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GREEN AGENDA AND SUSTAINABILITY IN FOLLOW UP AND EVALUATION STAGE OF PURCHASING OF LOGISTICS SERVICES: PERSPECTIVES FROM THE BRITISH SHIPPERS AND FORWARDERS

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Introduction

Traditionally, logistics decisions about purchasing logistics services have been driven by minimizing cost, maximizing profitability, and achieving customer service targets (Menon et al. 1998). As concepts of sustainability and green agenda were added to business objectives there has been an increased interest from companies in reducing or even eliminating impact of their products and operations on the environment (Nidumolu et al. 2009). In recent years, companies are under an increasing pressure to look at their logistics operations as there are several ways they may be a threat to the environment: impairing air quality, source of noise and vibration, cause of accidents, and an important contributor to climate change (McKinnon et al. 2015). As a result, a number of ways to make logistics sustainable and green were proposed and applied within the field (Halldórsson and Kovács 2010; Dey et al. 2011). There is a strong evidence that popularity of the outsourcing strategy of logistics services, which allows companies (shippers) to focus on its core competencies, leads to an increased reliance on the third-party logistics service providers (3PL, forwarders) for sustainable and green initiatives (Min 2013; Colicchia et al. 2013). On the other hand, forwarders only deliver services that they were contracted for, leaving the decisions about purchasing green logistics services with a low environmental impact with shippers (Wolf and Seuring 2010). A survey of shippers and forwarders by Björklund and Forslund (2013) suggested that environmental performance measurement systems were sparsely used by shippers to evaluate forwarders' performance. This indicates that evaluation of performance of logistics services is predominantly based on traditional objectives (i.e. price, quality, on-time and in-full) (Lammgård and Andersson 2014). Within this context, this paper investigates the role that green agenda and sustainability plays in follow up and evaluation stage of purchasing of logistics services and it is based on empirical evidence from the British shippers and forwarders.

Following this introduction, the authors' literature review provides an overview of the process of purchasing logistics services and related environmental concerns. Then the rationale of the current study is explained and the authors' specific objectives are set out. Next, the methodology employed by the authors is described. Then authors discuss the key messages from the research highlighting some of the main limitations and contributions of the paper.

Literature Review

Process of purchasing logistics services

Area of purchasing transport and logistics services is fairly under-researched with a limited number of articles available (Evangelista et al. 2013). A framework for purchasing 3PL services by SMEs was presented by Holter et al. (2008), which included such elements as: comparative bids; comparison of costs, services, and transit times; and supplier management. A more generalised process of

purchasing, which can be applied to purchasing of logistics services was presented by Weele (2009) and it is summarised in Figure 1. This paper follows stages proposed in the Weele's framework and offers a brief explanation of each stage below.

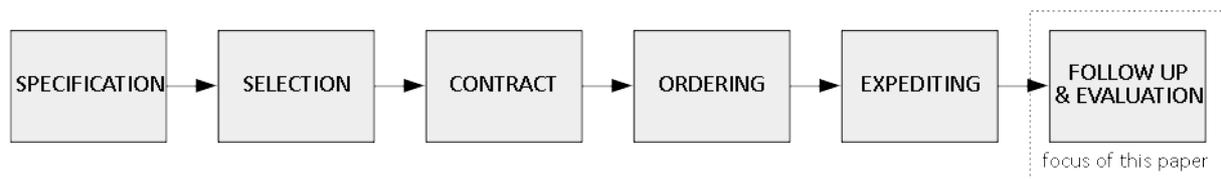


Figure 1: The purchasing process

Specification is the initial stage of the purchasing process in which order requirements in both functional and technical aspect are defined. At this stage shippers send out their request for proposal (RFP) to forwarders (3PLs), which may be pre-selected based on previous experiences, market surveys, and industry rankings (Qureshi et al. 2007). RFPs are highly standardised to allow for comparison between responses (Andersson and Norrman 2002). Supplier selection is interwoven with the specification process and includes “a preliminary selection of the most suitable suppliers by means of a tender and ranking procedure” (Selviaridis and Spring 2007). Supplier selection ends with negotiations, in which forwarder and shippers enter a dialogue on contractual details (Jané et al. 2006). According to Jané et al. (2006, p.27) logistics contracts focus mainly on technical, economic or operative aspects – “The parties’ main concern... is the negotiation of the price and the performance levels that the 3PL provider must achieve while rendering the services.” Logistics contracts have a relatively short duration, which leads to uncertainty on the side of the forwarders and may stifle innovation (Kacioui-Maurin et al. 2015). Ordering and expediting stages happen after the contract has been agreed and purchase orders for transportation or services are placed. Forwarders’ operation and execution of orders is then followed up and evaluated. At this last stage, on which this paper focuses, “it becomes clear whether the supplier can substantiate his promises about service” as outlined in the contract (Weele 2009, p.62). There is a little focus in the literature given to follow-up and evaluation stage and as such this paper attempts to fill this gap, with an emphasis on green and sustainability issues.

