Purchasing Consortia of Transportation Services in Humanitarian Logistics

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Abstract

Purpose - The thesis aims to provide a framework of measuring the performance of purchasing consortia humanitarian sector. The performance measurement seeks to identify the competitive advantages of being a member of purchasing consortia during purchasing activities of transportation services.

Design/methodology/approach – The research is based on a qualitative study with deductive and explanatory approach. Semi-structured interviews with experts within the humanitarian sector have been conducted to gain necessary and credible data.

Findings – It has been identified that purchasing consortia do not mutually operate physical purchasing activities. However, the consortia performance measurement framework, derived from the resource-based view, illustrates that being a member generates the capabilities of decreased purchasing complexity, learning capabilities and capacity sharing. These capabilities have a significant impact on the purchasing process for transportation services and lead to the competitive advantages of (1) having access to extensive knowledge, (2) reducing operational efforts, (3) reducing lead-time and (4) improving learning procedures.

Research limitations/implications – As the literature on humanitarian logistics is still in its infancy, further applications from the commercial sector were considered to strengthen the results of the framework.

Practical implications - The extent of collaboration of purchasing consortia indicates that managers of HOs are able to gain significant expertise and offers advantageous opportunities in handling purchasing activities in humanitarian logistics. The implications cover strategic as well as operational issues.

Originality/value – The thesis gives an insight about practical purchasing operations of existing consortia and detects previously unknown aspects within the literature of humanitarian logistics.
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<tr>
<td>HLA</td>
<td>Humanitarian Logistics Association</td>
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<td>IAPB</td>
<td>Inter-Agency for the Prevention of Blindness</td>
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<td>IAPG</td>
<td>Inter-Agency Procurement Group</td>
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<td>IASC</td>
<td>Inter-Agency Standing Committee</td>
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<td>ICEH</td>
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<td>ICRC</td>
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<td>IFRC</td>
<td>International Federation of Red Cross and Red Crescent Societies</td>
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<td>IOM</td>
<td>International Organization for Migration</td>
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<td>MAG</td>
<td>Mines Advisory Group</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>OHCHR</td>
<td>Officer of the High Commissioner for Human Rights</td>
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<tr>
<td>RBV</td>
<td>Resource-Based View</td>
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<tr>
<td>SLA</td>
<td>Service Level Agreement</td>
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<td>TQM</td>
<td>Total Quality Management</td>
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<td>UNHAS</td>
<td>United Nations Humanitarian Air Service</td>
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<td>UNPCDC</td>
<td>United Nations Procurement Capacity Distribution Centre</td>
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<td>UNHRD</td>
<td>United Nations Humanitarian Response Depot</td>
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<td>WFP</td>
<td>World Food Programme</td>
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1 Introduction

The first chapter will provide an introduction to the background and purpose, the research subject, the problem definition, the research questions and explain how this thesis is constructed. The information allows the reader to place the subject into the context of humanitarian logistics.

1.1 Background Information

The international disaster database recorded increasing occurrences of natural disasters within the last decades (EM-DAT, 2012). In 2010, worldwide a total of 385 natural disasters have been recorded, 297,000 people were killed, over 217.0 million others were affected and they caused US$ 123.9 billion of economic damages (Guha-Sapir et al. 2011). The first half of 2011 exceeded this number with an estimated damage of US$ 265.0 billion and therefore became the most expensive year to date (Able et al. 2011). Significant disasters that influenced the previous statistics were the earthquakes in Haiti (2010), Chile (2010) and Japan (2011) as well as the flood in China (2010). Those natural disasters are examples where humanitarian logistics had to be reinforced enormously. The demand of resources is unpredictable and the amount can vary according to the extent of the disaster. The essential need for handling humanitarian logistics is to minimize the delivery time with a maximized efficiency of supply and standardized costs simultaneously.

The expenditures for disaster relief operations are estimated to be around 80 per cent related to logistical operations (van Wassenhove, 2006; Trunick, 2005). The occurrence of agility, adaptability and alignment of supply chains relies on logistics and the executions of responsive actions towards natural and man-made disasters. As a result, humanitarian logistics and supply chain management is becoming more emphasized by the literature. Most of the articles have been published in the 21st century that provide a core body of knowledge but also track down further potential of research (Overstreet et al. 2011). The ‘Journal of Humanitarian Logistics and Supply Chain Management’ established in 2011 forms an active and clear overview in a collective database of research studies. These aspects prove that research field of Humanitarian Logistics is still in its infancy and is in need for further studies.

One specific field is the coordination of inter-agency collaboration towards purchasing and supply issues (Kovács & Spens, 2011a). The development towards those strategic collaborations can be recognized in the commercial sector as well with the most recent business agreement between General Motors and Peugeot (BBC, 2012). This leads directly to higher complexity of management operations which is also adaptable to the humanitarian sector. Humanitarian logistics becomes more complex due to the fact that the amount of humanitarian organizations (HOs), commercial companies (e.g. UPS, DHL), governments, military and other individuals steadily increase (Besiou, Stapleton & van Wassenhove, 2011). Particularly, HOs take over a significant role in the context of providing humanitarian aid. The Global Humanitarian Platform emphasized the need of mutual coordination in a meeting in 2006 and announced upcoming collaborations in the humanitarian sector (Global Humanitarian Platform, 2006). Recent trends prove that this outlook happened through a development towards inter-agency networks (Kovács & Spens, 2011b). These networks consist of collaborations between several HOs such as the Inter-Agency Procurement Group (IAPG) which is the first purchasing consortia
considered for the research. Furthermore, in 2006, the UN began to reform efforts to increase capacity, capability, predictability, accountability and equity in the humanitarian environment (UN, 2006; UN, 2008). The reforms entailed the implementation of several cluster approaches that strengthened these aims. One of the cluster approach, named the Logistics Cluster represents the second purchasing consortia for the research.

1.2 Problem Statement

According to the humanitarian platform, the development towards inter-agency consortia seeks to strengthen the coordination in order to guarantee supply in the best possible manner (Global Humanitarian Platform, 2006). Furthermore, the UN stated that the initiatives of the cluster approaches are in place (UN, 2009). The advantages and improvements triggered by purchasing consortia are hard to measure. The literature provides various analytical or conceptual approaches to measure consortia performance in the commercial sector (Arino, 2003; Lunnan & Haugland, 2008)

However, consortia within the humanitarian sector act in a different business environment. Therefore, further investigations need to be made to estimate the performance and to clarify if the transformation and trend generates valuable competitive advantages for HOs involved. The impact of interdependent relationships needs to be analyzed if the collaborations generate capabilities that affect purchasing operations and enhance the execution of humanitarian aid. Particularly, the purchasing of transportation services takes over a major role. It can be considered as an area with large potential. Firstly, it is the second largest cost factor after employee expenses (Pedraza Martinez, 2010). Secondly, the transportation determines the lead time. The lead-time is one of the crucial aspects that have priority in humanitarian logistics in order to approach disaster areas in a reasonable timeframe.

Within the purchasing process, it is necessary to enlighten the way of approaching commercial logistics providers and how these providers interact with sub-suppliers. It needs to be investigated if the collaborations affect the performance on operational levels and simplify humanitarian supply chains. On top of the operational insights, the impact on HOs’ expenditures for transportation plays an important role as well. Regarding economies of scale, the aggregate purchase of transportation can lead to lower transportation rate offers from commercial logistics providers. However, the amount of savings for HOs is unknown whether it allows exploiting donations in a more efficient manner or not. These incentives give the opportunity of providing a useful comprehension and overview about consortia.

1.3 Purpose of the Thesis

The thesis aims to provide a framework of measuring the performance of purchasing consortia. The performance measurement seeks to identify the competitive advantages of being a member. The investigation will identify the most valuable resources of purchasing consortia and how they enable to generate capabilities that affect the purchasing process of transportation services. The thesis will clarify how HOs operate aggregate purchasing. The roles and responsibilities of individual HOs, purchasing consortia and commercial logistics providers involved will be outlined to illustrate the subsequent stages of the purchasing process. The outcome seeks to identify if purchasing consortia are managed operational effectively and to what extent they support the purchasing of transportation services. Additionally, the thesis tries to track down occurring problems
and obstacles of current purchasing consortia. The following step is to discuss further potentials of collaborating purchasing consortia and different possibilities of working collaboratively in order to detect possible scenarios for improvements. Deriving the information from the background information and problem statement, the following research questions came forward:

1. **How do purchasing consortia collaborate within the purchasing process of transportation services in humanitarian aid?**
   a. Who are the participants within the purchasing process of consortia?
   b. How do consortia approach commercial logistics providers?

2. **How can purchasing consortia constitute competitive advantages for members?**
   a. What are the major important resources of consortia?
   b. How can consortia enhance purchasing capabilities?
   c. How is it possible to measure the competitive advantages?

### 1.4 Delimitation

Thomas (2004) illustrates the humanitarian supply chain with the subsequent stages showed in Figure 1. Purchasing activities that are consistent with the purchasing process by van Weele (2010) are the procurement, transportation execution and the performance evaluation stage.

![Figure 1: The humanitarian supply chain (Thomas, 2004)](image)

The activities will particularly enlighten the purchasing process of transportation services. Physical humanitarian supplies such as blankets or aid kits are excluded within the research. There will be no specific delimitation regarding the disaster management cycle by Tomasin & van Wassenhove (2009) or the different types of disasters outlined by van Wassenhove (2006). The importance of purchasing transportation services for consortia comes forward in all phases of immediate response, rehabilitation, mitigations and preparedness as well as in all types of natural and man-made disasters.

Finally, the thesis will be conducted within a 5-months timeframe. That entails that ongoing or frequent observations of the consortia will not be considered and the conclusion of the performance is based on unique research.

### 1.5 Method

An explanatory research will be conducted with a deductive approach in a qualitative study to investigate the purpose statement in the beginning. Primary research tools will be semi structured interviews with selected people of expertise that are able to contribute a qualitative information source to answer the stated research questions in the beginning. These include members and partners of the purchasing consortia such as the IAPG and Logistics Cluster. At first there has been a structure of academic literature in the form of a framework in where most important aspects regarding this topic come forward.
1.6 Disposition

The first chapter will provide an introduction to the background and purpose, the research subject, the problem definition, the research questions and explain how this thesis is constructed. The information allows the reader to place the subject into the context of humanitarian logistics.

The second chapter is the theoretical framework that explains the purchasing process with a specific focus on services. Prosperities from consortia of the commercial sector will be introduced and related to the third sector. Following, the resource based-view will be applied to consortia and connected it to the purchasing process for a conceptual approach of measuring the purchasing consortia performance.

The third chapter explains how the research will be conducted. This is dependent on the research topic. Terms like the approach, methods and techniques will come forward to gain the necessary information to conduct the research and eventually answer the research questions. Gathering information can be done by primary research, the collection of secondary data and literature.

The fourth chapter represents the analysis of purchasing consortia after gathering relevant information through primary research. The theoretical framework will be linked to the primary data. The most important resources, capabilities and their creation of value for consortia will be illustrated. The findings will be connected to the resource-based view and integrated in the conceptual approach to identify the purchasing consortia performance and its competitive advantages.

The fifth chapter sums up the findings with a conclusion and discussion. The purpose and aim of the paper will be rehearsed in order to have suitable answers to the research questions. It will revise the findings and link them to the theoretical framework by embedding the results into the resource-based view from the literature. The conclusion will be connected to possible future scenarios in purchasing consortia within the humanitarian sector. Further, implication for managers as well as an indication for further research will be presented.

1.7 Definitions

Purchasing

The purchasing function has traditionally been considered as a process of buying. The literature provides different concepts and terms in the commercial sector (Rozemeijer, van Weele & Weggeman, 2003; Handfield et al., 2011; Sollish & Semanik, 2011) and lately also for the humanitarian sector (Falasca & Zobel, 2011). Common terms are procurement, sourcing, purchasing or supply management. The thesis will use the term `purchasing` as it covers the entire process of activities according to van Weele (2010). For a better comprehension of the term, the following definition of purchasing will be used:

"The management of the company’s external resources in such way that the supply of all goods, services, capabilities and knowledge which are necessary for running maintaining and managing the company’s primary and support activities is secured at the most favorable conditions (van Weele, 2010; p.8)."
Consortia

Consortia are a form of collaboration and inter-organizational commitment through a formal agreement, sometimes under contract, for companies to collaborate and act jointly (Hooley, Piercy and Nicoulaud, 2011). The thesis will use the term consortia to denote the meaning of partnerships within humanitarian aid.

“[A consortium] links specific facets of the businesses of two or more firms. At its core, this link is a trading partnership that enhances the effectiveness of the competitive strategies of the participating firms by providing for the mutually beneficial trade of technologies, skills, or products based upon them (Yoshino & Rangan, 1995; p. 4) [Word paraphrased].”

In more detail, the defining three necessary and sufficient characteristics related to consortia are (1) two or more companies collaborate to achieve agreed goals while remaining independently; (2) sharing the benefits and controlling over the performance of distributed tasks; and (3) the members contribute on an ongoing basis to certain strategic areas such as technology sharing, marketing or product development (Yoshino & Rangan, 1995; Taylor, 2005).

Purchasing Consortia

A combination of the terms of ´purchasing´ and ´consortia´ leads to the following definition:

“A collaborative arrangement under which two or more organizations combine their requirements for a specified range of goods and services to gain price, design, supply availability and assurance benefits resulting from greater volumes of purchase (Lysons & Farrington, 2006; p. 420)”
2 Consortia and Mutual Purchasing of Transportation Services

The second chapter is the theoretical framework that explains the purchasing process with a specific focus on services. Prosperities from consortia of the commercial sector will be introduced and related to the third sector. Following, the resource based-view will be applied to consortia and connected it to the purchasing process for a conceptual approach of measuring the purchasing consortia performance.

