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**Sustainability transparency in road freight  
distribution in Sweden**

Master's Thesis

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## Abstract

**Background:** An extensive literature review pointed out the limited knowledge on the value of sustainability transparency in road freight distribution. This is researched in the context of non-compliance to current sustainability issues in Sweden. Additionally, the value of sustainability transparency for the procurement activity of a transport buyer was not explored.

**Purpose:** The purpose of this study is to reflect on the value of sustainability transparency in the light of procurement activity of transport buyers. First, the author related sustainability and transparency to road freight distribution. Afterwards, the author used a theoretical model to explain the value of sustainability transparency for transport buyer in two cases. First, during the monitoring of the execution of a distribution service and second to understand sustainability variation on the market. This theoretical model assumes that a higher transparency would lower transaction costs and information asymmetry for a transport buyer.

**Methodology:** A qualitative methodology based on a grounded theory approach was applied in this study. One research question was answered through a literature study. The other two research questions were answered with semi-structured interviews with experts to obtain empirical data.

**Results:** This study suggested that transparency is a signaling activity which could help a transport buyer to differentiate between distribution service providers who “talk the talk” from the ones who “walk the talk” in relation to sustainability. Literature study showed that sustainability transparency creates a value to road freight distribution because it creates a better understanding of the sustainability conditions along outsourced distribution chain. Empirical study showed that most transport buyers do not monitor the sustainability of their distribution service. As a result transaction costs for the transport buyer might be higher than anticipated because of high possibility of opportunistic behavior. Although, a few transport buyers who performed a monitoring activity, argued for the importance of sustainability transparency for a more effective sustainability monitoring. A table of sustainability monitoring techniques is presented as a contribution to the research. Additionally, the empirical study showed a high variation of the sustainability among road freight distribution service providers which creates information asymmetry for the transport buyer. A table of results is presented and shows how sustainability varies on the market. Finally, it was discussed also how sustainability transparency can facilitate buyers to distinguish easier both sustainable and unsustainable distribution service providers.

**Importance:** A lack of sustainability transparency may result in the development of a bad market and drive legitimate businesses out of existence since transport buyers have very limited information when they select distribution service providers. Consequently, it can affect a local society, government's income and environment as a whole.

**Keywords:** distribution, sustainability transparency, transport buyers, Sweden.

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## **List of Abbreviations**

<b>Abbreviation</b>	<b>Explanation</b>
CSR	Corporate Social Responsibility
LSP	Logistics Service Provider
SCM	Supply Chain Management
ISO	International Organization for Standardization
GRI	Global Reporting Initiative
LSR	Logistics Social Responsibility
DC	Distribution Center
RQ	Research Question
NGO	Non-Governmental Organization



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## 1 Introduction

*This chapter introduces the research issue and the problem area. The problem is then narrowed down to one particular issue – the value of sustainability transparency for a transport buyer' (shippers) procurement activity. Thesis chapter concludes with 3 research questions. A delimitation subchapter explains the boundaries of the analysis of this research.*

### 1.1 Research Issue

There has been a big interest in the last two decades in sustainability issues beginning with the statement of Brundtland commission (1987). Different sustainability initiatives were spread out among different industries, including distribution. However the effectiveness was quite different from one initiative to another. "Social responsibility. Sustainability. Fair trade. [...] Nowadays phrases like these trip off our tongues with unthinking ease. We all 'know' what they mean, and what they imply until we actually try to do it [...]" (Lee, 2008). European commission for mobility and transport<sup>1</sup> has put as a separate priority a sustainable transport development as a way to reduce pollution from growing transportation. EU Transport Council in April 2001 developed a definition for sustainable transport (European Commission, 2004) and includes both social and environmental dimensions of sustainability. European Council in Gothenburg 2001<sup>2</sup> stated that it is required to improve the sustainability in transport and decouple transport growth and GDP growth to be able to reduce emissions. Improvement still needs to be done as currently freight transportation currently grows faster than economy according to the report by European Environment Agency in 2009<sup>3</sup>. Swedish Government' policy envisioning fuel-free transport sector by 2030<sup>45</sup> plays an important role in the commitment to the greening of the distribution industry.

There are currently present some social and environment sustainability development trends in supply chain and road freight distribution, which can both improve reputation and lower costs, include activities such as "reducing packaging [...] using more fuel efficient transportation, requiring suppliers to undertake environmental and social programs" (Carter & Rogers, 2008). Some authors (Ciliberti et al., (2008); Carter & Jennings (2002)) researched the characteristics of social and environmental sustainable transportation (road freight distribution) as a part of Logistics Social Responsibility activity and included such areas as environment, ethics, diversity, safety, and philanthropy/community. However, due to recent market development, as transport deregulation, these social and environmental aspects in road freight distribution have gained additional attention.

Transport deregulation is considered a recent key development that shaped the evolution of supply chain management (Mangan, 2012). Their goal was to remove unnecessary barriers to competition,

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<sup>1</sup> [http://ec.europa.eu/transport/themes/sustainable/index\\_en.htm](http://ec.europa.eu/transport/themes/sustainable/index_en.htm). Viewed on May 8, 2015

<sup>2</sup> <http://ec.europa.eu/environment/air/transport/growth.htm>. Viewed on May 12, 2015

<sup>3</sup> <http://www.eea.europa.eu/publications/transport-at-a-crossroads> Viewed on May 2, 2015

<sup>4</sup> <https://sweden.se/nature/environmental-policy/>. Viewed on April 27, 2015

<sup>5</sup> <http://www.regeringen.se/rattsdokument/statens-offentliga-utredningar/2013/12/sou-201384/>. Viewed on August 15, 2015

reduce cost and improve service (Mangan, 2012). However, as presented in several research papers, deregulation has caused some unintended social effects according to Hilal (2008) as worsened working conditions and social conditions (social dumping) for European truck drivers. Deregulation, created a legal vacuum where it was possible for some dishonest companies to use subcontracting as a way to dodge national laws, labor and welfare regulations (Hilal, 2008). Kummer et al. (2014) presented in their longitudinal study in Austria that many road freight transport companies took advantage of lower labor costs in the new member states of EU (Eastern Europe) and consequently almost half of the hauliers' (truck owners) trucks were flagged out to these new states to get competitive advantages as lower driver labor cost. From a social sustainability point of view these lead to fiscal loses, driver's income and unemployment for the country of origin (Kummer et al., 2014). A similar calculation which explored the cost of flagging out Swedish trucks was done by (Sternberg et al., 2015). Another unintended environmental consequence to deregulation was an increased road transport demand and lower incentives for improving fill rates of heavy-good vehicles as a result of reduced transport cost (Sternberg et al., 2015). An efficient way to tackle these unintended consequences is not yet well developed.

These social and environmental sustainability problems affecting road freight transport/distribution service market are expected to be solved or at least diminished by sustainability or Corporate Social Responsibility reporting which were developed as a tool to create a transparent image of the organization (Fernandez-Feijoo et al., 2014, p.53) to a possible customer. However, there have been addressed concerns regarding the quality of sustainability reporting (Hahn & Kühnen, 2013) or about how "auditing/verification really helps to improve accountability and address stakeholder concerns" (Kolk, 2008, p.3). Other authors address concerns regarding the effectiveness of certification systems, as a tool, to label sustainable organizations, due labor intensive controls, mistakes and supplier fatigue (Lee, 2008).

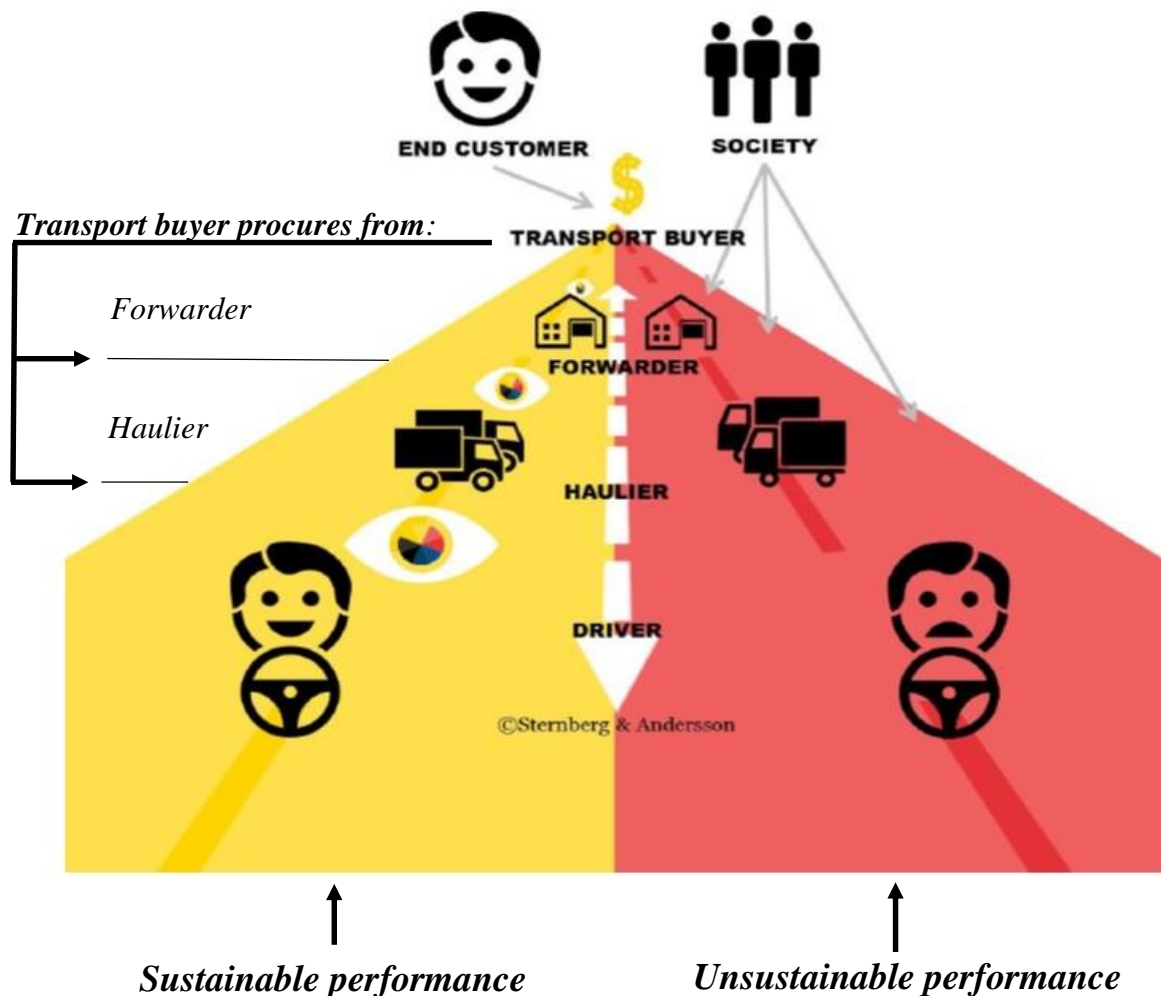
Road freight distribution in Sweden is perceived to be in a problematic state where multiple actors act opportunistically (act in a dishonest manner) thus breaking the rules and ignoring sustainability commitments. Recent media broadcasts pointed to the fact that some actors break the regulations for road transport (SVT, 2015) and thus it shows current raise of civic awareness of the issues.

Due to these research results and media coverage it is of interest for transport buyers (shippers) to understand how to make a well-informed purchasing decision. Customers increasingly demand more information and transparency about the products or services they buy and as accordingly to authors (Carter & Rogers, 2008; Svensson, 2009) customers want to be more aware of where and under what types of working conditions products are manufactured and prevent ethical dilemmas.

## **1.2 Problem area**

This paper wants to contribute to current research by exploring how sustainability transparency influence transport buyer's (shippers) procurement activity. This research area is proposed because previous authors (Hilal, 2008; Kummer et al., 2014) show an increasing sustainability related

problems with road freight distribution as a result of deregulation. Other authors mention the low ability of sustainability reports to help a buyer differentiate between the quality of sustainability performance of different companies (Quaak et al., 2007; Hahn & Kühnen, 2013; Kolk, 2008, p.3). Additionally, authors as Martinsen & Björklund (2012) mention the poor understanding of logistics service provider's sustainability offers or mentions transport buyer's poor monitoring of environmental non-compliance of their transport services (Björklund & Forslund, 2013). Moreover it was suggested by Sternberg et al. (2015) the need of more transparency regarding both sustainable and unsustainable distribution services including forwarders (logistics service providers (LSPs)) and hauliers as there were found multiple cases of unsustainable behavior for distribution service providers operating in Sweden. Therefore, the area of sustainability transparency for a transport buyer has a significant relevance for the academic environment as it is not yet well researched.



**Figure 1.1** Sustainability transparency in outsourced distribution. Source: (Sternberg et al., 2015)

Sustainability performance is perceived to be an asymmetric information (Hahn & Kühnen, 2013, p.14), a term coined by (Akerlof, 1970), thus it is required more transparency for transport buyers to minimize its effect. Information asymmetry (Akerlof, 1970) results from a situation when the seller of a product knows more information about product's quality than the buyer does.

This image fig. 1.1 presented in a report made by Lund University research group (Sternberg et al., 2015) is a guideline for this paper and displays outsourced road freight distribution services which includes transport buyers, forwarders (logistics service providers (LSPs)), hauliers and drivers. A transport buyer has the choice to procure distribution services from a forwarder (LSP) or from a haulier, acting as distribution service providers. In both cases transport buyers can deal with information asymmetry because they might know less about the quality of sustainability performance of distribution services they buy compared to forwarders or hauliers who sell it. Therefore, there is high probability that transport buyers make a poor informed purchase. Left side of the figure represent forwarder (LSP) and hauliers committed to sustainability. Right side of the figure represents forwarder (LSP) and hauliers which are unsustainable. Therefore, it is required to make a clear understanding for the transport buyer regarding the differences and how can they observe non-compliance in this distribution chain.

The difference in the quality of sustainability performance of road freight distribution companies and the degree of transparency of these differences for a transport buyer has not been yet addressed well in the research. Additionally, it was not well researched the effect of the differences of the quality of sustainability on the purchasing decisions made by transport buyers. The importance of transport buyer's perspective was discussed by Isaksson et al. (2011) who argued that transport buyers can influence the development of sustainability in distribution services. Similarly transport buyers' requirements are the base of a deal which providers seek to satisfy (Martinsen & Hüge-Brondin 2014). Additionally, paper will explore how transport buyers monitor the execution of distribution services the purchase because current research (Martinsen & Hüge-Brodin, 2014; Martinsen & Björklund, 2012) shows that mostly the commercial dimensions of transport services are frequently analyzed but not the actual execution of the transport service to be able to monitor how transport buyer's demands are fulfilled and how they handle sustainability non-compliance.

### **1.3 Purpose**

The purpose of this thesis is to explore the value of sustainability transparency in the light of procurement activity of transport buyers. First, a literature study is done on sustainability, transparency and road freight distribution based on the main research articles in the field. Second, an empirical study follows. Empirical study used a theoretical model to explain the effects of sustainability transparency on a transport buyer. There are organized interviews with experts representing forwarders (LSPs) and hauliers who act as distribution service providers, and transport buyers as an empirical material for the model. Author investigates how sustainability

transparency improves transport buyer's procurement decision making and what type of sustainability information they need. A list of both sustainable and unsustainable practices done by distribution service providers (hauliers and forwarder (LSP)) on the market are presented. There are explored how transport buyers perform sustainability monitoring of the execution of their deliveries and how can sustainability transparency facilitate in this process. A list of sustainability monitoring techniques from a revelatory case are delivered. This purpose leads to the following three research questions.

## **1.4 Research question**

### **RQ1: How do sustainability and transparency relate to road freight distribution?**

The aim of the question is to develop an insightful perspective regarding the link between two good known concepts and their benefits for road freight distribution services. This question presents a literature review of previous research papers, websites and documents related to sustainability and transparency in transportation and distribution fields. Author analyzes previous efforts to link these two concepts and will argue their importance for road freight distribution. Author explains the relationship between sustainability and transparency and the effect on a transport buyer from an academic, social and market perspective. Additionally, author presents the problem background which is a good base to present the relationship between these concepts.

### **RQ2: How do transport buyers monitor sustainability of the road freight distribution services?**

The aim of the question is to describe transport buyer's actions in relation to sustainability monitoring. This question seeks to understand how transport buyer monitor the execution of the distribution services. Author investigates what tools and processes are employed by transport buyers to monitor the sustainability aspects of services and whether they can detect opportunistic/cheating behavior as well as the cost of not doing it. In addition, author analyzes how the transaction costs are monitored during service delivery. Author reflects on the role of transparency in the follow-up process.

### **RQ3: How does sustainability vary on road freight distribution market?**

The aim of the question is to present and analyze different types of LSPs and hauliers and how they incorporate sustainability. It is illustrated the gap of sustainability that exists on the market and what are the main differences of sustainability of LSPs and hauliers. Author reflects on the transparency dimension as a way to illustrate why some of the differences are not perceived correctly by the transport buyers and how it creates information asymmetries. Author identifies key characteristics of both sustainable and non-sustainable distribution services and what are the market drivers they rely on. The aim of this question is to present a clear picture of the differences on the road freight distribution market between sustainability committed and non-sustainable service providers.

## **1.5 Delimitations**

This thesis analyzes the case when a shipper acts as a transport buyer. Hauliers, trucking companies and carriers are seen as a synonyms throughout the paper. Forwarders and logistics service providers (LSP) are seen as a synonyms throughout the paper. Distribution service providers are considered to be all these actors: hauliers/trucking companies and forwarders/logistics service providers.

This study will take into consideration the perspectives of logistics service providers, hauliers and transport buyers. Transport buyers are seen as actors who have the option to buy distribution services from a haulier or from a logistics service provider.

This study considers only the social and environmental sustainability aspects in this distribution chain. Economical sustainability is not considered.

## 2 Research Method

*This chapter introduces the research method used for this study. It explains the research approach and why it is relevant for the purpose of this study. It is explained how the literature review was made. For empirical study it is presented a triangle which is able to illustrate better how interviewees represent the outsourced distribution. In this chapter author ponders over the importance of ethics during literature review and data collection. The chapter concludes with a critique on the chosen methods.*

### 2.1 Grounded theory approach

This study is based on grounded theory research approach as author thinks it is appropriate for a qualitative research with the aim of exploring a new topic. This study tries to develop a theory which is grounded in the data. According to Daymon and Holloway (2011, p.130) in a grounded theory approach “theory is generated or modified from the data rather than from pre-existing theoretical frameworks”. Researcher proceeds to research with an open mind. Although, as argued by Tony Bryant (2009), professor at Leeds Metropolitan University<sup>6</sup> by open mind means without certain theories in mind but it doesn't mean an empty head. Also Daymon and Holloway (2011, p.131) supports the view considering that it is not required “to empty mind of any prior knowledge or experience of the topic [...] or that you should not have a general idea of your area of study”.

As a guideline for this research is the work of Kathy Charmaz (2006) as her grounded theory approach which applies a more constructivist approach to theory development and criticize the previous model of grounded theory developed by Glaser and Strauss (1967) which tends to be associated with positivistic assumptions (Cooney, 2010, p.24). Grounded theory is a guide for this study it can be used both as a set of research procedures and the theory that develops from research Daymon and Holloway (2011, p.130).

According to Daymon and Holloway (2011, p.133) “grounded theory is useful in situations where little is known about a particular topic or phenomenon, or where a new approach is needed to garner novel insights in familiar settings.” According to this study's literature review it was not much information regarding the sustainability transparency in road freight distribution, thus it is a reasonable background to proceed with this method.

Due to the fact that grounded theory is an exploratory approach it was in line with the research questions which builds on “how” type of questions. “How” questions are recommended for qualitative research studies as Silverman (2013, p.95) argues. Research questions are developed to be in line with the purpose of this study and guide me through research. First research question is answered through an extensive literature review and the last two questions are answered through semi-structured interviews with experts.

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<sup>6</sup> <https://www.youtube.com/watch?v=fmWKf5L0mfA>. Viewed on May 2, 2015



## **2.2 Literature review**

Literature search is done primary through LUB search database with keywords and Boolean operators AND/ OR. Author uses the following keywords related to transparency, sustainability, distribution and synonyms found from the literature like visibility, information sharing, accountability, transport, reporting, and logistics.

Additional literature searches are done to help author find articles for the frame of reference and literature study. Google and Google Scholar web based search is also done in order to explore this topic in relevant publications and get more information regarding the topic and find answers to research questions. Both author's supervisors helped to find articles which targeted methodological approach and theoretical model used in this research. From more than 723,339 hits with various combinations just 34 articles are included in the tables which illustrates common areas and ideas found in different papers and publications. Among main articles can be found Journal of Business Logistics, International Journal of Physical Distribution & Logistics Management, Journal of Cleaner Production, Journal of Business Ethics, Journal of Transport Geography, Journal of Supply Chain Management, Management Research Review etc.

Relevant articles are analyzed with a critical approach. Author looks for any supportive or different views of the research problem author intends to explore. Author treats each work with respect, found gaps and tried to interpret their ideas and findings in the best way possible through asking such questions "as who did what, when, why and how they did it" (Charmaz, 2006, p.168).

Author keeps reading notes, wrote emerging ideas writing were made along all the literature search and reading to help me guide through a multitude of articles. Main points of interest are codified and acted as a guide in the development of the theoretical framework. Theoretical framework was constructed with the summary of articles ideas, reflection on their work from different perspective and with direct quotes from the articles. During the literature review as Daymon and Holloway (2011, p.133) suggests authors need to "analyze and reflect on the data author explores in the literature, thus allowing (me) to make comparisons and contrasts between concepts between the concepts emerging from the data, the scholarship and the work of other researchers".

Different literature is chosen on its ability to act as "supplementary validation to explain why my findings support of differ from the existing literature" Silverman's (2013, p.341) based on the work of the main Grounded Theorists Strauss and Corbin. Such an approach guides author through the process of answering the first research question and support the findings with data obtained through interviews.

## **2.3 Frame of reference**

Considering the suggestions of Charmaz (2006, p.169) and Silverman's (2013, p.349) author designs a frame of reference which includes the ideas, theories and works of researchers relevant for this paper's findings. The frame of reference needs to support in the best way the findings and

try to explain them. The arguments from data analysis helps the readers to understand the reasoning of this research and “the theoretical framework will help to locate the arguments that I make” (Charmaz, 2006, p.169).

## **2.4 Interviews**

As stated previously, research questions two and three are answered through interviews because of their ability to give rich insights regarding people experience, opinions, attitudes (May, 2011, p.131) and specific knowledge in the field. As an interviewer, author tries to get an extensive understanding of the topic as interview participant has relevant experience to shed light on the research issue (Charmaz, 2006, p.25). Author uses semi-structured interviews with open ended question as it is helpful for both author and interviewee to explore the topic and get new information. The interviewees are free to add any answers and opinions as well as explore the topic in the way they considered necessary, according to the suggestions of May (2011, p.134). Author asked interviewees to elaborate on their answers when there was a need. Author took into consideration the fact that an interview is always contextual and negotiated (Charmaz, 2006, p. 27). Interviewer seeks a better clarification of the topic and interviewees are free to discuss, give direction and share the experience and knowledge in the way they want or are morally prepared.

There were sent multiple request to transport buyers and road freight distribution providers to participate in this study. Just seven actors gave their consent to be part of this study. It is conducted seven semi-structured interviews in English with experts who have extensive knowledge in road freight distribution field. Interviewees represent institutions as Swedish Road Haulage Association, BTF- Interest organization for hauliers who drive for DB Schenker, DHL Freight, Elgiganten, one medium-sized and one large logistics service provider with operations in Sweden and Europe. All interviews had a duration of about 1 hour and were recorded. All but one interview with DHL Freight were face to face interview, interview with DHL Freight was by telephone. Interviews are transcribed and codified with qualitative coding. The annex of the interviewee data synthesis and transcriptions are available on request.

### *Interviewee 1 – BTF (Bilspeditioners Transportörförening)*

Interviewer: Andrei Tarus

Location: Stockholm

Background of the interviewee: Katarina Johansson is part of the management team at Bilspeditioners Transportörförening (interest organization for hauliers which drive for DB Schenker in Sweden). She has extensive experience in transport field and hauliers' business activity. Katarina was actively involved in the campaign "Jag betalar skat i Sverige" which had the goal of raising the awareness of tax avoidance issues among transport companies operating in Sweden.

### *Interviewee 2 – BTF (Bilspeditioners Transportörförening)*

Interviewer: Andrei Tarus

Location: Stockholm

Background of the interviewee: Tomas Jansson is traffic expert at Bilspeditioners Transportörförening (interest organization for hauliers which drive for DB Schenker in Sweden). and part of the transport planning team. Tomas has an extensive experience of hauliers' operations.

*Interviewee 3 - DHL Freight*

Interviewer: Andrei Tarus

Background of the interviewee: Ulf Hammarberg is a part of Business Process Management at Quality & Environmental department at DHL Freight in Sweden. Ulf has an extensive experience working in the transport and logistics industry.

*Interviewee 4 - Swedish Road Haulage Association (Sveriges Åkeriföretag)*

Interviewer: Andrei Tarus

Background of the interviewee: Tina Thorsell was the Head of Communication at Swedish Road Haulage Association. Tina is one of the initiators of "Fair Transport" campaign which promotes sustainability among hauliers operating in Sweden.

*Interviewee 5 - Elgiganten*

Interviewer: Andrei Tarus

Background of the interviewee: Jimmy Olofsson is a Senior Logistics Manager at Elgiganten and has over 35 years' experience in Logistics at various companies around Sweden. He is working in a managerial position as Elgiganten for over 10 years. Jimmy Olofsson is one of the founders of the "Logistics med hjärta" (Logistics with heart) project which improves social sustainability at partner distribution companies.

