STRATEGY DEVELOPMENT FOR COMMERCIAL LOGISTICS SERVICE PROVIDERS IN HUMANITARIAN LOGISTICS

ABSTRACT

Following the 2004 tsunami in the Indian Ocean there has been widespread recognition of the importance of humanitarian logistics among its various stakeholders. With the increasing complexity and magnitude of the disasters over the years, the humanitarian aid organizations are finding it increasingly difficult to provide the necessary relief services to the victims of the disasters. Further, the situation is aggravated by the limited amount of funding and other types of resources that are needed for carrying out the humanitarian logistics operations.

In such circumstances, the humanitarian aid organizations are increasingly looking to partner with commercial logistics service providers to augment their limited logistical capacities. Further, even within the commercial logistics sector, there is an increasing recognition of the huge business opportunity that the humanitarian logistics sector represents. While some of the vital resources such as physical assets, capabilities, organizational processes, information technology, knowledge etc. that they have accumulated in servicing the commercial sector could prove useful in the humanitarian sector, they too, in order to be successful in the humanitarian sector, will need to adapt themselves to the challenging environment of this sector.

The humanitarian logistics landscape consists of at least 5 major actors, namely, government, donors, military, responding agencies and logistics service providers. And even though all of them are interdependent, research suggests that there exists only limited collaboration and coordination between them. In this context, if the commercial logistics service providers want to successfully participate in this sector, they need to develop strategies taking into consideration their interactions with all the major stakeholders. The IMP approach, with its emphasis upon rich description and efforts to understand the underlying processes behind interaction between organizations in networks is therefore appropriate for studying the abovementioned issue.

KEYWORDS

Humanitarian, logistics, strategy, interaction, IMP

INTRODUCTION AND PURPOSE

Between 1975 and 2008, both, the number of natural disasters and the number of people affected because of these disasters, have increased by almost 5 times (www.emdat.be). In the same period, the estimated economic damages caused by natural disasters have increased by almost 7 times and in 2008 they were approximately $140 billion (www.emdat.be). These trends portend increasing need for disaster relief operations in the times to come.

At the heart of any disaster relief operations is the establishment of a supply chain (Pettit and Beresford, 2005). The traditional view of supply chains is that they are tactical and transactional in nature as opposed to being of any strategic importance (Ketchen et al, 2008). This view is still widely prevalent in the disaster relief sector and this is one of the reasons why the role played by the various actors involved in this sector has come under intense scrutiny (Thomas and Kopczak, 2005; Jahre et al, 2009).

It is widely recognized that the logistical needs of humanitarian organizations frequently surpass the capabilities of current response approaches(Beamon & Kotleba, 2006). Among others, some of the main issues plaguing a vast majority of humanitarian organizations, particularly with regards to logistics, include the lack of trained manpower, lack of coordination, lack of institutional learning and lack of investment in technology (Thomas & Kopczak, 2005). The above mentioned issues suggest that the current transactional approach adopted by humanitarian organizations needs to change and instead they need to develop long term sustainable strategies for improving their efficiency and effectiveness.

There is a growing awareness amongst the various stakeholders involved in the disaster relief efforts that while it is vital that the humanitarian organizations improve upon their logistical capacities and capabilities, due to the increasing magnitude, complexity and frequency of the humanitarian catastrophes, their efforts will need to be augmented by the contributions from the commercial logistics service providers. Further, even within the commercial logistics sector, there is an increasing recognition of the huge business opportunity that the humanitarian logistics sector represents. While some of the vital resources such as physical assets, capabilities, organizational processes, information technology, knowledge etc. that they have accumulated in servicing the commercial sector could prove useful in the humanitarian sector, they too, in order to be successful in the humanitarian sector, will need to adapt themselves to the challenging environment of this sector. The purpose of this research is to study as to how the commercial logistics service providers can develop effective strategies for operating in the disaster logistics sector.

STRUCTURE OF THE PAPER

The paper is divided into seven main sections as listed below. The headings of each of the sections are self-explanatory.

