources, reactive and proactive as well as structural and individual. One of the main external driving forces seems to be a fear of the media and critical journalists, which most likely is an expression of fear of the organization losing its image, cultural capital, market shares and social position (as an organization or as an individual responsible for these issues). *You don't want to end up at Sverker (referring to a Swedish television programme aimed at identifying bad products and/or services and approaching those in charge) and ...you don't want to get yourself into some damn media circus.* This driving force can be seen as a reactive strategy, on the one hand, as the organization is merely acting to avoid negative media attention.

Yes there is, it's some kind of feeling for what may be coming up and up-to-date now that is, not based on some kind of danger perspective, but rather because you simply don't want to end up on the wrong pages in the newspapers.

On the other hand, sensitivity to 'what is going on' generally requires actions, strategies and initiatives on the part of the organization. The importance of trademark, branding and possible competitive advantages are other main driving forces in this work.

...well the environment is really, it's our strongest brand the environment.

Yes of course it is a way to build your brand.

...you do want to communicate a lot with those who are wearing the clothes, they should sort of send a message with them that it is warm and considerate...

Some organizations also criticize how the media frame issues of chemical risks, claiming that the media simplify the issue by focusing on sensations and present a lot of incorrect facts.

...if you talk to the Swedish Chemicals Agency and those kinds of authorities then then they have a more nuanced picture. But this is never published in the news media, instead there it is mainly the messages from the environmental movement that maybe reaches the public.

In relation to the importance of the media and public opinion on chemical risks and textiles, the Swedish NGOs the Swedish Society for Nature Conservation and Swedwatch obviously play a central role and are among the main actors in the public discourse on these matters.

They usually call for a press release when they've found something new and then everyone gets a bit worried. 'What are they up to now? Oh no'.

In general, the public debate, with its current focus on environmental issues and risks, is understood as a driving force or at least something that has contributed to putting issues of

chemical risks and textiles on the agenda. Some respondents, however, present purely internal motives for their work.

But there isn't really any, there isn't any, any pressure from the outside that makes us act in a certain way, but we just act based on what we think is required, for the environment and our customers.

Another driving force concerns the type of activity the organization is engaged in, which may also connect to the topic of trademarks discussed above. Some of the investigated organizations' activities were in one way or another related to the environment or health, and it may look bad if such an organization does not assume at least some responsibility for chemical risks. For example, a company selling products for sports and outdoor life argued that their products must be made to work 'in the nature'. Such a focus on nature is quite closely associated with environmental protection purposes.

Then what about regulations like REACH? Most of the organizations are well aware of REACH but, as we indicated earlier, they express uncertainty about the implications for their own situation. Generally REACH is considered to be very complex and difficult to interpret.

Well it is, REACH is so complex so every time you sit down with it, it feels like your head starts to spin.

It is important to acknowledge that, during the time the interviews were conducted, REACH was (and still is) a new regulation, which likely added greatly to the confusion about it.

Aside from REACH, there are several other regulations or directives that set the terms for the organizations' work. For instance, public organizations are largely dependent on the PPA, which we referred to earlier, and the principle of transparency (offentlighetsprincipen).

Besides these more structural or institutional factors, we must acknowledge the importance of individuals and personal motivations. In many organizations, environmental work in general, and work with chemical risks in particular, seems to be dependent on the person in charge of these issues and his/her level of engagement and knowledge. There are a couple of individual

experts working in the field of chemicals and textiles in Sweden who have been particularly influential and who definitely serve as driving forces. For example, several interviewees describe Stefan Posner at Swerea IVF as the person they turn to when they need help, and he also organizes a network in which many of the studied organizations participate. Posner has worked and been engaged in many areas concerning chemicals and appears to be the spider in the web. Several of the respondents also present their own interest in CSR, environmental issues and chemical risks as important factors for how the organization engages in those issues.