Process of purchasing of logistics services with a focus on green and sustainability was approached in the literature from three perspectives: shippers (Large et al. 2013), forwarders (Rossi et al. 2013), and both in a dyadic approach (Sallnäs 2016). However, both shippers and forwarders may have multiple relationships in the supply chain that extend beyond dyadic relationships (Panayides and So 2005) and as such need to be investigated in a broader context. This broader context approach to investigating role of shippers and forwarders in procurement of green and sustainable logistics services was applied by Jazayrli (2017). As his paper focussed only on three stages of the aforementioned purchasing process: specification (RFP), negotiations, and contracting, this paper explores perspectives of shippers and forwarders on green and sustainability in the little explored area of follow-up and evaluation.

Environmental concerns related to purchasing logistics services

Green procurement is defined as procurement of “goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured” (European Commission 2012). Recent literature on purchasing of green and sustainable logistics services presents a tension between

attitudes of shippers and forwarders on this topic. For example, Large et al. (2013) suggests that shippers consider sustainability to be high on their agenda during the purchasing phase, but at the same time they're not engaging with their selected forwarders in green projects. It is asserted that shippers influence plays a minor role on green conduct of the forwarders, which is in opposition to the view presented by Carter and Dresner (2001). According to Kudla and Klaas-Wissing (2012) buyers on the shippers' side "barely... integrated logistics services within their sustainability management", while those shippers who made attempts to integrate sustainability into their contracts did not consider how these issues should be measured or how the poor compliance should be handled (Björklund and Forslund 2013). This is the context within which the research objectives of this paper were developed.

Development of research objectives

To gain some insights into role that green agenda and sustainability plays in follow up and evaluation stage of purchasing of logistics services, the authors conducted interviews with managers representing two groups: shippers and forwarders. This approach adopts the lesson of Geertz (1973, p.5) who stated that "if you want to understand what a science is, you should look in the first instance not at its theories or its findings ...you should look at what the practitioners do".

Based on the above the specific objectives of this research study are:

1. To develop new insights into the practice of purchasing of logistics services, with a focus on follow up and evaluation stage and a role played by green agenda and sustainability.
2. To compare practitioner perspectives with the body of academic knowledge;

Methodology

Data collection

The interview sample comprised of nine managers, five representing shippers (manufacturers and retailers) and four representing forwarders (3PLs), all based in Britain. Seeking insight into research questions from practitioners representing three main echelons of the supply chain mirrors the approach used by Lummus et al. (2001). Table 1 presents some of the interviewees characteristics.

Company code S=shipper; F=forwarder; RET=retailer; 3PL=logistics; MAN=manufacturer;	Industry	Goods/services offered	Company presence
S-RET-1	Retailer	Non-food goods	UK
S-RET-2	Retailer	Clothes, food, home	Global
S-MAN-1	Manufacturer	Dispensing equipment	Global
S-MAN-2	Manufacturer	Agri-food	UK and Europe
S-MAN-3	Manufacturer	Furniture	UK and Europe
F-3PL-1	Logistics	Logistics services	Global
F-3PL-2	Logistics	Logistics services	Global
F-3PL-3	Logistics	Logistics services	Global
F-3PL-4	Logistics	Logistics services	Global

Table 1: Interviewee characteristics

This sample of companies handles a wide variety of product groups thus enabling the authors to generate a breadth of perspectives. Individual respondents were senior managers with a responsibility for purchasing logistics services on the shippers' side, and a responsibility to oversee the fulfilment of contracts on the forwarders side. Each person was sent an indication of topics that will be discussed to consider for their upcoming interview. The research then involved carrying out focussed (i.e. semi-structured) interviews with each respondent. Interviews were recorded and transcribed.