2.1 The Purchasing Function

Organizations seek to exploit their supply chains for a competitive advantage. The complexity of increasing customer value, improving performance and reducing costs simultaneously increases the intension towards purchasing (Monczka, Trent & Handfield, 2002). The development of purchasing has moved towards an integrative function of a firm, i.e. the purchasing strategy is fully consistent with the company’s strategy (Reck & Long, 1998). The acknowledgment of the strategic aim of efficient purchasing has an emphasis on purchasing processes rather than on products (Lysons & Farrington, 2006). This assumption is applicable to the advanced stage of purchasing, named performance-centered purchasing. It involves best product management methods and uses an integrated methodology to manage relationships and processes (Stannack & Jones, 1996).

2.1.1 Purchasing as a Process

A process consists of sub-processes or stages that aim to achieve an output. The purchasing output is the acquisition of supplies through a sequential chain of events (Lysons & Farrington, 2006). Van Weele (2010) illustrates the main activities of purchasing in a sequential pattern of six actions (Figure 2).

![Purchasing process diagram](image)

Figure 2: The purchasing process (van Weele, 2010)

The first three stages have a tactical character that takes place on strategic levels. The specification and selection of suppliers has to be performed carefully to ensure that the quality and service level will meet the requirements in the upcoming stages on operational levels. Therefore, these stages focus more on a long-term perspective. In case of purchasing transportation services, for instance, it is common to establish blanket orders
that will be applied for a specific time frame including various commercial agreements. Functional activities carried out may encompass market research, commodity analysis or negotiations (Monczka et al., 2002). Specifications are a statement of attributes of a product or service (BSI, 2005). The purpose of specifications is to detect fitness for purpose or use and to communicate the requirements to potential suppliers (Lysons & Farrington, 2006). Holter et al. (2008) indicate to gather requirements from all stakeholders and incorporate them into a standard operating procedure for transportation service that the provider will have to commit. Here, the broader term of purchasing management comes into play. Managers have to judge if these procedures and agreements achieve strategic fit and are sufficient for doing business together. The management has the function to coordinate and align them in order to create consistency with the business strategy (van Weele, 2010). Technical properties as well as the characteristics and the scope of the products and services will be defined. The questions towards desired quality, quantities and frequency will be clarified to establish a standard level that is coherent with functional specifications. The transportation services in that context have changed within the last decades from conventional transportation services to contract services or multimodal services provided by third party logistics providers (3PL) that offer integrative logistics solutions (Razzaque & Sheng, 1998). Jané & de Ochoa (2006) point out that those providers have to have extensive knowledge about physical operations of carriage and loading as well as required documents for this type of transaction. Further duties encompass national and international rules and regulations that establish the conditions, requirements, restrictions and standards that apply to the transportation services provided.

The supplier selection assures an adequate base that has prequalified and seems to be capable of delivering the goods or executing the desired services. Other critical issues that have to be considered are the relationship size, the use of international suppliers, countertrade requirements and social objectives (Monczka et al., 2002). During the stage of contracting, the suppliers will be approached to negotiate prices, legal aspects and all sorts of commercial conditions (van Weele, 2010). The prerequisite from the buyer-side is to prepare upcoming questions and have someone with expertise in the field of negotiating. Another common procedure is the application of tendering. Capable suppliers will be invited to submit a tender on a spreadsheet with prices, rates, and other commercial conditions required (Lysons & Farrington, 2006). Holter et al. (2008) advise to commoditize required transportation services by applying a specific quotation format that makes potential suppliers comparable. They further state that this increasing scope for differentiating services enhances the focal company’s purchasing power.

Once these stages have been finalized, the following three stages are relevant for the daily business to ensure efficient operations. The buyer is able to analyze the actual performance and can estimate if the previous stages have been performed effectively. Ideally, the supplier has been approved is suitable to meet the expectations. In practical, it is not a single department that fulfills all related tasks and duties. For instance, the evaluation stage can be operated by a different departments who seem to be most appropriate for judging a supplier’s performance. The ordering requests should be executed on a standard operating procedure to achieve efficient purchase. However, the complexities outlined by Overstreet et al. (2011) such as demand fluctuations, hinder to implement these standardized procedures in the humanitarian sector. Therefore, the ordering requests might vary and differ depending on the situation. The interaction can happen through digital interfaces where the buyer and supplier communicate and interact with
each other. During the expedition of delivering the goods, the focal firm has no direct influence but takes over a monitoring and control function in order to secure the supply (van Weele, 2010). The supplier invoices the products or the service after the fulfillment.

The evaluation stage assists in deciding which suppliers should be approached for specific orders (Lysons & Farrington, 2006). Moreover, it provides an understanding of the highest-quality suppliers and indicates potential for improvements (Harrington, Lambert & Christopher, 1991). The buyer evaluates the performance of the supplier to estimate if the product or service meets the requirements (van Weele, 2010). This can happen through the implementation of scorecards. A scorecard collects objective measurements of performance and indicates the supplier’s conformance to requirements (Lysons & Farrington, 2006). Regarding, transportation services, Holter et al. (2008) emphasized the liability of transit times and identified the two metrics of (1) per cent of deliveries made within the pre-agreed transit time and (2) average length of delays for any late containers.

2.1.2 Delimitation of Purchasing Services

A service can be characterized as a process consisting of a series of tangible activities that are operated on the interaction between customer and supplier, or tangible resources that are provided as a bundle of services to develop integrated solutions for a customer (Grönross, 2000). Furthermore, a service provision has (1) heterogeneous prosperities, (2) cannot be stored and is (3) contractual based on a service level agreement (SLA), that specifies the costs as well as the service and quality level (van Weele, 2010). According to the classification of services by Wynstra, Axelsson & van der Falk (2006), a plain execution of transportation without any modifications of the goods can be defined as a component service. An example could be the luggage handling at the airport for an airline company. In the humanitarian sector, the component service can be extended with additional services such as assortments of first-aid kits.

Axelsson & Wynstra (2002) make the assumption that the stages of the purchasing process become more challenging when buying services. They claim that the stages differ in terms of time consumption, the level of detail the stages are carried out, the type of information exchanged between supplier and buyer and the departments being involved. There are several reasons for this challenge. The buyer is not able to proceed an evaluation of the service in advance which complexes the supplier selection. Service costs are hard to quantify and therefore make the value gained hard to assess. Plus, the prediction of required capacity, human resources and the environment is associated with difficulties (van der Valk & Rozemeijer, 2009). As a result, a solid understanding of the buyer’s business processes is essential in order to be able to provide the transportation service in an effective manner (van Weele, 2010).

The increasing complexity of purchasing service led to an extended version of the purchasing process according to van der Valk & Rozemeijer (2009). Two additional stages of request for information and detailed specification are implemented between specifying and selecting suppliers (Figure 3). The incentive is that the buyer needs to assure that specifications have been accurate and use additional information to judge and evaluate the reliability and quality of the service. The assurance is given by the close interaction between the internal client and the service buyer who mutually determine the SLA in advance. Van der Valk & Rozemeijer (2009) point out that through this, the
company forces itself to be ahead on the service requirements. The extension enables transcending the challenge and complexity of “specifying the service, defining the specific content of a SLA and evaluating performance” (van der Valk & Rozemeijer, 2009, p. 6).

![Figure 3: The extended purchasing process for services (van Weele, 2010; van der Valk & Rozemeijer, 2009)](image)

### 2.2 Purchasing Consortia

#### 2.2.1 Consortia in the Commercial Sector

The establishment of consortia has become prioritized on the strategic level in order to gain competitive advantages on the market (Kale & Singh, 2009). Their ubiquity leads to complex intra- and inter-organizational constructs of partnerships (Robson, Katsikeas & Bello, 2008). Large companies form multiple partnerships in order to gain market share growths. The most recent business agreement between General Motors and Peugeot indicates that the collaboration of purchasing operations is an essential reason for an establishment. As Madslien (2012) predicts this partnership will have mutual benefits with an advantageous outcome on the operational level and costing issues. However, it can be assumed that the scope of purchasing still remains limited as the companies are competitors on the market.

The purchasing collaboration in the industry sector has a project management character. Standardized components with large amounts of quantities will be the focus. It is doubtful that those collaborations are extended towards an overall mutual purchasing strategy with collaborative purchasing on a large scale. Gaining competitive advantage in the industrial sector has its origin in development and innovation of products. Product development and experimentation is belonging to the core capabilities of a manufacturing firm (Hafeez, Zhang & Malak, 2002). Consequently, R&D issues are handled very serious and the firm tends to protect confidentially the type of certain components and the location of its suppliers. One significant aspect that comes forward is the need for knowledge protection. The knowledge barrier between companies is the only protection against unintended transparency of knowledge. Therefore, the use of mutual knowledge might be limited and negates the associated competitive advantage (Das & Teng, 1999). During the search for a new partner of the consortia, companies tend to search for new partners that share similarities regarding the firm’s characteristics (Rothaermel & Boeker, 2008).

Another negative aspect that comes into play is that large corporations have a lack of visibility of how the different consortia of subsidiaries affect future operations. The termination of specific agreements might lead to negative impact on a different network
even if the partners are not directly connected. This phenomenon is described as a domino effect (Hertz, 1999). As many companies see potential in consortia they establish partnerships ad-hoc even if they have not analyzed the benefits. The chance of a stable partnership from a long-term perspective decreases. Consequently, consortia tend to exhibit high failure rates, if the strategies have been inconsistent and if risks have not been analyzed appropriately (Dyer, Kale & Singh, 2001). The distribution of power has a major impact on successful consortia. This issue led to conflicts in an example from the aviation branch which occurred in the KLM – Northwest consortium from 1992. Even though, the companies were able to benefit in terms of increasing transatlantic market share, the companies were not able to balance the power issues. As a consequence, it led to conflicts and harmed the partnership (Das & Teng, 1999).

In the service sector, aggregate purchasing could be operated for new physical assets such as trucks or technological infrastructure. The sector provides further essential understanding of how consortia are characterized. It demonstrates consortia between multiple partners. Especially, logistics companies form these collaborations in order to exploit the benefits of complementary assets. One example from the sea cargo logistics is the A6 consortia formed in December 2011, consisting of the leading container shipping companies such as Hapag-Lloyd and OOCL (Wright, 2011). It can be considered as a strategic way of widen the geographical coverage. Consortia enhance the possibility of growing faster instead of growing naturally (Hertz & Mattson, 2001). The primary driver is the chance of pooling resources and assets (Chung, Singh & Lee, 2000). Those assets consist of warehouses or shared technologies. The firms can make use of established distribution networks to serve customers on a larger scale. The possibility of sharing technologies enhances the operations (Kogut, 1991). For instance, forwarding systems can support transportation planning as they can be used to visualize capacity throughout a logistics network.

2.2.2 Adaptation for the Humanitarian Sector

The literature provides a base of analysis of collaborations between the commercial sector and third sector (Tomasini & van Wassenhove, 2009; Bryson et al., 2006). They are known as cross-sector partnerships who seek to bridge the gap between commercial businesses, non-governmental organizations, governments and communities. Bryson, Crosby & Stone (2006) emphasize the need for a formal agreement that specifies commitment of resources, the form of leadership and decision-making structure in order to have a shared purpose that does not affect the consortia work in a negative way.

The interaction of HOs in the humanitarian sector was generated by setting up platforms online and convening conferences. Those interactions emerged to various unified consortia such as the Humanitarian Logistics Association (HLA) in 2008 or the Fleet Forum in 2003. These have the primary goal to share knowledge among members and develop best practices within humanitarian logistics in cooperation with commercial companies and academia (Plone Foundation, 2012; Stapleton, 2010). It provided accessibility to expand the knowledge and was used to discuss and consult each other with the latest developments and future predictions concerning humanitarian aid. However, none of these unifications included sharing resources or the mutual execution of collaborations to a large extent. The establishment of serious consortia between HOs can be considered as a field of quite a new happening. The Global Humanitarian Platform pushed this issue and put an emphasis on the need for collaboration within the third sector during a meeting in 2006 (Global Humanitarian Platform, 2006). Additionally, the UN
aimed to enhance capacity and coordination in the field through the development of various cluster approaches (UN, 2006; UN, 2008). One of these approaches called the Logistics Cluster specifies on the coordination and information management among multiple HOs within humanitarian projects in certain countries.

The establishment of purchasing consortia indicates to move away from competition and aiming towards an improvement of providing humanitarian aid collectively. Janz, Soi & Russell (2009) from WVI developed 12 principles of partnership (PoP) that are based on a five-years learning experience from different projects. They consist of trust, shared vision, accepting time and transaction costs, shared risks and costs, deciding when to form partnerships, ground rules for engagement, prioritizing best leadership, fertile ground for growth, equality of members and balance of power, benefits for all, results-oriented action approach and perpetuating a learning culture. Those principles could enable to reduce risk and barriers of the consortia. Moreover, HOs are working in a non-profitable and have the prioritized goal of providing humanitarian aid. As a consequence, the competitive character of the first sector is not present. The principles clarify the power issues and enhance the result-oriented approach. Particularly, consortia with mutual execution of collaborative purchasing have to be aware of the non-competitive character. As a result, the consortia could be able to enforce its capabilities.

2.3 Resource-Based View

The resource-based view of the firm gives a framework to approach strengths and weaknesses and explores these aspects in order to establish a long term competitive advantage (Fahy & Smithee, 1999). A competitive advantage can be gained by industry analysis, organizational management and the effects of the firm itself in relation to resource advantages and strategies.