- Introduction and purpose
- Background of humanitarian logistics sector
- Main Actors in humanitarian logistics
- Activities in humanitarian logistics

- Resources available for humanitarian logistics
- Theoretical considerations

The paper ends with a concluding section and some thoughts on directions for future research.

BACKGROUND OF HUMANITARIAN LOGISTICS SECTOR

This section describes in brief the humanitarian logistics sector and explains some of its important aspects.

HUMANITARIAN LOGISTICS

In the aftermath of the 2004-Indian Ocean tsunami, one European ambassador said the following at a donor conference, "We don't need a donor's conference, we need a logistics conference" (Thomas & Kopczak, 2005, p.1). Similarly, a spokesman for Doctors Without Borders had made a similar assessment and said, "What are needed are supply managers without borders: people to sort goods, identify priorities, track deliveries, and direct the traffic of a relief effort in full gear" (Thomas & Kopczak, 2005, p.1). Humanitarian logistics, the function that is charged with ensuring the efficient and cost-effective flow and storage of goods and materials for the purpose of alleviating the suffering of vulnerable people, came of age during this tsunami relief effort (Thomas & Kopczak, 2005).

SIZE OF THE HUMANITARIAN LOGISTICS SECTOR

Based on the size of the overall humanitarian industry and estimates of the percentage attributable to logistics efforts (ranging from 40 to 80 percent), the size of humanitarian logistics in financial terms is probably somewhere between US$7 billion and US$14 billion per year (Majewski et al., 2010). However it's not just the financial aspect which is important in this case. According to estimates provided by Majewski et al. (2010), the number of people who were affected by disasters in 2010 was approximately 40 million. And out of these 40 million, about half did not receive any humanitarian assistance. And since humanitarian logistics is at the heart of any disaster relief operation (Petit and Beresford, 2005), the need for improving the state of humanitarian logistics services has become a major concern for all the major stakeholders in this sector.

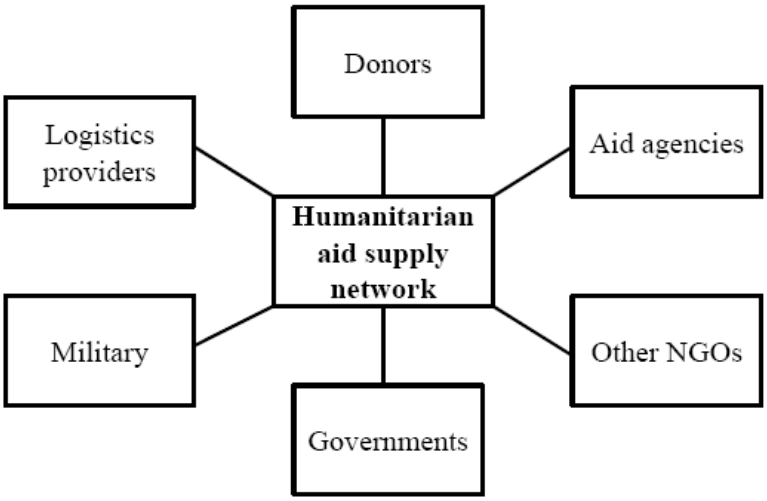
MAIN ACTORS

Broadly speaking the following are the main categories of actors involved in humanitarian logistics sector (Refer Figure 1) (Kovacs and Spens, 2006):

- Aid agencies
- Non-governmental organizations(NGOs)
- Governments
- Military

- Commercial logistics service providers

Figure 1: Actors in supply network for humanitarian aid (Kovacs and Spens, 2006)



The abovementioned actors and the role that they play in the humanitarian logistics sector are described in brief in the following sections.

AID AGENCIES AND NGOS

- The Aid agencies: The main actors in this sector include the multi-lateral aid agencies such as United Nations bodies, for example World Food Program (WFP).
- Non- governmental organizations (NGOs): There are several types of NGOs. Some of them have large scale international operations. They are usually referred to as International NGOs (INGOs). Then there are smaller and medium sized NGOs, which have more limited scope of operations.

In response to the growing need for humanitarian logistics services, these actors are trying to scale up their capacities. Table 1 provides some description of the roles and capacities of the respective categories of actors.