Another observation based on our interviews is that the issue of chemical risks in textiles does not appear to be driven directly by customers. Almost none of the organizations claim to have noticed any interest or special requests on the part of customers. One of the respondents, for example, thinks that consumers get fed up with all the bad news and do not have the strength to engage in these matters. There are of course also differences between groups of consumers. Parents of small children may be more engaged in the issue of textiles and chemicals than other groups are, as another interviewee points out. An interviewee from a company selling sports and outdoor life products maintained that they are experiencing an increasing number of requests from customers that are related to the environment. Another interviewee said that although they lack experience of direct requests from customers, they would not want to face the risk of customers having an allergic reaction. One interviewee from a Swedish municipality primarily mentions the working environment (risk for allergy) for the staff in that municipality as the key concern when including requirements for chemical content in their procurement. The focus then is on chemicals in the end product, and not on whether hazardous chemicals are used in the production process. This is also in line with the public regulation, which focuses on products rather than on production processes.

Driving forces can also be analysed from a cost-benefit perspective, where the organizations work with different risks and balance between different forms of capital (financial, social, ethical, etc.). Generally, organizations seem to put more energy into reducing costs than into increasing benefits, even if some point to the importance of this work for their brand and how it can give a competitive advantage. But even organizations that seriously attempt to develop a green and responsible image and brand may nevertheless focus on environmental and social aspects other than chemical risks (green electricity, child labour, etc.). Thus, this type of driving force does not necessarily produce sensitivity to this risk area.

9.4. Developing capabilities

How can the organizations cope with all the challenges involved in developing a pro-active responsible strategy in light of the complex situation? What are the organizations' (potential) capabilities to develop such strategies?

We have focussed on knowledge and risk awareness (5), communication (6), regulatory instruments (7), and the issue of monitoring and trusting suppliers (8). All these aspects concern having the capabilities to cope with a very complicated matter and to develop pro-active strategies (cf. De Bakker & Nijhof, 2002). For example, one interviewee discusses labelling as a way to deal with the huge numbers of possible choices that have to be made all the time. Labelling is thus a tool for coping with complexity because by choosing certified goods, a lot of choices have already been made through that certification.

Capabilities relate to organizational resources of various kinds: financial, cognitive, and social (social capital). Financial resources are needed for a number of reasons, including:

- Making field visits at suppliers to carry out inspections and develop trusting relationships with suppliers and sub-suppliers (thus increasing social capital)
- Conducting tests of products
- Recruiting competent staff, and investing in expertise (thus increasing cognitive capabilities)

As pro-active strategies require resources, we may see an advantage for bigger organizations, including public ones. Big organizations also have an advantage, as they may be seen as powerful among suppliers. A big organization, such as IKEA, may easily be able to substantially influence suppliers. Several of our interviewees referred to their smallness as a very problematic circumstance when it came to exercising control in the product chain:

We, XXXX, are very small when we come to a factory with our orders. It is difficult for us to say 'you have to have a cleaning system', because then, basically, they don't bother about us.

It is incredibly difficult coming as a small actor with odd requirements, which, in addition, are not included in any legislation.

It is never the case that we are the only customer at a factory. Our volumes are so small.

Nevertheless, one way for smaller organizations to compensate is to rely on the requirements set by other bigger procurers, such as H&M, in case they use the same supplier. If suppliers already deliver to big buyers that use ambitious codes of conduct, then suppliers could be assumed to be familiar with, or more willing to accept, one's own codes. Relative smallness may be compensated for by networking and collaboration. Indeed, Suering and Muller (2008) argue that *sustainable supply chain management* requires much more cooperation among partnering companies than does more conventional supply chain management. We noted earlier (section 5 and 6) that a majority of the investigated cases did engage in various national and international networking activities. Several interviewees mentioned international networks. One such network is the Business Social Compliance Initiative, which one of the organizations participated in. The benefits of this affiliation were explained in the following way:

We engage their team a lot then to make revisions at a factory in, above all, China, as we don't know the language and not... No, it's certainly difficult to read all the lists if you don't know Chinese. And also... so to speak, present the whole message also, they are good at explaining what this is all about and what the goal is and how important it is.

Another interviewee referred to the European legislation as a way to generate leverage against China.

To be sure, as we have discussed earlier, in terms of capabilities, there can also be disadvantages associated with having a big organization. A big public and private organization has to struggle with effective internal communication.