To make a good analysis of the value that companies and the consortia create, the core capabilities of these organizations have to be determined. Fahy & Smithee (1999) explain why and how an organization can gain a short market advantage. The resource-based view of the firm is analyzing the internal core capabilities of a company or organization in order to obtain the maximum advantage possible, and to increase greater output (Capron & Hulland 1999; Christensen & Overdorf 2000). Capabilities can include all sorts of tangible and intangible assets of the organization. The result of analyzing the resource-based view of the firm is to make strategic decisions that benefit the organization and create a sustainable competitive advantage.
Firstly, the resources and capabilities of the company need to be brought forward in order to make the strategic decisions based upon the resource-based view. The differences between these two aspects are described by Grant (1991) as follows. Resources appraise strengths and weaknesses related to competitors and identify opportunities for a better usage of resources. Capabilities are considered as a repeatable pattern of actions and are determined by asking the question in what a firm or organization can do more effectively than its competitors. The identification of resources and capabilities within the five-stage model by Grant (1991) represent the first two stages for the performance measurement framework. The input of each resource and capability and its complexity needs to be comprehended. The distinction of capabilities and resources is important as it contributes to the understanding of the model presented by Fahy & Smithee (1999). Using mainly information systems often leads to incomplete result which makes it difficult for the management to identify resources (Grant, 1991). The usage of the key resources of the organization in order to create a sustainable competitive advantage will be determined by the strategic choices of the management.
Strategic decision-making is crucial to create a sustainable competitive advantage, as outlined in the model of Fahy & Smithee (1999). Resource identification, resource development and protection as well as resource deployment are executed within this process. The competences of a firm or organization are often coming forward in the content rules, regulations and culture that are stated and created by its management. Eventually the decision-making process of the management result in the fundamental genetics an organization or a company has. Meaning that a sustainable advantage is a path that is going way back to the source which is the decision making process of management (Barney 1991). The management has to decide which capabilities to use and deploy to create a sustainable competitive advantage. These decisions have to be precise as according to Barney & Ouchi (1986), the resource-based view is closely related towards the agency theory because the resource deployment is influenced by minimizing the general costs commercial firms have. The resource protection is dealing with the property rights resources might have, which makes them more valuable compared to other resources. The more valuable a resource is, the more precise the property rights according to Libecap (1989) that eventually will consolidate the advantage of a firm or organization.

The next step in the model by Fahy & Smithee (1999) is the sustainability of advantage. This step can be considered as the most challenging one. All sorts of internal and external influences can affect the advantage created by the firm. These influences help to understand environmental, technological, financial and operational effectiveness. Wade & Hulland (2004) emphasize that the competitive advantage of a firm depends on its protection of resource imitation. If this is high, it means that the advantage is temporary and will be less valuable.

Mata, Fuerst & Barney (1995) suggested that five key information system drivers consisting of (1) switching costs, (2) access to capital, (3) proprietary technology, (4) technical IT skills, and (5) managerial IT skills will lead to a sustained competitive advantage. Mahoney & Pandiam (1992) bring forward a citation from Penrose (1959) who puts the emphasis on environmental changes that can change the significance of re-
sources for the firm. Developing and combining resources can result in a short competitive advantage due to this effect. However, when uncertainty occurs, an advantage is of less value as the link between the resources controlled by a firm and the firm’s competitive advantage is not understood by its management (Barney, 1991).

2.4 Value Creation

This part of the literature framework will focus on the value creation within consortia that is part of the RBV and outcome of strategic management choices. The model by Fahy & Smither (1999) refers to the value creation by absorbing information from customers. Regarding humanitarian aid, it is not ethically appropriate to define a certain type of customers for HOs.

Creating value with intangible assets is connected with cost reduction, employee training and total quality management (TQM) according to Kaplan & Norton (2004). The consortia consist of HOs with intangible assets where members share and sustain knowledge in order to create value. Kaplan & Norton (2004) provide a four step plan that illustrates to create value with intangible assets. However, as these assets are focused on employees, cost reduction, customer service and financial improvements, it can be assumed that this four step strategy is not entirely applicable towards humanitarian consortia. This because customer service is not included and more important, value is largely generated in the form of coordination and cooperation. A more suitable model is given by Schönberger (2011) who presents a model applicable towards purchasing consortia that includes value creation.

![Network capacity disposition (Schönberger, 2011)](image)

The model shows a timeline with letters that represent subsequent activities. The meaning of this is that one activity can only be activated as the other is completed. According to the author, this is how value is created within consortia, by trigging activities. Some activities however can start simultaneously like for instance A, D, and G.

As an example, the reduction of common purchasing prices for transportation services can be taken into account. In that case, the model is a plan of how that goal can be accomplished. The different activities succeed one another until the goal is reached. The accomplishment of price reduction results in temporal collaboration among the partners of consortia where specialists succeed in forming value creation. During this process the collaborating partners assert their legitimate and economic independent management and culture (Schönberger, 2011)
In comparison with traditional systems, the decision making processes for value creation in consortia are different. In particular, the members of consortia want to be responsible if it comes to their own decision-making process. In other words, they want to decide autonomously on the activities that frame their contribution to the consortia (Bloos, Schönberger & Kopfer, 2009; Villa, 2002). That does not mean that the individual members should ignore the decision-making and information provided by others within the consortia as each member provides valuable knowledge and experience that can be used by others in terms of value creation. Further tangible resources are plants, warehouses, trans-shipment centers and vending facilities. It comes down to that fact that consortia are stronger with multiple members of status who mutually share tangible and intangible assets.

Suggested is that value creation next to the use of customer information can also be reduced from suppliers and/or partners by giving permanent feedback and following a transparent business model. This type of co-creation is applicable to consortia like the IAPG as it is a multiple partnership that tries to simplify the collaboration with suppliers and other partners (Prahalad & Ramaswamy, 2004).

2.5 Consortia Performance Measurement

McKinsey & Company (2002) found out that the minority of consortia have proper performance metrics implemented in place. Vital characteristics that are linked to the consortia performance are (1) the partner firms’ specific investments in the consortia, (2) the degree to which partner brought resources into the consortia are complementary, and (3) the strategic importance of the consortia for fulfilling partner firm strategies (Lunnan & Haugland, 2008). Multiple researchers developed models that can be adapted by firms to get an insight view of the consortia performance. Calculative approaches have been developed to measure the fulfillment of goals, net spillover effects or contractual changes (Arino, 2003) and to quantify the impact of tangible and intangible assets, cultural differences and managerial changes (Lunnan & Haugland, 2008).

A conceptual framework towards measuring the consortia performance can be adapted from the resource-based view. This performance measurement framework tracks down the competitive advantages of being a member of purchasing consortia. The framework requires clarifying potential resources, and related capabilities that have to be considered within consortia of the humanitarian sector.

2.5.1 Resources

The formation of a consortium is based on the strategy to overcome a lack of resources (Das, 2012) by pooling tangible and intangible assets (Child, Faulkner & Tallman, 2005). The chosen scope of assets for consortia, gathered throughout the research for the literature review encompasses (1) knowledge, (2) human capital, (3) physical assets and (4) financial assets.

Knowledge

Knowledge is an intangible resource that is crucial for executing business operations effectively. Ulrich & Lake (1991) state that the uniqueness of knowledge advocates gaining competitive advantages. Regarding the purchasing of transportation services, it has to be ensured that ordering will fulfill all standards, regulations, etc. The IAPG developed a code of conduct that defines the requirements of suppliers. Managers on the op-
erational levels need to be aware of these exclusions. Moreover, required documentation and related customs and insurance issues throughout transportation have to be considered. Particularly in consortia, the roles and responsibilities for certain arrangements of transportation purchasing need to be clarified and allocated. Lambe, Spekman & Hunt (2002) provide a model where consortia knowledge is a key antecedent parameter to consortia success. Gathering primary data through qualitative interviews identified three facets of competence consisting of (1) consortia experience, (2) consortia manager development capability, and (3) partner identification propensity (Lambe et al., 2002). As purchasing consortia are relatively new in the humanitarian sector, the facets (2) and (3) are predominantly taken into account. Managers involved with consortia operations need to make sure those roles and responsibilities are clearly articulated and that the strategic purpose of the consortia is consistent with the changing environment in order to modify things appropriately. The partner identification propensity seeks to place complementary competence in the right position to enable sufficient chances of generating competitive advantage (Hunt, 1997).

**Human Capital**

The resource of human capital is closely related to knowledge as it contributes core or peripheral assets for a firm or an organization (Lepak & Snell, 1999). Particularly, core assets need ongoing development and improvement to generate value (Quinn, 1992). Improving human capital can be performed by the four employment options of internal (1) development and (2) acquisition or external (3) contracting and (4) consortia (Lepak & Snell, 1999). The employment through consortia occurs when organizations collaborate in the mutual use of employees to achieve synergistic value that exceeds the individual potential for creating value (Lepak & Snell, 1999). Teece (1982) makes the assumption that some assets of knowledge only create value after combined efforts. This implies that consortia members are able to rely on other's specialized knowledge that complements each other and consequently gains value from the human capital. Moreover, the transfer of knowledge entails a reduction of internal employment costs (Lepak & Snell, 1999). A case study by Porac et al. (2004) illustrates that the use of collective human capital can be performed with unique configurations. The different ways of managing the collaboration led to success and enhanced the amount and variety of knowledge productions. Additionally, unifying human capital through consortia makes it possible to act as one company or one organization as a whole to encounter suppliers.

**Physical Assets**

The mutual use of physical assets facilitates benefits for each partner within the consortia. Relevant physical assets for consortia include (1) information technology and (2) the transportation systems.

Rothaermel (2001) outlines the different phenomena’s of exploring and exploiting consortia. Exploitation occurs when a new partner provides additional technology for the consortia. The incumbent partners have the task to exploit consortia by leveraging existing complementary assets and commercializing the technology to ensure beneficial outcome for the consortia (Rothaermel, 2001). Exploration takes place when new partners entering consortia learn new technologies and seek to adapt them in favor of their own operations (Rothaermel, 2001). The integration of various technologies is crucial because of the complementary character of technological resources. Optimized integration reduces the resource deficiency and enables additional applications for partners (Teece,
Pisano & Shuen, 1997). Technology related resources tend to be more significant for consortia’s performance if the environment is marked by technology dynamic and turbulences, i.e. the environment is characterized by short life-cycles and high obsolescent rates (Song et al., 2005). Regarding purchasing, technology has a supportive character during the tendering process. Specifications and requirements needs to be distributed to multiple potential suppliers. Additionally the documentation of the tendering process can be captured in a database.

The transportation systems consist of the resources of available transportation fleets and transportation networks. Agarwal et al. (2009) note that consortia of transportation providers in the commercial sector pool their fleets in order to widen the scope of transportation fleets. A collaborative use of transportation systems has large cost savings potential, especially for small and medium-sized firms according to Liu, Wu & Xu (2010). They further conclude that collaborative operations of transportation can result to higher utilization and profit efficiency. In case of humanitarian logistics, HOs can make use of each other’s’ established supply chains instead of setting them up individually. Furthermore, HOs are able to pool their vehicles and fleets which extends the viability of total transportation capacity.

Financial Assets

Consortia’s mutual financial assets enable cost- and risk-sharing with other partners (Ohmae 1989). When members of consortia follow an expensive and risky strategy, the collaboration can pay off by supporting each other with financial resources in vulnerable situations (Eisenhardt & Schoonhoven, 1996).

2.5.2 Capabilities

Rothaermel & Boeker (2008) make the assumption that firms with complimentary resources enable widening the scope of capabilities. Mowery, Oxley & Silverman (1996) note that exploring consortia allows acquiring new capabilities. Keeping in mind that capabilities are defined as a repeatable pattern of actions, the following ones are relevant for the purchasing consortia.

Decreased Purchasing Complexity

Traditionally, the development of consortia and dyadic partnerships advocate the complexity of the business environment. Considering this aspect as a capability that creates a competitive advantage might sound as a paradox. However, focusing on the complexity of inter-organizational processes within the consortia, we can adapt general assumptions from the literature. The idea is that, consortia purchasing involves the establishment of a cooperative structure where the members unify the same levels of the supply chain and combine their purchasing volume (Essig, 2000). The operation of purchasing activities will be performed from a central department on behalf of the entire consortia. This can be related to the industrial sector where companies judge the strategy of purchasing of centralized versus decentralized. A centralized strategy implies that the amount of human resources involved can be reduced as a specialized team that takes over roles and responsibilities. Additionally, administrative tasks can be consolidated which reduces the degree of operational efforts (Arnold, 1999). We refer to the overall capability of simplifying purchasing operations and reducing the extent of complexity. In relation, the metric of lead-time will be taken into account.
According to Lysons & Farrington (2006), purchasing consortia generate time savings in searching for and ordering standard items and services (e.g., transportation services). The capability of lead-time in this case encompasses the two dimension of (1) the time requesting demand and approaching the logistics provider and (2) the time until the service will be expedited and reaches the destination. The centralized purchasing streamlines administrative processes and advocates the reduction of lead time. Consequently, logistics providers can be approached in a shorter timeframe and enhance the effective execution of purchasing activities. The aggregate purchasing volume increases the priority status of the consortia and enables to reduce the lead time of the physical product flow.