Table 1: Key actors and their respective capacities (Majewski et al., 2010, p.11)

Key actors	Respective logistics capacity

Multilateral agencies, for example United Nations (UN) bodies such as the World Food Programme (WFP)	WFP is leading the UN efforts in managing humanitarian logistics. It has been instrumental in the development of humanitarian response depots (HRDs[1]).
International nongovernmental organisations (INGOs)	The importance of logistics is better understood in these organizations. And they are making efforts to jointly develop capacities with the corporate sector.
Red Cross Red Crescent Movement	There is an improvement in capacity since 2005. Establishment of the regional logistics units (RLUs) have helped to improve capacity. There has also been improvement in performance.
Smaller and medium-sized NGOs	Resource constraints, staff expertise, and poor preparedness are some of the important limitations.

COMMERCIAL LOGISTICS SERVICE PROVIDERS

Logistics service providers have been serving the needs of various businesses in a variety of different way. In the earlier years, private sector businesses, which include the commercial logistics service providers, engaged with humanitarian organizations or donor agencies either as 'for-profit' contractors or responded with philanthropic motives to address needs in a particular context (Borton, 2009). The focus was rather short term and tactical in nature. However, more recently the commercial logistics service providers have begun to form partnerships with humanitarian organizations and their approach is more long term (Borton, 2009). A noteworthy example is the partnership between TNT, a global commercial third party logistics service provider, and WFP (Borton, 2009).

Among other things, an important factor driving corporate-humanitarian collaboration is global economic liberalization, which has facilitated corporate sector access to countries around the world and simultaneously increased global scrutiny of corporate behavior (Kent, cited in Borton, 2009). And if historical trends are any indication for the future, then the needs for humanitarian sector are expected to increase rapidly (Refer
Table **2**) in the future. In such a scenario, the trend of increasing involvement of private sector companies and corporations in the humanitarian sector looks set to not only increase but possibly accelerate over the next 15-20 years (Borton, 2009).

[1] UN Humanitarian Response Depot (UNHRD) is a WFP network able to deliver humanitarian relief items worldwide within 24/48 hours (http://www.logcluster.org/about/depots, 20th April, 2011).

Table 2: Natural disasters and their consequences (www.emdat.be)

Criteria	1975	2008
Number of people dead	133,858	241,261
Number of people affected	44,050,525	217,990,195

MILITARY

It is widely acknowledged that the military is a major provider of humanitarian logistics services (Pettit and Beresford, 2005). Broadly, war or civil disturbance normally involves the greatest military mobilization; whereas natural disasters precipitate a response that often involves few or no military resources (Pettit and Beresford, 2005).

More developed countries are likely to be able to rely more heavily on non-military organizations, whereas less developed countries tend to depend proportionately more on military assistance during a humanitarian crisis (Petit and Beresford, 2005).

DONORS

Donors are important actors, as they provide the bulk of funding for major relief activities. In addition to country specific funding (e.g. the US and UK), in recent years, foundations, individual donors and the private sector have become important sources of funds for aid agencies (Kovacs and Spens, 2006). With an increasing number of aid agencies, the competition for donor funding is getting more intense.

INCREASE IN THE NUMBER OF ACTORS

According to Majewski et al. (2010), the number of NGOs has increased dramatically over the last 20 years. However, the impact of this trend has been counterintuitive: reduced coverage of humanitarian assistance needs because of fragmentation, duplication, and time lost due to increasing coordination challenges.

Further, according to Majewski et al. (2010), donors have also expressed frustration with the proliferation of actors and the resulting duplication and coordination challenges. Some of the donors are putting pressure on NGOs to consolidate or come up with collaborative funding proposals to lessen this problem (Majewski et al., 2010).

ACTIVITIES

The following section describes in brief the various activities that are performed in the different phases of disaster relief operations. The disaster relief operations can be broadly divided into three main phases depending upon the time before, during and after the occurrence of a disaster as shown in Figure 2 (Kovacs and Spens, 2006). They are as follows:

- Preparedness or preparation phase
- Immediate response phase
- Recovery and reconstruction phase

Figure 2: Phases of relief operations (Kovacs and Spens, 2006)

PREPAREDNESS PHASE

The preparedness phase is summarized in Table 3, which shows that preparedness is reliant largely on pre-tested systems and communication (Pettit and Beresford, 2005).