Data analysis

Regarding interview transcript analysis, Easterby-Smith et al. (2008) describe two approaches: content analysis and grounded analysis. The overall approach in this study involved a combination of both methods, thus integrating their strengths and mitigating their shortcomings. The transcript analysis employed by the authors (as shown in Figure 2) involved four main stages in distilling the raw transcript data into information that was analysed based on comparing and contrasting the main issues set out by respondents.

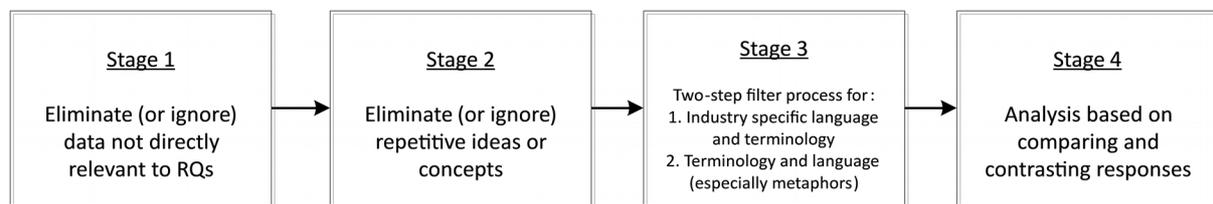


Figure 2: Transcript Analysis Process

Discussion of results

Shippers perspective

All shippers indicated that green agenda and sustainability was important for their business and was defined in terms of: caring for the environment, minimising waste, limiting CO2 emissions, green mile, fuel efficiency, and minimising power and water usage. For shipper S-RET-2 green procurement meant "going beyond carrying just for the environment" and he included in it people welfare - "how people are treated and protected, example being modern day slavery".

There is a divergence of practice between manufactures and retailers in regard to addressing environmental concerns during the initial stages of purchasing process. S-MAN-1 suggested that any such concerns were driven by their upstream clients, which led to pragmatism in this area -"we were looking for solutions that we could sell to our customer, that we could put on a presentation slide". S-MAN-2 doesn't specifically ask about anything sustainability related, as in his view it may limit a response to tender and requires only general statements about corporate social responsibility (CSR) policies. The primary focus of S-MAN-2 and S-MAN-3 is around filling the trucks and minimising empty runs. Conversely, retailers are very up front about their environmental concerns. Both retailers request details of "any environmental policies, standards and targets for green levies, CO2 emissions" (S-RET-1) and work under the assumption that "a participant in the tender, especially in the contractual stage, is committing to green principles that we're operating under" (S-RET-2).

Follow-up and evaluation stage is very important to all shippers, and they carefully follow up on each element that was agreed within the contract. Some of the metrics that are monitored include: fuel

consumption, mileage (mpg – miles per gallon), trailer utilisation and maximising fill, fleet level, CO2 emissions, driver behaviour (road safety), water efficiency, and energy use. S-MAN-1 suggested that although the primary focus of follow-up and evaluation is cost control, “you can see some environmental benefits as well – lowering costs and sustainability is closely linked”. S-MAN-3 summarises the importance of monitoring driver behaviour with telematics – “drivers driving in the best way is a benefit to the environment”. In addition to using metrics, both retailers also follow-up with visits to physical facilities of the forwarders to “make sure they don’t pose any risk to people and environment” (S-RET-2).

There is a breadth of practices among shippers when it comes to specific processes to handle poor compliance of forwarders in area of green agenda and sustainability. Manufacturers rely solely on periodic reviews with the forwarders “where all aspects of performance are evaluated, including any green and sustainability issues” (S-MAN-3). Retailers make use of periodic reviews, but also have “internal audit teams, who make sure that contract terms including any green and sustainability obligations are complied with” (S-RET-1). All respondents indicated that a forwarder who was failing in regard to their contractually agreed green and sustainability obligations would be challenged, even if they were exceptional on all other metrics – “we would seriously consider if they are a right company to take our business forward” (S-MAN-3), “green issues cannot be compromised or overlooked” (S-RET-1). Retailer S-RET-2 suggested that while contractually “agreed... measurable sustainability metrics can be followed up quite easily” a problem arises when “you’ve engaged with a company believing that they’re sharing your green and sustainability principles” and they aren’t, “it would be tricky to manage this disconnect”.

Forwarders perspective

Green agenda and sustainability was important for all the forwarders and was defined in terms of: their CSR policy, CO2 emissions control, carbon footprint, and fuel efficiency.