**Negotiation Capabilities**

The negotiation capability involves discussing and bargaining in order to reach a mutual acceptable agreement (Oliver, 2011) between the logistics provider and the consortia. The DuPont analysis emphasizes the strategic importance of purchasing as savings in that area have a significant impact on the margin of a company. Stradford & Tiura (2003) have proved that a professional purchasing approach of services can result in considerable savings between 10 to 29 per cent. Hence, we can assume that the negotiation capability has a value-added function for the consortia. The representative metric to measure the savings is the economies of scale. Exploiting the economies of scale is significantly relevant for smaller members of the consortia and allows purchasing in a larger economy of scale than they could achieve individually (Lysons & Farrington, 2006). This is also consistent with Gomes-Casseres (1997) who states the increase of economies of scale and scope as one primary driver and incentive. According to his article, the network effect of consortia can be surplus that leads to a competitive advantage for the organizations from a consortium perspective. Agarwal et al. (2009) note that purchasing consortia reduce purchasing costs by utilizing volume discounts from suppliers. The development of centralized purchasing follows a purchasing strategy that advocates a stronger negotiation position versus suppliers (Arnold, 1999) and enables to have a strong buying leverage that leads to better terms and rates (Lysons & Farrington, 2006).

**Learning Capabilities**

The phenomenon of learning is a development of memories and behaviors, including skills, knowledge, understanding and values or a development of experience by acquiring knowledge and skills through instruction or study (Webster’s Dictionary, 2012). Consortia can enhance capabilities of permanent learning improvement by utilizing the relevant profession and bringing together unique skills (Hamel, Doz and Prahalad, 1989; Inkpen, 1998; Lysons & Farrington, 2006; Tsang, 1999). The learning capabilities are constituted by the dimensions of “learning from strategic consortia experience” and “learning the other partner’s skills” (Tsang, 1999; p. 215). The exploitation of learning potential of consortia requires more than just participating. The key challenge is to create an environment that supports knowledge-sharing, movement, and amplification (Inkpen, 1998). Inkpen & Crossan (1995) bring forward a multi-level perspective of learning within consortia that encompasses (1) individual, (2) group and (3) organizational levels. At the individual level, the critical process is interpreting; at the group level, integrating; and at the organization level, integrating and institutionalizing. Kale & Singh (2007) make the notion that a learning process consists of articulation, codification, sharing, and internalization of the consortia management know-how. Articulating
implies making knowledge accessible and externalized through spoken and written words or with the support of metaphors, analogies or models (Nonaka, 1994). Codification incorporates the adaption and transfer of consortia best practices within a firm and can be considered as a useful toolkit for managers (Kale & Singh, 2009).

**Knowledge Sharing**

The formation of consortia also entails that proprietary knowledge will be eliminated and shared among the members to make new competences accessible and distribute them throughout the network of partners (Dyer & Noboeka, 2000). Internalization seeks to establish a knowledge base that enables absorbing new knowledge more effectively (Kale & Singh, 2007). The absorption in purchasing consortia can take place during meetings and conferences of members that exchange information. A prerequisite for exploiting available knowledge is the existence of trust among the members. Barney & Hansen (1994) point out that this is the crucial factor for consortia that allows using the resource of knowledge to generate a competitive advantage. Besides expertise about specific operations, it could also include forwarding of business contacts. Consortia partners can support each other with direct or indirect referrals of commercial suppliers in case of an insufficient match with current partners. As a result independent partners get to know each other through the virtue and knowledge of other members in the consortia (Gulati, 1999). This is applicable to the third sector as organizations could also widen the scope of partnership by exchanging information about potential suppliers or partners and strengthen the possibility of finding a suitable partner. Another practical example is that managers transmit know-how during training courses to teach employees effective learning from best practices and consortia (Draulans et al., 2003).

Whipple & Russell (2007) bring forward a typology of collaboration that entails different forms of knowledge sharing. The authors distinguish between (1) collaborative transaction management and (2) collaborative event management. Type one is characterized by person-to-person interaction and is crucial for operational level decisions that require immediate solutions on a daily basis. Type two includes sharing explicit and tacit knowledge to perform joint-planning and decision-making on a higher level during special events such as is disaster relief incidents.

**Capacity Sharing**

The joint resources of transportation systems lead to the capability of capacity sharing. Agarwal et al. (2009) and Liu et al. (2010) outline the potential and benefits of efficient utilization and decreasing costs within the commercial sector. This potential can be adapted to the humanitarian sector as well. Consortia provide the possibility of pooling transportation systems and operate joint utilization of transportation capacities. As a result, HOs are able to use established humanitarian supply chains from other partners and can use additional capacities for a backup. It allows preventing delivery delays of humanitarian supply, particular during disaster relief operations.
2.5.3 Performance Measurement Framework

The description of valuable resources and capabilities of consortia represent the base of the conceptual approach to measure performance. Additionally, the performance measurement integrates the created value through purchasing consortia capabilities. The concept is built as a three-stage construct in figure 7 that combines the first two stages of the resource-based view by Grant (1991), the gained competitive advantages by Fahy & Smithee (1999) with the extended purchasing process based on van Weele (2010) and van der Falk and Rozemeijer (2009).

Figure 7: Consortia purchasing performance based on Grant (1991), Fahy & Smithee (1999) and van der Falk & Rozemeijer (2009)

The framework provides the foundation for the analysis in chapter 4. It will be illustrated how the possible capabilities are facilitated by the joint resources. The value creation of the capabilities will be reflected on the subsequent stages of the purchasing process. It will be outlined to what extent the capabilities have a positive impact on the extended purchasing process for services and clarify the gained competitive advantages for consortia members.

2.6 Summary of Theoretical Framework

The theoretical framework covers the relevant topics of purchasing consortia of transportation services in humanitarian logistics. The purchasing process is explained as a subsequent stage-model. The delimitation of purchasing services with its complexity is clarified with an emphasis on transportation services. Furthermore, the prosperities of consortia in the commercial sector are linked to the third sector to bridge the gap to humanitarian organizations. The provision of a framework to measure the performance of purchasing consortia is outlined by a construct based on the resource-based view. The resource-based view combines the resources and related capabilities of a company and
determines the possibility of achieving a competitive advantage in the market. Its adaptation for the purchasing consortia in humanitarian aid requires the collection of potential resources and capabilities. Based on the literature, the resources of (1) knowledge, (2) human capital, (3) physical assets and (4) financial assets have been identified. The capabilities encompass various activities within the purchasing process and related metrics and have been defined as (1) decreased purchasing complexity, (2) negotiation capabilities (3), learning capabilities, (4) knowledge sharing and (5) capacity sharing. The general idea of joint resources and generated capabilities is the creation of value for the purchasing itself and its individual members. The outcome of the created value is to identify the competitive advantages that are enforced through these joint resources and generated capabilities. A combination of resources, capabilities and the purchasing process leads to the purchasing consortia measurement framework.
3 Methodology

The third chapter explains how the research will be conducted. This is dependent on the research topic. Terms like the approach, methods and techniques will come forward to gain the necessary information to conduct the research and eventually answer the research questions. Gathering information can be done by primary research, the collection of secondary data and literature.

3.1 Approach

According to Robson (2002) a research purpose can be defined into the three different methods of (1) explanatory, (2) descriptive and (3) exploratory. The thesis is based on the explanatory approach to provide further insights to the problem statement in the beginning. Explanatory seeks to get an explanation of a situation or problem, traditionally in the form of a causal explanation. Explain patterns related to a phenomenon to be explained. An explanatory research that focuses on the study of a situation or problem explains the relationships between variables.

The testing of theory can be conducted with an (1) inductive and (2) deductive approach. A deductive approach has been selected to perform the research for the performance measurement of purchasing consortia. A deductive approach is an approach that creates a mental picture in a tangible environment of how something is operative. This thought is tested against gathered empirical data. In other words, an assumption that is made to proof or develop a theory that starts off with an abstract concept and is eventually proven by empirical evidence (Neuman, 2006). Because the research topic is not entirely unknown but little research has been done so far, it is needed to execute an explanatory research in combination with a deductive approach.

The research design is the logical sequence that connects the empirical data to a study’s initial research questions and ultimately to its conclusions (Yin, 2009). In this case, the purchasing behavior of humanitarian consortia and the effect it has on the mutual benefits and collaboration is researched. This identification will be performed by the interviews of five selected experts who can provide the information needed to answer the research questions.

The research design is the most crucial part of any research, but is often undertaken without considering issues and possibilities sufficiently (Robson, 2002). Therefore, the selected interviewees are operational active at different organizations but in the same way all in relation to the research topic. They are questioned about their knowledge and expertise to complete the data collection. Members from the IAPG and the Logistics Cluster were selected to create an equal balance in gathering information. All interviews are transcribed and were asked for approval in order to make the analysis valid.

The research questions are formulated from established theory within the research topic. By using these theories, a broader understanding was gained in order to design the research strategy. However, the established theoretical framework that was created did not entirely suit the outcome made in the analysis. Therefore, the theoretical framework was slightly adapted towards the outcome of the research that was made.
3.2 Strategy

There are two types of research approaches consisting of (1) qualitative and (2) quantitative research (Robson, 2002). The chosen research strategy for the thesis follows a qualitative approach. The qualitative approach was conducted, as the aim was to identify and explain the role of purchasing consortia within humanitarian aid. Qualitative research is non-probability data or non-numerical data that has been gathered. During the qualitative research interviews were the main source of primary information. This is a time-consuming effort method to get access to the right key-persons. This can sometimes lead to a smaller number of participants then is stated in the beginning.

Ellram (1996) points out that the majority of logistics research is conducted by quantitative research methods including simulations, model building, and statistical testing of survey data. This type of approach is done mainly by questionnaires using a larger pool of participants. As well as the fact that statistical proof is not applicable to help answering the research questions. Quantitative data is data in form of numbers. In other words, it refers to numerical data that can be quantified. The usage of quantitative data mainly occurs in empirical studies. It has to be described how the data is analyzed in the study. It also contains arguing whether this analysis, virtually in its same form, could be found as one part of a broader research analysis (Neuman, 2006). As these consortia contain only a limited amount of members, a quantitative approach is already excluded.

3.3 Primary Data

Primary data is data collected specifically for the research project being undertaken or observed or collected directly from first-hand experience. Primary data can be collected in different kinds of ways. It can be done by observation, using questionnaires or/and using semi structured interviews. Questionnaires are more suitable for a quantitative data collection. Observations can be applied in face-to-face interaction with people or on-side situations. Therefore, the primary data collection of a qualitative study will be performed with semi-structured interviews through Skype and telephone.

3.3.1 Interview

An interview is a purposeful discussion between two or more people (Kahn & Cannell, 1957). Interviews provide substantial information to answer research questions and the purpose of the thesis. Interviews can also contain crucial information to reformulate the questions and purpose statement throughout the research. During the conduction of semi structured interviews, the interviewees can be asked about the facts of matter as well as their opinions about events. An important issue in interviews is to prefer open questions.

Five interviews have been carried out with interviewees that have field of knowledge. The information given will be supported and linked to the literature and secondary data. The personal interviews took place by telephone and Skype that brought certain advantages in terms of costs and time. Adams et al. (2007; p. 149) emphasize this advantage as ‘ease of geographical coverage’, as the contact persons are operative internationally, outside of Sweden. The questions were created in advance and collected in the interview guide. The purpose of a semi structured interview gives the opportunity to adapt questions in a more personal matter so that these suit the particular interviewee. Personal interviews were of importance to stay in flexible control while conducting the information.
All interviews have been conducted on a personal matter with members of the IAPG and the Logistics Cluster. The semi-structured approach requires a recording of the interview as the elaboration will be more effective by replaying the conversation. The recording was clarified with the interviewee in the beginning. It also facilitated to transcribe the interviews. The transcriptions have been checked by each interviewee in order to receive an approval as well as the possibility to use names and positions within the thesis where needed. All the interviewees can be examined in Table 1.

Further, it can be assumed that all interviewees will speak openly and agree that their information will be used freely to approve points and findings in order to create an appropriate outcome for the interest of this thesis.

### 3.3.2 Interview guide

The interview guide in Appendix A has been created before the conduction of interviews took place. The guide is an important tool and base for the interview conduction. According to Bryman & Bell (2007), an interview is a list of questions to be asked in a structured way as a guideline for the interviewer. This guide provides a list of questions that are related to the research topic and applicable to all participants in order to make a comparison afterwards. The questions are stated in such a way that broad answers are likely to be given by the interviewees as well as the change of giving a large amount of additional information. The questions are in an open matter which follows the idea of a semi-structured interview.

The interviewee is given the opportunity to talk freely about events, behavior and beliefs in relation to the topic area, so that this type of interaction is called ‘non-directive’ (Saunders, Lewis, & Thornhill, 2009). The amount of five interviews is based on the saturation point that eventually was reached. This is the point when the information flow becomes minimal because of repeating activities (Eisenhardt, 1989). Regarding the conduction of interviews, it is not valuable to absorb information from perpetual statements from the interviewees.

### 3.4 Theoretical sampling

The sampling within primary data will be from a certain amount of HOs who are members and partners of the different consortia researched. A sampling element is the unit of analysis that can be related to a group, organization or a person in a group that is analyzed in order to get an understanding of a larger group (Neuman, 2006).

Qualitative research is related to non-probability sampling in where a representative sample from a larger number is drawn to study the sample cases. It is easier to gain more specific knowledge and information about a sample then an entire population.

We first analyzed a large amount of secondary data and literature in order to make decisions for the interview sample selection. During the conduction of primary information, we received new insights that changed or expanded our samples. This process of data collection is called theoretical sampling according to Neuman (2006).

### 3.5 Selection of Participants

The selection of purchasing consortia within humanitarian logistics includes the IAPG and the Logistics Cluster. These consortia have members that vary from NGOs, gov-
ernmental organizations and UN agencies. As the purpose is to gain information in a similar matter the aim was to conduct information with an equal amount of members from each consortium. The mix of approaching different NGO’s and governmental organizations gives a broader aspect regarding primary information that adds more value towards the analysis and outcome of this research.