*Interviewee 6 - Logistics Service Provider 1*

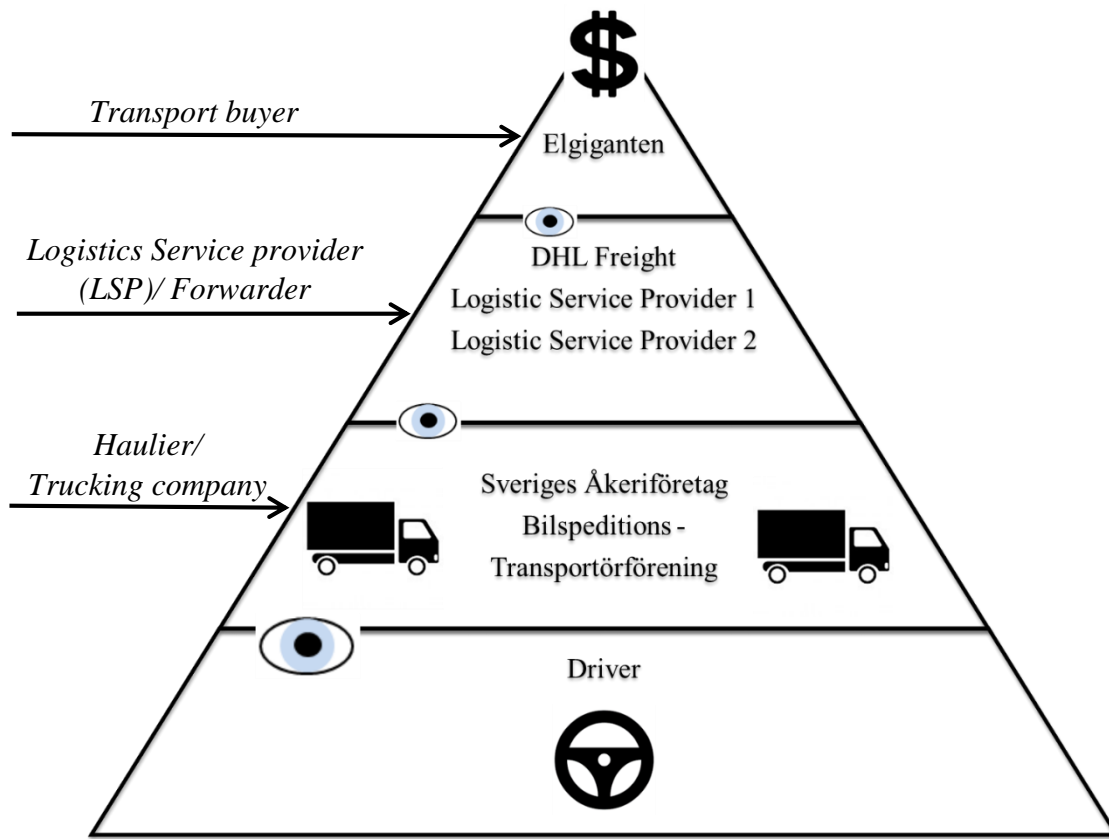
Interviewer: Andrei Tarus

Background of the interviewee: Interviewee (anonymous) is a part of management staff at a medium-sized logistics service provider with operations both in Sweden and Europe. Interviewee has about 10 years of experience in transport and logistics field.

*Interviewee 7 - Logistics Service Provider 2*

Interviewer: Andrei Tarus

Background of the interviewee: Interviewee (anonymous) is a part of management staff at a large logistics service provider with operations both in Sweden and Europe. Interviewee has about 20 years' experience in various logistics companies and works with quality issues at this company.



**Figure 2.1** The affiliation of interviewees. Source: (Sternberg et. al., 2015) (adapted)

Figure 2.1 illustrates which part of the outsourced road freight distribution (triangle) interviewees represent. Those interviewees who requested confidentiality are coded as Logistics Service Provider 1 and Logistics Service Provider 2.

## 2.5 Text analysis

To supplement interviewee's statements with additional data different texts from websites, online documents, conference presentations or conversations by email are used. Study acknowledges the fact that text is constructed with a certain purpose in mind, thus containing an embedded meaning (Charmaz, 2006, p.35). It is reflected on the content of the text it is gathered, its plausibility to be close to reality. After an examination of the relevance of text it is complemented to the data from interviews.

## 2.6 Qualitative coding of the transcribed interviews

All the interviews are transcribed because it was an essential activity for qualitative coding process. Transcribed interviews were codified using ground theory approach from (Charmaz, 2006, p.42-71). Thorough qualitative codes, different segments of data are categorized with short names and action words. These codes represent an analysis or a summary of a piece of data. These codes can

also show a process or shed light on the reasoning of the interviewee. Author applies a focused coding approach (Charmaz, 2006, p.57) which allowed author to do a conceptual analysis of a large amount of data rather than doing line by line coding. Afterwards, author assigns theoretical categories to the codes which formed patterns. Qualitative codes act as a background to guide the study into developing a theory capable to shedding light to sustainability issues in distribution. Qualitative coding according to Charmaz (2006, p.45) “shapes the analytic frame on which author builds my analysis” and it helps to grasp better the data it is collected and “understand participants views and actions from their perspective” Charmaz (2006, p.47). As a next step of qualitative coding it is made a synthesis of the qualitative codes from all the interviews to find similarities or patterns between the ways interviewees construct their views and experiences. The results of this analysis is seen as empirical data for the answers for research questions. The table of qualitative coding is available upon request.

## **2.7 Abduction approach**

Throughout the study it is applied an abduction approach as it is appropriate technique for this type of study. According to Charmaz (2006, p.186) abduction is “a type of reasoning that begins by examining data and after scrutiny of these data, entertains all possible explanations for the observed data, and then forms hypotheses to confirm or disconfirm until the researcher arrives at the most plausible interpretation of the observed data”. Additionally, Kovaks and Spens (2005, p.138) add “taking an abductive approach leads to new insight about existing phenomena by examining these from a new perspective. This way of creating knowledge is rather common in logistics research that borrows theories from other scientific fields”. This study uses social science and economic theories while being primarily focused on logistics studies. Thus it was reasonable to use an abduction approach during data analysis.

## **2.8 Critique for the chosen methods**

Each method approach has its advantages and disadvantages. Data obtained through interviews can be biased because interviewees understand that they are recorded during interview. Thus it is important to follow all the ethics procedures and inform interviewees how their answers will be used in this research. During qualitative coding there can appear some preconceptions, based on author's previous experience which influence the way data is analyzed. Author was aware of such possibility and made an effort to reduce preconceptions to minimum or eliminate them completely. All the interviews are conducted in English which is not a native language for the interviewees thus there could be cases when participants could not express their ideas or experiences accurately. To be able to reduce the possibility of such events, additional questions are given, depending on the context, to clarify the answers. Additionally, any data is situated in a certain context and specific environment, thus it might reflect a certain perspective of how things work. As Charmaz (2006, p.40) stated “data are never entirely raw”. Author is aware of these disadvantages during research and minimized as much as possible all the possible erroneous data and assure internal validity. Author conducted as many interviews as possible with relevant actors according to the

time availability to be able to increase external validity of the research and minimize the disadvantages of the chosen methods.

## **2.9 Ethics in research**

Ethics is an important part of this research. Author is committed to protecting the interests of participants at interviews and afterwards and assure that no harm is made (Silverman 2013, p.162). Considering that social sustainability is a sensible topic, it was used a language which does not offend any of the subjects involved. Author strives to use a neutral language and does not try to subject a group of people to criticism but instead describe the social and environmental aspect of different business models. All interviewees and research supervisors are informed about the purpose of this study and what is the topic of discussion before commencing to the interview as suggested by Silverman (2013, p.162). Interviewees are asked if they want to be anonymous or not in the study. Additionally as Silverman (2013, p.162) advises, a consent form is given to interviewees and which ask them whether they allow author or not to publish any extracts of interviews. Author asked the participants whether they accept to be voice recorded and the purpose of this. The consent form includes voluntary participation, the right to withdraw from the study without repercussions and permission to quotation of interviewee's statements. The consent form can be found in the annex. All the extracts of the interviews were sent to interviewees as a possibility for reviewing before final publishing in the paper.

*This chapter describes the method that guided this study. It includes an explanation of the way each step in the thesis development was made. It also includes literature review, data collection and ethics among others. Additionally, author describes what can be the possible critique associated with this data collection method and what actions are taken to improve the quality of the data in these areas.*

### 3 Frame of reference

*This chapter describes the main concepts used throughout the thesis as well as the latest research done in this field. It contains a historic analysis of how sustainability develops during the years. It describes its current challenges from an organizational perspective and then more detailed from road freight distribution perspective. Author provides a list of sustainability performance indicators already present in the literature. This chapter presents also current issues with certification systems and sustainability reporting. A synthesis of the main research areas is presented to inform about the topics of interest in the field of sustainability on a general organizational level and narrower on road freight distribution level.*

#### 3.1 Sustainability

##### 3.1.1 Sustainability evolution in organizations and supply chains

One of the most important reports used by both researchers and society is the Brundtland Commission's report entitled "Our Common Future" (1987) which outlined the way society and economy need to grow. Brundtland report (1987) defined sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". It is one of the most cited definition of sustainability and is being used ever since in many publications. A more concrete example of how to implement sustainability in practice was John Elkington who coined the term the triple bottom line (1994)<sup>7</sup> which says that a company needs to consider all three dimensions social, environmental and sustainability to be able to act responsible in a society. Since then "sustainability has become an important alternative to neoliberal economics, the dominant socio-economic paradigm" (Lozano & Huisingh, 2011, p.99).

There have been numerous publications regarding sustainability as a concept in public organizations, NGO and companies. Its significance as the core of long term development is indisputable according to modern public policies and researchers. Even if sustainability was seen as an optional approach to business, now society sees it as a "must do" (Lee, 2008) action to be given the right to operate in the market (Lee, 2008, p.20).

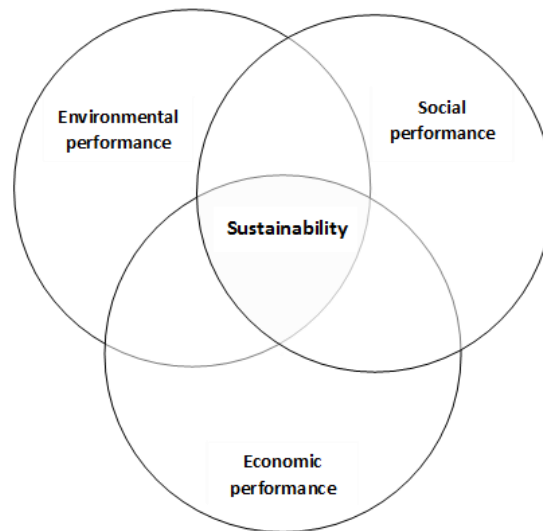
CSR, triple bottom line (social, environment and economic sustainability) or sustainability has at its base the same principles, goals and promotes responsibility across organizations as it is argued several research papers (Fernandez-Feijoo et al., 2012; Hahn & Kühnen, 2013, p.6). Fernandez-Feijoo et al., (2012) explains the link between CSR and triple bottom line through a historic argument "at the beginning of the XXI century, with the development of the Global Reporting Initiative (GRI), CSR reporting evolved towards the "triple bottom line". Triple bottom line also seen as a synonym in this paper to general sustainability includes social, environment and economic sustainability (Carter & Rogers, 2008; Elkington, 1994; Kolk, 2008). Triple bottom line

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<sup>7</sup> <http://www.economist.com/node/14301663>. Viewed on May 12, 2015

illustration is displayed in figure 3.1. Thus, all these concepts can be used interchangeably as they are developed to guide organizations through their decision making.

CSR targets the well-being of the society and environment the organization operates in. This commonly means that organizations will act in the most responsible way and form synergies with the society and environment which give them resources for development. CSR policies make organizations more accountable for their actions and assure that they are committed to create wealth and equity in society, assure good working conditions and minimize impact on the environment. As Van Marrewijk (2003, p.96-97) argues that according to “the broader view on CSR [...] companies are responsible to society as a whole, of which they are an integral part. They operate by public consent (license to operate) in order to “serve constructively the needs of society – to the satisfaction of society”.



**Figure 3.1** Social, environment and economical dimension in sustainability. Source: (Carter & Rogers, 2008, p.365)

Sustainable development is not supposed to be seen just as a tool for continuous improvement of current working practices and know-how. Sustainability development is a core and vital activity to assure the development of the “good market”. Otherwise “disruption or pathology in one field can reverberate throughout an entire system” (Van Marrewijk, 2003, p.98). Society need to be aware of eventual pathologies and demand from organizations to follow social and environment conditions to be fulfilled and not let bad practices develop in “bad” companies which could monopolize the market.

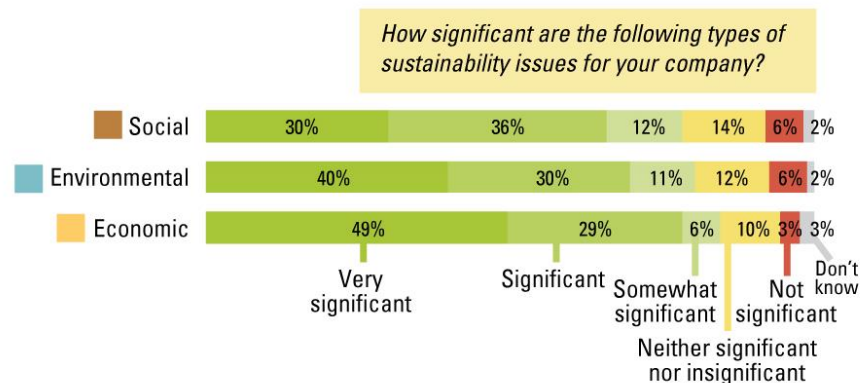
Sustainability is undoubtedly a strategic issue and it needs to be tackled an organization’s network at once. Such a way of acting can have a big effect in any industry and might be better than any isolated efforts to make industry sustainable. Kiron et al. (2015) mention the importance of collaboration in sustainability issues and argue that “business can, and arguably must, tackle some



of the toughest sustainability issues, such as access to stressed or non-renewable resources, avoiding human rights violations in value chains or moderating climate change”.

### 3.1.2 Shedding light to current sustainability issues

At the moment sustainable issues are not fully embraced or tackled in organizations and much work requires to be done in this regard. Even though there are many companies who consider sustainability a significant issue, there are a few who actually implement it. This is confirmed along the years through a study on corporate sustainability in organizations done in 2002 by Ernst & Young within 114 companies from Global 1000 which shows that “only 11% are actually implementing it” (Van Marrewijk, 2003, p.103). This argument was confirmed also in another study in 2013 done by MIT Sloan Management Review and The Boston Consulting Group (Kiron et al., 2013) which states that even though two-thirds of organizations rate social and environment issues as significant to their activity Fig. 3.2, only 40% of them are largely addressing these issues and 10% state that they fully tackle these issues. Due to that there is a “disconnection between thought and action” (Kiron et al., 2013). This makes us realize why there is still much critique to organizations regarding their sustainability efforts and the required effort and unity to keep sustainability vision as a steering part of the organization’s operations.



**Figure 3.2** The perceived significance of sustainability issues. Source: (Kiron et. al., 2013)

There is a difference between companies who “walk the talk” in sustainability, thus fully addressing sustainability issues, versus those who just “talk the talk”, who barely address all the significant sustainability issues (Kiron et al., 2013; Carter & Jennings 2004, p.168). Therefore inactivity among organizations on sustainability issues and merely “talking” about it, are frequent cases according to the authors.

Companies characterized as “walkers” in sustainability issues are most likely to have it as a priority for senior management and make sustainability a priority for purchasing (Carter & Jennings, 2004, p.168), measure progress on sustainability performance and change their business models as a response to sustainability etc. (Tapscott & Ticoll, 2003). New business models are required because there are not so many low-hanging fruits in relation to sustainability according to Savitz and Weber (2006).

Media headlines and investigative journalism articles publish frequently news with headlines linking companies and their supply chains with un-sustainable practices. Frequently, this is one of the reasons why corporations began to act to fill their debt to society and environment. The question is still open but can be a rhetoric one itself “why do companies sometimes wait and react until they are at headline news” (Svensson, 2009, p.266). There are certainly different types of companies on the market which are more or less committed to sustainability. Some of the big leaders such as Walmart or Starbucks (Lee, 2008) on the market are able to steer sustainability development on a larger scale by creating new demands and new type of offerings from suppliers, thereby moving the old business model to a new level, “a fair one”. Additionally, it is the company's leaders who have a significant effect on company's decision making process. Those leaders decide which sustainability issues to tackle and are able to shape organization culture which builds on fairness and supportive attitude (Carter & Jennings, 2004, p. 168).

There are significant institutional barriers and paradigms which hinder the implementation of sustainability in organizations. Sustainability is more than a fancy word someone who is interested in its development. It is required much more effort to change a whole industry than it is used to believe. However, once sustainability is implemented, it assures a balanced development which is able to create value in the society while having the resourced to grow economically. As Lee stated (2008, p.12) “we begin to realize just how big and complicated the challenges are – and just what a potent force for change they represent”. Therefore, sustainable actions have the ability to solve many capitalism problems but it is critically important that they are developed in a way which serve best their stakeholders.

Literature review shows that there is a large consent on the importance of implementing sustainability policy and not just for good public image, authorities or compliance with regulations. “Sustainability is not a matter of good corporate citizenship [...] or business ethics [...], sustainability is “now a fundamental principle of smart management, one that's all too easy to overlook or take for granted in a world where financial bottom line is often treated as the only measure of success” (Savitz & Weber, 2006, p.xiv). Sustainability development is likely to have long-term profitability as reason for implementation, therefore it is not just about good corporate citizenship alone (Tapscot & Ticoll, 2003, p.10). It constitutes a base for a sound development of an organization or an industry to assure long-term growth and contribute to stakeholders' well-being as well as reduced carbon emissions.

Some of the companies began their sustainability efforts by picking low-hanging fruits, which are cheaper to implement and require less effort (Carter & Rogers, 2008, p.370). However, companies can be more reluctant to long-term sustainability projects which can also bring results in the long term (Carter & Rogers, 2008, p.370). Investment cost, and short term profitability still plays a major role in decision making process regarding sustainability. Even if long-term benefits as commercial image or good corporate citizenship are acknowledged, new investment and other higher operations cost still remain a major barrier to the implementation of sustainability.

## **CERTIFICATION SYSTEMS ISSUES**

Some kind of signals from organizations regarding their efforts conform to sustainability are best developed when the society or their direct customers recognize a problem and demand companies to act on it. Therefore, people act when they are better aware of it. Some companies which already in 1990 started to address practically sustainability issues are “Nike and Home Depot which responded to activist campaigns tying them to sweatshops, child labor, or ecological degradation” (Bartley, 2007, p.301). Similar actions on a public level were developed as a response to an increased awareness on tropical deforestation which facilitated the development of certified forests initiatives. One of such organization to give certifications is Forest Stewardship Council which “emerged in 1993 as the first overarching system for certifying forests as “well managed” and labeling forest products accordingly” (Bartley, 2007, p. 301).

This attention to sustainability initiatives gives life to a wide range of certification systems and sustainability reports. Some of the reasons to develop a certification system are “their potential to protect firms reputations (i.e., to differentiate the good and bad apples) (Bartley 2007, p.307)” or their ability “to solve problems in the market” (Bartley, 2007, p.297). Thus to a private or public individual this is perceived as a tool to differentiate fair and unfair companies.

Beside the positive effects, certification systems of products and suppliers have some downsides as they require labor intensive work, controls, are prone to mistakes, raise cost, or even create “supplier fatigue” (Lee, 2008, p.19). Certification schemes can also create sanctions or restrictions in the market (Mol, 2013) or are done to “limit competition or gain competitive advantages” (Bartley, 2007). Even if certification is a part of communities and stakeholders demands to make corporations more transparent and visible (Carter & Rogers, 2008) certifications system alone might not be a solution for certain problems.

## **SUSTAINABILITY REPORTING ISSUES**

Sustainability reporting was seen as a framework to guide companies through sustainability process. Sustainability reporting is perceived to be a tool to achieve sustainability or at least to show a commitment to sustainability. There are various synonyms for sustainability reporting like “‘corporate social responsibility’ or ‘triple bottom line’ (people, planet, profit) reporting” (Kolk 2008, p.2). From numerous sustainability reporting standards, Global Reporting Initiative is considered the most prominent and a main guideline for sustainability reporting (KPMG, 2011; Fernandez-Feijoo et al., 2012). A study done by Lozano and Huisingh (2011, p.106) argues that sustainability reporting contributes to improved sustainability or as argued by (Borglund et al., 2010) sustainability reporting improve company’s attitude and knowledge about sustainability. Sustainability reporting or disclosure mainly aim to increase the transparency of companies’ daily operations, motivate employees and ensure legitimacy. Sustainability reports are created as well as a tool to inform the consumer regarding the differences on the market thereby reducing information asymmetry (Hahn & Kühnen, 2013). A link to reducing information asymmetry through provision of sustainability reports were presented also by Dhaliwal et al. (2011, p.62).

On the contrary it was argued by a study (Quaak et al., 2007) done in Holland that sustainability reporting does not produce the expected results. It is worth mentioning that Holland supports companies at governmental level to deliver sustainability reports. Quaak et al. (2007) found out that sustainability reporting does not produce the expected result because “the quality of sustainability reports differ, the information varies and the target group is not enthusiastic” (p.306). However, the quality of sustainability report is a fundamental element which determines the requirement of its existence. Additionally, a study done by Kolk (2008) also shows that there are differences on how sustainability reports are created, who is final responsible and which type of complaint mechanism is implemented.

There are not so many articles which explains the quality of a sustainability report itself and how each of the sections are treated by stakeholders, but merely how the idea of sustainability reports affect company's goal and employees to be sustainable. This concern was addressed as well by Hahn and Kühnen (2013, p.17) which states that “quality of sustainability reporting has been largely neglected” in the literature as it might be difficult to evaluate. Additionally, Hahn and Kühnen (2013, p.16) mention the problem that sustainability reporting acts as tool to improve company's reputation and thus cannot be associated with low performance activities. In other words sustainability reports are not likely to include unsustainable practices. Hahn & Kühnen (2013, p.16) argues that it is not common the inclusion of the negative aspects or non-performance in sustainability reports, though according to GRI standard it is a must. Voluntary reports as sustainability reporting does not require external assessment by an independent institution and this might be one of the reasons why reports can contain subjective information.

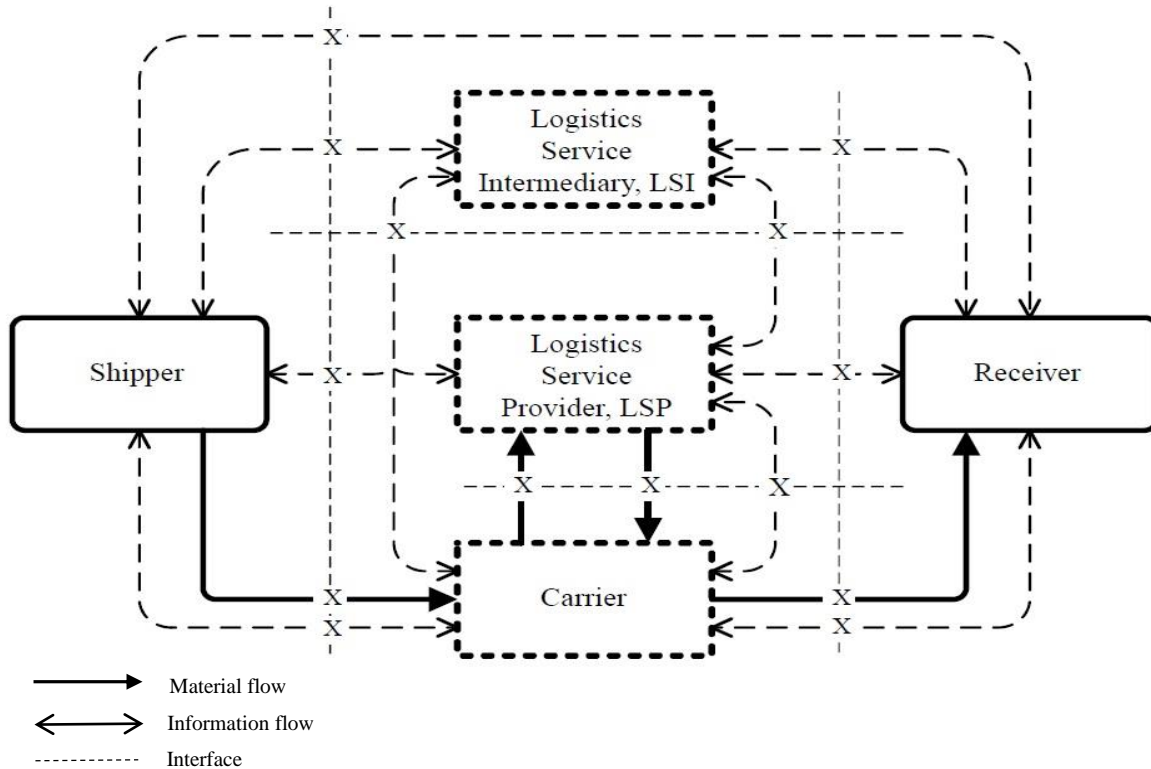
Additionally, the Quaak et al. (2007) argues that “Sustainability Reporting does not improve CSR, and therefore, Sustainability Reporting is not relevant for demonstrating transparency of CSR (sustainability)” (Quaak et al., 2007, p.305). Other studies address the same concerns and question if sustainability reporting and monitoring contributes to the satisfaction of stakeholders demands for information and transparency improvement (Kolk, 2008, p.3). An opaque organization which does not share the information with the external world or even with its own employees about all its operations is not able to deliver credibility. Credibility is not ensured because the main purpose of reporting is not fulfilled. Credibility can be obtained through openness about working practices of the organization.