Table 3 : Disaster Management: Preparedness (Petit and Beresford, 2005, p.316)

Activity	Brief description
Disaster policy	Governments and NGOs are involved.
Planning	Planning in terms of infrastructure, personnel, coordination etc.
Coordination	Coordinated between various organizations involved in preparedness phase.
Equipment and supplies	Designated and stockpiled where appropriate. NGOs are increasingly pre-positioning stocks as per projected needs for the future.
Training of personnel	Crucial for effective and adaptable response.

IMMEDIATE RESPONSE PHASE

Response activities usually have to be carried out in crisis conditions and require flexible planning, organization and disciplined training. As physical infrastructure, such as roads, bridges

and airports, is commonly damaged by war or natural disaster, transport capacity is often severely limited (Thomas and Kopczak, 2005).

The activities that are usually performed in this phase are described in brief in Table 4.

Table 4 : Disaster management: Immediate Response (Pettit and Beresford, 2005, p.317)

Activity	Brief description
Assessment	Assessment of needs for various resources in the aftermath of a disaster.
Appeals management	Appeal for funds and resources from donor organizations based on the needs assessment.
Coordination of agencies' activities	Coordination between the various stakeholders in order to ensure effective and efficient response.
Reporting	Performance measurement to monitor and improve the quality of operations.

RECOVERY AND RECONSTRUCTION PHASE

Recovery is a process by which communities and the nation are assisted in returning to their proper level of functioning following a disaster and can take several years (Pettit and Beresford, 2005). The activities that are usually performed in this phase are described in brief in **Error! Not a valid bookmark self-reference.**.

Table 5: Disaster management: Recovery (Petit and Beresford, 2005, p.317)

Activity	Brief description
Recovery programmes and projects	Long term development projects.
Management of commodities and suppliers	Management of suppliers. Inventory management.
Maintenance of transport and transport systems	Upkeep and improvement of transport infrastructure

RESOURCES AVAILABLE FOR HUMANITARIAN LOGISTICS

Majewski et al. (2010, p. 15) have presented a somewhat 'sobering' picture of the resource availability for humanitarian logistics. Although overall humanitarian assistance funding has generally increased since the year 2000, this trend is likely to slow down as funding levels reach a plateau, partly due to the global economic crisis (Majewski et al., 2010). On the other hand the number of NGOs competing for the funding has been increasing significantly. To further aggravate the situation, the number of disasters occurring every year is expected to increase due to several factors such as increasing population and effects of climate change (Majewski et al., 2010). This will result in significant stress on the availability of funding and resources for humanitarian assistance activities. And if the current policies and approach towards disaster relief efforts do not change significantly, then the future of this sector indeed looks very grim as suggested in Table 6.

Table 6: Projected growth in demand for humanitarian assistance (Majewski et al., 2010)

Dimensions	2010	2020
People affected	200 million/year	260–280 million/year
Affected who need assistance	60 million/year	78–84 million/year
Those who need but do not receive assistance	20 million/year	30–36 million/year

However, the challenges related to humanitarian logistics are not just limited to availability of funding. Some of the other major challenges concerning resources are as follows:

- Lack of professionally trained staff(Thomas and Kopczak, 2005)
- Inadequate technology(Thomas and Kopczak, 2005)
- Lack of institutional learning(Thomas and Kopczak, 2005)
- Quality of local resources (Alexander, 2006)
- Lack of effective performance measurement (Thomas and Kopczak, 2005)
- Limited collaboration between various stakeholders(Thomas and Kopczak, 2005)

THEORETICAL CONSIDERATIONS

As described in the earlier sections, the global humanitarian logistics landscape consists of at least 5 major actors, namely, government, donors, military, responding agencies and logistics service providers. And even though all of them are interdependent, research suggests that there exists only limited collaboration and coordination between them (Majewski et al., 2010).