**IAPG**

The IAPG is a consortium of logistics professionals from NGOs and governmental organizations who work collectively on humanitarian supply chain activities. The members consist of various HOs with different focuses on providing humanitarian aid and target customers that make use of transportation services worldwide on a regular basis.

The first contact established was with the British Red Cross who forwarded us first to Mr. Hoare of Sightsavers. Mr. Hoare initiated the establishment of the IAPG and seemed to provide a foundation for the research. The interview was conducted by telephone on 12-03-2012. Afterwards, we decided to contact Mr. Darcy from Concern Worldwide, another member of the IAPG. This interview was conducted at 20-03-2012 and gave a different insight and perspective then it was expected. The interview with Mr. Darcy gave us additional information to gain new insights in the problem definition and the assumption that was made in the beginning. As a result, slight adaptions within the theoretical framework and the research questions were made.

Interesting information that was gained during the interview with Mr. Hoare of Sightsavers led us to the organization of MAG. MAG is also a NGO and member of the IAPG who has conducted a tendering process with a logistics service provider in 2011. The interview with MAG was conducted with Mrs. Edwards at 10-04-2012 in order to get a better understanding of the actual purchasing process.

All participants felt confident answering questions and giving additional information. They also agreed upon the usage of all the information gathered and their names and organizations mentioned in the thesis. The contact search with all participants went surprisingly well as often this might not be the case in general.

**Logistics Cluster**

The Logistics Cluster is a consortium involving NGOs, governmental organizations and UN agencies. It was initiated by the Inter Agency Standing Committee (IASC) in September 2005 which is focusing on inter-agency coordination of humanitarian assistance. The full members consist of the heads of the UN humanitarian agencies, standing invitees include OHCHR, World Bank, IOM, ICRC, IFRC, Inter-Action, ICVA (represented by World Vision International) and the steering committee for humanitarian response (represented by Oxfam).

Regarding the Logistics Cluster, we made a phone call to retrieve a possible contact with knowledge in the field of our topic to gain the needed information. This eventually brought us to Mr. Cimetière who is a logistics officer at CARE Canada and seconded to the WFP Logistics Cluster. The interview with Mr. Cimetière was conducted on 04-04-2012 shortly after our first attempt to get in contact. The information gained in this interview gave us more insight from the Logistics Cluster.
One of the major participants within the Logistics Cluster is the IFRC who was contacted at 24-04-2012. As a response, we received an email from Mrs. Séchaud, a field logistics manager at 25-04-2012. The interview with the IFRC was eventually conducted on 30-04-2012. Mrs. Séchaud was willing to answer in great detail and clarity all our questions regarding the relation of the IFRC towards the Logistics Cluster. Table 1 as presented below, summarizes all interviews and the corresponding details that were conducted.

Table 1: List of interviews

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Humanitarian Organization</th>
<th>Duration</th>
<th>Consortium</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philip Hoare</td>
<td>Procurement Manager</td>
<td>Sightsavers</td>
<td>47 mins</td>
<td>IAPG</td>
<td>✔</td>
</tr>
<tr>
<td>Donal Darcy</td>
<td>Supply Chain Advisor</td>
<td>Concern Worldwide</td>
<td>59 mins</td>
<td>IAPG</td>
<td>✔</td>
</tr>
<tr>
<td>Gilles Cimetière</td>
<td>Logistics Officer</td>
<td>CARE Canada</td>
<td>85 mins</td>
<td>Logistics Cluster</td>
<td>✔</td>
</tr>
<tr>
<td>Kelly Edwards</td>
<td>Procurement Officer</td>
<td>MAG</td>
<td>53 mins</td>
<td>IAPG</td>
<td>✔</td>
</tr>
<tr>
<td>Isabelle Séchaud</td>
<td>Field Logistics Manager</td>
<td>IFRC</td>
<td>44 mins</td>
<td>Logistics Cluster</td>
<td>✔</td>
</tr>
</tbody>
</table>

3.6 Secondary data Collection

While primary data is the main source of validated data in this thesis, it does not say that secondary data is not playing an important part in achieving additional information. Secondary data is just as important as primary data because it can give more insight to the topic and a second view upon primary data. ‘Secondary data is data that has not been gathered by the researchers themselves and have been collected with a different purpose’ according to Sørensen, Sabroe & Olsen (1996; p. 321). Secondary data includes quantitative and qualitative data that can be used in descriptive, explanatory and exploratory research. Secondary data is a type of ‘raw data’ that has been little processed, compiled and received some form of selection or summarizing (Kervin, 1999). It can be gathered in a less time consuming and labor intensive form then primary data. Another advantage of secondary data is that it already exists. According to Adams et al. (2007) secondary data can be gathered by the researcher through company and government information, libraries and the internet.

In this thesis, secondary data consists of webpage information of the IAPG, the Logistics Cluster and its members such as the WFP, IFRC, Concern Worldwide, MAG, and Sightsavers. Other secondary information was gained by online annual reports from the UN and Logistics Cluster meeting minutes on the field level to get a better insight in the research topic in the beginning.

However, the disadvantages of secondary data are the collection methods, the degree of quality and the selection of. Sørensen et al. (1996) state that the researcher is not in control of this type of data which makes it sometimes difficult to validate. Therefore, it has been taken into account that secondary data will never be superior above primary data. The secondary data used for this research has simply been for getting to understand the research topic. Secondary data that has been used for analysis is always accompanied by primary data.
3.7 Literature

According to Neuman (2006; p. 111) ‘it is best to find out what is already known about a question before trying to answer it yourself’ in order not to waste too much time. A large amount of existing based literature (e.g. consortia, logistics and humanitarian aid) has been researched to get a deeper understanding of the research topic. Several goals of the literature framework are (1) to demonstrate a familiarity with a body of knowledge and establish credibility, (2) to show the path of prior research and how a current project is linked to, (3) to integrate and summarize what is known in an area and (4) to learn from others and stimulate new ideas (Neuman, 2006).

We made use of the combination between a context review and an integrative review. A context review is specific theory that is related to the thesis subject and is linked to a larger body of knowledge (Neuman, 2006). It relates to the theoretical framework at the beginning of a study and is developed on a continuous basis throughout the study. The integrative review is also a common type of review in which the current state of knowledge on a certain topic is summarized and pointing out the agreements and disagreements of it. According to Neuman (2006) the integrative review is often combined with the context review. For the theoretical framework in chapter two we used books, scholarly journals, articles, related dissertations, and government documents. The best way to conduct a systematic literature review as done in this study is to define and redefine a topic first. In this case the ‘purchasing behavior of consortia in humanitarian logistics’. After that it is of importance to design a ‘search’. We used the tool of a roadmap which can be seen in Appendix B. The roadmap clarifies the information that needs to be analyzed regarding the thesis subject. Knowing what type of information was needed, we were able to locate and evaluate the necessary research reports while notes were taken and interviews were recorded.

To find relevant theory for the research, the library of Jönköping University provided electronic databases with online journals (e.g. Emerald, EBSCO, ABI/INFORM). Additional webpages related to selected HOs as well as Google Scholar what was used as a search engine. On top, own expertise and experience regarding logistics issues from internships with respectively the A.P. Møller-Mærsk Group in Rotterdam, the Netherlands and Daimler AG in Stuttgart, Germany have been considered.

3.8 Trustworthiness

Reliability and validity are crucial for testing the quality of gathered and presented data in a quantitative and qualitative research. According to Halldorsson and Aastrup (2003), problems within logistics regarding qualitative research should take into ‘truth-value’, ‘transferability and contextualism’ and ‘trackability and explicity’ when evaluating gathered data.

Truth-value in this case can be also seen as credibility and to the notion of internal validity. It is in fact the extent to which the reasoning in the study was performed correctly. Taking in consideration the terms of trustworthiness explained below we assume that the saturation point has been reached to have a solid outcome of our findings.

With transferability is also meant external validity. The external validity is the term of how findings are applicable in other circumstances and towards individual interviewees related to our sample. It is in fact the generalizability of the outcome (Guba and Lin-
coln, 1989). In other words, the research process is checking the degree of similarity between sending and receiving contexts. As the outcomes of the interviews were consistent with each other, the outcome can be generalized among all members of the Logistics Cluster and the IAPG. In terms of contextualism, we have to take into consideration that the knowledge is not unambiguous as interviewees could have different meanings in different contexts.

In trackability we took into account that all data gathered during this research should be handled in a proper manner. The information in this thesis is trackable to a credible source from primary and secondary data as well as the literature used. Literature sources are captured in the reference list. Primary data is transcribed and approved by the interviewees. Explicitly relates to the possibility of misconception and misinterpretation in this study. For instance, the transcriptions of the interviews could be twisted or misunderstood. We prevent misunderstanding by giving the interviewees the opportunity to analyze and make adaptations necessary in the transcribed interviews before requesting a written approval that makes the explicitity valid.

3.9 Summary of Methodology

The research is based on a qualitative study with a deductive and explanatory approach. The approach, strategy, data collection methods, sampling, and trustworthiness are all part of ‘how’ research is conducted and what it is used for to prove statements and assumptions made in the beginning. That assumption is the research towards purchasing behavior among humanitarian consortia with the focus on logistic services. To find primary data, interview techniques have been conducted with a sample selection of sources of importance.

The interviewees are all operative in the humanitarian sector and connected to the different consortia of matter. The consortia that have been important for this research are the IAPG and the Logistics Cluster. Other HOs that are related to these organizations and have contributed in the research are Sightsavers, Concern Worldwide, MAG, CARE Canada and the IFRC.
4 The Extent of Consortia Collaboration and its Benefits for HOs

The fourth chapter represents the analysis of purchasing consortia after gathering relevant information through primary research. The theoretical framework will be linked to the primary data. The most important resources, capabilities and their creation of value for consortia will be illustrated. The findings will be connected to the resource-based view and integrated in the conceptual approach to identify the purchasing consortia performance and its competitive advantages.

4.1 Purchasing Process

Collaborative purchasing of transportation services is not operated by the consortia according to the entire interviewees. However, considering the extended process by van der Valk & Rozemeijer (2009) and van Weele (2010), collaborative activities within the different stages can be depicted. The first two stages and partly the third stage are operated individually by the members of the consortia. Hence, the individual purchasing process will be described to cover the theoretical framework.

According to Mrs. Edwards, a procurement officer at MAG, the purchasing process of transportation services is operated by tendering that follows a two-stage model. In the first stage the suppliers have to pass a pre-qualification round. General information about the organization, type of business and former references will be collected in order to get a broad picture of the potential supplier. An additional factor is the assurance of financial stability.

In the second stage, the specification will be narrowed down further by the HO. The pre-qualified supplier base will be requested to come up with practical questions of how to encounter specific scenarios that might occur within humanitarian logistics. Commercial terms will be clarified and communicated with the suppliers to avoid renegotiations. Following, the HOs set up different slots where the suppliers have to submit a tender. Mrs. Edwards pointed out that price is not the primary aspect in terms of supplier selection. It is based on the whole package that the supplier indicates to offer. Therefore, additional price negotiations are not taking place. The emphasis will be put upon the scenario descriptions.

The two-stage model is basically consistent with the extended purchasing process for services by van der Valk & Rozemeijer (2009) (see Figure 8). The complexity of purchasing services comes forward and was also proved by the statement of Mrs. Edwards. Service offers have to be analyzed carefully in advance as they are not comparable as physical goods. Therefore, the two-stage model with specific scenario descriptions is necessary to apply. The setup of slots confirms the idea of Holter et al. (2008) to commoditize transportation services.
4.2 Consortia Collaboration

4.2.1 Logistics Cluster

The Logistics Cluster is a group of HOs, involving UN agencies and NGOs, governmental organizations that are committed to address logistics issues during humanitarian crisis. The cluster approach was initiated by the Inter Agency Standing Committee (IASC) in September 2005 which is focusing on inter-agency coordination of humanitarian assistance. The full members consist of the heads of the UN humanitarian agencies, standing invitees include OHCHR, World Bank, IOM, ICRC, IFRC, Inter-Action, ICVA (represented by World Vision International) and the steering committee for humanitarian response (represented by Oxfam). The IASC was generally aiming towards a cluster approach in humanitarian aid. This approach contains nine different clusters where the Logistics Cluster is embedded in as well (Logistics Cluster, 2012a). It is structured as a two-level consortium with a global level and a field level. WFP is the lead-agency with a central department of 12 employees in Rome with full-time duties for the Logistics Cluster according to Mr. Cimetière, a logistics officer from CARE Canada, seconded to the WFP Logistics Cluster. WFP has the mandate of the Logistics Cluster and ensures the following issues.

One of the roles of the Logistics Cluster is to continuously advocate the cluster approach within the humanitarian community, donors and governments and to enhance inter-cluster links and collaboration (Logistics Cluster, 2010). Mr. Cimetière set the priority of the Logistics Cluster coordination and information management during humanitarian crisis. He describes the coordination function as consolidation and dissemination of standards, building of response capacities, provision of mutual training and operational support. This may include infrastructure assessment, mutual customs clearance, providing equipment, supplier information, sharing storage or organizing and facilitating common transportation services by road, river, air and sea (WFP, 2011a). Particular, the Logistics Cluster arranges to fill logistics gaps encountered by HOs. This function is declared by Mrs. Séchaud, a field logistics manager at IFRC, as an option for last resort. Meaning that if the need is there for the Logistic Cluster to provide service towards its members it is given where possible. Another duty is to facilitate the coordination between logistics actors (WFP, 2012). One recent example is that the Logistics Cluster coordinated cargo from 12 different aid organizations that arrived on 27 March 2012 including humanitarian supply for the Somalia Famine Response (Logistics Cluster, 2012c). The Logistics Cluster is currently also acting as a focal point for all convoy re-
quests that are executed in South-Sudan (Logistics Cluster, 2012d). The Logistics Cluster achieves the functions by providing surge support from the headquarters based cell with trained logistics specialists that are capable of handling emergencies on short notice with high quality guidance, information management as well as the dissemination of information through the Logistics Cluster website (WFP, 2011a).