## **3.2 Sustainability in road freight distribution**

### **3.2.1 How does road freight distribution work?**

This paper considers both the situation in which distribution activities are purchased from Logistics Service Provider (LSP) who can outsource further to hauliers or when distribution services are purchased directly from a haulier. In both cases, the cargo originates at the shipper's location (transport buyer), might go or not through terminals or distribution centers (DC) and is further distributed to the receiver. Stefansson (2006) proposes a model fig. 3.3 which describes how an

outsourced road freight distribution is designed. This model includes LSPs, carrier (hauliers) and logistics service intermediaries (LSI) which are not considered in this research. LSPs provides diverse services to a transport buyer in addition to transportation services according to (Stefansson, 2006, p.86) “these are cross-docking at terminals or consolidation services at DCs, storage or



**Figure 3.3** Distribution network set-up. Source: Stefansson (2006)

integrated-logistics value-added services at warehouses and DCs [...]. The scope of the services, provided by the third-party service providers is wide and can include transport but does not need to be carried out in an own-account fleet.” Therefore, transportation can be outsourced to another haulier which have their own trucks. Hauliers (carriers), according to (Stefansson, 2006, p.86), carry out haulage of products from one point to another and are most of the time asset-based operators. Additionally, hauliers provide a number of basic services like: inbound and outbound transportation, door-to-door transportation service and contract delivery (Stefansson, 2006).

### 3.2.2 Sustainability as a public policy

Sustainability concept in transportation is a rather hot topic on European Union<sup>8</sup>, Swedish Government<sup>9</sup> and local corporate level. Distribution of products by transporting them on road is a field which is highly important for economic growth. Due to the fact that freight transportation grows faster than economy<sup>10</sup> it is critical to assure and facilitate the development of sustainable

<sup>8</sup>[http://ec.europa.eu/transport/themes/sustainable/index\\_en.htm](http://ec.europa.eu/transport/themes/sustainable/index_en.htm) Viewed on April 19, 2015

<sup>9</sup><http://www.regeringen.se/contentassets/241b29f58e444c8f9940f96d75bdbfbc/engelsk-sammanfattning-av-skr.-200102172> Viewed on April 19, 2015

<sup>10</sup> <http://www.eea.europa.eu/publications/transport-at-a-crossroads> Viewed on April 20, 2015

transports. Distribution of products is essential for our daily life because it affects the ones operating it, society and environment as a whole.

EU Transport Council in April 2001 developed a definition according to which a sustainable transport system has the following characteristics (European Commission, 2004):

- Allows the basic access and development needs of individuals, companies and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations;
- Is affordable, operates fairly and efficiently, offers a choice of transport mode and supports a competitive economy, as well as balanced regional development;
- Limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimizing the impact on the use of land and the generation of noise.

This definition describes quite well the type sustainability development transport actors require. Previous definition made by the Brundtland Commission (World Commission, 1987) could not satisfy the needs of the distribution/ transport sectors according to Weijers et al. (2012) who stated that “as most trucks still employ an implosion engine, it could be stated that every liter of gasoline used for transportation today will not be available for future generations”.

### **3.2.3 Sustainability practices**

Road freight distribution is a part of the logistics activities which are part of strategic planning for many companies and there are significant costs associated to its operation. However it is a strategic part of transport buyer's final customer satisfaction. “Since the total logistics costs account for over 50% of the industrial added value (McCann, 1996 in Ciliberti et al., 2008, p.89) investigating the impact of CSR on logistics management is a relevant issue” (Ciliberti et al., 2008, p.89). Some authors (Ciliberti et al. 2008; Carter and Jennings; 2002) explore social and environmental sustainable transport services as a part of logistics social responsibility research area.

Literature suggests different green demands or performance metrics for transport providers and includes: the amount of return loads, choice of transportation mode, and load optimizing type of fuel, use of IT, cost efficient driving, load factors, maintenance of modes, type of mode, age, and engine type refrigerants and tires used (Martinsen & Björklund, 2012; Björklund and Forslund, 2013). Additionally, Arvidsson et al. (2013, p.111) argues that environment performance is an added-value service for some shippers. Therefore LSPs try to develop more environment friendly services. This is confirmed also by (Martinsen & Björklund, 2012, p.565) which state “that shippers' demands for environmentally responsible transportations are rising”.

Martisen and Hüge-Brondin (2014) adds that LSPs “play a vital role as corporate actors in the greening of logistics since they often manage the resources directly connected to the negative

externalities from logistics systems” (p.115). Although, Martisen and Huge-Brondin (2014) argue additionally that “at the same time, they are providers to their customers, whose requirements to a large extent frame LSPs’ business” (p.115). Therefore, both the providers and the customers/transport buyers bear the responsibility of developing sustainable distribution services

Pålsson and Kovács (2014) discuss that LSPs are expected to have high interest in lowering their transport emissions since it is big part of their activity. Pålsson and Kovács (2014, p.299) found, in their survey of Swedish companies from different industries, that even though emissions reduction is not primarily a short-term economic benefit it is highly important for long-term competitive advantage and improved corporate image.

One of the few papers which analyze hauliers’ perspective in the distribution chain is done by Arvidsson et al. (2013). Authors state that hauliers are the ones who physically drive the goods and are directly responsible about how do they operate this. Arvidsson et al. (2013, p.125) concludes that “road hauliers could become the main actors in making transport efficiency and sustainability a trademark, positioning environmentally better transport as a strategic issue”. Arvidsson et al. (2013) have also discussed some of environment related initiatives taken by hauliers in Sweden and how did they adopt them.

### **3.2.4 Sustainability performance indicators**

Ciliberti et al. (2008) study includes a taxonomy of Logistics Social Responsibility (LSR) practices in transportation. Although it included a limited list of practices. There can be mentioned a couple of performance indicators from Ciliberti et al. (2008) which miss in Carter and Jennings (2002, p.161) list of sustainability practices such as: usage of more bio fuels, improvement of loading capacity, purchase of electric vehicles, reduction of kilometers driven, new driving style (eco-driving). Carter and Jennings (2002) offer a broader overview of LSR practices in transportation and this is why it was chosen as a guideline to for this study.

Carter and Jennings (2002) identified social and environment areas in transportation which are included in Logistics Social Responsibility (LSR). Their framework united previous CSR concepts which are not usually referred to logistics management. This list includes the main social and environment sustainability areas present in road freight transportation table 3.1 (Carter and Jennings, 2002, p.155).

**Table 3.1** Sustainability performance indicators. Source: (Carter and Jennings, 2002, p.155)

<b>Areas</b>	<b>Elements</b>
Environment	<ul style="list-style-type: none"> <li>• Transportation of H/M: Complying with regulations including labeling and placarding</li> <li>• Clean vehicles/Fuel efficiency: Ensuring that trucks are maintained so that they do not leak fluids, e.g., oil, etc.</li> <li>• Modal choice (Rail versus truck in terms of impact on environment)</li> <li>• Reverse logistics</li> <li>• Reconditioning and reuse of pallets</li> </ul>
Ethics Avoiding the following...	<ul style="list-style-type: none"> <li>• Bribes and kickbacks associated with carder selection</li> <li>• Mafia involvement</li> <li>• Bribes offered to port officials to expedite shipments</li> </ul>
Diversity	<ul style="list-style-type: none"> <li>• Use of minority carriers</li> <li>• Hiring and promoting equally within a traditionally white-male dominated industry</li> <li>• Quality of Life for Drivers</li> <li>• Operating schedules that allow drivers adequate time at home</li> <li>• Paying adequate wages</li> </ul>
Safety	<ul style="list-style-type: none"> <li>• Abiding by hours of service requirements</li> <li>• Ensuring vehicles are adequately maintained</li> <li>• Contamination/Spoilage of food, including making sure that trailers and tankers are properly cleaned/purged</li> <li>• Proper securement of load (not dumping product on roads)</li> <li>• Ensuring the safety of for-hire carriers: accident records, operating ratios, insurance, and training. Including safety as a selection criteria of for-hire carders.</li> <li>• Driver certification and training</li> <li>• Drug and alcohol testing</li> <li>• Performing internal safety audits</li> <li>• Overweight vehicles</li> </ul>
Philanthropy/Community	<ul style="list-style-type: none"> <li>• Hours of operation/ Minimizing traffic/Avoiding neighborhoods. Noise pollution</li> <li>• Stopping to help stranded motorists (“White Knights”)</li> <li>• Education: Bringing trucks to schools</li> <li>• Professional affiliations such as CLM</li> </ul>



### 3.2.5 Current sustainability issues

Literature review pointed out that there exists information related problems with making a transport buyer to understand the quality of sustainability performance of the firm. Also literature review showed that not all the transport buyers make sustainability of the transportation/distribution services a priority in the purchasing decision making. It is also common that sustainability is tackled just by a low percentage of transport buyers on the market.

Considering the cases when some LSPs try to act sustainable on the market, transport buyers have a difficulty to comprehend what exactly LSPs try to offer or how their offer differentiate on the market. This problem was addressed by Martinsen and Björklund (2012, p.577) who found out that there is a large gap “between the stated offers of the LSPs and the shippers’ perception of the offers indicates that even if the LSPs are aware of their over-achievements, the shippers are not.” Also authors argue that “shippers are more successful in communicating their green demands than the LSPs are in communicating their green offers” (p.575). There is a problem of communication which creates barriers for the development of a more sustainable distribution service.

Considering Weijers et al. (2012, p.159) research table 3.2 sustainability demand is not at the moment the first priority for transport buyers. Moreover, Martinsen and Høge-Brodin (2014) found out that such sustainability initiatives as certifications for LSPs are not rewarded by transport buyers. Such an attitude is similar to the selection criteria found in table 3.2.

**Table 3.2** Importance of sustainability for transport buyers. Source: Weijers et al. (2012)

<b>Selection criteria priority</b>	<b>Selection criteria Weight price =100</b>
Price	100
Reliability	94
Service	72
Sustainability	45
Innovation	33

Sustainability in logistics and transportation still has obtained low interest by companies who are even focused on developing sustainability practices on a corporate level. A study done on Italian companies oriented on sustainability (Ciliberti et al., 2008, p.97) shows that “out of all the logistics social responsibility areas, sustainable transportation practices are tackled by only 20% of the companies”. Ciliberti et al. (2008, p.97) suggests that shippers mostly monitor some limited environment aspects of transports, though the author does not describe what technique do shippers employ to monitor environment aspects and author does not find any intensive social responsibility monitoring.

Collaboration in sustainability is rather new and hot topic on an organizational level (Kiron et al., 2015). Though Weijers et al. (2012) argues that this is not the case of LSPs and their competitors. “Logistic Service Providers also seem to be reluctant to turn to fellow Logistic Service Providers

for cooperation” (p.163). It is thus interesting to find out the reasons which could stand behind this unwillingness.

Transport buyers are seen also as actors who are supposed to be interested in tackling proactively sustainability by seeking to purchase sustainable distribution services. Carter and Jennings (2004) explored the ability of purchasers to buy social responsible products and services. Carter and Jennings (2004), van Marrewijk (2003) emphasize the difference between “walkers” and “talkers” of sustainability, a quality which can be applied to transport buyers and distribution service providers.

### 3.2.6 Synthesis of key research areas from literature review

**Table 3.3** Common research areas in organizational sustainability. Source: Author (2015)

Sustainability talkers versus walkers	<i>van Marrewijk, 2003</i> <i>Carter &amp; Jennings, 2004</i> <i>Kiron et al., 2013</i>
Opportunistic behavior elimination in sustainability issues	<i>Carter &amp; Rogers, 2008</i>
Critique to sustainability reporting	<i>Quaak et al., 2007</i> <i>Kolk, 2008</i> <i>Hahn &amp; Kühnen, 2013</i>
Critique to certification systems	<i>Lee, 2008</i> <i>Bartley, 2007</i> <i>Mol, 2013</i>
New business models adapted to sustainability	<i>Tapscott &amp; Ticoll, 2003</i> <i>Lee, 2008</i>

**Table 3.4** Common research areas in sustainable road freight distribution. Source: Author (2015)

New customer's demands for sustainable distribution services	<i>Björklund and Forslund, 2013</i> <i>Martinsen &amp; Björklund, 2012</i> <i>Björklund, 2005</i> <i>Arvidsson et al., 2013</i>
Social and Environmental sustainability performance indicators for distribution services	<i>Ciliberti et al., 2008</i> <i>Björklund and Forslund, 2013</i> <i>Martinsen &amp; Björklund, 2012</i> <i>Carter &amp; Jennings, 2002</i> <i>Carter &amp; Rogers, 2008</i> <i>Martinsen &amp; Hüge-Brodin, 2014</i> <i>Weijers et al, 2012</i>

<b>Table 3.4</b> Continuation	
Social and Environmental sustainability performance indicators for distribution services	<i>Arvidsson et al., 2013</i>
Limited measures for sustainability non-compliance in contracts	<i>Björklund and Forslund, 2013</i> <i>Björklund, 2005</i>

Table 3.3 presents an overview of the main research areas found in the literature regarding current sustainability developments and issues in organizations and supply chains. Table 3.4 presents an overview of the main research areas found in the literature regarding current sustainability development and issues in road freight distribution.

*This chapter discusses recent sustainability developments as well as issues from an organizational and then narrower road freight distribution perspective. Author presented a list of sustainability practices in road freight distribution. This chapter concludes with a synthesis of the key research areas in sustainability on a general organizational level as well as narrower on road freight distribution level.*

## 4 Theoretical model

*This chapter contains the model proposed by the author for the analysis of the data obtained through interviews. It contains a description of three theories used in the model which are transparency, transaction costs and the theory used in “the market for lemons” article. Author designs 2 models with two theories for each. The chapter includes as well an argumentation for the choice of these theories.*

### 4.1 Transparency

Transparency as a standalone concept does not offer an exhaustive explanation of what does it means in a business relationship. Therefore, it was required a better explanation what does transparency means in supply chain context. Lamming et al. (2001) applies transparency concept as an element of a supply relationship. Authors (Lamming et al., 2001) propose a framework which describes different forms or characteristics of transparency which exists in a market context or business relationship. Each of these characteristics describe certain types of information sharing between partners.

Previous research made by Lamming et al. (2001) lead authors to explore transparency characteristics in a communication or information sharing process. Lamming et al. (2001) stated “transparency should go beyond simply better “communication”. Additionally, authors pointed out that information sharing in a relationship “must be reciprocal, selective, and justified — but not necessarily symmetrical” (p.6).

Table 4.1 includes different states of supply relationships between two organizations and it is described how information varies. First is “opaque” status - where not information is shared at all. Second is translucent – where just partial data is shared. Third is transparency - where information is freely shared and both parties know everything about what it is required for a specific stage of cooperation. Thus it is not required to share all information at once thus producing noise but not transparency. Such a framework will allow both parties to share information with a less risk for their business and increase desirability to implement transparency.

**Table 4.1** Transparency. Source: (Lamming et al., 2001)

	Opaque	Translucent	Transparent
<b>Business case (information shared between two organizations)</b>	For any of a variety of reasons, no information is shared between the parties, even operational day-to-day information is obscured	Outline information only is shared- interface conditions or partial data. This can be similar to “black box” collaborative design. If used tactically, it may be akin to cheating.	Information is shared on a selective and justified basis. Development of information leads to shared knowledge and collaborative abilities.

From a market perspective table 4.2 transparency is seen as a way to develop a perfect market. Thus information about all suppliers or about how a product is produced and service delivered is freely shared. Therefore customers will not be exposed to dishonest behavior because of the lack of information. In an opaque market, buyer will have almost no information about the product beside a “shelf” price and in a translucent market providers will hide some of the information to create an artificial differentiation on the market.

**Table 4.2** Transparency in a market relationship. Source: (Lamming, 2001)

	<b>Opaque</b>	<b>Translucent</b>	<b>Transparent</b>
<b>Market context (supply relationship)</b>	Bazaar-arm's length trading; possibly, Internet trading	Imperfect market; competitive advantage gained by secrecy and guile	Theoretically perfect market; commoditization

The purpose of transparency, as authors (2001) suggest, is to transmit the knowledge in a supply chain relationship. However, knowledge is dynamic but not static thing and is quite complex to measure how well recipient learned it. It is present a learning curve in how knowledge is gathered. Additionally, authors argue (2001, p.8) “rather than being simply “opaque”, “translucent,” or “transparent” in a pure form, supply relationships are likely to contain elements of all three characteristics, in a variety of locations at different times (or stages in a project).

## 4.2 Transaction cost

Organizations are mostly focused on a continuous quest to save money and increase income. Although this trend does not consider transaction costs between companies which can lead to the procurement of a service/ product from a less transparent organization which had apparently a better price proposal on initial stage. Transaction costs occurs, according to Williamson (1981, p.552), when a “good or service is transferred across a technologically separable interface”. Transaction costs include all other additional managerial and fixed costs that might appear during the service provision or transfer of good.

Transaction cost theory offers an interesting view to how much organizations truly saves when they purchase e.g a service. Different transactions include different partners and different levels of transparency. “Some transactions are simply and easy to mediate. Others are difficult and require a good deal more attention.” (Williamson 1981, p.553). Williamson (1981) assumes in this theory that “at least some agents are given to opportunism”. This implies that it is a human quality which causes that some of the trading partners will use the opportunity to cheat or be dishonest, thus contributing to an increased transaction cost.

However, more extensive contracts which might cover all these “opportunistic” issues are not always able to solve all the problems and additionally impose higher costs. Williamson (1981, p.553) confirms “it is widely recognized [...] that complex contracts are costly to write and enforce. Contracts are exposed to threats because there are some economic actors “dishonest (or more generally disguise attributes or preferences, distort data, obfuscate issues and otherwise confuse transactions) and it is very costly to distinguish opportunistic from non-opportunistic types” (Williamson, 1981, p.554). Additionally, author adds that “economic man engages in simple self-interest seeking, opportunism makes provision for self-interest seeking with guile.” Thus, there are situations when not all the promises are being kept. Therefore, transaction costs could be higher than anticipated.

Transaction costs are different in situations where there is a large fixed investment for a transaction. In case low fixed investments for a transaction, it is safer for users and for suppliers to switch to another partner. Thus, a relationship can be observed between how important are transportation services for transport buyers and how much time it is spent on transport monitoring. Furthermore, if customers spend less time on transport transactions they are probably more exposed to opportunistic behavior.

### **4.3 The market for “Lemons”. Quality uncertainty and the market mechanism.**

It is quite common that sellers know more about the quality of a product they sell than the buyers who buy it. Quality uncertainty suggest that the buyer does not possess the information of the differences of qualities on the market or it is difficult for him to do so. Thus a buyer cannot understand which products are bad and which are good or honest. Akerlof (1970) defines the difference between the estimate of the event that a certain product is bad and the original estimate -“information asymmetry”.

Information asymmetry theory is exemplified by Akerlof (1970) through used cars market case. When customers buy a used car, they are happy that it is much cheaper than a new one, although it is difficult for them to say if the used car is still good or already too bad. Buyers are not well aware of the quality of the car they bought. They will only understand better the true quality after a period of owning the car. Due to information asymmetry, both the bad and the good cars will be traded at the same price by some sellers.

It is common in the business world that buyers have problems in understanding the differences of the qualities of products or might not even be aware at all of these differences. The seller is bound to the rationality of obtaining higher profit and voluntary or involuntary sellers hide some of the information about the product which is sold. However, on a market there can be found both good and bad products thus the “purchaser’s problem, of course, is to identify quality” (Akerlof, 1970, p.495).

A consequence to bad or dishonest business operating on the market is that the good market has a lower revenue and profit. This competitive advantage created by bad market creates barriers for development for the ones who are honest. Furthermore, these kind of sellers who offer inferior goods and price them on the same level as the good ones, push out honest people/business out of the market. It is expensive to be honest in such circumstances, when people compare the products just by price and are not able to see the differences between qualities.

Information asymmetry causes the development of a bad market is similar to pathology which advance in the whole system and is destructive for it. Therefore the cost of dishonesty, lies not only in the amount by which the purchaser is cheated; the cost also includes the loss incurred from driving legitimate business out of existence (Akerlof, 1970, p.495).

#### **4.4 Argumentation for the choice of theories**

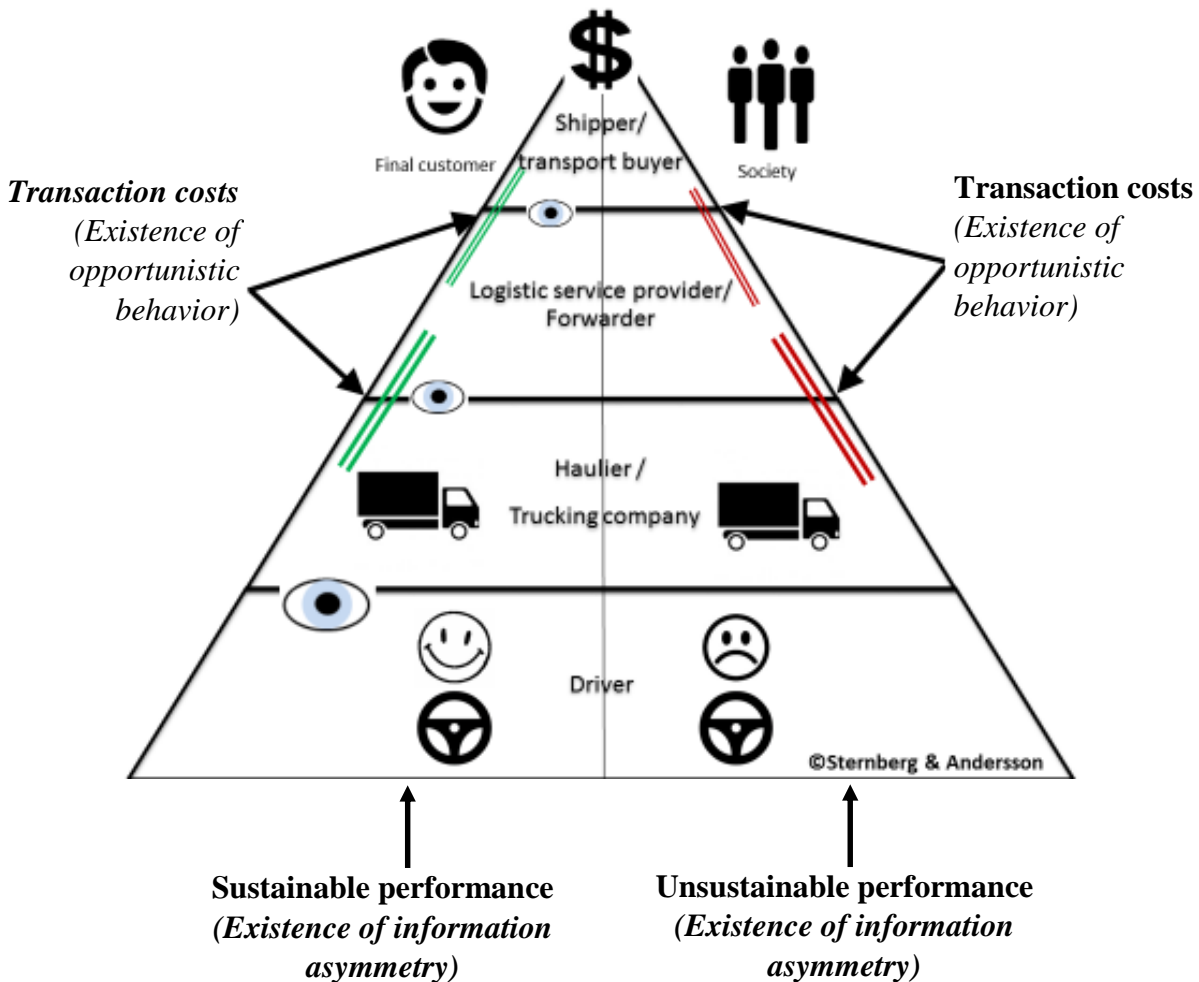
These theories were chosen because they are highly inter-related and greatly benefit each other and ultimately could foster sustainability development. Author presents bellow some evidence from the literature review which shows this linkage and serves as a background for the model.

With regard to sustainability performance authors indicated that unethical behavior, opaque environment, or opportunistic behavior contribute to an increased transaction costs. Transaction costs concept were used by some other authors who explored as sustainability in supply chains Carter and Rogers (2008) and argued that “because some organizations act unethically or even illegally, this creates transaction costs in terms of investment monitoring for shareholders and costly government regulation and reporting requirements” (p.375). Carter and Rogers (2008) perceived as an opportunistic behavior - non-compliance to social sustainability. Additionally, Tapscot and Ticol (2003, p.xiv) argued that “Transparency is critical to business partnerships-lowering transaction costs between firms”. When organizations have a better view of what are they buying they can better understand what are the associated transaction costs with this purchase. Another argument is presented by Robertson (1996 in Lamming et al., 2001) who suggests that a lack of transparency contributes to higher transaction costs by creating barriers to efficiency in such areas as transportation and distribution.

Furthermore, sustainability can be associated with information asymmetry according to Hahn and Kühnen (2013, p.14) who argue that “The sustainability performance of a company can be regarded as such asymmetric information since it is difficult, for example, for parties outside the company to gain credible information on these aspects”. In addition, it is argued by (Mol, 2013, p.1) that “transparency is believed to empower the weak and hold the more powerful accountable through reducing information asymmetries, enabling more equal participation around political controversies and enhancing accountability”.

Figure 4.1 illustrates where transaction costs take place. It is showed that the purchase of a distribution service from a Logistics Service Provider or from a haulier is considered a transaction and therefore it implies that there are associated transaction costs. Transaction costs vary among

different partners because of the existence of different quality of sustainability performance. Furthermore, sustainability information is considered asymmetric as Hahn and Kühnen (2013, p.14) discuss and thus the sellers will know more about the distribution service than the transport buyers who buy it. Author illustrated on the figure 4.1 that both sustainable and unsustainable performance of distribution service companies are perceived to be asymmetric by a transport buyer.