Our discussion shows that capabilities are related to social resources, or in other words to social capital. We earlier discussed the issue of trust (trust in both constructed systems such as regulatory tools and trust in concrete actors such as suppliers) as a partial substitute for inspection and testing. As we said, trust need not merely be a kind of blind naïve trust, but could be developed in the form of reflective trust. Many of the interviewees' responses certainly come close to blind trust, and such a response to chemical risks in textiles would hardly be recommended. However, it is necessary to rely on some level of trust in systems, suppliers, and sub-suppliers, but such trust does not have to be blind and static. Reflective trust would include conscious and continuous evaluations of the trusted actor's incentives and capacities. Such assessment would require communication, hand-shaking and face-to-face interaction. Thus, developing a degree of reflective trust would imply the fostering of long-term relationships, which in turn require investing in financial resources for precisely this goal. It is important to bear in mind, however, that cosy face-to-face interaction, too, can give rise to excessive trust. A lively public discourse and the incessant threat of being targeted by media and NGO reporting may facilitate the development of a kind of trust that is not blind, and that thus would be highly provisional. Indeed, in the minds of our interviewees, the threat of negative media reporting appears to be much more real than the threat of stricter legislation. People working in the textile sector are frequently reminded of various risks, and this very fact may sharpen the attention they put on what other people in distant parts of the world are delivering.

10. Conclusion and further research

What then are the possibilities and capabilities as regards working towards more socially and environmentally responsible procurement among procurement public and private organizations? We first provide a brief summary of the main findings in Table 1:

Table 1: Summary of empirical findings

Prioritizing, risk awareness and knowledge (gaps)	Communication: Forms, strategies and barriers	Policy instruments	Monitoring and trusting suppliers and products
<p>Other aspects more prioritized</p> <p>Increasing awareness and reflexivity around general risks, including economic ones, and that risks are related to global complexity</p> <p>While external databases and expertise exist and are used, interviewees perceive huge knowledge gap on both general and specific issues</p> <p>Complex product chains seen as a barrier to receiving relevant information on risks</p> <p>No reference to a precautionary approach</p> <p>More reflection on risks and potential alternatives than on</p>	<p>No particular communication strategy for chemicals, sometimes part of a general CSR-policy or similar</p> <p>Increasing use of both mediated (e.g. codes of conduct, quality manuals, agreements, terms for procurement) and personal forms (e.g. meetings, seminars), externally and internally</p> <p>Communication with suppliers, not sub-suppliers</p> <p>Communication as transmission of information rather than two-way dialogue</p> <p>Emergence of networking with e.g. experts and other procurers</p> <p>Perceived need to take on but difficulties in assuming an educational role</p> <p>Communication barriers in relation to, e.g. language,</p>	<p>Use of both external and internal instruments; combination of vertical and horizontal governance</p> <p>Each instrument has its limits and there are gaps in between</p> <p>REACH: seen as complex and difficult to comprehend; may assist in increasing awareness of chemical content in products</p> <p>The Public Procurement Act: set certain limits (focus on end products), while helping to formalise the contracting procedure</p> <p>Various limitations lists are provided, but a lack of lists/tools that focus on good alternatives</p> <p>Labelling seen as a proactive approach; problems due to e.g. the rapid fashion cycle</p> <p>Internal policies (e.g. CSR), frame agreements, etc</p>	<p>Product tests, auditing, and inspection are expensive, time-consuming, and difficult</p> <p>Traceability difficult</p> <p>Excessive trust in some actors, instruments, regions</p> <p>Important to have</p> <ul style="list-style-type: none"> • Strategic test-plans • Field trips to factories to assess incentives and capacities, and to develop reflective trust

concrete actions	different professional background, organizational isolation, complexity of product chain, and physical and cultural distance	useful for directing attention, but not sufficiently detailed Codes of conduct: useful in communication with suppliers; but a challenge with their credibility	
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Our analysis in section 9 of this report resulted in the conclusion that only a fairly modest level of responsibility was being assumed in procurement in the area of chemicals in textiles. The approach to responsibility cannot be characterized as particularly systematic, preventive, and integrated. Nevertheless, there is an increasing risk awareness, networking, communication, as well as use of various policy instruments that go beyond what is required by law. Interviewees expressed a willingness, commitment, and an increasing capability to move away from a strictly defensive and reactive strategy. Further research should investigate more systematically how such willingness, commitment and capacity building are related to various background factors. Within our research programme, we are interested in studying in more detail how dimensions such as public vs. private, organization size, and core vs. periphery are related to this issue.