The coordination is supported by regular meetings involving UN agencies, government, international and local HOs (Logistics Cluster, 2012a). Mr. Cimetière distinguishes between the Global Logistics Cluster meetings every six months and the more frequent field meetings. Mr. Cimetière made the notion that these meetings are fundamental to operate knowledge sharing. This included key logistics infrastructure such as ports, airports, roads that supports expediting transportation services on operational levels. In 2011, the geographical extent of the cluster included mainly operations in Africa, the Middle East and Asia. For instance, the Logistics Cluster provided logistics services in Myanmar, la Côte d’Ivoire and the Philippines and they took over coordination duties in Niger, Sudan and Pakistan (Logistics Cluster, 2012b). Mrs. Séchaud mentioned that the Logistics Cluster provides mapping and geographic information system that support to analyze and get an overview about the status quo situation in a country or for a project.

4.2.2 Inter-Agency Procurement Group (IAPG)

The IAPG is a consortium of logistics professionals who work collectively on humanitarian supply chain activities. According to Mr. Hoare, who initiated the IAPG, the consortium was established 16 years ago. The members consist of various HOs with different focuses on providing humanitarian aid and target customers that make use of transportation services worldwide on a regular basis. Mr. Hoare is a current procurement manager at Sightsavers. He stated that organizations such as British Red Cross, Concern Worldwide or WVI are primarily performing in disaster relief operations, whereas Sightsavers has a special focus on development operations. Additionally, the IAPG aims to identify and form relationships and collaborations with organizations that can provide advice, support and assistance to members. The outcome seeks to improve standards and the effectiveness of humanitarian logistics systems and best practices on a global level (IAPG, 2012).

Mr. Darcy, a supply chain advisor at Concern Worldwide noted that knowledge sharing is the primary incentive of being a member of the IAPG. Quarterly meetings provide the possibility of discussing latest issues of humanitarian aid and unify experiences and knowledge according to Mr. Hoare and Mrs. Edwards. However, Mrs. Edwards also clarified that the presence at these meetings is a difficult aspect to pursue from time to time. Mr. Hoare pointed out that the strong relationship among the members is one of the success factors of the IAPG. This strong connection within the network allows exploiting ad-hoc knowledge sharing. Mrs. Edwards mentioned that sharing supplier contacts can be of great value to members as they can rely on trustful experience with a certain supplier. She also stated that the ad-hoc approach also enables gathering information about certain procedures of scenarios in specific countries that supports the execution of physical transportation on the operational levels. It has to be added that not all the information obtained during their operations are freely shared. Information is given to those who request and peculiar occurrences are discussed.

Another value-added aspect is the exchange of contractual templates for transportation services among the members. Mrs. Edwards made clear that MAG is keen to share es-
established contractual documents in order to simplify and reduce efforts for others who approach and negotiate with transportation providers. Mr. Darcy noted that it would be valuable to get an insight into these templates to receive a broader perspective regarding commercial terms.

The development with appropriate academic and professional bodies is enhanced by permanent training opportunities such as workshops where skills and knowledge are getting advocated according to Mrs. Edwards and Mr. Hoare. Those workshops are getting mutually evaluated to place the quality and value on a scale.

### 4.2.3 Comparison of the Consortia

The research upon the IAPG and the Logistics Cluster enlightened the extent and form of collaboration regarding purchasing activities. Generally, the collaboration within the consortia does not occur to the extent assumed in the beginning. The major activities concerning purchasing transportation services are operated individually. In relation to Bloos et al. (2009) and Villa (2002), the participants prefer to keep those operations internally if it comes to the decision-making process that benefits their organization.

The common objective of consortia is the emphasis on knowledge sharing and sustainability. Both consortia organize fixed meetings to remain the connection and relationship as well as to exchange experiences and knowledge among the members. The willingness to share internal information openly is consistent with the 12 points of principles made by Janz et al. (2009) and gives the hint that consortia in the humanitarian sector have a more non-competitive character than in the commercial sector. Particularly, the IAPG indicates to share confidential contract information between its members.

The extent of collaboration in terms of the disaster management cycle by Tomasini & van Wassenhove (2009) differs among the IAPG and the Logistics Cluster. The IAPG is covering the entire cycle by discussing issues during periodical meetings and exchanging information ad-hoc within the consortia. Contrary, Mr. Cimetièrè made clear that the Logistics Cluster is only activated by the UN in the phase of immediate response. Its main objective is to operate logistical tasks and duties in emergencies where individual HOs are not capable of handling coordination or purchasing activities of transportation.

The execution of mutual purchasing activities is limited due to several problems and barriers that will come forward in 4.2.4. Undertaking physical actions of transportation in a collaborative matter is more pronounced in the stages of ordering and expediting. Especially, the Logistics Cluster acts as an important intermediary. Mr. Darcy noted that the Logistics Cluster takes a much more advanced role than the IAPG by taking over important services regarding coordination and information management during disaster relief operations. The possibility in taking over this position can be derived from the human capital provided by the central department of the lead-agency. The examples described in 4.2.1 show that mutual coordination and physical transportation occur frequently that is beneficial for HOs of the Logistics Cluster. In general, the impression perceived is that the Logistics Cluster is placed on a much more advanced stage then the IAPG.

Mrs. Séchaud explained that the Logistics Cluster does not have any formal registration in place so that the participation is open for all kinds of HOs. In her opinion, the Logistics Cluster is defined as a tool instead of a formal consortium of members. Contrary,
the IAPG requires a formal application before becoming a member. Mr. Hoare also noted that the IAPG demands its members to be present at meetings at least twice a year.

Table 2: Comparison of the consortia

<table>
<thead>
<tr>
<th></th>
<th>IAPG</th>
<th>Logistics Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>• None</td>
<td>• 12 employees</td>
</tr>
<tr>
<td>Objectives</td>
<td>• Knowledge sharing</td>
<td>• Provision of assets, facilities, information and services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Filling identified logistics gaps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Facilitate coordination between logistics actors</td>
</tr>
<tr>
<td>Types of members</td>
<td>• Governmental and non-governmental</td>
<td>• UN agencies, governmental and non-governmental</td>
</tr>
<tr>
<td></td>
<td>organizations</td>
<td>organizations</td>
</tr>
<tr>
<td>Meetings</td>
<td>• 4 times a year</td>
<td>• On the global level: 2 times a year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• On the field level: frequent weekly meetings depending on the situation</td>
</tr>
<tr>
<td>Service Portfolio</td>
<td>• Cooperative knowledge sharing</td>
<td>• Coordination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Information management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Mapping and geographic information system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Common logistics services</td>
</tr>
<tr>
<td>Activities during the</td>
<td>• Immediate response</td>
<td>• Immediate response</td>
</tr>
<tr>
<td>disaster management</td>
<td>• Rehabilitation</td>
<td></td>
</tr>
<tr>
<td>phases</td>
<td>• Mitigation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Preparedness</td>
<td></td>
</tr>
</tbody>
</table>

4.2.4 Problems and Barriers

All interviewees made clear that the members of consortia have a different focus within humanitarian aid and that collaborative procurement of logistics services within the consortia is complex. As a result, the purchasing prosperities of transportation services differ among the members. Firstly, Mr. Hoare noted that they have a different focus concerning the disaster management cycle by Tomasini & van Wassenhove (2009). Mr. Darcy added that HOs have different day to day operations. Several HOs are focused on disaster response operations whereas others operate within the rehabilitation or mitigation phase. Therefore, the transportation mode and desired lead-times differ significantly according to Mr. Hoare and Mrs. Edwards. As an example, Sightsavers is transporting 95 per cent with airfreight as they ship lightweight lenses. This implies that the different commodities have an impact on the type of transportation as well. Contrary, Mr. Darcy points out that Concern Worldwide is more operative on ground and sea freight. He also stated that the different working methods in humanitarian logistics are a barrier as well. For instance, Mrs. Séchaud stated that the IFRC prefers to purchase service locally to reduce purchasing prices and boost the local economy. A study carried out by the Pan American Health Organization confirms this as an advantage for the local economy (PAHO, 2001).
Furthermore, the different sizes of HOs are also reflected in the amount of transportation services purchased. This fact makes it impossible to offer consortia wide freight rates from commercial logistics providers. Mrs. Edwards noted that larger HOs (e.g., Save the Children) still receive better freight rates as their demand and volume exceeds notably smaller then middle-sized HOs such as MAG. That entails that mutual blanket contracts for transportation services cannot be applied in practice as an estimated prediction of transportation cannot be provided by all organizations. Mr. Darcy clarified that the demand of transportation service for Concern Worldwide fluctuates to a large extent throughout the year which makes it impossible to forecast a capacity volume. A further obstacle can be derived from legal issues. Mrs. Séchaud clarified that there has to be a specific registered HO to close contracts with logistics providers. Mrs. Edwards also stated that it would be difficult for the logistics providers to judge the priority during capacity allocation. Finally, Mr. Darcy made the notion that local disturbances and organizational confusion hinder mutual purchasing of logistics services. He gave the examples of insufficient labeling or the shipment to wrong destinations. As a result, contracts cannot be similar for each member. This entails that each HO is conjunction with a logistics service provider of choice which fulfills the notion that organizations prefer to be independent and substantive with their decision making process (Bloos et al., 2009; Villa, 2002).

The establishment of a central department at the Logistics Cluster that is dedicated to issues dealing with the consortia is already an advanced achievement. In contrast, the IAPG is missing the manpower of allocating additional tasks to the members according to Mrs. Edwards. As a result, at the current stage it is not possible to operate mutual purchasing as the coordination is time-consuming.

4.3 Resource-Based View

4.3.1 Combined Resources

Human Capital

Combining human capital can be considered as an important incentive of entering a consortium such as the IAPG. Mrs. Edwards indicated that the wider availability of colleagues is the major reason to be a member. It provides the availability of widening the scope of competent partners that have knowledge about different humanitarian logistics operations such as customs clearance, country-specific knowledge and operational experience in the field. Therefore HOs are able to build and complement each other’s knowledge. This fact proves the notion by Lepak & Snell (1999) that the employment method through consortia improves human capital.

In terms of the Logistics Cluster, a central department of 12 employees that are seconded to serve the WFP Logistics Cluster, is reserved full time that deals only with issues of the consortium. Mr. Cimetière pointed out that this central department is able to support members on operational levels by being responsible for coordination issues and information management. For instance, Mr. Cimetière pointed out that a HO can use the Logistics Cluster as a last resort option if the organization is not capable of getting hold of transportation or warehousing capacity by itself. However, Mr. Cimetière and Mrs. Séchaud also clarified that this only happens under exceptional circumstances and should not happen on a frequent basis. This option avoids the search for capacity through multiple channels. The combined human capital of the Logistics Cluster is the
primary channel for the members and solves the issue of missing transportation capacities. Porac et al. (2004) describe this issue as a unique configuration derived from collective human capital. Additionally, Mr. Cimètère stated that the Logistics Cluster provides a specific logistics coordinator who is in charge for organizing meetings on the field level during projects by gathering information related to in-country logistics situation, gaps and needs. It creates purchasing synergies within consortia and is consistent with the assumption made by Axëlsson, Rozemeijer & Wynstra (2005). These synergies consist of new capabilities that will exceed the individual potential of consortia members as stated by Lepak & Snell (1999).

Knowledge

Consortia enable to create a combined pool of knowledge. Even the purchasing process does not take place on a mutual basis; all interviewees note that one of the major functions of consortia remains to enhance knowledge sharing among the members. This function would match the primary driver of establishing other forums such as the HLA or the Fleet Forum. It covers findings by Dyer & Nobaka (2000) who point out that proprietary knowledge will be eliminated to a high extent and made accessible for other members. Mrs. Edwards and Mr. Darcy highlighted the advantage of having a wider scope of colleagues available to contact for specific questions about certain humanitarian operations or scenarios. It can be considered as ad-hoc knowledge sharing on operational levels which matches with the term of collaborative transaction management by Whipple & Russell (2007). Mr. Darcy also described the resource of knowledge as a primary incentive of being a member if the IAPG. This improves the consortia’s manager development capability as indicated by Lambe et al. (2002). The managers have more options to access valuable knowledge to operate duties and judge occurring conflicts. Additionally, Mr. Hoare and Mrs. Edwards emphasized the importance of sharing supplier contacts. Bridging the gap to the literature in this case, Gulati (1999) states that independent members get to know each other through the virtue of knowledge from the consortia. This open attitude gives the hint of existing trust which is a crucial factor to use the resource of knowledge to generate a competitive advantage (Barney & Hansen, 1994).

The function of ‘bringing knowledge to the table’ is one of the major objectives of the IAPG according to Mr. Hoare. However, the extent of sharing knowledge is taking place on a higher level in the IAPG as the consortium shares established contract and tender formats with each other. In particular, Mrs. Edwards mentioned that a standardized format of contracts including commercial terms or scenarios for transportation services can be provided throughout the consortia.