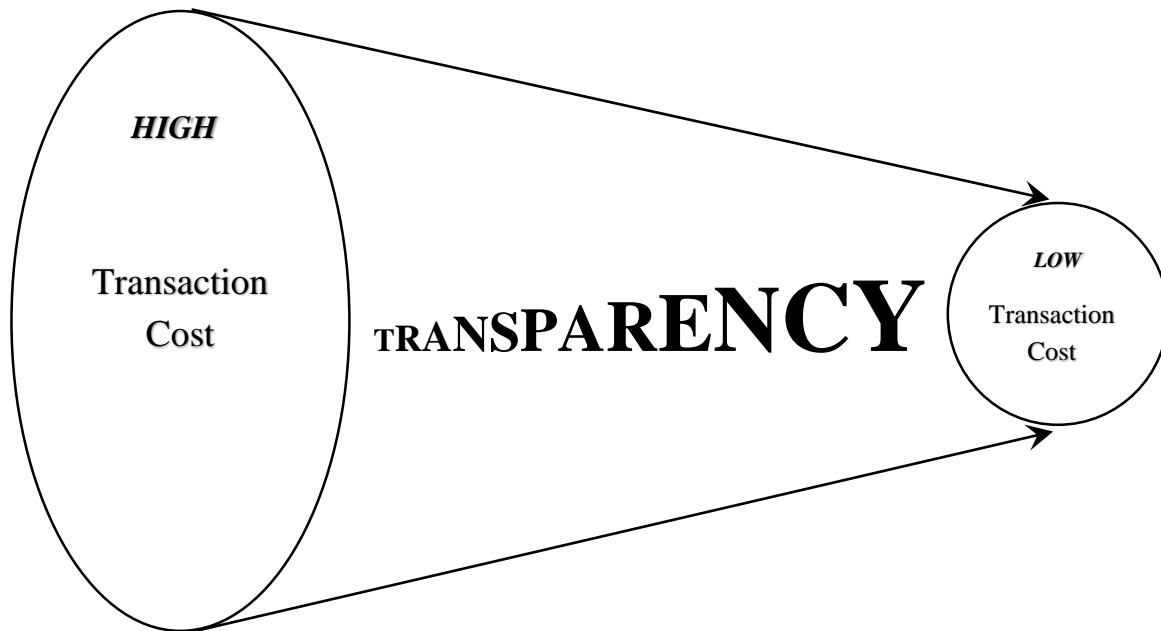
**Figure 4.1** Transaction costs and information asymmetry in outsourced distribution. Source: (Sternberg et al., 2015)

#### 4.5 Presentation of the models

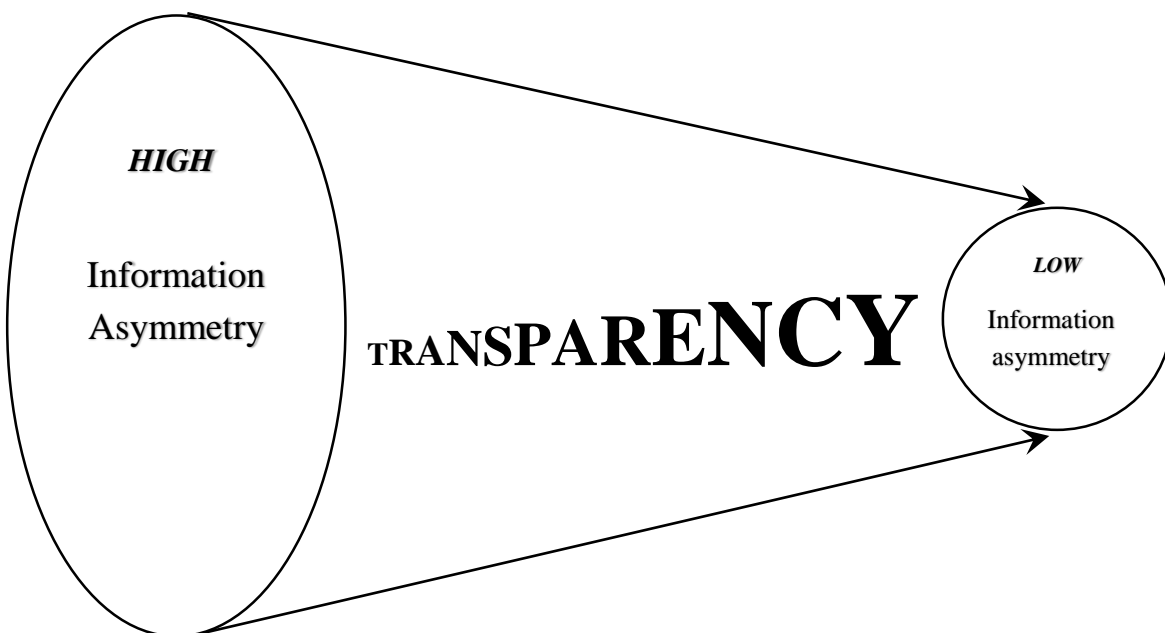
Author proposes the next model composed of figure 4.2 and figure 4.3 which guides the study through the analysis and presents the empirical findings from this research. This model is created to analyze social and environmental sustainability.



Figure 4.2 illustrates how the increase of transparency decreases transaction costs of a transport buyer during the execution of the distribution service, considered a transaction in this paper. A



**Figure 4.2** Transparency effect on transaction cost. Source: (Author, 2015)



**Figure 4.3** Transparency effect on information asymmetry. Source: (Author, 2015)

better transparency can help a transport buyer during the monitoring of the transactions to be able to identify easier the quality of execution of a distribution service. Through an improved monitoring transport buyers are expected to find and eliminate eventual opportunistic behavior, especially of qualitative/ non-monetary aspects, performed by a distribution service provider and

reduce the cost. Therefore, it is present an inverse relationship between transparency and transaction costs. Figure 4.3 illustrates how the increase of transparency in a relationship between buyer and seller contributes to a reduction of information asymmetry for the transport buyer. Lower information asymmetry are supposed to benefit transport buyers as they might possess more accurate information about the quality of the product they intend to buy or in this study the quality of sustainability performance of their distribution service providers. Therefore, it is present an inverse relationship between transparency and information asymmetry.

*This chapter explains how these two models are created and what do they mean for this study. Each theory used in this model is described separately. Chapter concludes with the explanation of the choice of these theories and their relevance for this thesis. Author proposes and draws a table to visualize and interpret data during analysis.*

## 5 Literature study

*This chapter includes the answer for the first research question which is done through a literature study on sustainability transparency and road freight distribution. It is explained the importance of sustainability transparency and how it is related to road freight distribution. Author takes as a model previous research which describes sustainability transparency in a supply chain and applies it to an outsourced distribution chain. This chapter concludes with a reflection on the barriers to development of sustainability transparency in road freight distribution. A synthesis of the main research areas is presented to inform about the main topics of interest in the field of sustainability transparency on an organizational and narrower on road freight distribution level.*

### 5.1 RQ1: How do sustainability and transparency relate to road freight distribution?

#### 5.1.1 Initial development of sustainability transparency in organizations

Transparency of ethics or of sustainability is a rather new topic and begins to be discussed in supply chain literature. “On a scientific scale, transparency is widely implemented in corporate ethics and corporate social responsibility issues, yet it is still a term that is open to change and misinterpretation” (Kaynak & Avci, 2012, p.345). It is not so easy to be transparent as there are many interests and stakeholders involved. “One might suggest that learning how to balance different interests, making choices and implementing and explaining them in a transparent manner is the very nature of sustainability (corporate responsibility) and corporate governance” (Kolk, 2008, p.12).

Some other online sources confirms that transparency is a core prerequisite for sustainability. Kasso (2010)<sup>11</sup> in a Forbes article about sustainability transparency writes as a headline the statement “No sustainability without transparency”. Cushman (2014)<sup>12</sup> in The Guardian article argues that sharing of information, being connected, rising trust is the basis for sustainability. Additionally, to create a sustainable future and sustainable relationship it required trust which is created through transparency.

This interest in research was fueled by the spread around the globe of transparency practices, right-to-know movements and sustainability practices (Mol, 2013, p.1). While transparency was mostly researched in financial reporting, corruption etc. complex and urgent areas as sustainability requires additional attention (Tapscott & Ticoll, 2003, p.vii). Additionally, transparency of ethics is viewed as an area which requires more research and offer many directions and possibilities for developing new theories in supply chain management (Svensson, 2009, p.267). Thus, additional effort is required to analyze how smaller parts of supply chain work, like road freight distribution.

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<sup>11</sup> <http://www.forbes.com/sites/csr/2010/06/18/no-sustainability-without-transparency/> Viewed on May 5, 2015

<sup>12</sup> <http://www.theguardian.com/sustainable-business/2014/jun/05/open-business-transparency-sustainability-survival> Viewed on May 5, 2015

Transparency of sustainability in road freight distribution is a growing area of interest. Sweden's case is not different and has even acknowledged this problem on a research level (Sternberg et al., 2015) and on media (SVT, 2015).

Organization's value chains are exposed to a growing demand of transparency as they affect the lives of the people living in them and have a footprint on the environment. Transparency helps organizations to "maintain legitimacy and build reputation, therefore, companies may need to open their operations to greater public scrutiny" (Hart, 1995, p.1000). Furthermore, it is commonly agreed that reputation takes more time to build than to destroy it, thus transparency is a topic which needs a special attention and through implementation in the long term.

Transparency is one of the main mean to obtain high quality information which is vital for a good accountability of organization's practices. Although, there are apparently different forms of transparency and with different characteristics which implies that information is shared in different ways. An example of how different forms of transparency work in supply relationships was presented by Lamming et al. (2001). Earlier in the study is showed that a relationship between two organizations can be opaque, translucent or transparent (Lamming et al., 2001).

Additionally, it is known that there are two ways of being transparent, a voluntary or non-voluntary in which the legal institution investigates a certain activity in the company. As Mol (2013, p.2) states "Global value chains are increasingly confronted with voluntary and mandatory demands for transparency". Some sustainable actions are regulated by the government and thus creating a mandatory transparency regarding their operations for example use of chemicals, worker's employment regulations, security issues etc. In order to maintain legitimacy.

The value of transparency for organization itself is considerable as well. Additionally it is argued by (Tapscott & Ticoll, 2003) that transparency lowers transaction costs (p.xiv) and enhance market value (p.xiv). A connection between lower transaction costs and transparency is illustrated in figure 4.2. Even though the implementation of transparency might be perceived as a cost in the very beginning, because of costs associated with the development of an appropriate organizational system (Tapscott & Ticoll, 2003, p.39), its benefits are promising. Therefore, "high levels of transparency in SCM ethics would be seen as more valuable for everyone involved, including the stakeholders, in the long-term perspective" (Svensson, 2009, p.267) because it will allow a more efficient neutralization of the negative impact it has, decrease of the non-compliant ones or the development of organizations which strive to be more transparent. Additionally, there are potential win-win situations from increased transparency in all the supply chain as Carter and Rogers (2008, p.370) argues. Companies cannot fully assess the benefits if they do not see them in a transparent way.

Too much information can be a synonym to noise and might be contra-productive and produce little value for recipient. "Transparency does not mean telling all about an institution or processes as it is required to separate noise from signals" (Tapscott & Ticoll, 2003, p.22). Customers want to know the information which satisfies in the best ways their interest. In this way it can be defined

transparency as “the accessibility of information to stakeholders of institutions, regarding matters that affect their interests” (Tapscott & Ticoll, 2003, p.22). Also transparency targets organizations’ daily operations, but not on information that is considered to be private by law, which for example target personal information of individuals (Tapscott & Ticoll 2003, p.38).

### **Lower information asymmetry through transparency**

Sustainability activities of a company are largely dispersed in different units of a company. Not everyone can access the files of a supplier, customer or contracts. Due to that information can be restricted to some people inside the organization and even more restricted to external stakeholders who get mostly prepared reports. Therefore “sustainability performance of a company can be regarded as such asymmetric information since it is difficult, for example, for parties outside the company to gain credible information on these aspects” (Hahn & Kühnen, 2013, p.14). Due to this organizations tried to act according to signaling theory which states that in “situations of asymmetric distribution of information, one party tries to credibly convey information about itself to a second party” (Hahn & Kühnen, 2013, p.14). Sustainability reports were seen as a proactive tool to reduce information asymmetry (Hahn & Kühnen, 2013). Though as it was presented improved transparency to both internal and external stakeholders regarding their social and environmental responsibility is the main goal.

In situation of such asymmetry of information it is required more communication and sharing of information. These efforts are very intensive after public criticism of an organization’s internal behavior or of its supply chain. A similar example was described by Hansson (2015, p. 14) and stated that Swedish company Nudie Jeans considering a recent scandal regarding the security of their products decided to engage in signaling activities as reporting the working conditions at their suppliers as well as their names. Signaling activities are meant to show to society, stakeholders and not the least consumers that an organization behaves correctly and strives to communicate this in the best possible way. Signaling theory as described by Hahn and Kühnen (2013, p.14) “suggests that in situations of asymmetric distribution of information, one party tries to credibly convey information about itself to a second party”. Additionally Gustafsson (2004, p.51) concludes that “transparency can bring an end to business areas and highlight non-performance.” Though, there can be situations in which interested parties in a transaction also benefit from information asymmetries (Tapscott & Ticoll, 2003, p.38) when one party does not offer full information about one product or service to the other and gains some benefits after this.

LSPs/hauliers need to look to a transparent relationship where social and environment sustainability are openly discussed and clear presented to everyone involved. Therefore organizations need to pursue a reduction of information asymmetry both inside the organizations as this case LSPs/ hauliers and outside to be able to offer more to their customers/ transport buyers than sustainability reports and certifications can. The value of transparency for sustainability reports and certifications will be discussed in the next section.

### **5.1.2 Sustainability transparency in road freight distribution**

A growing demand of transparency in transportation was argued by several research documents and players on the market. Jeschke (2011, p.11) makes the link between the importance of both ethical products and transparent transportation which can signal that both transportation and products have to be produced in a sustainable way. Transport buyers have a growing demand for sustainability transparency due to recent media interest (SVT, 2015) and therefore more public scrutiny.

Similarly DHL's report (2014) includes "Fair Logistics" as a trend in distribution or logistics field. This report argues that "Logistics will lead the way into a fair and sustainable society by generating social benefits and fostering the circular economy with its products and services. In future, dealing thoughtfully with earth's limited resources will go hand-in-hand with fair and respectful human interaction, and sustainable investment in regional empowerment."

Furthermore, the report (DHL, 2014) argues that transport buyers may benefit from "fair logistics" through obtaining "Transparency about the social/fair footprint of logistics providers". It represents a quintessential suggestion of why transparency and sustainability have a very strong connection in relation to distribution. Additionally, in another report, DHL (2009, p.44) argues that customers/ transport buyers will require more transparency and information regarding "how and by what route a product is transported and who earned how much from this product and when". Additionally it is argued that "customers will want to be assured that everything they buy conforms to their ethical and moral standards, and therefore they will expect an extremely high degree of transparency" (p.44).

Similar finding have been made by a Harvard Business Review article (New, 2010) which state that customers want to know "[...] where their goods come from and how they progress through the supply chain." These analyses relieve the importance of customer's transportation demands which do not resume just on delivery from point A to point B at the lowest cost, but some questions as "how?" is this done. It is suggested that transport buyers want to have a legitimate profit and not damage their reputation. By supporting this fair logistics transport buyers they can get a transparent image of the way their products are distributed to the customers.

It was suggested by Lamming et al. (2001, p.5) that transparency will contribute to a commoditization process and "will "demystify" arcane, obtuse or possible illegal practices" in business relationships. Similarly, transparency might foster a commoditization of distribution market in relation to social and environment responsibility thus levelling the quality across the market. Therefore there will be less differences between sustainability practices among distribution service providers. Considering Lamming et al. (2001) framework and adapting it to freight distribution it can be argued that sustainability information between logistics service providers (LSPs) and transport buyers/shippers will lead to a shared knowledge regarding current sustainability issues and challenge and will foster collaborative abilities in this field.

In other papers Gustafsson (2004) explored transparency from the perspective of transport efficiency which is beneficial to a better environmental sustainability. Gustafsson (2004, p.51) concludes in the paper that “transparency does not mean that every player should know everything at all times - instead transparency should be viewed as knowledge accessible to the relevant players in the transport chain”.

### **5.1.2.1 Alternative to sustainability reports and certifications**

There are many alternatives of how organizations can be perceived as transparent by society. Hansson (2015) presented in their paper some alternatives of how an organization can be more transparent about their sustainability and it includes sustainability reports, sustainability certifications and environmental product declarations” (p.5).

In Sweden there are present these efforts to make distribution service providers more sustainable. Some logistics service providers working with freight distribution have managed to adopt sustainability reports<sup>13</sup>. Swedish Association of Road Transport Companies developed a sustainability label<sup>14</sup> for trucking companies. “Schysta Villkor” (Decent work) was developed movement and label by Swedish Transport Workers Union and especially they are designed for drivers.

Though, as was showed previously in the paper, certification systems and sustainability reports require more transparency. Their main goal is to provide to provide more information about organization's activities to stakeholders. These actions can be considered an effort to be transparent to stakeholders and society regarding their operations as an organization. By disclosing sustainability information private companies aim to increase transparency, enhance [...] reputation and legitimacy “(Herzig & Schaltegger, (2006), in Hahn & Kühnen, 2013, p.5). Otherwise what is the value of a certification or of a sustainability report to the society if the information provided does not create a transparent picture about them and is not well understood by the recipient?

### **Sustainability reports**

Therefore, transparency is seen as a performance measurement of a sustainability report. To be able to fulfill its purpose sustainability reports require an organization which is transparent by definition. Sustainability reports can provide the value it is meant for just in case if there is sufficient internal and external transparency. Such a system will contribute to reducing information asymmetry, therefore allowing the logic of reporting to work. A varying degrees of quality of sustainability reports (Hahn & Kühnen, 2013), subjective self-assessment and different level transparency among organizations, varying from low to high, who provide sustainability reports

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<sup>13</sup> <http://www.dsv.com/About-DSV/media/latest-news/2014/02/2013-CSR-report-released>  
[http://www.logistics.dbschenker.se/file/log-se-en/2124918/aPQwXwSJbUGTOH24wVD37i1UJss/8603000/data/sustain\\_report\\_2013.pdf](http://www.logistics.dbschenker.se/file/log-se-en/2124918/aPQwXwSJbUGTOH24wVD37i1UJss/8603000/data/sustain_report_2013.pdf)  
[http://www.dhl.se/en/about\\_us/responsibility.html](http://www.dhl.se/en/about_us/responsibility.html)

<sup>14</sup> <http://www.akeri.se/fairtransport>

confirmed by annual Transparency Benchmark report in 2014 by Dutch Ministry of Economic Affairs leads to the thought of having transparency as the main comparison tool. Quak et al. (2007) makes a straightforward conclusion "Sustainability reporting is not what it was meant to be. It is not the best way to transparency".

### Certification systems

Similarly for certification systems improved transparency is able to diminish excessive control (Lee, 2008) associated to this and can serve as a base for future certification schemes or other sustainability programs. Transparency has considerable benefits between parties actively involved in developing value chains. "Transparency across the industry of our respective contract factories will promote greater collaboration, sharing of monitoring information and reinforcement of remediation expectations across the industry. This could also decrease the burden on suppliers dealing with contradictory audit requirements by multiple buyers" (Carter & Rogers, 2008, p.367).

Thus it can be argued that the sustainability transparency of logistics service providers and hauliers needs to be the gravity point during negotiations between them and transport buyer as sustainability reports and other certification systems are doing a limited job in informing transport buyers about their current sustainability performance.

#### 5.1.2.2 Varying degree of transparency

Due to the fact that a distribution service is composed of different chains as shown in earlier in this paper, which might include a transport buyer/shipper-haulier-LSP-haulier-receiver is of special interest to understand better transparency dimension in a value chain.

The degree of transparency of company's behavior, ethics or sustainability varies with each additional level in supply chain on an empirical level (Svensson, 2009). Therefore, the further away an entity is from the main actor in the supply chain, which is a transport buyer in this paper,

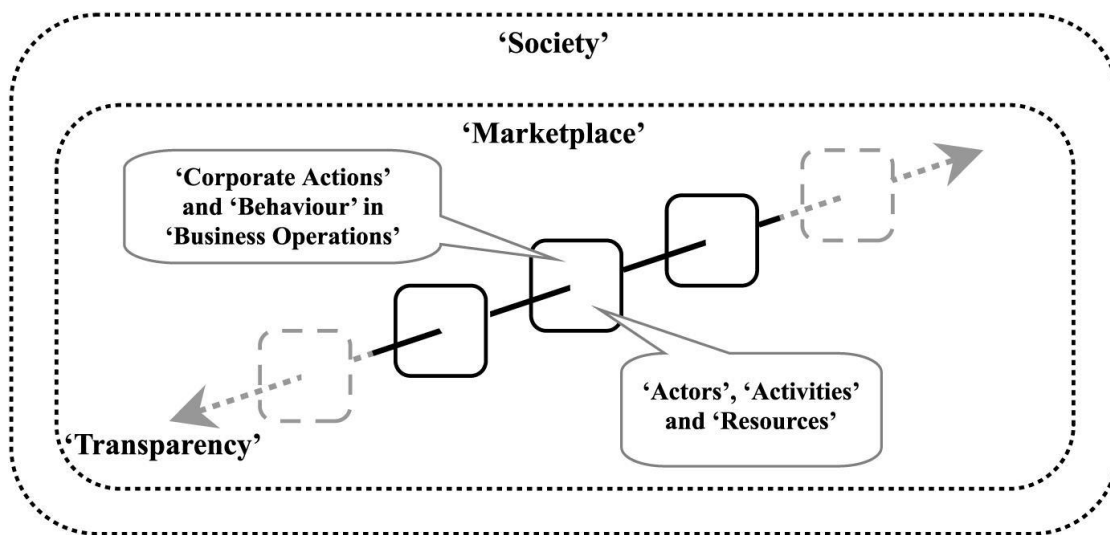
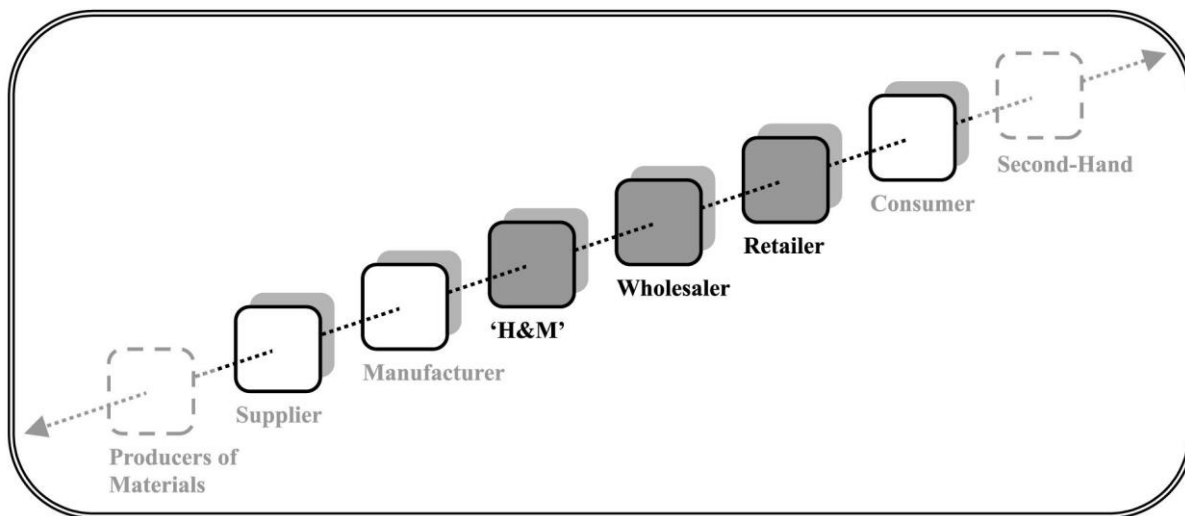


Figure 5.1 Transparency variation along value chain (a). Source: (Svensson, 2009)



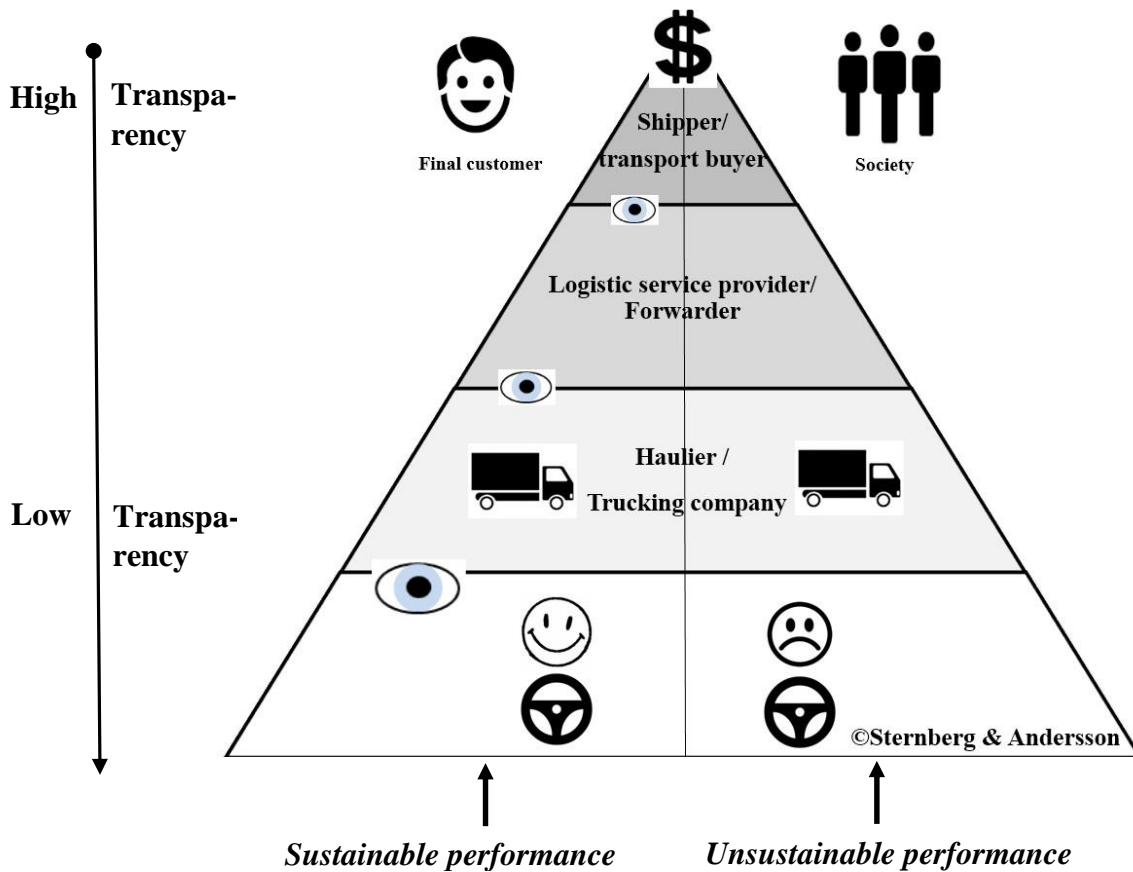
the harder for customer itself to assure that all the sustainability commitments are fulfilled. Even if an organization is not aware of certain dilemmas which exists in the supply chain levels which are less or even not exposed to transparency at all, organizations are expected to be proactive to shed light to possible damaging externalities of their operations. Furthermore, it is important for a company not to apply a conscious restriction to the degree of transparency in supply chain because it affects directly how sustainability is perceived in the whole organization. Svensson's (2009) findings show that large companies with many suppliers and supply chain management in general "need to consider all levels of supply chains in order to prevent and avoid severe ethical dilemmas in the marketplace and society" (Svensson, 2009, p.267). Thus, it is "required to monitor and manage both the upstream and downstream levels of supply chain" (Svensson, 2009, p. 261). In figure 5.1 and figure 5.2 and it is shown how transparency decreases both upstream and downstream the value chain.