The purpose of this research is to study as to how commercial logistics service providers can develop effective strategies for operating in the disaster logistics sector. In the above context, it is essential that the commercial logistics service providers develop strategies that govern their interactions with the other stakeholders. The IMP approach, with its emphasis upon rich description and efforts to understand the underlying processes behind interaction between organizations in networks (Baraldi et al, 2007), is therefore appropriate for studying the abovementioned issue. One of the basic observations of IMP is that interaction between individually significant companies is a primary characteristic of the business landscape (Håkansson et al, 2009). An important implication of this observation is that it is not what happens within companies but what happens between them that constitutes the nature of business (Håkansson et al, 2009).

An important distinction between the IMP approach and most other approaches strategy concerns the assumptions regarding the degree of control over resources that a firm can achieve. "A firm's resources are partially controlled by the demands and requirements of its counterparts, while 'external' resources, owned by counterparts, are partially controlled by the firm" (Baraldi et al, 2007, p.880). An important aspect of IMP approach is that firms operate in the context of interconnected business relationships, forming networks (Gadde et al, 2003). "And from a strategic point of view, these relationships affect the nature and the outcome of the firms' action and are their potential sources of efficiency and effectiveness" (Gadde et al, 2003, p.357).

Another important distinction between the IMP approach and the more traditional approach in strategy is their differing units of analysis. In IMP the units of analysis are 'the interaction' or 'the relationship and the network', whereas the standard unit of analysis in strategy research is the 'firm' (Baraldi et al, 2007). According to IMP, "the relationship has a separate existence beyond that of the companies or individuals involved in it. This relationship provides the particular context within which specific episodes of interaction between the companies and individuals take place" (Håkansson et al, 2009, p.185).

ARA MODEL

The Activity-Resource-Actor (ARA) model suggests that the outcomes of an interaction process (or the content of a business relationship) can be described in terms of three layers between the counterparts: activity links, resource ties and actor bonds (Håkansson et al, 2009). The ARA model represents a major step forward in terms of conceptualizing B2B relationships and networks (Lenny and Easton, 2009).

The model also suggests that the three layers are inter-connected and that each affects and is affected by the constellation of resources, pattern of activities and web of actors in the wider network (Håkansson et al, 2009). Further the ARA model also takes into consideration that an important aspect of business relationship, namely, "that the actor bonds, resource ties and activity links have consequences that go beyond the specific relationship in which they arise" (Håkansson et al, 2009, p.34). Thus every relationship is more or less important connection in a number of webs of actors, constellations of resources and patterns of activities that stretch across many other businesses (Håkansson et al, 2009).

From the perspective of the individual firm, strategizing involves the active and systematic linking of activity structures among a web of actors in order to utilize resource constellations that are dispersed in the network (Harrison and Prenkert, 2009). Thus the "ARA model can be used as a managerial tool to generate network strategizing trajectories for differently shaped processes in order to consider network effects"(Harrison and Prenkert, 2009, p.669).

In the earlier sections of this paper, an attempt was made to describe the main actors, the activities and some of the resources that are relevant to the humanitarian sector. The humanitarian sector is indeed very interdependent and interconnected with actors having very diverse interests. Therefore, considering that the purpose of this paper is to about strategy development for commercial logistics service providers, it is important that the commercial logistics service providers take into consideration the web of actors, constellation of resources and pattern of activities that exist in the humanitarian aid sector.