Transportation Systems

Mutual investments in physical assets did not come forward during the interviews. The problems and barriers have been stated in 4.2.4. It can be concluded that every single HO has to judge which investments are economically viable. Nevertheless, consortia provide a wider access of transportation systems. In particular, the Logistics Cluster enables for HOs to widen the scope of transportation capacity by coordinating the operations of multiple HOs during immediate response phases. Therefore, the connection to the commercial sector of pooling transportation fleets by Agarwal et al. (2009) is applicable to the purchasing consortia. The pool of fleets is assessed by the logistics coordinator who conceptualizes an action-plan that ensures to utilize available assets efficient-
ly and identifies occurring gaps regarding transportation capacity according to Mr. Cimetière.

The identified purchasing consortia do not have a pool of mutual funds by donors. All the members still rely on their individual funds. Consequently, the resource of financial assets is not crucial for consortia.

### 4.3.2 Capabilities

#### Decreased Purchasing Complexity

Another important capability is the decreased purchasing complexity enabled by consortia. The Logistics Cluster functions as a central department that combines human capital for the consortia to coordinate transportation demand. That implies to decrease the complexity of approaching logistics providers. It avoids the search for capacity through multiple channels. Arnold (1999) outlined this advantage by reducing the degree of operational efforts. HOs have a central contact person at the Logistics Cluster that provides an option for last resort. According to Mr. Cimetière, this function ensures that humanitarian supply will be shipped in a reasonable timeframe to the destination. In that context, the metric of lead-time plays an important. The central forwarding of transportation demand reduces (1) the time to approach the transportation provider and (2) the time until the service will be executed. Overall, the capability of decreased purchasing complexity covers the findings of Lysons & Farrington (2006) that purchasing consortia can speed up the process of purchasing services.

The IAPG advocates the simplification of purchasing activities by sharing contractual documents among the members according to Mrs. Edwards. It supports to get a broader picture and speeds up the elaboration of contracts with transportation providers. Mr. Darcy stated that he would be interested in having a closer look to the content in order to track down adoptions for Concern Worldwide.

#### Knowledge Sharing

The capability of knowledge sharing among members gives the opportunity to access valuable knowledge concerning purchasing activities. The provision of experience of operational procedures in particular countries or scenarios are valuable for individual members according to Mr. Hoare and Mrs. Edwards. Members are able to use their network connection and request information on a daily basis. This individual interaction is consistent with the term of collaborative transaction management (Whipple & Russell, 2007). This extension of the individual knowledge base also allows absorbing new knowledge more effectively (Kale & Singh, 2007). In order to keep knowledge sharing and creation up to date, the IAPG is meeting four times a year to debate openly about issues of matter related to humanitarian logistics. Mrs. Séchaud pointed out that the Logistics Cluster provides valuable knowledge on a common platform for the IFRC. The Logistics Cluster enables knowledge sharing through annual meetings on the global level. The exchange of previous experiences and observations allows deriving strategic perspectives and potential service provisions, stated by Mr. Cimetière. Furthermore, Mr. Cimetière emphasized the importance of field meetings that occur more frequently in disaster areas. A logistics coordinator is in charge for developing a concept of operations. It includes gathering information regarding the scope of services and affected geographical areas to analyze the status quo of the situation. This information is made available on the Logistics Clusters’ website so that all organizations involved of that
specific emergency have instant access. This way of gaining and sustaining knowledge is comparable to the model of Sveiby (2001) that explains the relations to three different components of (1) individual competence, (2) external structure and (3) internal structure.

![Figure 9: Three components of knowledge (Sveiby, 2001)](image)

The information flow between these components exchanged is the key for firms and organizations to guide in strategy formulation. This is an ongoing process that will help improve the company’s knowledge and the people that are operating in it.

Another form of knowledge sharing was mentioned by Mrs. Edwards and Mr. Cimetière in the form of collaborative training. It is related to Kaplan & Norton (2004) and Draulans et al. (2003) who suggest that developing intangible assets is connected with cost reduction, employee training and TQM.

**Learning Capabilities**

Closely related to the capability of knowledge sharing, the *learning capabilities* have been identified as significant benefits for the consortia. The IAPG as well as the Logistics Cluster conduct meetings throughout the year to share experiences and discuss potentials for services. The members are proactively interested in sharing recent incidents that might be helpful for other members. In case of purchasing duties, Mr. Hoare and Mrs. Edwards mentioned that experiences with suppliers or contractual issues during tendering processes are openly discussed within those meetings. This is consistent with articulating know-how with spoken or written words (Nonaka, 1994), learning the other partner’s skills (Tsang, 1999) and creating an environment within the consortia that supports knowledge sharing and amplification (Inkpen, 1998). The movement ensures to enhance the learning capabilities by bringing together unique experience and skills which is also stated by Hamel et al. (1989) and Lysons & Farrington (2006). Furthermore, we can identify that the learning capabilities take place on multi-level perspectives as indicated by Inkpen & Crossan (1995). Firstly, on the individual level HOs learn by themselves or they obtain new findings on the group level during meetings.

**Capacity Sharing**

Another aspect that came forward throughout the research is the capability of *capacity sharing* within transportation services. This is mainly applicable for the Logistics Cluster. Mr. Cimetière points out that the partners of the Logistics Cluster are able to share tangible assets. For instance, it is possible that goods are getting merged in sea transpor-
tation. This is important within humanitarian aid as the metric of lead-time has primary attention by managers. Mr. Cimetière made the notion that the extended scope of possible transportation modes and transportation providers decreases this lead-time and enables delivering supplies within the time as desired by consortia partners. The coordination function also supports utilizing capacity more efficiently which confirms the findings by Liu et al. (2010). The Logistics Cluster recently published a service portfolio document that describes the purchasing of transportation has an essential service for HOs. However, insurance issues and customs clearance formalities have to be operated by the requesting HO (Logistics Cluster, 2012e). Mrs. Séchaud stated the last resort option of the Logistics Cluster is mostly not considered by large organizations. Those organizations have their own established supply chains that are capable of handling scenarios of humanitarian supply. In terms of capacity sharing, Mrs. Séchaud mentioned that the option for capacities in warehouses was used once by the IFRC. This fact indicates that small and medium-sized organizations are much more in need for the last resort option.

**Negotiation Capabilities**

*Negotiation capabilities* turned out to be not relevant for consortia as the contracting stage and included price negotiations are operated individually. All interviews came down to the fact that the different size and demand of HOs does not allow logistics providers dealing with them under the same conditions.

### 4.3.3 Value Creation

Chapter 2.4 presented the conduction of value creation in consortia based on Schönberger (2011). During the primary research focussed on value creation in consortia, it was found that the model is applicable to the research topic. The focus however of consortia regarding value creation is in knowledge sharing, sustainability and the creation of it. Knowledge is not freely shared, only when participants ask each other for advice according to Mrs. Edwards. Especially striking changes in humanitarian logistics are discussed.

The use of different capabilities among the members of the consortia is the base for creating value. Implementing the different capabilities within the purchasing process of the model in figure 11 creates value for the participants of the consortia. Each capability contributes to a different stage in the process. The purchasing process can be mirrored to the theory that is suggested by Schönberger (2011). The model explains that within consortia decisions are made in steps. One part of the process can only start after its predecessor is completed.

![Figure 10: Network capacity disposition mirrored to the purchasing process based on Schönberger (2011) and van Weele (2010)](image)

However, the competence of the consortia and the internal collaboration needs to be in optimal form in order to produce a maximum outcome. An example is the development
of standardized contracts within the IAPG according to Mr. Hoare and Mrs. Edwards, as well as the collective reduction of lead time within the Logistics Cluster according to Mr. Cimetièrê.

4.3.4 Impact on the Purchasing Process

The stage of contracting is partly influenced by the capability of knowledge-sharing. The duty for price negotiations with suppliers remains individual whereas the usage of established contract formats from other members enables to have a competitive advantage against non-members of consortia. Therefore, other HOs can make use of these formats and use them individually for their own tendering and purchasing process. As a result, the stage of contracting within the purchasing process can be simplified by avoiding time-consuming contractual specifications and reduce operational efforts.

The capabilities of decreased purchasing complexity and capacity sharing have a notable impact during the stage of ordering. Even collaborative ordering is not taking place; the benefits for individual ordering are still given. Firstly, purchasing consortia advocate HOs by giving coordination support if the HO is not capable of finding transportation capacity. This duty of helping out as a last resort helps to approach logistics providers in a reasonable timeframe. For instance, the Logistics Cluster coordinates transportation demand and manages logistics needs through the provision of physical assets of transportation fleets or warehousing facilities. In that context, the relevance of capacity sharing among members comes forward. The extended scope of possible transportation options ensures effective executions of humanitarian supply. The following stage of expediting is directly connected as the capabilities for ordering are applicable as well. The execution of transportation will be performed earlier as the central department speeds up the ordering process. Sharing the capacity allows shipping humanitarian supply in a reasonable timeframe. In the end, it reduces the lead-time which is one of the major objectives of the Logistics Cluster according to Mr. Cimetièrê. It also generates efficient exploitation of shipment capacities according to Liu et al. (2010) and prevents unnecessary delays.

The capabilities of learning and knowledge sharing support the operations that occur within the evaluation stage. Firstly, the meetings of the consortia generate a multi-perspective evaluation from various members by exchanging knowledge and experiences. This evaluation can be used by other members who did not have experience with a specific transportation provider or with a specific transportation process. Reporting the performance as indicated by Mrs. Edwards, provides valuable knowledge that can be used as a toolkit by managers involved in purchasing activities. This toolkit is described by Kale & Singh (2009) as a transfer of best practices that is internally distributed within the purchasing consortia. This implies that learning capabilities are much more pronounced that positively affect a proper evaluation of provided transportation services.

4.4 Summary of the Analysis

In general, the goal of consortia is to develop a long term competitive advantage. These advantages can be identified through the resource-based view that outlines the key resources and its usage and exploitation of the management (Fahy & Smithe, 1999). It has been detected that purchasing consortia do not mutually operate purchasing activities. The most crucial resources, related capabilities and their impact on purchasing activities that generate competitive advantages for purchasing consortia have been identi-
fied. Human capital, knowledge and transportation systems lead to the capabilities of decreased purchasing complexity and capacity sharing. These capabilities have a major impact on the executions of transportation services. The availability of extended knowledge advocates mainly the capability of knowledge sharing and learning. As a result, we derived the following propositions that are enabled by being a member of a purchasing consortium.

Proposition 1: Purchasing consortia simplify purchasing processes on operational levels.

Proposition 2: Purchasing consortia improve purchasing processes by reducing the lead-time of approaching transportation providers.

Proposition 3: Purchasing consortia significantly advocate the distribution of knowledge and skills.

Proposition 4: Purchasing consortia enhance the possibility of learning procedures.

Figure 11: Consortia purchasing performance based on Grant (1991), Fahy & Smithee (1999) and van der Falk & Rozemeijer (2009)
5 The Role of Purchasing Consortia in Humanitarian Logistics

The fifth chapter sums up the findings with a conclusion and discussion. The purpose and aim of the paper will be rehearsed in order to have suitable answers to the research questions. It will revise the findings and link them to the theoretical framework by embedding the results into the resource-based view from the literature. The conclusion will be connected to possible future scenarios in purchasing consortia within the humanitarian sector. Further, implication for managers as well as an indication for further research will be presented.

5.1 Conclusion

The aim of the research was to identify the operative effectiveness of humanitarian consortia and its competitive advantages. Several crucial research questions where set in the beginning to analyse the added value that consortia give towards its members. The resource-based view is of great contribution and is used as the base for the developed model in figure 11, designed to investigate the competitive advantages and impact on the purchasing process of consortia. The ultimate aim of identifying the competitive advantages is consistent with the model by Fahy & Smithee (1999). Using their model as a tool, the findings after primary research can be filled in the blank parts of the model. The analysis can be summarized by implementing tangible and intangible key resources, and the management strategic choices that ensues into an outcome.

<table>
<thead>
<tr>
<th>Key resources</th>
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<tbody>
<tr>
<td>Tangible Assets</td>
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<tr>
<td>- Human Capital - Transportation systems</td>
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<tr>
<th>Management Strategic Choices</th>
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<tr>
<td>- Individual decision making process among members of the IAPG and Log Cluster using the shared knowledge as key resources</td>
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Figure 12: The resource-based view of purchasing consortia based on Fahy & Smithee (1999)

Key resources lead to the result of possible capabilities. It is the basis of the value that can be created in an organization. They should be well used by its management in the decision-making process. In case of the consortia researched, these tangible assets are (1) people of expertise and (2) physical distribution with transportation systems. The tangible assets lead to the intangible asset of knowledge sharing, obtaining and sustaining among other members.
The assets are transformed in useful capabilities. Capabilities that can be used and obtained by all members within the consortia, and bring value and eventually superior performance. The capabilities that have been implemented in the resource-based view are (1) decreased purchasing complexity that is the result of (2) knowledge sharing among members together with (3) learning capabilities and the possibility of (4) capacity sharing.

The result of the competitive advantage of a company or organization will make upon its competitors is dependent on the managers’ strategic choices. It has been analysed that the shared knowledge among partners is used in its own way depending on the usefulness of the information. However, decisions may not be made collaboratively; the shared information is used as a key resource within the individual decision-making process.

The obtained information is taken into account for managerial decisions which creates the long term competitive advantage of the HOs. Obvious aspects that will bring an added value in creating a sustainable competitive advantage are (1) an extensive form of knowledge within logistics services together with (2) less operational efforts and (3) improved learning procedures that is obtained through the transparency in consortia. Plus, the Logistics Cluster (4) reduces the lead-time by taking over coordination duties. This also includes the option for last resort. Partners are allowed to ask for assistance in order to transport goods of importance.

The superior performance is the final result of the resource-based view and the actual performance of the organization. This part is the process of the resource-based view that is tested against the competitive market and where the HO can analyse what the advantage compared to its competitors content.