**Figure 5.2** Transparency variation along value chain (b). Source: (Svensson, p.264, 2009)

Due to the fact that customers nowadays want to be sure that they understand everything they buy is according to moral standards (DHL 2009, p.44), organizations need to put more light into their practices along the supply chain so that social and environment sustainability commitments are accurately followed. Moreover, the transparency along the supply chain with several levels diminishes especially with tier two and tier 3 suppliers and similar phenomenon happens with customer's customers (Svensson, 2009, p.266). Furthermore such elements as bad working conditions and other human rights issues might be unknowingly associated with the products customer buys. The conditions under which products or services were produced are hard to be understood or even ever known about. This is why managers need to pay more attention to their sustainability actions "in particular, in the upstream levels that are far from the consumer market, and therefore anonymous the general public" (Svensson, 2009, p.266). Therefore, organization's main resources can be redirected on achieving a high degree of transparency on multiple levels of their supply chain regarding sustainability activities.

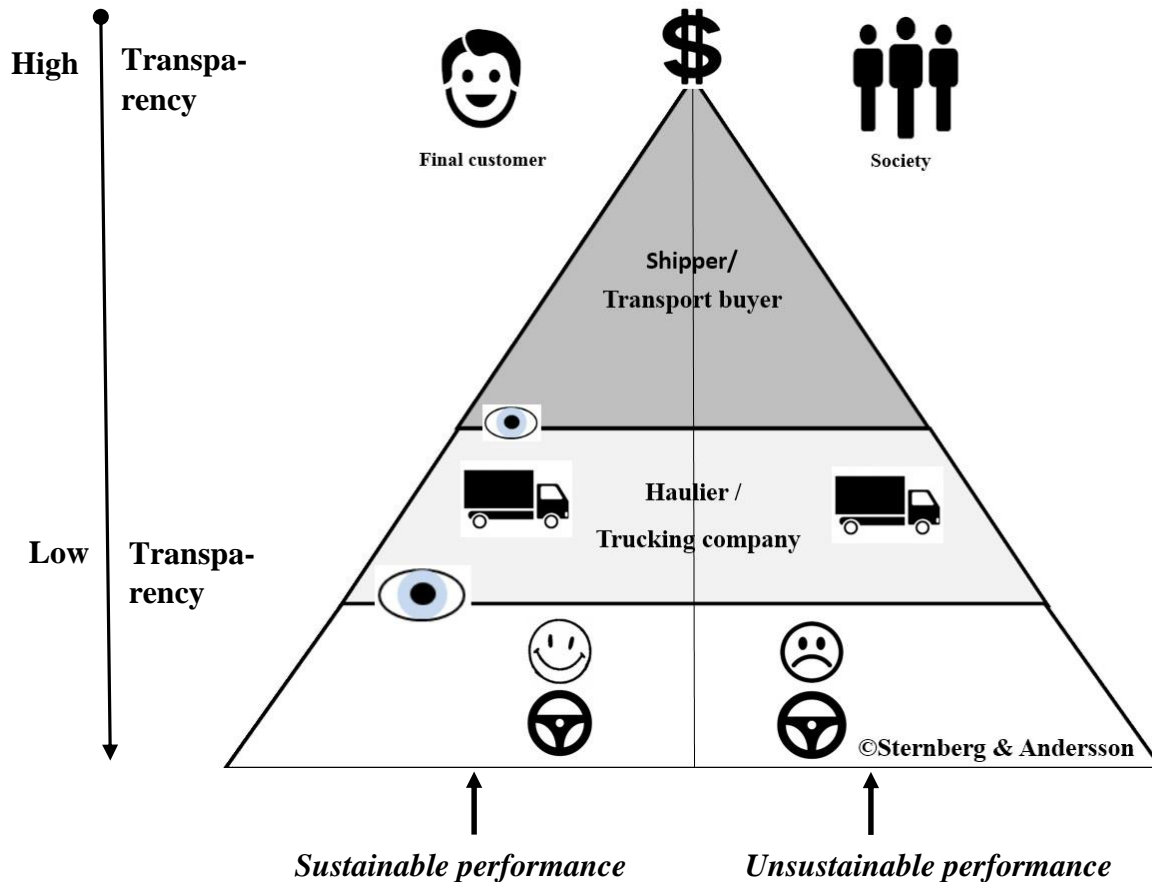
### Analogy to road freight distribution



**Figure 5.3** Transparency variation in an outsourced distribution (a). Source: (Sternberg et al., 2015) (adapted)

Similar to the distribution market is exposed to the same obscurity. Martinsen and Björklund (2012, p.577) concluded in their study that there is a need for improved information exchanges between shipper and LSP regarding environmental performance of the transport services. One of the reasons for this might be due to the fact that a customer will typically buy a distribution service from a logistics service provider, who consequently can outsource their deliveries to different trucking companies as figure 5.3 shows. Figure 5.3 takes as reference the situation when a transport buyer buys a distribution service from a logistics service provider who consequently outsources to hauliers who are responsible for transporting the freight. Though as explained earlier in the paper a transport buyer can buy directly from a haulier (fig. 5.4), thus transparency will vary accordingly and will decrease at the lower level of the distribution chain where social and environmental performance is shown.

Similarly to the work of Svensson (2009) transport buyers are in a situation where the transparency of sustainability performance of their distribution partners decreases along the value chain and ends with drivers and truck performance as the triangle shows. Such a theoretical similarity with Svensson (2009) work seems plausible for an outsourced distribution, considering sustainability



**Figure 5.4** Transparency variation in an outsourced distribution (b). Source: (Sternberg et al., 2015) (adapted)

related problems shown in the literature (Hilal, 2008; Kummer et al., 2014; Sternberg et al., 2015) and limited transport buyer direct connection to it.

Transport buyers can limit themselves to knowing sustainability related information about logistics service providers operations on the upper level of the distribution chain. This is what most requirement for quotations might look like. Therefore, transport buyers might not be aware of the possible differences in the quality of sustainability on a lower level on the outsourced distribution chain. Thus, the lack of transparency on the lower level of the outsourced distribution chain exposes the transport buyer to possible ethical dilemmas and higher environmental impact than expected. It can be argued that several levels in an outsourced distribution adds obscurity to sustainability practices. Similarly to Svensson's (2009) research, in case transport buyers consider all the levels in the distribution chain, transparency improves significantly and consequently it is possible to monitor all the actors involved in the distribution activity. This improves the awareness about both high and low quality of sustainability performance of their distribution service providers.

### **5.1.3 Why transparency is not yet fully implemented?**

Transparency has its downsides too as any other concept. Some forms of transparency can be too inquisitive which might be at the brink of being intrusive to people's private lives, slower actions or be perceived as an excuse for unnecessary surveillance. Mol (2013, p.4) states that "the world has hardly any ideal situations and thus numerous shortcomings can be identified [...] in transparency infrastructures and practices". Mol (2013, p.4) further adds that "rather than a means of empowerment transparency can also become implicated in further surveillance and control". Author adds that "transparency in value chains has lost its innocence of automatically advancing empowerment/democracy and sustainability goals" (Mol, 2013, p.4). Also, Mol's findings (2013, p. 4) show that transparency development creates some restrictions on the market because some organizations do not have the capabilities to provide the required transparency to the customer and the same is with poorer countries. Although it is worth to understand that transparency per se is a value and just some un-expected developments of transparency concept can "endanger the fundamental idea of emancipatory transparency in value chains" Mol (2013, p.4). Next research according to Mol (2013, p.2) shall be on looking for "specific designs of transparency arrangements in value chains which fulfil original promises".

Companies might not want to be transparent about their activities as they may perceive it as a loss of business or in case there is not a trustful relationship which might use the other party information for profit seeking purposes. Lamming et al. (2001, p.6) further states "clearly, it would not be in a supplier's commercial best interests to reveal sensitive supply relationship information without some reciprocation. In seeking to hedge this risk (to cheat), the supplier is behaving entirely rationally." Author argues (Lamming et al., 2001) that suppliers might offer erroneous information to protect themselves from a corrupt system to protect its economic position.

Also non-transparency of some activities can be also a prerequisite for security and represent in the same time a valuable information which can be exposed to fraud activity. Gustafsson presents an example (2004, p.51) in which relates about the case of the information about origins and type of consignments in transport chain. Such an information transparency is critical for security issues but "transparency accessed by someone not authorized can be dangerous" (Gustafsson, 2004, p.51).

Some other examples of unexpected results of transparency in supply chain were presented by Egels-Zandén et al. (2014). Authors described how Nudie Jeans Co's (a retail company) effort to improve transparency with a factory supplier resulted in counterproductive impacts. Though it was a case study on one company and it has this problem with one supplier. Another research done in Turkey by Kaynak and Avci (2012, p.355) shows that the transparency of service logistics providers has a negative effect on ethical behavior. This research was done in a single region in Turkey. Therefore these two examples of results as drawbacks of transparency need to be further researched in the future.

#### 5.1.4 Synthesis of key research areas based on literature review and document analysis

**Table 5.1** Common research areas of sustainability transparency in organizations. Source: (Author, 2015)

Information asymmetry in sustainability	<i>Bartley, 2007</i> <i>Hahn &amp; Kühnen, 2013</i> <i>Dhaliwal et. al., 2011</i>
Transparency critique in sustainability reporting	<i>Quaak et. al., 2007</i> <i>Kolk, 2008</i>
Transparency critique in sustainability and organizations	<i>Quaak et. al., 2007</i> <i>Mol, 2013</i> <i>Hansson, 2015</i> <i>Gustafsson, 2004</i> <i>Kaynak, 2012</i>
Transparency along the supply chain	<i>Carter &amp; Rogers, 2008</i> <i>Svensson, 2009</i>
Sustainability transparency in organizations	<i>Carter &amp; Rogers, 2008</i> <i>Quaak et. al, 2007</i> <i>Kolk, 2008</i> <i>Svensson, 2009</i> <i>Jeschke, 2011</i> <i>Fernandez-Feijoo et. al., 2012</i> <i>Fernandez-Feijoo et. al., 2014</i> <i>Hahn &amp; Kühnen, 2013</i> <i>Kiron et. al., 2013</i> <i>Tapscot &amp; Ticoll, 2003</i> <i>Mol, 2013</i> <i>Hart, 1995</i> <i>Egels-Zandén et al. (2014)</i> <i>Kaynak, 2012</i> <i>New, 2010</i> <i>Lamming et. al., 2001</i>
Sustainability transparency in distribution and transportation services	<i>DHL, 2014</i> <i>DHL, 2009</i> <i>Martinsen &amp; Björklund, 2012</i>

**Table 5.2** Common research areas of sustainability transparency in freight distribution. Source: (Author, 2015)

Sustainability transparency in road freight distribution and transportation services	<i>DHL, 2014</i> <i>DHL, 2009</i> <i>Martinsen &amp; Björklund, 2012</i>
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Table 5.1 and table 5.2 present the main ideas literature review and document analysis of the main research areas related to sustainability transparency in organizations and road freight distribution.

*This chapter describes how sustainability transparency relates to road freight distribution. Author uses previous research in sustainability transparency in a supply chain and applies to outsourced distribution to visualize better how sustainability transparency varies along the outsourced distribution starting with transport buyer in the center. Author reflects on the reasons of why sustainability transparency is not yet implemented. Chapter concludes with a synthesis of the main research areas in sustainability transparency on both larger organizational level and narrower on road freight distribution level.*

## 6 Empirical study

*This chapter includes the empirical data and analysis of the research question two and three. First, it is presented empirical data for research question two and three. This data is categorized according in patterns according to the topic of interviewee's statements. A separate analysis then follows for each research question. Each subchapter of the analysis part includes the theoretical model, an explanation of how it is used, as well as an explanation of how empirical data is situated into the model. Empirical data is categorized in patterns according to the topic of interviewee's statements. Each pattern is analyzed along with presentation of its location in the theoretical model.*

### 6.1 Data

#### 6.1.1 RQ2: How do shippers monitor sustainability of the road freight distribution services?

The following table 6.1 includes a list of the main patterns found in the empirical data. A list of quotes according to the topic of each pattern is presented to illustrate the basis of its development.

**Table 6.1** Empirical data for RQ2. Source: Author (2015)

<b>Empirical data</b>
I Lack of monitoring activity
II Opportunistic behavior
III Perceived significance of distribution service transactions
IV Examples of limited or weak monitoring
V More monitoring activities are requested by LSPs
VI Elgiganten's case
VII The value of transparency

#### **I LACK OF MONITORING ACTIVITY**

The following interview statements represent the main ideas which are the basis for the identification of this pattern:

*"They ask for environment, right fuel, engines (euro 5/6), other electronics etc. when they have RFQ etc [...] but when they started to work, then it is just price. Even though there is some follow up, it is not so wide as they asked for in the beginning."*

(Tomas Jansson, Bilspeditioners Transportörförening)

*No (there is no follow-up), and this is a big problem outside Fair transport [...] But this is really bad for serious, honest and sound companies. They try to fulfill these demands and of course they will have more expensive transports."*

(Tina Thorsell, Sveriges Åkeriföretag)

*"No, transport buyers don't follow up their deliveries. I can tell you. Some of the buyers follow-up, partly, you can say. But it is different between small companies and larger ones. But, I am sorry, but there are not so many customers doing regularly follow-ups."*

(Ulf Hammarberg, DHL Freight)

*"Customers just talk about ISO, environmental goals but in the end, do not even care about it. In the RFQ I do not see that customers demand certified transport services. There is no follow up of the matters of sustainability. Customers do not check if the trucks which come to pick up the products are EURO 5 or EURO 4."*

(Logistics Service Provider 1)

## II OPPORTUNISTIC BEHAVIOR

The following interview statements represent the main ideas which are the basis for the identification of this pattern:

*"One of the problems in Sweden as we can see is that there are still some transport buyers who buy transport and who don't prioritize these kind of questions." [...] "So that's why there are so many trucks outside who do not work with these kind of questions."*

(Ulf Hammarberg, DHL Freight)

*"You can cheat with lots of working requirements -working hours, what kind of fuel you use and as you know you are not allowed to drive in domestic Swedish market for more than a couple of days. But some drivers are driving for a couple of weeks, I think."*

(Ulf Hammarberg, DHL Freight)

*"Yes, maybe (there is cheating) because there is not so much follow up on this [...] but of course we hear about it and see it."*

(Katarina Johansson, Bilspeditioners Transportörförening)

*"Measuring is an investment. If you do not measure, you do not know. If a transport provider knows about monitoring, they will strive to comply. Measuring is important" [...] "It is important to have a control, to be able to check if transport companies are fulfilling our demands or if they have the right working conditions, the right equipment, and the right salary."*

(Jimmy Olofsson, Elgiganten)

*"Since everybody knows that there is almost no control then it is easy to say: "Hey I will do it, it does not cost anything", and then do not do it. And this I would say is big, big problem" There is a really big unfairness in the branch. Since you do not control your demands, it is too expensive to be serious/sustainable! To be honest! It is just expensive to follow the demands."*

(Tina Thorsell, Sveriges Åkeriföretag)



### III PERCEIVED SIGNIFICANCE OF DISTRIBUTION SERVICE TRANSACTIONS

The following interview statements represent the main ideas which are the basis for the identification of this pattern:

*"Sometimes I think they are not interested. They should be interested to get fair transport. But in this market, price matters a lot..."*

(Katarina Johansson, Bilspeditioners Transportörförening)

*"Customers look at price and delivery quality... environment comes in the end."*

(Tomas Jansson, Bilspeditioners Transportörförening)

*"Customers arrange their demands in the following ways: 1st price, 2nd service, 3rd ISO, 4th economic stability, 5th Rule and regulations and transparency. Customers look mainly at Price and Service and do not dig deeper to the next levels."*

(Logistics Service Provider 1)

### IV EXAMPLES OF LIMITED OR WEAK MONITORING

The following interview statements represent the main ideas which are the basis for the identification of this pattern:

*We have some companies who have asked about environment and you also feel that it is important.[...] Some customers want to check a lot of things by themselves. But there are not so many!"*

(Katarina Johansson, Bilspeditioners Transportörförening)

*"That's not so many customers, like (non-disclosure) one of ours large consumer goods company. They show high performance when they do the audits. At one of our terminals, 4 months ago, they visited us and I was guiding them. There were 2 people from this company for 1 day and asked a lot of questions from fire equipment to how we operate and how we are doing."*

(Ulf Hammarberg, DHL Freight)

*"Now we have new questions, like how much do you pay the driver and the costs of the fuel difference outside Sweden [...] or if we know if the drivers have driving license [...] The mainly way that customers follow-up is that they send to us by email an excel sheet some questions and then we answer them back in the email. Well it is more like requirement from ISO 14001. They need to follow-up the supplier. But well it is not impressive, I think!"*

(Ulf Hammarberg, DHL Freight)

### V MORE MONITORING ACTIVITIES ARE REQUESTED BY LSPs AND HAULIERS

The following interview statements represent the main ideas which are the basis for the identification of this pattern:

*"But if you understand that you can put up some environmental issues for example, and not only ask for price/service, you need to have emission reports, you need to inform us what you do to reduce your emission for your network for DHL. Then we must explain what we do and we must*

*communicate to the customers what we have done. These kind of demands should transport buyers put, I think."*

(Ulf Hammarberg, DHL Freight)

*"Please check our books, please check our staff, and please check our fuel. I think this is the way to go"..... "If our members (hauliers) are taking this step ahead and say we are delivering, we are prepared to deliver, please ask us, we would love to show how we are working."*

(Tina Thorsell, Sveriges Åkeriföretag)

## VI ELGIGANTEN's REVELATORY CASE

Eliganten's demands for social and environment sustainability of their road freight distribution services:

*"We said that those drivers have to have collective agreement in the contract. If you have a foreign driver, then you have to have an agreement which offers the minimum for each country we have operations [...] if the driver will work in the distribution for us in Sweden, then you should have a Swedish salary."*

[...]

*"We are doing the check up at the transport service provider's place once or twice per year. One, when we announce them that we are coming and one, when we just come without notice and say "Hello, here we are, can you please help us :)"? Then, we will have a check with the drivers, if the company is fulfilling their salaries and so on. We are also looking at vehicles' equipment when they arrive here."*

[...]

*"We know exactly every vehicle from the transport company... what engine... average fuel consumption. We will check at every company what salaries do they offer, if they are following the laws, how the equipment is and so on" [...] "We look at several quality demands, environment, experience competence, even security (how is the equipment ... should it be hard wall trailers etc.). If you should stay overnight, we have decide where it is possible to do it and we have to know it. You have to have GPS on the trailer."*

(Jimmy Olofsson, Elgiganten)

This statement shows the importance of CSR in the operation of a distribution service provider and how non-compliance can be taken as a ground for termination of the partnership:

*"We call the whole process "Logistics with heart" [...] "CSR is our most important demand. If you can't fulfill that – Sorry you will not be a partner to us!"*

(Jimmy Olofsson, Elgiganten)

These statements suggest the importance of transparency for sustainability monitoring activity:

*"We should know what driver it is. Before it comes... Latest one hour before loading, we should know the registration number of the plate of the truck and we want to know the driver's six first*

*figures of the personal number (ID)." [...] "Yes we check it through our guard... We will know everything before and will just check to see if everything is correct."*

*"Our previous carrier had everything... they have volume... they do the planning. We did not have any control over it that we wanted to have. " ... "Tomorrow we want to plan which trucks go to which stores and on specific routes."*

*"It is important to take control because I exactly know which are delivery times, delivery schedule, we know exactly what they should deliver and when they should deliver."*  
(Jimmy Olofsson, Elgiganten)

The usage of specialized tool for CO2 emission calculations:

*"We will calculate all through NTM (Network for Transport measures) a specialized environmental company that you can send the statistics through so they can calculate every shipment."*  
(Jimmy Olofsson, Elgiganten)

## **VII THE VALUE OF TRANSPARENCY**

The following interview statements represent interviewee's suggestions which are the basis for the identification of the value of transparency:

*"I think some of DB Schenker customers want to know if they buy transport from Malmö to Stockholm, they want to know who is in fact driving the trucks. But if you buy from some other you do not know.[...] And you should be interested where are my "mobile phones", how are they going to my customer. They do not know that. I think they do not care sometimes. But they should care! There should be transparency!"*  
(Katarina Johansson, Bilspeditioners Transportörförening)

*"The problem that some transport buyers have some ambitions but it is not easy to get information about it!"*  
(Ulf Hammarberg, DHL Freight)

*"But actually to all these 3 categories (from transport buyers who monitor transports to those who do not care about sustainability) you are technically able to not be transparent. You can say it is this emission, but it is actually not" [...] "LSPs do not have their own trucks, they do not have the same trucks. LSPs buy from a service provider, from a service provider, that buys from me... Or worse if a LSP buys directly from a haulier with EURO 3 engine. When you subcontract services you do not know what are the resting times, who drives the truck."*  
(Logistics Service Provider 1)

*"I should say that is hard (to have transparency). It is really important to have it in writing form in the agreement. So you can really check it... Then it is up to the company if they are showing you the right things. Partnership is the most important."* (Jimmy Olofsson, Elgiganten)

### 6.1.2 RQ3: How does sustainability vary on road freight distribution market?

The following table 6.2 includes a list of the main patterns found in the empirical data. A list of quotes according to the topic of each pattern is presented to illustrate the basis of its development.

**Table 6.2** Empirical data for RQ3. Source: Author (2015)

<b>Empirical data</b>
I Affirmation of the existence of variation
II Social and environmental sustainability areas: - Social sustainability (wages, working conditions, tax) - Environmental sustainability
III The cost of sustainability
IV Effect on transport buyers
V Transport buyer's awareness
VI Bad market's effect on good market
VII The value of transparency

#### **I AFFIRMATION OF THE EXISTANCE OF VARIATION**

The following interview statements represent the main ideas which are the basis for the identification of this pattern:

*“All of them are in the same market and of course there are differences” [...] “Yes, we can see that, we can see this cheating happening. Yes we do see some competitors, we see it at companies when our trucks leave goods at transport buyer's final location. Our hauliers' drivers can see it... they see a lot of things...”*

(Katarina Johansson, Bilspeditioners Transportörförening)

*“Some transport companies are cheating with working/resting times, taxes and not respecting security regulations for special cargo.”*

(Logistics Service Provider 1)

*“Yes, I would say that there is a huge difference between a serious/sound company who is working with driving and resting times, for example, and the others” [...] “To deliver a sustainable transport is tricky because you need to have all these factors: Do you use a full-loaded truck or you have half-loaded truck?; what kind of fuel do you have?; what kind of engine do you have?; how do you plan your road trip and your drive?; how did you educate the driver (e.g. eco driving)?*

(Tina Thorsell, Sveriges Åkeriföretag)

*There are a lot of trucks in Sweden driving around that do not live up to these kind of fair transport” [...] “some big transport companies have lots of smaller companies. Some of them*

*have the competence, but others are doing nothing. That's the way it is. Some are very good and some are not prioritizing these kind of questions.” (Ulf Hammarberg, DHL Freight)*

A qualitative and quantitative analysis made by Swedish Association of Road Transport Companies (Sveriges Åkeriföretag) confirms the existence of variation and proposed a campaign.

*“First we made a big questionnaire for our members and found out the foremost problems of our hauliers in Sweden: Road safety, Environment, Social conditions, Fair Competition. These issues were the background for Fair Transport initiative.”*

(Tina Thorsell, Sveriges Åkeriföretag)

## **II SOCIAL AND ENVIRONMENTAL SUSTAINABILITY AREAS**

The following interview statements represent the main ideas which discuss social and environment sustainability issues:

### **SOCIAL SUSTAINABILITY**

*“You can cheat with lots of working requirements -working hours, what kind of fuel you use and as you know you are not allowed to drive in domestic Swedish market for more than a couple of days. But some drivers are driving for a couple of weeks, I think.”*

(Ulf Hammarberg, DHL Freight)

#### **a) WAGES**

*“If you have 5000 sek and are coming here to work for 1 month, they have to buy things here [...] “We don't want to have a case that drivers have a salary that they can't live on it [...] It is more common than you know!”*

[...]