As regards the first dimension, we were able to find somewhat more evidence of pro-active thinking and action among private actors. We refrain from generalizing that finding, however, as such comparisons among public and private actors are very rough and would at least require more cases and more systematic comparisons. The challenges are many and huge for both types of organizations, and more research on these challenges is warranted for all types of organizations. Nevertheless, it is reasonable to assume that the thinking in terms of 'supply-chain management' is somewhat closer to private companies, and consequently the linking of responsibility to such chains. Public actors in Sweden are likely to think of responsibility in relation to the political system – representative democracy regarding the input side and delivery of welfare regarding the output side (to clients) – whereas a responsibility that extends also to suppliers and sub-suppliers is not among their traditional concerns and mandates. In Ulrich Beck's words, public actors tend to be more embedded in the 'container'

of the national-state than businesses are. Public actors are also restricted by specific legislation. We have noted that the PPA, for instance, sets specific limitations for public actors. Moreover, public actors struggle with internal complexity, and there also appears to be a lack of external driving forces, meaning that public actors have to rely more on internal sources of inspiration (motivated individuals). Nevertheless, the traditional focus on public welfare, public health, collective benefits and so on may be something that can foster an extended notion of responsibility, encompassing the area of sustainability procurement as well. Indeed, Preuss (2009) found many new initiatives in this area among local governments in the UK, pointing out the importance of such organizational issues as transparency, development of sustainability strategies and policies, fostering of organizational cultures and risk management in the public sector.

As regards the size of the organization, a large size is naturally related to more capabilities (resources), and even more importantly, it may be that a large buyer has larger volumes and is a more important customer in relation to suppliers. Big private organizations, including their name and brands, are also more visible, and therefore more vulnerable to media attacks and reputation loss. Such visibility can be used as a political weapon by NGOs that want to target big organizations through global or local campaigning activities. Examples of the challenges faced by big organizations are the processing of huge amounts of information and complex internal communication. Further research needs to be done on how both big and small organizations are able to cope with challenges related to size. For instance, what are the opportunities and constraints for small actors to develop collaborations aimed at compensating for their relative smallness? How can they develop capabilities (cognitive and social) to gain relevant information and knowledge, and are there any identifiable pathways for the development of constructive long-term relations with both suppliers and sub-suppliers along product chains?

Finally, the core-periphery dimension is very relevant and should be taken into account in further research. We have seen that more pro-active approaches are detectable in organizations whose core business is textiles. That is perhaps not surprising. As Haake and Seuring (2009) maintain, the greening of strategic products associated with the organization may be more profitable than the greening of minor products and the greening of processes: 'the public image of a company is usually associated with its main products' (p. 290). The driving forces getting companies to embrace 'sustainable minor procurement' are therefore

weaker than those for the strategic products. Furthermore, companies will concentrate on the areas they know best, that is, within their core business fields. However, as Haake and Seuring (2009) argue, "there can be no such thing as being "80% sustainable", and the effects of minor procurement add up along the entire supply chain" (p.285). In basically all organizations, there are actually huge volumes of procurement of goods and services – ‘the small stuff’ – that appear to be of marginal strategic value to the organization. We can expect huge volumes of textiles in many types of organizations, such as hotels and hospitals. It is thus important to further investigate organizations that have textiles in the periphery of their business – not as a strategic product – while at the same time procurement huge volumes of textiles. What are the potential driving forces, incentives and opportunities for capacity building among these organizations? Furthermore, it is also important to further address both the opportunities and obstacles involved when textiles are indeed among the strategic core products. In the present report, we have paid some attention to the obstacles created by the rapid fashion cycle. For instance, how can companies that rely on fashion trends develop and use policy instruments that can cope with the specific challenges resulting from this dependence?

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