Having linked the resource-based view from the literature with the findings, the research questions can be answered as follows:

1. How do purchasing consortia collaborate within the purchasing process of transportation services in humanitarian aid?

During the research, it has been found out that the extent of mutual physical purchasing does not occur as assumed in the beginning. Due to various barriers mentioned in chapter 4.2.4 consortia members obtain their own relationship regarding logistics service providers. The common objective of the Logistics Cluster as well as the IAPG is knowledge sharing, creating and the sustainability of it. The members operate frequent meetings to exchange information, experiences and observations that are a matter of interest to discuss. According to the outcome of the interviews the consortia are important for the transparency in the market that is created among its members and partners. Furthermore, the consortia conduct mutual workshops that seek to train staff in the field of humanitarian aid.

The Logistics Cluster shows a more advanced stage of collaboration by providing a central department that is in charge for supporting HOs in coordinating transportation services and providing information management. The department is run by the WFP which is the lead-agency for the Logistics Cluster. HOs are able to approach the department as a last resort option in order to ensure shipments of humanitarian supply.
A. Who are the participants within the purchasing process of consortia?

Every single member or partner of consortia is responsible for their own physical purchasing activities regarding logistic services. Established purchasing departments undertake relevant tasks related to the purchasing process. The actual duty of shipping humanitarian supply is either executed by the HO itself or commercial logistics providers based on contractual agreements with individual HOs.

B. How do consortia approach commercial logistics providers?

In general, the approach takes place on an individual base. However, the Logistics Cluster can act as an intermediary for purchasing transportation services. If a HO is not capable of approaching a provider, it can send requests to the central department. Following, the lead-agency (WFP) takes over necessary coordination duties to fulfil the demand for transportation. The central department coordinates the execution of transportation services and therefore takes over a significant role within the stages of ordering and expediting in the purchasing process.

The IAPG also provides an example that brings forward the possibility of sharing contractual templates within consortia. The result of a transportation supplier selection was presented within the IAPG. The template was accessible to all members that supported their decision making process regarding transportation services. For instance, another HO took over the outcome and closed a contract with the same logistics service provider.

2. How can purchasing consortia constitute competitive advantages for members?

The major competitive advantages derived from generated capabilities based on the resource-based view include (1) the accessibility of extensive knowledge, (2) the reduction of operational efforts, (3) the reduction of lead-time and (4) the improvement of learning procedures.

The extensive knowledge is given by meetings as well as ad-hoc information sharing. The reduction of operational efforts can be drawn from the exchange of contractual information in the IAPG that saves time-consuming work and gained valuable knowledge and experience for other members and partners. The fact that Sightsavers used the information generated by MAG is a perfect example of ‘management strategic choices’. The Logistics Cluster can be considered as a single point for requesting transportation service. It avoids multiple requests towards other HOs or logistics providers and reduces the effort of purchasing. The decrease of effort is also linked to the reduction of lead-time. Firstly, contracts can be closed in a shorter timeframe for members of the IAPG. Secondly, the Logistics Cluster reduces the lead-time by providing capabilities of providing transportation services. Finally, both consortia support to enhance learning procedures through exchange of knowledge and experiences and the conduction of mutual training workshops.

A. What are the major important resources of consortia?

Fahy & Smithee (1999) distinguish between intangible and tangible resources that contribute to the value creation of companies and organizations. It has been identified that the tangible resources of (1) the human capital and (2) the physical assets of transporta-
tion systems as well as the intangible resource of (2) knowledge are the most valuable ones for purchasing consortia.

The wider scope of transportation systems primarily affects the physical distribution of humanitarian supply and supports to decrease the lead-time. The availability of pooling human capital strengthens the accessibility of expertise in the field of humanitarian aid. The intangible key resource of knowledge is the direct result from the tangible resources, human capital. It can be stated that this is the obtained knowledge that is shared, sustained and created. Extended expertise contributes to the exchange of information within consortia. This information is drawn from the experience that is created with the physical distribution of their goods with the logistic service providers they cherish contracts with.

B. How can consortia enhance purchasing capabilities?

The key resources facilitate purchasing capabilities. The scope of purchasing capabilities for consortia encompasses (1) decreased purchasing complexity, (2) learning capabilities, (3) knowledge sharing and (4) capacity sharing.

Decreased purchasing complexity is derived from less operational efforts through exchange of contractual documents. In case of the Logistics Cluster, it also relates to the function of coordinating transportation capacities and being a central contact point that arranges logistics services as a last resort option, particularly for transportation capacities. The capabilities of knowledge sharing and learning arise from the meetings and conferences that are operated by consortia. On the global level, strategic perspectives and previous experiences are discussed that advocate future operations and identify potentials of collaboration. Additionally, the Logistics Cluster operates weekly meetings for specific operations in disaster areas that support knowledge sharing of involved HOs and other participants on the field level. The capability of capacity sharing is only applicable for the Logistics Clusters as the lead-agency WFP has the mandate to ensure operational support by providing assets, facilities, information and services.

C. How is it possible to measure the competitive advantages?

The designed model in figure 11 that has been presented in the previous chapter is a model that is based on the resource-based view with the intention to measure the competitive advantage of HOs related to consortia. It contains the most valuable resources of human capital and knowledge and transportation systems for consortia. These resources generate new capabilities and advocate existing capabilities of consortium members. The identified capabilities create value and have a significant impact on certain stages of the purchasing process of transportation services illustrated by the arrows in figure 11. Finally, these impacts lead to competitive advantages that would not have been generated individually.

5.2 Purchasing Consortia – An Outlook

The participation of consortia in the humanitarian sector shows that their presence is generating considerable success for individual members and the provision of humanitarian supply in general. However, it has been identified that the extent of collaboration is still limited for purchasing activities, particularly during immense disaster incidents as the hurricane in Haiti in 2010. Mr. Darcy clarified that the degree of emergency was tremendously high that logistics operations were executed under chaotic conditions. It
indicated that each HO was focusing on own operations instead of working collaboratively. Those aspects query the existence of consortia and their effectiveness. Consequently, Mr. Darcy admitted that the IAPG partly became redundant. An additional obstacle to consider is the refusal of governments to enter their countries and provide humanitarian aid. Previous incidents show that operations of the Logistics Cluster has been hindered as only UN agencies such as UNICEF were allowed to enter certain countries (Kovacs, 2012).

Currently, the government of the Netherlands, WFP and UNICEF are operating a joint evaluation of the Logistics Cluster. The final evaluation report can be expected at the end of May. The joint office of evaluation already stated a pre-assumption in a report that the investments into the Logistics Cluster are starting to pay off as the benefits through the cluster approach have compensated the costs and shortcomings (WFP, 2011a). The evaluation indicates that the Logistics Cluster approach has significant potential for additional improvements in humanitarian response.

The humanitarian sector might adapt project management issues from the commercial sector regarding purchasing activities. The prerequisite is to establish sub consortia that consist of HOs with the same focus and commodities. An example from the commercial sector would be the collaboration between GM and Peugeot (BBC, 2012). An example from the humanitarian sector was given by Mr. Hoare from Sightsavers who founded the IAPB. This consortium combines HOs with a focus on providing sight equipment for underdeveloped countries. These HOs undertake mutual purchasing activities for lenses and other sight commodities. It implies that consortia have a large potential especially in the phases of rehabilitation and development. It is necessary to set up a reasonable timeframe to approach suppliers and discuss specifications mutually in order to gain economies of scale advantages. Contrary, those frequent collaborations are limited and considered as an immense challenge during disaster relief phases illustrated by the disaster of Haiti as an example. The challenges encompass factors from the literature given by Overstreet et al. (2011) as well as statements from interviewees during the thesis research. A possible solution to transcend this challenge could be the application of purchasing activities on a project basis.

This project perspective is mainly applicable for the Logistics Cluster as it has the human capital combined in a central department. The project perspective entails that HOs with mutual commodities and focus set up a consortium that collaborates ad-hoc when a disaster breaks out. It requires that contractual issues with transportation providers have been prepared in advance. Therefore, the stages of ordering and expediting can be executed instantly. It is also necessary to allocate roles and responsibilities as well as related communication flows in order to gather information efficiently from all participants. Transcending the problem of setting priorities pointed out by Mrs. Edwards can be solved by following a data sheet that contains previous freight volume information of all HOs participating in the consortia project. The volume could be broken down to a percentage that defines the capacity reserved for each HO for the upcoming project. Further developments that advocate this project perspective is the use and exploitation of established transportation and warehouse links within the supply chain. Examples are the UNHAS who is specialized in coordinating and combining air freight services (WFP, 2012), the UNPCD that provides centralized warehousing and assortments for HOs (UNPCDC, 2012) or the UNHRD that provides storage, warehouse and handling services of humanitarian supply in 5 different locations in Europe, Africa, Latin America,
Asia and the Middle East (WFP, 2011b). It is managed by the WFP and other partner HOs. The UNHRD is able to deliver humanitarian aid to those who are affected by natural disasters and other concrete emergencies all around the globe within 24-48 hours (Balci̇k & Beamon, 2008). Additional services for HOs include the procurement of transportation, technical assistance, insurance or repackaging (WFP, 2011b). These examples simplify the mobilization of relief for HOs as it delivers aid in a more efficient manner together with financial benefits, especially for small HOs. According to Balci̇k & Beamon (2008) only major HOs are able to provide the capital to operate warehouse centers to store and distribute humanitarian aid.

5.3 Implication for Managers

The extent of collaboration of the IAPG and the Logistics Cluster indicates that managers of HOs are able to gain significant expertise, offers and advantageous opportunities in handling purchasing activities in humanitarian logistics. The implications cover strategic as well as operational issues.

On the strategic level, managers of a HO are able to discuss possible future scenarios of collaboration with experts from other HOs and logistic service providers. The forum discussions as well as frequent meetings allow managers exchanging experience and expertise that provides a wider perspective on humanitarian logistics and its purchasing activities. Particularly, the usage of transportation services can be discussed by designing modified humanitarian supply chains with different transportation modes and geographical allocations of trans-shipment centers (e.g. warehouses, ports). The timeframe on this level focuses on the long-term collaboration that ensures to steer the consortia to an appropriate path to execute humanitarian supply.

On the operational level, managers of a HO should be aware to exploit being a member of the consortia on a daily basis. The advantage of having multiple contact persons combined in a network provides the opportunity of gathering ad-hoc information. This information can vary from simple documentation handling processes to complex procedures concerning transportation processes on the ground and supports managers’ decisions. Sharing this knowledge requires that managers should keep the non-competitive character of HOs in mind that transcends barriers of keeping proprietary knowledge within an organization.

5.4 Indication for Further Research

The findings and conclusion were delimitated to focus on the purchasing of transportation services. Plus, the thesis is based upon the two consortia, the IAPG and the Logistics Cluster. The research can be extended with the two dimensions of (1) additional services or goods and (2) additional consortia. Further research has to be done to focus on other logistics services, such as warehousing, assortments, consulting or other value-added services or by taking supply goods into account, such as aid-kits, blankets or tents. Furthermore, additional existing consortia could be tracked down that widen the scope for findings. The discussion in 5.2 gives the hint to undertake possible future scenarios of establishing sub-consortia with a mutual background and focus. This potential needs to be analyzed as well, whether it might be of a serious option for HOs or too complex to execute. The analysis indicated on several problems and barriers that limit the collaboration of the IAPG and the Logistics Cluster. However, the establishment of the IAPB is a proof for possible scenarios.
References


Kovács, G. (2012). Disaster and/or reconstruction, presentation within the workshop: *After the Arabian Spring - emergency or reconstruction?*, held on 3 May 2012 at JIBS, Jönköping, Sweden.


Appendix A – Interview Guide

Date:
Name:
Organization:
Position:

General

1. When did [HO name] enter the consortium?
2. Why did [HO name] enter the consortium?
3. Does any HO play a major role in the consortium? (Power distribution balance)
4. What are the criteria for entering the consortium?
5. What kind of services and goods are purchased through consortia?

Purchasing Issues

6. How can you adapt the purchasing process for the consortium? Do what extent are the purchasing stages relevant for the consortium?
7. How does the extent of collaboration and frequency differ towards the different phases of the disaster management cycle or type of disasters?
8. How does the buying process and tendering process occur? How do you approach logistics service providers? Are any further intermediaries involved?
9. Is your organization having multiple logistics service providers? How does the selection occur? What makes the decision to operate with single/multiple suppliers? What are the priorities for supplier selection?
10. How do consortia enhance the possibility of pooling
   a. Skills and knowledge?
   b. Financial assets?
   c. Physical assets?
   d. Employees?
11. How would you describe the benefits of being a member of the consortium?
12. To what extent does the consortium change the purchasing processes?
13. How does the purchasing consortium affect negotiation capabilities?
14. Which activities have been simplified by the purchasing consortium?
15. How do consortia advocate learning procedures?
16. Can you relate to previous practical examples of improvements?
17. What are current problems and obstacles for mutual purchasing?
18. Where do you see potential of the consortium?
19. Are you a member of another consortium? Why and what are the additional benefits?
Appendix B – Thesis Roadmap

Chapter 1 - Introduction
Chapter 2 - Literature Review
Chapter 3 - Methodology
Chapter 4 - Analysis
Chapter 5 - Conclusions and Recommendations

Performance Measurement
Procurement
Humanitarian sector
Consortia in general
Model
Resource-based View
Value Creation
Collaborations
Answers to Research Questions

Chapter 4 - Analysis

Chapter 5 - Conclusions and Recommendations

Humanitarian sector
Resource-based View
Collaborations
Answers to Research Questions

Value Creation
Performance Measurement

Procurement
Model