*“Many transport companies operating in Sweden have a lot of drivers who do not have the right salary.” [...] “We have to do a really good check here.”*

(Jimmy Olofsson, Elgiganten)

#### **b) WORKING CONDITIONS**

*“You should not have a tired driver. But I do not think all the transport companies follow driving/working times in this market.”*

(Katarina Johansson, Bilspeditioners Transportörförening)

*“When we started, we sent out requests to 85 transport companies. I should say a lot of companies who saw our demands: salaries, work conditions and CSR as the most important, few paid attention... In the beginning there were a few companies who took that (CSR) really serious! Everybody said that only money that counts. It took a lot of effort to convince them that this (sustainability) is serious!”*

(Jimmy Olofsson, Elgiganten)

*“A serious haulier will probably need to have a team working separately with working/resting times and communication with drivers; match CSR policy according to transport buyer's policy”*(Tina Thorsell, Sveriges Åkeriföretag)

*“I price with my trucks, my drivers and with fixed schedules; I respect all the working hours, resting times 24 hours in Sweden [...]. I do not press drivers to drive quicker because safety is a priority and it is not according to the law to do that. We take well care of the drivers.”*  
(Logistics Service Provider 1)

c) TAX

*“It is quite basic what we want... we want to pay taxes, we want everybody to have the same rules, we want to follow the union agreements.”*

(Katarina Johansson, Bilspeditioners Transportörförening)

### ENVIRONMENTAL SUSTAINABILITY

*“Everyone can have ISO certifications but it does not show what you actually do. Though it is better than having nothing. Large LSPs say that they care about the environment and that they use EURO 5 engines etc. But when a large LSP subcontract services from another truck company they cannot be sure about the environment commitments of their partners and cannot check if everyone follows the rules.”*

(Logistics Service Provider 1)

*“A serious haulier will probably need to have a separate team working separately with environment performance in terms of fill rate, type of fuel usage, IT system capable to follow-up on these issues with transport buyer.”*

(Tina Thorsell, Sveriges Åkeriföretag)

### III THE COST OF SUSTAINABILITY

The following interview statements represent the main ideas which discuss this pattern:

*“Differences are visible if you want to see it [...] I think they understand if you pay so little you have to understand. Because if you buy something that is too cheap you need to understand that it was not fair or even criminal.”*

(Katarina Johansson, Bilspeditioners Transportörförening)

*“There will be never a transparent product which is cheaper than a non-transparent one because it is expensive to run fixed schedules, to have GPS on the trucks, to have drivers you know and you can trust and to have schedules that work for the clients.”*

(Logistics Service Provider 1)

Sveriges Åkeriföretag argued for the importance of their campaign which promotes sustainability:

*“This is why you need the fair transport because with it you can explain what they get when they pay a little bit more for transport.”*  
(Tina Thorsell, Sveriges Åkeriföretag)

#### **IV EFFECT ON TRANSPORT BUYERS**

The following interview statements represent the main ideas which discuss the effect of sustainability variation on transport buyers:

*“If you don't know very much about transport you can't see the difference between healthy transport and criminal one. You can see just price. You can see that one is cheap and the other is expensive. Such a person will not be able to see the difference and they will take the cheap one.”*  
(Tina Thorsell, Sveriges Åkeriföretag)

*“Sometimes it is difficult for the transport buyer because you have to inform that there are different companies.”*  
(Katarina Johansson, Bilspeditioners Transportörförening)

*“It is difficult for consumer to understand how to compare the offers when he/she does not understand how the taxes and additional charges are being imposed. There is low customer awareness regarding: how the service is delivered, priced and that there are different type of transport service providers.”*  
(Logistics Service Provider 1)

*“I think it is very tough for (transport buyers)! It is not so easy to buy transport, monitor, understand and compare between one transport provider and the other. It is tricky.”*  
(Ulf Hammarberg, DHL Freight)

#### **V TRANSPORT BUYER'S AWARENESS**

The following interview statements represent the main ideas which are the basis for the identification of this pattern:

*“Customers do not understand how the service is delivered and that there are different type of transport service providers.”*  
(Logistics Service Provider 1)

*“Of course you have to understand that if you have these extremely low prices than this can't be right. But you just choose not see that.”[...] “I think they are aware of the differences of sustainability. I will not believe if they claim that they do not know!”*  
(Tina Thorsell, Sveriges Åkeriföretag)

## VI BAD MARKET'S EFFECT ON GOOD MARKET

The following interview statements represent the main ideas which are the basis for the identification of this pattern:

*"Customers think all transport providers are the same. [...] I have lost a contract because customer thinks I am like everyone else and just want a higher price."*

(Logistics Service Provider 1)

*"Yes we are affected (by unfair competition) because the price is going down. No one wants to pay for transport even though it has not a significant share of final product price."*

(Katarina Johansson, Bilspeditioners Transportörförening)

## VII THE VALUE OF TRANSPARENCY

The following interview statements represent the main ideas which discuss the value of transparency.

*"We are a different company who are working with this and that, we are trying to do it in the right way. And we are doing a lot of things right, but maybe we do not tell them." [...] "but of course we could be better and really show it. So, they could see better the differences."*

(Katarina Johansson, Bilspeditioners Transportörförening)

*"It is Not Control as everybody is screaming. I am telling them well hold your horses, we have 300 authorities, police and they can't make control. [...] The solution (for the improvement of sustainability among transport companies) as I see it is Transparency."*

(Tina Thorsell, Sveriges Åkeriföretag)

*"Illegal cabotage is result of the lack of transparency. Nobody knows what is happening. Because nobody knows people think they can do whatever they want! LSP can use drivers with lower payment than Swedish wage standards to drive from Hub to Hub so that customers cannot understand who is taking care of it."*

(Logistics Service Provider 1)

*"No, (there is not enough transparency)... Of course companies can and must improve. If you have the competence when you buy transport you can do more. If you do not have competence and understanding then it will not happen so much."*

(Ulf Hammarberg, DHL Freight)



## 6.2 Analysis

### 6.2.1 RQ2: How do shippers monitor sustainability of the road freight distribution services?

*This research question comprises first a literature review on the subject with the aim of finding a possible theoretical answer. Afterwards an empirical analysis follows. The subchapter concludes with a final analysis of the empirical material.*

#### 6.2.1.1 Possible theoretical answer

Some of the research papers which cover sustainability monitoring discuss for example transparency dimension, and shipper's demands. These topics were analyzed to be able to provide possible theoretical answers.

Transparency is a useful mean for improved monitoring because it relieves to the organization what is actually happening and what does it needs to monitor. Transparency is required to monitor both the supplier's operations and eventual retailers, resellers in case of a large supply chain. Svensson stated (2009, p.262) in the study about SCM ethics "that the focal company has a need for transparency to monitor and manage the ongoing actions and behavior of other companies in their business operations (i.e. upstream or downstream) within the supply chain so as to be able act and react properly in the marketplace and society". Thus, sustainability related activities are better monitored in a transparent chain.

Consequently such a low willingness to act has a considerable impact on how sustainability requirements are put in the contract and how well they are followed-up. Björklund and Forslund' (2013, p.214) findings show that "companies that include environmental performance in transport contracts do not necessarily consider how to measure the environmental performance and how to handle non-compliance. Managerial involvement is a driver that promotes environmental aspects of logistics". Thus, due to a low number of initiatives in this direction, it often happens that there are not yet detailed procedures of how to work with sustainability issues in practice, how to handle non-compliance of the requirements. Non-compliance can be seen both negative and positive (Björklund & Forslund, 2013, p.217) which can results in both bonuses and penalties. Therefore, companies might not be interested, at the moment, to over perform because their performance will not be monitored anyway during the transport service provision. Although, there could be assumptions that ongoing complaints or under-performing services in terms of sustainability will increase monitoring activity from the company.

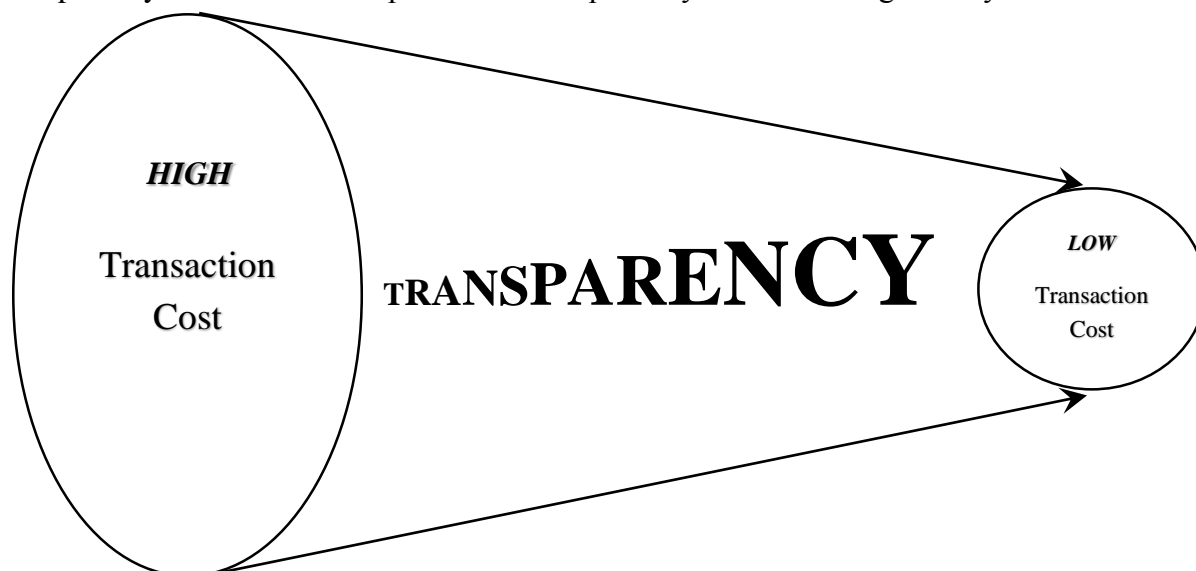
The lack of non-compliance measures is a background for opportunistic behavior. Just 2 per cent of the shippers who consider environment aspect during the purchasing process "have written agreements regarding how to handle differences" (Björklund & Forslund, 2013, p.217). This may be one of the reasons that performance targets are not met (Björklund & Forslund, 2013, p.223).

“Findings from a survey study by Björklund (2005) show that even if most of the studied shippers consider the environmental aspect during the purchasing process, 50 per cent actually include them in the written contract agreement, 13 per cent include how to measure them, and only 2 per cent have written agreements regarding how to handle differences e.g. non-compliance. Non-compliance can be viewed both in a positive and in a negative way, resulting in incentives or penalties” (Björklund & Forslund, 2013, p.217). Additionally, Kaynak and Avcı (2012) add that without an accountable system it is not possible to implement transparency of ethics. Thereby, due to the fact that there are not usually non-compliance measures in the contracts, there might be no incentive for monitoring. Consequently, no monitoring and non-compliance measures contributes, to a certain extent, to a decreased knowledge of the degree of transparency of sustainability performance of a distribution service.

### 6.2.2.2 Empirical analysis

#### Introduction to the analysis of the interviews

Empirical data based on interviewee's statements are analyzed through qualitative coding to be able to form a better understanding of their opinions and processes linked to sustainability monitoring and thus answering this research question. The following theoretical model fig. 6.1 is used to analyze how interviewee's statements are explained by these theories. Also, author presents some of the consequences of different intensity of monitoring based on the opinions of the interviewees. Author concludes with a final analysis on the current sustainability monitoring activities performed by shippers of their road freight distribution services and reflects on the transparency dimension in the process of transport buyer's monitoring activity.



**Figure 6.1** Transparency effect on transaction costs. Theoretical model. Source: (Author, 2015)

**Empirical analysis of the patterns**

Empirical data which is categorized in patterns table 6.3 is analyzed through the theoretical model in figure 6.1.

**Table 6.3** Empirical data of the analysis and section in the theoretical model. Source: (Author, 2015)

<b>Section of the theoretical model</b>	<b>Empirical data</b>
<i>a) Transaction cost</i>	I Lack of monitoring activity
	II Opportunistic behavior
	III Perceived significance of distribution service transactions
	IV Examples of limited or weak monitoring
	V More monitoring activities are requested by LSPs
	VI Elgiganten's case
<i>b) Transparency</i>	VII The value of transparency

**a) TRANSACTION COST**

**I LACK OF MONITORING ACTIVITY**

According to a detailed analysis of the interviewees' statements it was observed a common view which suggested that transport buyers are not following up the sustainability of their freight distribution services, thus not monitoring all the associated transaction costs. Transaction costs in this analysis does not considers monetary cost but non-monetary cost as social and environment sustainability. Author noticed that the price of the freight distribution services is perceived to be a critical requirement in the selection of the LSPs and is monitored regularly, but as it can be seen further in the analysis, there is almost no monitoring of the social conditions and environmental impact. Even though some of the transport buyers demand sustainability commitment from a distribution service provider during the selection process through ISO certifications, minimum CO2 emissions, good working environment etc. they are hardly or ever monitored to understand how well are they fulfilled. Thus, the lack of monitoring of a repetitive transaction as distribution/transport services represent a motivation for an increased opportunistic behavior, an action described by (Williamson, 1981), with regard to the fulfillment of social and environment commitments. Opportunistic behavior in relation to social sustainability issues has been discussed also by Carter and Rogers (2008). It is not very common, as the interviewees argue, that transport buyers or their team to go at loading/unloading facilities or at LSPs/hauliers terminals to check truck's environment specifications, or the quality of maintenance. This kind of routine from transport buyer is perceived to be lacking. Similarly, it is not well monitored how environment goals as fill rates are fulfilled and whether the best route was selected for freight distribution activities. The lack of monitoring is also present with regard to the driver's working conditions as

wages, working hours and training (eco-driving and extreme road conditions training) both at the point of loading or unloading and at the LSPs terminals and offices.

Consequently, some LSPs argue that it is not common that transport buyers to monitor their transactions and initial demands in relation to sustainability. There are just seldom sustainability monitoring activities. Transport buyers mostly monitor price and not sustainability on the repetitive transactions and the interviewees argued. Some of interviewee's statements can describe the current state of transport buyer's monitoring activity. Transport buyers are perceived by LSPs to "talk the talk rather than walk the talk" as Kiron et al. (2013) describes them and similar to the attitude some companies as it is referred by van Marrewijk (2003) quoting an Ernst & Young research. Though this attitude can be equally used for different distribution service providers. Kiron et al. (2013) further stated "companies are far more likely to perceive significant sustainability issues than they are to act on them". Transport buyers are perceived to lack specific routines linked to sustainability monitoring.

*"They ask for environment, right fuel, engines (euro 5/6), other electronics when they have RFQ etc [...] but when they started to work then it is just price. Even though there is some follow up, it is not as wide as they asked for in the beginning."*

(Tomas Jansson, Bilspeditioners Transportörförening)

## **II OPPORTUNISTIC BEHAVIOR**

The lack of monitoring activity intentionally or unintentionally create motivation for an opportunistic behavior (Williamson, 1981) for some unfair hauliers/LSP. Thus, transport buyers facilitate the development of unfair distribution activities in the eyes of a logistics service provider for not monitoring and even more not demanding at all social and environment sustainability. As a result the costs of distribution service transaction, for a transport buyer, is higher than preliminary agreed as the sustainability demands are not fulfilled. The costs of the service as it was mentioned earlier is also seen in terms of quality and sustainability attributes which cannot be seen in financial data of a transaction. Transport buyers do not get what they initially demand as the quality of the social and environment sustainability is lower than what they normally might expect.

*"You can cheat with lots of working requirements -working hours, what kind of fuel you use and as you know you are not allowed to drive in domestic Swedish market for more than a couple of days. But some drivers are driving for a couple of weeks, I think."*

(Ulf Hammarberg, DHL Freight)

Distribution service providers do not have a motivation, from an economic perspective, to perform all the social and environmental sustainability commitments as there is no monitoring activity on these transaction aspects. It is perceived as an additional cost that does not produce a competitive advantage, compared to other market offers on the market. As a result, some distribution service providers are behaving opportunistically with these sustainability commitments to be able to offer a service at the lowest cost possible. Most interviewees associate this type of behavior with "cheating".

*“Since everybody knows that there is almost no control then it is easy to say: ”Hey I will do it, it does not cost anything”, and then do not do it. And this I would say is big, big problem” That is a really big unfairness in the branch. Since you do not control your demands, it is too expensive to be serious/sustainable! To be honest! It is just expensive to follow the demands.”*

(Tina Thorsell, Sveriges Åkeriföretag)

### **III PERCEIVED SIGNIFICANCE OF DISTRIBUTION SERVICE TRANSACTIONS**

For some transport buyers distribution service transaction might not be seen as a strategic one in company's policy. Thus, the impact of social and environment sustainability of distribution services are not so big to influence the whole company sustainability commitment. There is an impression that transport buyers see distribution services as leverage to decrease the financial costs while other social and environment sustainability attributes are not perceived to impact company's corporate operations, policies or reputation. Most LSPs argue that shippers/transport buyers mainly prioritize price as a main selection requirement, followed by quality and some sustainability linked demands which are found in the bottom of the list. These market demands are similar to the ones discussed by Weijers et al. (2012) who ranks selection criteria for LSP 1. Price; 2. Reliability; 3. Service; 4. Sustainability; 5. Innovation. Thus, any additional effort to monitor distribution services might be perceived as an additional cost.

### **IV EXAMPLES OF LIMITED OR WEAK MONITORING**

Interviewees argued that even if transport buyers initiate some monitoring activities they are limited and sparsely address important social and sustainability issues. Very limited number of transport buyers are interested to monitor social and environment sustainability issues in an exhaustive manner.

However, as some of interviewees argued social and environmental sustainability issues in road freight distribution are beginning to be addressed more frequently than before. Online questionnaires, ISO copies, social and environment questions by email are common ways of monitoring sustainability commitments of distribution service providers. Even though there could be noticed some examples of monitoring activities for a transport buyer, such tools are not able to fully address current social and environment issues in road freight distribution. ISO standards routines are not capable to tackle complex sustainability issues as interviewees tried to suggest, a critique also made by Lee (2008, p.19) for other type of certification systems.

### **V MORE MONITORING ACTIVITIES ARE REQUESTED BY LSPs AND HAULIERS**

Sustainability oriented LSPs or hauliers are looking for more monitoring for how they provide freight distribution services. These sustainable companies believe that they provide a service which is significantly different than others in the market. Consequently, these companies are able to show how they differentiate from other unfair distribution service providers present on the market. Additionally, LSPs believe that improved monitoring will benefit both transport buyer and themselves as more engagement, communication and collaborative abilities will appear.

## VI ELGIGANTEN's REVELATORY CASE

Elgiganten is one of the first transport buyers who openly placed social sustainability demand as a priority in their selection of freight distribution service providers. Elgiganten case was chosen because as Martinsen and Høge-Broding (2014, p.19) argue, shippers in logistics intensive industries and with closeness to final consumers, have the highest level of detail with regard to environmental practices as required from LSPs. Elgiganten in this case monitors in detail both social and environmental aspects. Elgiganten case is important because it is a revelatory case for the study of current sustainability issues in road freight distribution and kind of monitoring techniques are used by some companies to tackle them. Elgiganten's commitment to assuring that drivers get the appropriate wages, through collective agreements, was a way to tackle current problem of exploitation of some drivers operating in Sweden by paying significantly lower than average wage for Swedish market standards. Elgiganten designed certain monitoring tools to be able to assure that their demands are fulfilled, therefore making an effort to eliminate opportunistic behavior and minimize transaction costs. Being one of the first companies to pay attention to sustainability attributes of a distribution service, they are still in a minority if to compare to the majority who do not prioritize sustainability demands and do not monitor them. Along with social sustainability demand, security and environmental sustainability demands are monitored continuously by Elgiganten.

*"We said that those drivers have to have collective agreement in the contract. If you have a foreign driver, then you have to have an agreement which offers the minimum for each country we have operations [...] if the driver will work in the distribution for us in Sweden, then you should have a Swedish salary."*

(Jimmy Olofsson, Elgiganten)

Elgiganten employs non-compliance penalties as contract termination or restriction to the bidding process if the distribution service provider is not able to fulfill its social sustainability requirement through assuring that drivers gave a collective agreement for wage. Additionally Elgiganten demands more transparency of its distribution services to be able to monitor more accurately the fulfillment of social sustainability demands as wage and work conditions and monitor how they can contribute to the minimization of the environment impact like: increasing fill rate for each truck, choosing the best route and organizing reverse logistics, etc. The ability to check, monitor or even control indicate the strategic importance of transparency for purpose of achieving an improved sustainability. Additionally Elgiganten suggests that it wants to monitor closer the calculation of CO<sub>2</sub> emissions. Better knowledge of the trucks /LSPs employed by Elgiganten and transport routes selected is able to increase the reliability of CO<sub>2</sub> calculations and thus stay away from the critique to sustainability reports made by Kolk (2008) and Quak et al. (2007).

## **b) TRANSPARENCY**

### **VII THE VALUE OF TRANSPARENCY**

Even though there are possibly a number of transport buyers who have a higher interest in monitoring the execution of their distribution service transactions, than the average according to the interviewees, there is an opaque environment which hinders this process. To make monitoring process more effective, transport buyers require more transparency from LSPs regarding the hauliers to whom they outsource transports. Hauliers, in turn, are expected to be transparent about the social conditions of their drivers and trucks they use and their environmental performance. Such kind of transparency will allow transport buyers to understand better what are the real sustainability conditions associated their hauliers responsible for the distribution of the goods. The more transparent sustainable distribution service providers are about their performance the better transport buyers can understand what to look for in their selection process. Thereby, transport buyer will be able to increase the quality of their decision making.

Logistics service provider 1 argued that due to a lack of transparency transport buyers cannot monitor how CO2 is calculated and thus the reliability of the emission data from some distribution service providers is low. As a result the annual reports of CO2 emissions from many companies can be built on false data. CO2 emission targets can be also endangered by such kind of opaqueness in CO2 calculations. This kind of critique is also made by Kolk (2008) and Quaak et al. (2007) who questioned the quality of sustainability reporting and as the quality of information varies.

*“But actually to all these 3 categories (from transport buyers who monitor transports to those who do not care about sustainability) you are technically able to not be transparent. You can say it is this emission, but it is actually not” [...] “LSPs do not have their own trucks, they do not have the same trucks. LSPs buy from a service provider, from a service provider, that buys from me...*

*Or worse if a LSP buys directly from a haulier with EURO 3 engine. When you subcontract services you do not know what are the resting times, who drives the truck.”*

(Logistics Service Provider 1)

Elgiganten, in the position of a transport buyer, argues that it wants more than an arm's length relationship which is typically associated with an opaque relationship as Lamming et al. (2001) has described. Elgiganten strives to create and demands a transparent relationship described by Lamming et al. (2001) which can lead to shared knowledge, enhanced capabilities and collaborative abilities.

### **Final analysis of the empirical patterns**

Following a detailed analysis of the qualitative coding of the interviewees statements, it was possible to get more in depth understanding of the current monitoring activities from transport buyers or as many interviewees stated follow-up activities in relation to social and environmental sustainability of the distribution services. It was possible to identify some iterative statements that supported the mainstream view. Though, there were some statements which made an impression

of a conflicting view in relation to the mainstream one but with the help of in depth interviewing it was possible to alienate all the opinions towards a common one which formed a stronger pattern.

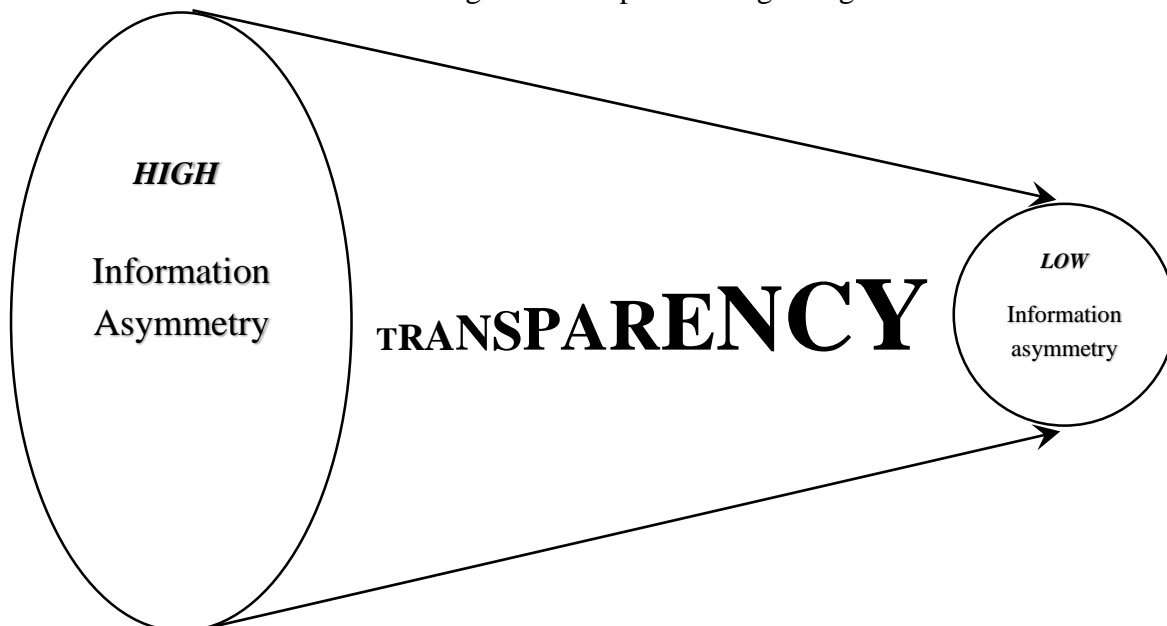
It can be suggested that more effort needs to be done by transport buyers to monitor in a more comprehensive and exhaustive way the sustainability of their distribution services as at this moment monitoring activities are rather simple, limited or absent facilitating the development of opportunistic behaviors and causing an increased transaction costs. Opportunistic behavior develops easier when there is opacity of sustainability information between transport buyer and distribution service provider which results in an increased cost for the transport buyer. Additionally, an opaque environment hinders the analysis of the transaction costs, as the quality of sustainability, and any efforts to monitor them, thus more transparency is required in the road freight distribution chain. It is thus possible to argue that improved transparency decrease transaction costs, in this case non-monetary ones, as buyer can detect and eliminate easier opportunistic behavior. In turn, opacity will lead to higher transaction costs as transport buyer cannot monitor the actors involved in the distribution chain.