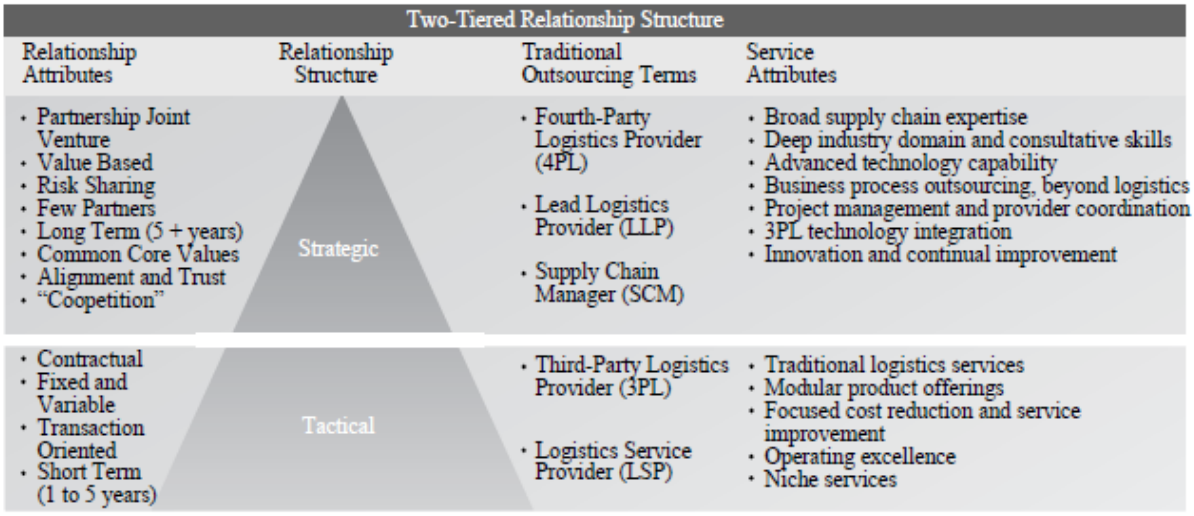
Thus the ARA Model suggests mechanisms by which the entities relate to one another (Lenny and Easton, 2009). It proposes that the three entities, actors, resources and activities capture the key aspects of relationships, both between firms, as in B2B relationships, but also within firms at all levels down to the relationships among individuals (Lenny and Easton, 2009). In the light of the above arguments, it appears that the ARA model provides an appropriate framework to conduct this research study.

CLASSIFICATION OF LOGISTICS SERVICE PROVIDERS

In the literature concerning third party logistics service providers, most papers take the view that when a company makes a decision to outsource its logistics, it is mainly for the purpose of performance improvements of the company and its supply chain(s) (Fabbe-Costes et al, 2008).

In the previous literature, the logistics service providers have been differentiated depending upon the type of services they provide. They have also been differentiated upon the nature of the relationship they have with their clients (Fabbe-Costes et al, 2008), which can range from transactional and short term relationships to strategic and long term partnerships (Refer Figure **3**).

Figure 3: Two-tiered relationship structure (Langley et al, cited in Win, 2008)



Among other important issues, this research project will also study and analyze the types of relationships that the commercial service providers form with the other actors involved in the area of humanitarian logistics.

EMPIRICAL SETTINGS AND SOURCES OF DATA

This research is a part of a larger research and development study knows as 'CONTRIBUTE' which focuses on the use of commercial service providers in international humanitarian response. The research is being conducted by a consortium consisting of commercial service providers, responding agencies and academic institutions.

The study, it is expected, would be conducted in at least 2 steps as described below.

- Mapping of the humanitarian logistics landscape: According to Lenny and Easton (2009), in the case of the ARA model, it has to be made clear when analyzing data who are the actors, what are their activities and with which resources they interact. This type of information can act as a bridge between the theoretical and the empirical. At present, there exist no definitive information about the constellation of resources, pattern of activities and web of actors in the wider network of humanitarian logistics network. It is expected that having this kind of information would provide this research with a more solid foundation, on which studies concerning strategy development would become more meaningful. A part of this abovementioned mapping study, concerning the commercial logistics service providers, is currently being undertaken as a part of this PhD research.

- Strategy development in humanitarian logistics: This will be step two of the research process. Having 'mapped' the humanitarian logistics sector as described above, in this step, the focus would be on the interactions of one of the commercial logistics service provider, who is a part of the research consortium 'CONTRIBUTE', with other constituents of the humanitarian logistics sector.

CONCLUSIONS AND DIRECTION FOR FUTURE RESEARCH

Indeed, as is evident from this paper, this research is in its early stages. And much more needs to be done in order to establish appropriate theoretical frameworks that will be used in this study. Similarly, the methodology to be used for conducting the empirical studies needs to be properly defined.

Nevertheless, from the preliminary studies that have been conducted thus far, it appears that, given the heavy interdependence between major stake holders in humanitarian logistics sector, the IMP approach would provide an appropriate framework for analysing the role of commercial logistics service providers in this sector.

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