All forwarders indicated a wide range of approaches to addressing environmental concerns during the initial stages of purchasing process – “it varies between the customers” (F-3PL-2). Forwarder F-3PL-3 indicated that many of their customers “are interested in how to save the environment and there are specific questions [in the tender] about what we’re doing in terms of our environmental agenda”. This sentiment is shared by F-3PL-2: “it depends on how much a customer is interested in these green issues, or are they just interested in our services and prices”. Green agenda and sustainability questions in tender documents are summed up by F-3PL-1: “Somewhere in the request there is that question... it’s still not the first question, but probably the last one”.

Follow-up and evaluation stage is very important to all forwarders, but they unanimously agree that it’s rare that they’re asked for any direct service level agreement (SLA) or KPI linked to environmental issue. Costs and operational service levels “are higher on [customers’] agenda, before any green points are raised” (F-3PL-4). However, some operational metrics are indirectly related to the green and sustainability issues. For example, a better utilisation of the shipping units (i.e. container or truck) leads to “less impact on the environment” and in this case although a decision is cost driven “any green benefits are an add-on” (F-3PL-1). Forwarders admit that green and sustainability issues are rarely raised during performance reviews: “Not all our customers evaluate environmental issues, but we do get a couple who ask” (F-3PL-3). Measurable sustainability metrics that forwarders are asked about include: carbon footprint, CO2 emissions, fuel consumption, use of energy.

According to forwarders the shippers don't have any specific process to handle poor compliance in the area of green agenda and sustainability – “I've never come across any process like that with our customers” (F-3PL-2). Forwarder F-3PL-1 notes – “I've never heard of any contract that's been lost on green and sustainability issues” – and alludes that commercial and quality team on their side “would spin the data” anyway. “Maybe we're using more CO2 than we agreed or planned, but you – Mr Customer – are asking us to do some more emergency airfreight shipments” concludes F-3PL-1.

An apparent lack of environmental scrutiny on the shippers' side doesn't impede some forwarders from their own sustainability efforts. F-3PL-3 aims to be a leader in this area and their regular internal communications include reports on how they're “doing in terms of green and environmental targets, CO2 saved, wastage, recycling, etc.” with all sites reporting these metrics to a centralised unit.

Bringing it all together

Follow up and evaluation plays an important role within the contract for both shippers and forwarders. Although shippers indicated that green and sustainability concerns are high on their agendas, it is not apparent in discussions with the forwarders about how they're evaluated. Nevertheless, both groups indicated a growing importance of measurable metrics linked with sustainability such as CO2 emissions and fuel usage. Additionally, both groups recognise a positive link between cost saving and green and sustainability. Despite these advances, a typical focus on price and service levels in purchasing of logistics services seem to remain, which corroborates with earlier findings (Wolf and Seuring 2010; Lamngård and Andersson 2014).

Research limitations and future work

In reflecting on the validity and reliability of this research, the four qualitative criteria recommended by Lincoln and Guba (1985) have been adopted – credibility, transferability, dependability and confirmability. The credibility criterion involves establishing that the results of qualitative research are credible from the perspective of the participants in the research. Whilst there is room for improvement in this area in the research described in this paper, this issue was addressed to some extent by inviting interviewees to comment on summaries of the research findings. The small sample used in the current research is not intended to be definitive and transferability is difficult. However, use of the focussed interview methodology enabled some potentially useful contributions to be developed inductively. The process of relating the empirical findings back to the literature helped in this regard. The next stage of the work is to empirically test these findings using a larger survey of firms. Dependability emphasizes the need for the researcher to account for the changing context within which research occurs. In this regard, the authors fully documented the whole focused interview process, from design through to analysis and feedback. Confirmability refers to the degree to which the results could be confirmed by others. Future work should build on the findings of this research using a combined inductive/deductive approach based on methodological triangulation.

Conclusions

The first objective of the research described in this paper was to develop new insights into the practice of purchasing of logistics services, with a focus on follow up and evaluation stage and a role played by green agenda and sustainability. To this end, the views of practitioners in manufacturing, third party logistics and retail have been solicited through a series of focussed interviews. The findings suggest that although green agenda and sustainability issues grow in importance in the initial stage of purchasing logistics services, they have a minimal impact during follow-up and evaluation

stage. This provides some insights into the second objective of this piece of research and opens up some potentially fruitful avenues for future research.

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