### 6.2.2 RQ3: How does sustainability vary on road freight distribution market?

*This research question is answered with an empirical analysis. The subchapter concludes with a final analysis of the empirical material.*

#### Introduction to the analysis of the interviews

Empirical data based on interviewee's statements are analyzed through qualitative coding to be able to form a better understanding of the opinions regarding the current differences of



**Figure 6.2** Transparency effect on information asymmetry. Theoretical model. Source: (Author, 2015)



sustainability of the transport operators which include LSPs and trucking companies. The following model fig. 6.2 is used to analyze how interviewee's statements are explained by these theories. Author concludes with a final analysis on the current sustainability differences of road freight distribution and reflect on the degree of transparency to which transport buyers are exposed during the selection process of distribution service providers.

### **Empirical analysis of the patterns**

Empirical data which is categorized in patterns table 6.4 is analyzed through the theoretical model in figure 6.2.

**Table 6.4** Empirical data of the analysis and section in the theoretical model. Source: (Author 2015)

<b>Section of the theoretical model</b>	<b>Empirical data</b>
<i>a) Information asymmetry</i>	I Affirmation of the existence of variation
	II Social and environmental sustainability areas: - Social sustainability (wages, working conditions, tax) - Environmental sustainability
	III The cost of sustainability
	IV Effect on transport buyers
	V Transport buyer's awareness
	VI Bad market's effect on good market
<i>b) Transparency</i>	VII The value of transparency

### **a) INFORMATION ASYMMETRY**

#### **I AFFIRMATION OF THE EXISTANCE OF VARIATION**

According to a detailed analysis of the interviewees' statements it was observed rather big differences of how well social and environmental practices are adopted by distribution service providers operating in Sweden. Thereby it can be noticed the existence of a bad and good market, a market situation explained by (Akerlof, 1970), which has immediate consequence to the buyer in form of information asymmetry. Even though some of the interviewees were pointing at some isolated sustainability problems it could be perceived a big variance between different sustainability conditions adopted by an LSP or haulier. Interviewees pointed at both social and environment performance indicators which can vary from one actor to another because of a complex list of measures which need to be taken care of as fill rate, type of fuel and its usage, euro standard of the engine, driver education in eco driving, route planning and other sustainable performance indicators described by Carter and Jennings (2002, p.155). These statements express a straightforward view and confirm the existence of a variation of the sustainability performance:

*“All of them are in the same market and of course there are differences”[...]“Yes, we can see that, we can see this cheating happening. Yes we do see some competitors, we see it at companies when our trucks are leaving goods at transport buyer’s final location. Our hauliers’ drivers can see it... they see a lot of things...”*

(Katarina Johansson, Bilspeditioners Transportörförening)

There are transport companies which have different commitment to sustainability, thus different type of work conditions, fuel usage or even law violation through illegal cabotage. An extensive study on transport deregulation and its effects has been made by Sternberg et. al. (2015). Other organization who did similar research is Swedish Association of Road Transport Companies (Sveriges Åkeriföretag) who made a qualitative and quantitative research (Thorsell, 2015) on the hauliers operating in Sweden and could point out some important social and environment linked problems for the hauliers industry. Therefore, it can be certainly thought that some of the actors in the market apparently contribute to the problems or sustainability issues in the market while others make an effort to solve sustainability issues. According to Sveriges Åkeriföretag the problems that hauliers presented, were considered as a background for Fair Transport initiative which meant to promote an additional awareness to these problems on the market and motivate an engagement in its solution.

## **II SOCIAL AND ENVIRONMENTAL SUSTAINABILITY AREAS**

Researcher could notice that almost all interviewee were confident that there are present important issuers with social sustainability and especially driver’s working conditions and wages. There were also pointed out, in some cases, some issues with tax avoidance. Environment sustainability performance of different actors were also criticized and varied as well in terms of speeding, engine types and CO calculation reliability. These differences are not previously clearly presented in the literature and are obscure for some transport buyers with limited knowledge about the current status of the industry. Due to the fact that LSPs outsource their transports to other hauliers, a transport buyer will mostly not be able to know prior to cargo loading what kind of truck is assigned to transport the goods and what are the sustainability conditions associated with that haulier.

### **SOCIAL SUSTAINABILITY**

An iterative opinion presented by most of the interviewees was that there are present different driver’s work conditions and wages. For some of the drivers driving trucks in Sweden these work conditions and wages are considerable lower compared to other colleagues drivers doing similar jobs. This is one of the intended social effects of deregulations. It was argued that some drivers live in their trucks for many days/weeks without having possibility to rest in real beds, have showers or have a proper meal. These are partly some of the unintended social effects of deregulations as social dumping and worsened working conditions, also mentioned by Hilal (2008). Even though trucks are specially designed to sleep in a couple of days, these stays are frequently prolonged.

#### WAGES

Wages are considered by interviewees to be a common problem in this industry. They argued that there can be wages unreasonably lower for some drivers working on Swedish roads. Interviewees argued that some companies use this social dumping to compete with other distribution service providers. As a result some drivers are not treated fairly and equally and might get lower wages than a driver who normally has collective agreement on wage with his/her employer. Consequently, less tax will be paid to Swedish Government which is again a social loss. This low cost working force might be seen as a way to save money while providing the service, tax avoidance or even to create a low cost distribution service option for some of the transport buyers.

*"If you have 5000 sek and are coming here to work for 1 month, they have to buy things here [...] "We don't want to have a case that drivers have a salary that they can't live on it [...] It is more common than you know!"*

(Jimmy Olofsson, Elgiganten)

#### WORKING CONDITIONS

Other interviewees pointed at significant problem linked to working and resting times for drivers. They argued that working/resting times are frequently not respected and thus it is both against the law and it makes driver tired. It is a common problem for many distribution service providers as there are certain strict rules in Sweden to how much a driver can drive and rest but this can be easily overlooked as a driver stays in the truck alone most of the time. Some of the interviewees stated that it is required special people and management commitment to take care of working/resting times for drivers, collect reports from computers and tackle non-compliance. As some researchers mentioned the whole business model needs to be changed to make the company act sustainably (Tapscott & Ticoll, 2003; Lee, 2008). It was suggested that not all the companies make sure that drives are not tired. As it is known tired drivers create a danger for themselves, goods that are transported and for other participants in traffic. Apparently some distribution service providers are even harder to motivate to work with high social sustainability as these social sustainability differences might be taken for granted and in some cases even beneficial.

There are companies who talk openly about work conditions and it can be considered an important signaling activity, an action described by Hahn and Kühnen (2013), when a distribution service provider can be transparent about its social sustainability commitment as working time during the negotiation process with the transport buyer. Thus information asymmetry can be diminished.

#### TAX

Some interviewees mentioned the problem with tax avoidance. This phenomenon affects distribution service providers who are committed to paying taxes and contributing to the society they live in as well as cover the costs for the roads that are used. It was argued for a requirement of fair competition in which distribution service providers compete on performance but not compete through a lower commitment to social and environmental sustainability.

## ENVIRONMENTAL SUSTAINABILITY

Some of the interviewees discussed separately the environmental sustainability performance of a potential fully sustainable distribution service provider. It was mentioned frequently the importance of fill rate, EURO standards of trucks, route planning. It was also made a critique to ISO certifications capability of ensuring sustainability commitments. Additionally if a transport buyer does not know exactly the type of truck which is assigned to distribute the products or which route has been used to distribute it, there can be not calculated correctly CO<sub>2</sub> emissions and thus confirming the critique to sustainability reporting made by Kolk (2008) and Quaak et al. (2007). Environmental sustainability performance is rather different among different distribution service providers. Other interviewees pointed that environmental sustainability commitment can be accurately followed if there are special employees and departments dealing with it.

## III THE COST OF SUSTAINABILITY

Interviewees suggested that a sustainable transport will be most of the time more expensive than an unsustainable one. It is argued that sustainability cost more money to implement e.g. because of improved wage and fixed working hours. In the case of environment sustainability, a newer truck with latest EURO engine standard will cost more money than old one. Interviewees suggested that a distribution service at a price way below the average on the market is most probably delivered with unfair conditions.

Sveriges Åkeriföretag argued that a company operating under “Fair Transport” conditions will have a higher cost and thus it needs to be understood by the transport buyer the reasoning and the motivation for higher transport costs.

## IV EFFECT ON TRANSPORT BUYERS

At the moment transport buyers face a difficulty in understanding the difference of quality of sustainability due to an opaque environment. Distribution service providers know a lot more of the service's social and environmental conditions the transport buyers who buys it. Such a market situation where the seller know more about the product which is sold than the buyer is described by (Akerlof, 1970) and is referred to as information asymmetry. Sustainability conditions can be associated with information asymmetry as Hahn and Kühnen (2013) have suggested. Due to the fact that some companies are dishonest with regard to sustainability conditions of their services, a transport buyer can typically receive erroneous or incomplete information about that quality of sustainability of the service they bought. Especially for a novice transport buyer, it will have significant challenges to select sustainable distribution service providers as it is hard to get the correct information about the quality of different distribution service providers or even be aware of the differences i.e. transport buyers have a difficulty in comparing different service offers, without an additional competence in the distribution industry, besides the commonly used price comparison. The mainstream idea was that at this moment, it is hard to distinguish a sustainable distribution service provider on the market, because of the presence of the information asymmetry,

and thus better communication might be required from those distribution service providers who deem to be considered sustainable:

*“If you don't know very much about transport you can't see the difference between healthy transport and criminal one. You can see just price. You can see that one is cheap and the other is expensive. Such a person will not be able to see the difference and they will take the cheap one.”*

(Tina Thorsell, Sveriges Åkeriföretag)

## **V TRANSPORT BUYER'S AWARENESS**

Interviewees had different opinions regarding the awareness of transport buyer regarding these quality differences of sustainability performance. While some argued that transport buyers lack specialized knowledge others argued that a transport buyer who pays below than average price for a distribution service is aware of the type of purchase he or she makes. Thereby, it can be of high importance to understand how much does a transport buyer bear the responsibility of unsustainable purchases and their consequences even if being unaware of what did they buy.

## **VI BAD MARKET'S EFFECT ON GOOD MARKET**

Interviewees argued that unfair or unsustainable distribution service providers grow on the market and take both market share and profitability of those companies which want to be more sustainable. As it was shown earlier, unsustainable companies which save on wages, avoid taxes and doing less actions to prevent environment impact have an average lower operation cost and consequently lower price offers for transport buyers. Considering the case that a transport buyer has a low awareness of the social and environmental attributes of the service purchase, due to the existence of an information asymmetry, he/she will choose an offer with the lowest price and thus contributing to the growth of the bad market. The growth of bad market can significantly affect the good market as it will gain more market share according to Akerlof (1970). The cost of dishonesty lies not only on the transport buyers who is cheated but is a social loss driving legitimate business out of existence. This process affects both families of employees and society as a whole because of the loss of correct income and taxes.

*“Yes we are affected (by unfair competition) because the price is going down. No one wants to pay for transport even it has not a significant share of final product price.”*

(Katarina Johansson, Bilspeditioners Transportörförening)

## **b) TRANSPARENCY**

## **VII THE VALUE OF TRANSPARENCY**

Following a detailed analysis of transport buyers' problems and suggestions from distribution service companies it can be certainly argued that it is required more transparency in relation to social and environmental aspects of the services provided by LSPs and hauliers. Transport buyers need signals from LSPs and hauliers that they are actually “walking the talk”, a type of behavior discussed by Kiron et al. (2013), Carter & Jennings (2004) and van Marrewijk (2003), which might be able to assure a maximum commitment to sustainability. There is still much ambiguity in

relation to sustainability because at this moment it is not clear which hauliers and drivers are assigned to distribute the products and what is the quality of their sustainability performance. Sustainability performance of a distribution service provider is asymmetrical in this case, which confirms the views of Hahn and Kühnen (2013, p.14). Information asymmetry can be also created by an opaque relationship where there is present arm length relationship discussed by Lamming et al. (2001). It is of critical importance for a transport buyer to make the difference between distribution companies who just “talk the talk” from the ones who “walk the talk”. To be able to make this selection decision transport buyers require more transparency from their LSPs regarding the hauliers and their sustainability conditions. Distribution service providers who want to act sustainable, in their turn, need to be more transparent about their distribution chain to transport buyers to let them understand better the differences, provide more knowledge regarding their operations and how do they do it. It will show to buyers why sustainability performance for some distribution service providers is better than of the other competitors. Such an effort can lead to a lower information asymmetry on the market for a transport buyer. Transparency is considered critical attribute of road freight distribution to assure a sustainable development.

*“Illegal cabotage is result of the lack of transparency. Nobody knows what is happening. Because nobody knows people think they can do whatever they want! LSP can use drivers with lower payment than Swedish wage standards to drive from Hub to Hub so that customers cannot understand who is taking care of it.”*

(Logistics Service Provider 1)

### **Final analysis of the empirical patterns**

Following a detailed analysis of interviewee's statements it was noticed that all the interviewees argued that the quality of sustainability among distribution service providers varies significantly. Some of the interviewees compared low quality of sustainability performance with being similar to criminal activity. On the other edge there were analyzed distribution service providers who invest significantly in sustainability performance and strive to improve it. It was possible to highlight differences of both social and environmental areas and explain what it entails to perform high or low in these areas. It was suggested that a better transparency is required from road freight distribution providers to diminish information asymmetry with regards to the quality of sustainability performance. Transport buyers can increase their assurance that what they buy conform to social and environment sustainability through a higher demand on transparency from LSPs or hauliers. Transparency might help transport buyers to understand and differentiate which distribution service providers are sustainable and which are not, thus lowering information asymmetry during their procurement activity.

*This chapter presents the empirical data and analysis for research question two and three. Empirical data based on interviewee's statements is categorized into topics and assigned correspondingly to the position in the theoretical model. Research question two is answered first*

*through a literature review and afterwards through an empirical analysis. Research question three is answered just through an empirical analysis. Each research question ends with a final analysis of the empirical material.*

## 7 Results and discussions

*This study reflects on the value of sustainability transparency in the light of procurement activity of transport buyers. There are discussed the benefits of sustainability transparency during the selection of LSPs, performance analysis and for sustainability monitoring activities performed by a transport buyer. Chapter includes a separate discussion for each research question. The consequences of lack of sustainability transparency are also discussed and their effect for market and society.*

### 7.1 Research questions

#### 7.1.1 RQ1: How do sustainability and transparency relate to road freight distribution?

##### *Theoretical and document analysis*

Following an extensive literature review for the first research question it is possible to argue that sustainability and transparency are highly related terms. It is contended that transparency of sustainability or “sustainability transparency” creates a value for road freight distribution, a view supported by Jeschke (2011, p.11) and DHL (2014). Sustainability tools as sustainability reports and certifications schemes require a transparent corporation where actions can be traced, monitored and open communication takes place between different levels of the value chain. It is argued that transparency is a signaling activity which can make a difference between organizations as LSPs/hauliers who “talk the talk” and “walk the talk” in relation to sustainability. The problem of organizations who “talk the talk” and “walk the talk” in relation to sustainability is also discussed in (Kiron et. al., 2013); Carter & Jennings (2004, p.168). Therefore, it is argued that transparency is able to lower the information asymmetry for a transport buyer about the quality of sustainability performance between different distribution service providers. Information asymmetry is associated with sustainability according to Hahn and Kühnen (2013).

It is presented in the table 5.1 the research areas indicating a critique of the current organizational transparency and a rising requirement for sustainability transparency in organizations and their supply chains. This argument supports the critique of the current state of transparency in organizations made by Quaak et. al (2007), Kolk (2008), Hansson, (2015). Author presents as well an analogy of a theoretical explanation based on the transparency of the supply chain developed by Svensson (2009) and applies on outsourced road freight distribution. There are presented two figures fig 5.3 and fig 5.4 which illustrate how sustainability transparency decreases along the outsourced distribution chain having transport buyer in the top of the outsourced distribution chain. This analogy can be seen as another application of Svensson (2009) visualization of transparency of ethics along a chain of multiple actors. These figures, figure 5.3 and figure 5.4, support as well the findings of Lamming et al. (2001) which argue for the existence of different state of relationship between partners which range from opaque to transparent. Therefore, it is important to have sustainability transparency so that a transport buyer has the opportunity to minimize exposure to social dilemmas and environment impact which are also discussed by Sternberg et al.



(2015); Hilal (2008), Kummer et al. (2014). Sustainability areas are considered to be of high priority for a transport buyer. Sustainability is a complex issue to comprehend and thus requires transparency, thereby supporting the view of Tapscott and Ticoll (2003).

### **7.1.2 RQ2: How do transport buyers monitor sustainability of the road freight distribution services?**

#### *Theoretical analysis*

An extensive literature review pointed out that companies do not act frequently on sustainability issues. Swedish shippers, as found by Björklund and Forslund (2013, p.214), do not include in a frequent manner non-compliance penalties regarding the sustainability performance of their deliveries. It is stressed the importance of transparency for a more effective monitoring activity on all the levels of the value chain (Svensson, 2009) and consequently distribution chain.

#### *Empirical analysis*

The analysis of the empirical data from the interviewees for the second research question shows that most of the transport buyers do not monitor the execution of distribution services (transactions) and associated quality of sustainability performance. This finding supports previous research of Björklund and Forslund (2013, p.214), analyzed in the theoretical analysis, which states that sustainability non-compliance measures are not frequently included in the contract. Although, without a monitoring activity there is no background to have any sustainability non-compliance. Transport buyers generally suppose that a distribution service needs to be cheap and are not able to see how sustainability varies on road freight distribution market.

The lack of sustainability monitoring can be seen in the selection process when transport buyers choose a transport provider based on price, and service level requirements which are then consequently monitored. These two main requirements from a transport provider support the findings of Weijers et al. (2012, p. 159). Therefore, sustainability in an independent way, is not monitored on this repetitive execution of distribution services (transactions) because it is neither a priority during the selection process nor it is perceived as critical part of the value chain. It might be overlooked that transport costs (monetary and non-monetary costs) can be higher than anticipated. Transport buyers might perceive that they minimize transaction costs, i.e. the costs of the execution of the service, through price monitoring alone, but as it was shown in the results, multiple opportunistic behaviors arise due to insufficient monitoring of transport buyer's initial demands which can include sustainability areas. This finding supports the view of Williamson (1981) who argues that the lack of consideration and monitoring of transaction costs might result in higher total costs than anticipated because of actors who act opportunistically or are dishonest during service provision. Due to the fact that transport buyers monitor closely just the price as a way to minimize transaction costs, sustainability is often overlooked, thus a quality attribute of the distribution service. The lack of monitoring the quality of sustainability performance, results in reduced capacity to detect opportunistic behavior.

From a stakeholder perspective, the lack of sustainability monitoring might affect environment in short term with eventual financial losses or long term with degradation of living environment, local income of the community, and governmental income (Hilal, 2008; Kummer et al., 2014; Sternberg et al., 2015). Disregarding the monitoring of CO<sub>2</sub>/NO<sub>x</sub> or other dangerous emissions reports quality can endanger credibility of sustainability reporting or compliance to ISO standards. Additionally, a lack of sustainability monitoring does not support the European policy of a sustainable transport system (European Commission, 2004).

Even though some transport buyers may have regular monitoring activities, they are quite weak or not comprehensive as interviewees suggested. Those distribution service providers who are more committed to sustainability issues demanded more monitoring activities from transport buyers to be able to argue better how they price their commercial offers and what are the associated costs for performing sustainable services. Transport buyers are expected to follow the fulfillment of their demands which are initially requested during the bidding process. Otherwise, opportunistic behavior in relation to sustainability can apparently continue to be a normality.

According to the results there are a limited number of transport buyers who are doing extensive monitoring activities which complements the research of Björklund and Forslund (2013). In their research, Björklund and Forslund (2013) have also highlighted a few transport buyers who have special demands included in the contracts to assure environmental sustainability. Such a revelatory case, as Elgiganten, is described in this study and is a quintessential example for sustainability monitoring activity. Author presented a list of monitoring techniques (table 7.1) developed on this

**Table 7.1** Sustainability monitoring techniques. Source: (Author, 2015)

<b>Social sustainability</b>	<b>Environmental sustainability</b>
<ul style="list-style-type: none"> <li>• Preliminary check-up of driver's personal information (ID) (4 last digits for wage verification/ collective agreement) one hour before cargo loading</li> <li>• Plan routes according to driver's working and resting times</li> <li>• Plan routes to offer drivers an appropriate sleeping location</li> <li>• Preliminary check-up of truck's plate number one hour before loading</li> <li>• Planed LSP's site visit to check-up driver personal information and training qualifications (e.g. extreme road conditions as icy/narrow roads)</li> <li>• Check-up of truck equipment at cargo loading according to security regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Optimization of distribution routes</li> <li>• Assurance of high fill rate for trucks</li> <li>• Close attention to delivery route planning and optimization to assure high fill rate</li> <li>• Reverse logistics planning</li> <li>• Delivery schedule monitoring to stores and warehouses</li> <li>• Planed LSP's site visit to check truck equipment</li> <li>• Creation of database with all the trucks and their technical specifications used by a LSP or trucking company</li> <li>• Check-up of truck equipment at cargo loading</li> <li>• Use of specialized CO<sub>2</sub> calculation tool</li> </ul>

transport buyer's case for both social and environment sustainability areas. Social sustainability monitoring performed by a transport buyer was not extensively discussed in the research. It is further analyzed the value of sustainability transparency of Elgiganten in their monitoring process, to be able to understand and measure all the social and environmental performance indicators.

Both transport buyers who perform regular monitoring and distribution service providers argued for the importance of transparency for a more effective monitoring of the execution of a distribution service. This view is supported by empirical findings and theoretical model (figure 6.1) which argue that transparency during sustainability monitoring is able to diminish transaction costs and specifically non-monetary e.g. non-compliance to high quality of sustainability performance. This result is supported also by the views of Svensson (2009), discussed in the theoretical analysis subchapter, who argue that transparency is a core attribute for sustainability monitoring activities of other actors in their supply chains. Without transparency it is not possible to monitor the compliance to ISO standards or to create reliable and credible sustainability reporting. This view is supported by Kolk (2008) and Quaak et al. (2007) who questioned the value of sustainability reporting because the quality of information and reports varies.

### **7.1.3 RQ3: How does sustainability vary on road freight distribution market?**

#### *Empirical analysis*

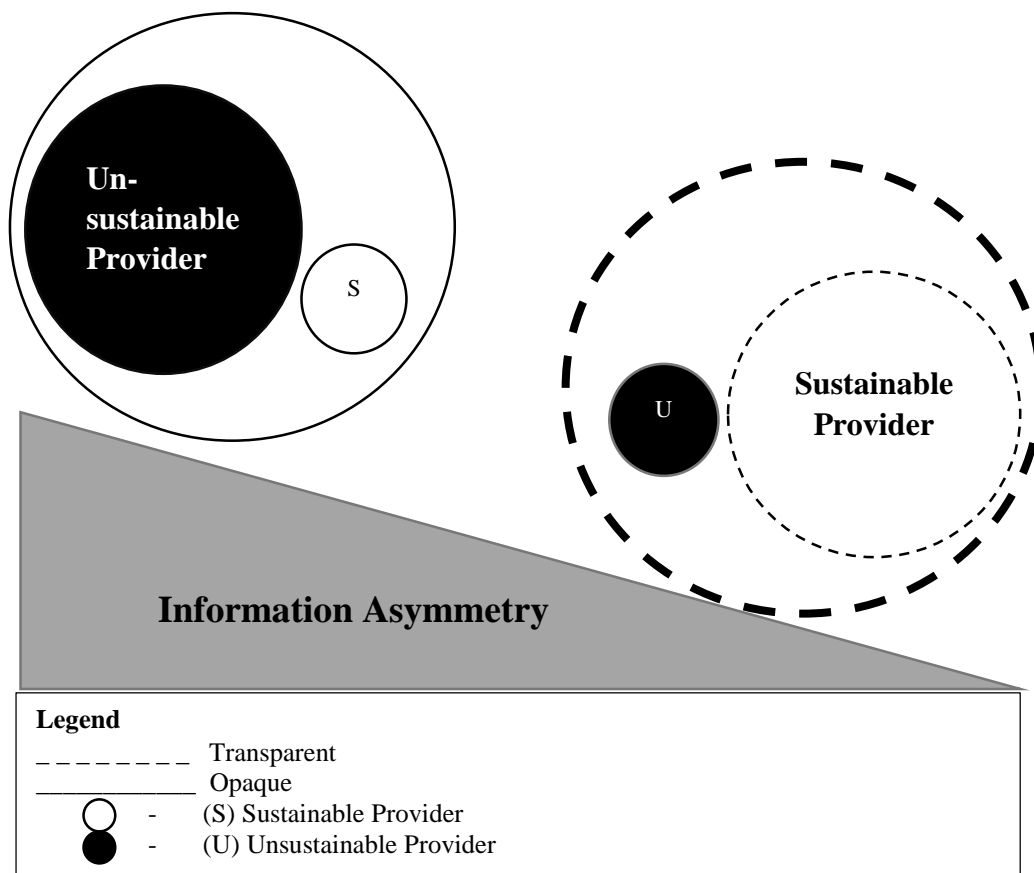
Empirical analysis points out the existence of significant differences of the quality of sustainability performance among LSPs and hauliers operating in Sweden. Interviewees outlined some quality differences for both social and environmental sustainability.

The analysis of empirical material pointed at stringent problems and opportunistic behavior in social sustainability areas and thus supports the views of Hilal (2008), Kummer et al. (2014) and Sternberg et al. (2015). These areas are typically associated with multiple cases of lower wages compared to medium Swedish standards for deliveries on Swedish market. It was suggested that it is common that some LSPs compete through social dumping rather than through the performance of their service. Low wages for drivers as it is known affect the income of both driver him/herself and the tax income to the government which has a direct affect for the whole society. Also, interviewees suggested that many hauliers operating trucks on Swedish distribution network create deplorable working and living conditions for drivers, thus a low quality of life. Interviewees have also pointed at the frequent breach of driving and working times which affect security on the traffic.

With regards to the differences on environmental sustainability performance there are reported cases of usage of low standard engine, low quality fuel, non-commitment to high fill rates or optimal driving routes. A high variation of the elements which determine environmental performance can directly affect the accuracy of CO<sub>2</sub>/ NO<sub>x</sub> and other emission calculations. The lack of transparency of these environmental aspects might affects the reliability of the emission reports. There are also reported non-compliance with the rules of transporting special cargo (e.g.

dangerous cargo). Additionally, it is suggested a lack of communication to transport buyer about the fill rates of the trucks, drivers' certification (eco-driving), routes optimization etc. Thus, organizations' policy on environment, sustainability reports, ISO 14000 standards and CO2 emission targets can be endangered by a lack of transparency. This kind of critique to sustainability reporting has been made as well by Kolk (2008), Hahn & Kühnen, (2013), Quaak et al. (2007).

A consequence to the differences in the quality of sustainability and possible low transport buyer awareness about sustainability issues, facilitates the development information asymmetry phenomenon, described by Akerlof (1970). Information asymmetry is also created through an opaque relationship which persists in arm's length trading discussed by Lamming et al. (2001). As it was shown earlier in the paper, the presence of information asymmetry on the market, due to opaqueness, influences a transport buyer to do an uninformed choice and pick a service provider with a lower quality of sustainability performance or in other words from the ones who are dishonest. Consequently the purchases from LSPs with a lower quality of sustainability performance take the market share from the LSPs who provide a higher quality of sustainability performance. Thus the cost of dishonesty lies not only on the transport buyers who are cheated but it is also a social loss - driving legitimate distribution service providers out of existence. Figure 7.1 illustrates that in a situation of information asymmetry, a transport buyer will be tempted to



**Figure 7.1** Market share change according to variation of information asymmetry. Source: (Author, 2015)

select an unsustainable distribution service provider because actors are opaque about their quality of sustainability performance who might provide an apparent lower price. Therefore, this facilitates the growth of market share of the unsustainable distribution service provider at the

**Table 7.2** Sustainable and unsustainable performance indicators. Source: (Author, 2015)

<b>Sustainable performance</b>	<b>Unsustainable performance</b>
<p><b>Social</b></p> <ul style="list-style-type: none"> <li>• Appropriate working and resting driving times</li> <li>• Follow driver's union wage agreements</li> <li>• Adjust CSR policy to customer's demands</li> <li>• Good behavior on the road</li> <li>• Well trained driver for different road conditions</li> <li>• Fair competition</li> <li>• Correct tax payment</li> <li>• Speed compliance</li> <li>• No bribery to transport buyer</li> </ul>	<p><b>Social</b></p> <ul style="list-style-type: none"> <li>• Poor work/living conditions for drivers</li> <li>• Drivers live in the truck for long time without access to basic utilities</li> <li>• Drivers with a salary that they can't live on it</li> <li>• Cheating with driving and resting times (manipulation of tachometer indication)</li> <li>• Tired Drivers</li> <li>• Lack of CSR</li> <li>• Violation of safety regulations</li> <li>• Excessive speeding</li> <li>• Illegal cabotage</li> <li>• Unreasonable cheap services</li> <li>• Tax avoidance</li> <li>• LSP/hauliers perceived as criminals</li> <li>• Fuel stealing</li> <li>• Worsening health condition</li> </ul>
<p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>• Respect fuel type promise or use more bio fuel</li> <li>• Education in eco-driving</li> <li>• Ensuring a high fill rate and optimized road freight deliveries</li> <li>• Following security regulations</li> <li>• Plan the improvement of EURO standards of the engines</li> <li>• Follow the regulations for dangerous cargo</li> <li>• Following security regulations</li> <li>• Correct tires</li> <li>• Appropriate places for truck washing</li> </ul>	<p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>• Cheating with the standards of EURO engine used in trucks</li> <li>• Erroneous calculations of CO2 emissions</li> <li>• Erroneous calculations of other emissions (as NOx)</li> <li>• No regular technical control</li> <li>• No respect of security regulations for special cargo (hazard cargo)</li> </ul>

expense of the market share of the sustainable distribution service provider. This phenomenon in road freight distribution proves the consequence of information asymmetry in the market described by Akerlof (1970) and is discussed as well in (Sternberg et. al., 2015). On the other side, in a situation of lower information asymmetry, which is created by sustainable distribution service providers who have a transparent business model, transport buyers are able to make a more informed decision. It leads to a facilitation of the growth of the market share of sustainable distribution service providers at the expense of unsustainable ones.

This kind of market regulation force creates the requirement for a transport buyers to demand more transparency during their selection process and consequent service deliveries from distribution service providers. This will facilitate the process for transport buyers to understand more accurately what social and environmental conditions are present at lower levels in their outsourced distribution chain. Though, distribution service providers need to be more transparent with their operations and the quality of sustainability of those entities to whom they consequently outsource services, to be able to create a transparent relationship with transport buyer. The requirement of transparency along supply chain is argued as well by Svensson (2009). The knowledge of the sustainability conditions associated with a purchased service is of a high significance for a transport buyer as this determines the type of the purchased service and its value for the organization. The results of the study show that Elgiganten has a high interest to understand sustainability performance of their distribution services and supports the view of Carter and Rogers (2008) that customers want to understand what types of working conditions are associated with their partners and prevent ethical dilemmas. This study shows that Elgiganten strives to create and demands a transparent relationship described by Lamming et al. (2001), which can lead to shared knowledge, enhanced capabilities and collaborative abilities.

A higher sustainability transparency can help transport buyers to distinguish easier both sustainable and unsustainable distribution service providers, therefore lowering information asymmetry. This view is supported by empirical findings and theoretical model (fig 6.2) which argue that transparency is able to diminish the information asymmetry for a buyer

It is developed a list of performance indicators associated to a sustainable and non-sustainable LSP and haulier which can be found in table 7.2. This list complements the research of Carter and Jennings (2002, p.155); Ciliberti et al. (2008) which is focused just on sustainable performance indicators in road freight transport. Unsustainable performance indicators are not frequently discussed in research and thus were of interest in this study. This list is based on the empirical data gathered from the statements of the interviewees.

*Transparency is a possible direction for evolution with many promising benefits for sustainability implementation in current business models. Even though transparency can be expensive, those which ignore or oppose transparency will suffer (Tapscot & Ticoll, 2003). Transparency might offer a competitive advantage to distribution service providers who are first to embrace it.*

## **7.2 Recommendations for future research**

1. How can transport buyers construct their sustainability demands for road freight distribution service providers?
2. What are the challenges in implementing transparency in a large versus small logistics service provider?
3. What competitive advantage can be obtained through being a transparent distribution service provider?
4. A longitudinal study to explore the benefits of transparent distribution service providers for a transport buyer's procurement activity.
5. Explore the benefits of intensive authority and institutional control versus transparency in road freight distribution industry.
6. Explore LSPs' selection criteria for a haulier.
7. Explore the possibility of collaboration between transport buyer and distribution service provider to be able to improve transport planning and fill rates.

## 8 Conclusion

*This study has the goal to answer three research questions to be able to explore the value of sustainability transparency in the light of procurement activity of transport buyers. Author did an extensive literature review in the field of sustainability, transparency and road freight distribution as theoretical reference for the thesis. First research question is answered with a literature review, while the second and third research question is answered with the data from interviews with experts in road freight distribution. Two theoretical models are proposed to analyze the data for research question two and three.*

### ***Theoretical implications***

a) The first research question points out that transparency and sustainability are highly related terms as a transparent value chain can reveal the quality of sustainability performance of organizations' operations. There are presented two figures to illustrate how transparency diminishes along two outsourced distribution network set-ups.

b) The second research question explains that that due to a lack of sustainability monitoring from most of transport buyers on the execution of their deliveries, many opportunistic behaviors take place in relation to social and environmental sustainability. Thus transport buyers do not get what they expect. Additionally, due to a lack of sustainability monitoring, transport buyers cannot distinguish non-compliance and what are the differences in the quality of sustainability performance. The lack of monitoring increased the risk of exposure to social dilemmas, environmental damage and resulting penalties. One revelatory case has been presented which lists sustainability monitoring techniques of one of the few transport buyers in Sweden who performs extensive sustainability monitoring. It was found out that transparency is an important aspect for sustainability monitoring. Thus, it is one example of how it is possible to “walk the talk” in sustainability oriented purchases.

c) The third research question informs that there is a high variation of the quality of sustainability performance among LSPs and their hauliers. This variation starts with the ones considered even criminals on the market to the ones showing high sustainability performance. To illustrate better the differences of the quality of sustainability it is presented a table which includes a list of both sustainable and unsustainable performance which is further divided in social and environmental dimensions. A different level of awareness among transport buyers regarding quality differences and low transparency from distribution service providers creates an information asymmetry. Information asymmetry gives the opportunity for the dishonest market “bad market” to develop because of their ability to provide a lower price compared to an honest LSP/haulier. Thus, high information asymmetry regarding the quality of sustainability performance associated with distribution service providers drives out the legitimate business from the market. At the moment it can be stated that road freight distribution market is rather translucent than transparent from the



perspective of a transport buyer because of the several levels of a distribution chain which are rather obscure about their quality of sustainability performance.

### *Managerial implications*

a) First research question includes a figure which illustrates the variation of suitability transparency and helps a transport buyer to measure the current level of sustainability transparency in the outsourced distribution chain.

b) Second research question produces a list of sustainability monitoring techniques which can be used for benchmarking purposes. The results of this question informs transport managers/ transport buyers about the importance of sustainability monitoring of their distribution service transactions to be able to monitor not just the monetary cost but also non-monetary costs - as social and environmental ones. Insufficient monitoring activity on distribution service purchases can result in higher costs (both monetary and non-monetary) than anticipated.

c) Third research question produces a list of sustainable and unsustainable practices which can be used by a transport buyer during the negotiations, selection and monitoring of distribution services. It is argued about the necessity of a transparent relationship between a transport buyer and a LSP, thus a more than an arm's length relationship. In case a transport buyers opts for a transparent relationship with distribution service providers it may improve the transparency of sustainability information as transport buyers might be able to understand better the sustainability conditions associated with their purchases. Improved transparency will allow transport buyers to understand better which distribution service providers are striving the most to increase the performance of social and environmental sustainability.

### *Summary of results*

As a result, all three questions are answered and both theoretical and managerial implications are presented. The study is able to explain the value and the importance of sustainability transparency for a transport buyer as well the risks transport buyers are exposed when they cannot have transparency of the quality of sustainability performance. In addition, it is explained what is the effect on the society as a result of choosing a distribution service provider that does not provide sustainability transparency. Finally, it is argued that transport buyers require a better transparency of the activities of both logistics service providers and hauliers. Transparency can thus diminish exposure to social dilemmas, contribute to a better society and diminish environmental impact. Additional work can be done to explore in depth the findings.

### *Limitations*

There are three limitations to this study. First, the reliability of the data can be higher if there could be more interviewees representing transport buyers which could provide additional insights about their knowledge, experience and challenges and in procurement activity. Second, additional qualitative study could give a longer list of unsustainable practices performed by some distribution

service providers. Finally, this study gathered data from companies in one country and thus encompasses just some perspectives on global practices in road freight distribution.

## 9 References

### *Journals:*

- Akerlof, G. A. (1970). The market for "Lemons": Quality uncertainty and the market mechanism. *Quarterly Journal Of Economics*, 84(3), 488-500.
- Arvidsson, N., Woxenius, J., & Lamngård, C. (2013). Review of Road Hauliers Measures for Increasing Transport Efficiency and Sustainability in Urban Freight Distribution. *Transport Reviews*, 33(1).
- Bartley, T. (2007). Institutional Emergence in an Era of Globalization: The Rise of Transnational Private Regulation of Labor and Environmental Conditions. *American Journal of Sociology*, (2), 297.
- Björklund, M. (2005). *Purchasing Practices of Environmentally Preferable Transport Services: Guidance to Increased Shipper Considerations*, doctoral thesis, Lund University, Lund.
- Björklund, M., & Forslund, H. (2013). The inclusion of environmental performance in transport contracts. *Management of Environmental Quality: An International Journal*, 24(2), 214.
- Borglund, T., Frostenson, M., & Windell, K. (2010). *Increasing responsibility through transparency?: A study of the consequences of new guidelines for sustainability reporting by Swedish state-owned companies* (p. 24 s). Stockholm: Regeringskansliet.
- Carter, C. R., & Jennings, M. M. (2002). Logistics social responsibility: An integrative framework. *Journal of Business Logistics*, 23(1), 145-180.
- Carter, C., & Rogers, D. (2008). A framework of sustainable supply chain management: moving toward new theory. *International Journal of Physical Distribution & Logistics Management*, 38(5), 360-387.
- Charmaz, K. (2006). *Constructing grounded theory: a practical guide through qualitative analysis*. London: SAGE, 2006.
- Ciliberti, F., Pontrandolfo, P., & Scozzi, B. (2008). Logistics social responsibility: Standard adoption and practices in Italian companies. *International Journal of Production Economics*, 113(Research and Applications in E-Commerce and Third-Party Logistics Management).
- Cooney, A. (2010). Grounded theory. Choosing between Glaser and Strauss: an example. *Nurse Researcher*, 17(4), 18-28.
- Daymon, C., & Holloway, I. (2011). *Qualitative research methods in public relations and marketing communications*. New York: Routledge, 2011.

- Dhaliwal, D. S., Oliver Zhen, L., Tsang, A., & Yong George, Y. (2011). Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. *Accounting Review*, 86(1), 59-100.
- Egels-Zandén, N., Hulthén, K., & Wulff, G. (2014). Trade-offs in supply chain transparency: the case of Nudie Jeans Co. *Journal Of Cleaner Production*.
- Fernandez-Feijoo, B., Romero, S., & Ruiz, S. (2012). Transparent Information System for Sustainability. A Sectoral Analysis. *Procedia Technology*, 5(4th Conference of ENTERprise Information Systems - aligning technology, organizations and people (CENTERIS 2012), 31-39.
- Fernandez-Feijoo, B., Romero, S., & Ruiz, S. (2014). Effect of Stakeholders' Pressure on Transparency of Sustainability Reports within the GRI Framework. *Journal of Business Ethics*, 122(1), 53-63.
- Gustafsson, I. (2004). *Information for transparency in transport chains*. Karlskrona: School of Technoculture, Humanities and Planning, Division of Technoscience Studies, Blekinge Institute of Technology, 2004.
- Hahn, R., & Kühnen, M. (2013). Review: Determinants of sustainability reporting: a review of results, trends, theory, and opportunities in an expanding field of research. *Journal of Cleaner Production*, 595-21.
- Hansson, N. A., Göteborgs universitet, H. P., University of Gothenburg, S. P., Göteborgs universitet, H. P., University of Gothenburg, S. P., Göteborgs universitet, H. P., & University of Gothenburg, S. P. (2015). Supply chain transparency as a consumer or corporate tool: The case of Nudie Jeans Co. *Journal of Consumer Policy*.
- Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review*, 20(4), 986-1014.
- Hilal, N. (2008). Unintended effects of deregulation in the European Union: The case of road freight transport. *Sociologie Du Travail*, 50 (Supplement 1), e19-e29.
- Isaksson, K. A., Hüge-Brodin, M. A., Linköpings universitet, I. O., & Linköpings universitet, T. O. (2013). Understanding efficiencies behind logistics service providers green offerings. *Management Research Review*, 216.
- Jeschke, S. (2011). *Global Trends in Transport Routes and Goods Transport: Influence on Future International Loading Units*. 32-32.
- Kaynak, R. & Avci, S. B. (2012.) The impact of accountability, transparency, and ethical behavior on buyer trust among third party logistics service provider. *Ekev Academic Review*, 16(52), 339-360.

- Kitchin, T. (2003). Corporate social responsibility: A brand explanation. *Journal of Brand Management*, 10(4/5), 312.
- Kolk, A. (2008). Sustainability, accountability and corporate governance: exploring multinationals' reporting practices. *Business Strategy & The Environment (John Wiley & Sons, Inc)*, 17(1), 1-15.
- Kovács, G., & Spens, K. (2005). Abductive reasoning in logistics research. *International Journal of Physical Distribution & Logistics Management*, 35(2), 132-144.
- Kovács, G., & Spens, K. M. (2005). Abductive reasoning in logistics research. *International Journal Of Physical Distribution & Logistics Management*, 35(2), 132-144.
- Kummer, S., Dieplinger, M., & Fürst, E. (2014). Flagging out in road freight transport: a strategy to reduce corporate costs in a competitive environment. Results from a longitudinal study in Austria. *Journal of Transport Geography*, 36141-150.
- Lamming, R. C., Caldwell, N. D., Harrison, D. A., & Phillips, W. (2001). Transparency in Supply Relationships: Concept and Practice. *Journal of Supply Chain Management*, 37(4), 4-10.
- Lee, H. L. (2008). Embedding sustainability: lessons from the front line. *International Commerce Review -- ECR Journal*, 8(1), 10-20.
- Lozano, R., & Huisingh, D. (2011). Inter-linking issues and dimensions in sustainability reporting. *Journal Of Cleaner Production*, 1999-107.
- Mangan, J. (2012). *Global logistics and supply chain management*. New York: John Wiley & Sons, 2012.
- Martinsen, U. A., Björklund, M. A., Linköpings universitet, I. O., & Linköpings universitet, T. O. (2012). Matches and Gaps in the Green Logistics market. *International Journal Of Physical Distribution & Logistics Management*, 562.
- Martinsen, U. A., Hüge-Brodin, M. A., Linköpings universitet, I. O., & Linköpings universitet, T. O. (2014). Environmental practices as offerings and requirements in the logistics market. *Logistics Research*
- May, T. (2011). *Social research. [Elektronisk resurs]: issues, methods and process*. Maidenhead, Berkshire, England : McGraw Hill, Open University Press, 2011.
- Mol, A. P. (2013). Transparency and value chain sustainability. *Journal of Cleaner Production*.
- New, S. (2010). The Transparent Supply Chain. *Harvard Business Review*, 88(10), 76-82.
- Pålsson, H. , & Kovács, G. (2014). Reducing transportation emissions: A reaction to stakeholder pressure or a strategy to increase competitive advantage. *International Journal Of Physical Distribution And Logistics Management*, 44(4), 283-304.

- Quaak, L., Aalbers, T., & Goedee, J. (2007). Transparency of Corporate Social Responsibility in Dutch Breweries. *Journal of Business Ethics*, (3). 293.
- Savitz, A.W. and Weber, K. (2006), *The Triple Bottom Line*, Jossey-Bass, San Francisco, CA.
- Silverman, D. (2013). *Doing qualitative research*. Thousand Oaks, CA: Sage Publications, 2013.
- Stefansson, G. (2006). Collaborative logistics management and the role of third-party service providers. *International Journal of Physical Distribution & Logistics Management*, 36(2), 76-92.
- Svensson, G. (2009). The transparency of SCM ethics: Conceptual framework and empirical illustrations. *Supply Chain Management*, 14(4), 259-269.
- Tapscott, D., & Ticoll, D. (2003). *The naked corporation: How the age of transparency will revolutionize business*. New York: Free Press.
- Thorsell, T. (2015) *Sveriges Åkeriföretag presentation at Swedish Road Haulage Association*, Stockholm, Sweden.
- Van Marrewijk, M. (2003). Concepts and Definitions of CSR and Corporate Sustainability: Between Agency and Communion. *Journal of Business Ethics*, (2/3). 95.
- Weijers, S., Glöckner, H., & Pieters, R. (2012). Logistics service providers and sustainable physical distribution. *Logforum*, 8(2), 157-165.
- Williamson, O. E. (1981). The Economics of Organization: The Transaction Cost Approach. *American Journal of Sociology*, (3). 548.

### Websites:

- Bryant T. (2009) *Lecture on Research Methods at Leeds Beckett University*. Retrieved from <https://www.youtube.com/watch?v=fmWKf5L0mfA>. Viewed on May 2, 2015.
- Cushman D. (2014) *Open (for) business: how transparency can equal sustainability - and survival*. The Guardian. Retrieved from <http://www.theguardian.com/sustainable-business/2014/jun/05/open-business-transparency-sustainability-survival> Viewed on May 1, 2015.
- DHL (2009) *Delivering tomorrow. Customer Needs in 2020 and Beyond A Global Delphi Study*. Retrieved from [http://www.dpdhl.com/en/media\\_relations/media\\_library/documents/delphi\\_study\\_delivering\\_tomorrow\\_customer\\_needs.html](http://www.dpdhl.com/en/media_relations/media_library/documents/delphi_study_delivering_tomorrow_customer_needs.html) Viewed on May 3, 2015.
- DHL (2014) *Logistics Trend Radar. Delivering Insight Today. Creating Value Tomorrow*. Retrieved from [http://www.dhl.com/en/about\\_us/logistics\\_insights/dhl\\_trend\\_research/trendradar.html#.VV0J-vntmko](http://www.dhl.com/en/about_us/logistics_insights/dhl_trend_research/trendradar.html#.VV0J-vntmko) Viewed on May 5, 2015.

European Commission (2004) *Towards a Thematic Strategy on the Urban Environment (Brussels: Commission of the European Communities)*. Retrieved from <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52004DC0060> Viewed on May 27, 2015.

European Commission. Directorate-General for Environment. *Transport and Environment policy*. Retrieved from <http://ec.europa.eu/environment/air/transport/growth.htm>. Viewed on May 8, 2015.

European Commission. Directorate-General for Mobility and Transport. *Sustainable theme*. Retrieved from [http://ec.europa.eu/transport/themes/sustainable/index\\_en.htm](http://ec.europa.eu/transport/themes/sustainable/index_en.htm). Viewed on May 8, 2015.

Kassoy A. (2010) *No Sustainability Without Transparency!* Retrieved from <http://www.forbes.com/sites/csr/2010/06/18/no-sustainability-without-transparency/> Viewed on April 25, 2015.

Kiron D., Kruschwitz N., Haanaes L., Reeves M., Fuisz-Kehrbach S. (2015). *Joining forces: Collaboration and leadership for sustainability. MITSLOAN Management Review*. Retrieved from <http://sloanreview.mit.edu/projects/joining-forces/> Viewed on May 12, 2015.

Kiron D., Kruschwitz N., Rubel H., Reeves M., and Fuisz-Kehrbach S. (2013). *Sustainability's next frontier. Walking the talk on the sustainability issues that matter most*. Retrieved from <http://sloanreview.mit.edu/projects/sustainabilitys-next-frontier/>. Viewed on May 12, 2015.

Regeringskansliet (2002) *Sweden's National Strategy for Sustainable Development 2002*. Retrieved from <http://www.regeringen.se/contentassets/241b29f58e444c8f9940f96d75bdbfbc/engelsk-sammanfattning-av-skr.-200102172> Viewed on April 19, 2015.

Sternberg, H., Filipiak, M., Hofmann, E., & Hellström, D. (2015). *A study on trucking deregulation and cabotage in Scandinavia and beyond*. Cabotagestudien, (Version 1.0), 62-62. Retrieved April 28, 2015. Available from: <http://www.lu.se/lucat/user/21e91a8b349174cc52a0a5fe36d3db75>

Sveriges Television AB, SVT (2015) *400 trucks drive illegally in Sweden*. Retrieved from <http://www.svt.se/nyheter/inrikes/400-lastbilar-kor-olagligt-i-sverige> Viewed on March 1, 2015

Swedish Government. *Environmental and energy department*. Retrieved from <http://www.regeringen.se/rattsdokument/statens-offentliga-utredningar/2013/12/sou-201384/>. Viewed on August 15, 2015.

Swedish Government. *Environmental policy*. Retrieved from <https://sweden.se/nature/environmental-policy/>. Viewed on April 27, 2015.

The Economist. *Triple bottom line*. Retrieved from <http://www.economist.com/node/14301663>. Viewed on May 12, 2015.

Transport at a crossroads. *TERM 2008: indicators tracking transport and environment in the European Union*. Retrieved from <http://www.eea.europa.eu/publications/transport-at-a-crossroads>  
Viewed on April 15, 2015.

United Nations (1987) *The Brundlant Commission. Report of the World Commission on Environment and Development: Our Common Future*. Retrieved from <http://www.un-documents.net/our-common-future.pdf>



## 10 Appendix

### 1. Consent Form (open)

I, ....., agree to participate in master's thesis research study at  
Lund University

The purpose and nature of the study has been explained to me verbally.

I am participating voluntarily.

I give permission for my interview with Andrei Tarus to be tape-recorded

I understand that I can withdraw from the study, without repercussions, at any time, whether before  
it starts or while I am participating.

I understand that disguised extracts from my interview may be quoted in Andrei Tarus thesis if I  
give permission below:

(Please tick one box:)

I agree to quotation/publication of extracts from my interview

I do not agree to quotation/publication of extracts from my interview

Signature [Interviewee]..... Date.....

Signature [Interviewer] Andrei Tarus..... Date .....

## 2. Consent Form (anonymous)

I, ....., agree to participate in master's thesis research study at Lund University

The purpose and nature of the study has been explained to me verbally.

I am participating voluntarily.

I give permission for my interview with Andrei Tarus to be tape-recorded

I understand that I can withdraw from the study, without repercussions, at any time, whether before it starts or while I am participating.

I understand that anonymity will be ensured in the write-up by disguising my identity.

I understand that disguised extracts from my interview may be quoted in Andrei Tarus thesis if I give permission below:

(Please tick one box:)

I agree to quotation/publication of extracts from my interview

I do not agree to quotation/publication of extracts from my interview

Signature [Interviewee]..... Date.....

Signature [Interviewer] Andrei Tarus..... Date .....