LOGISTICS IN THE HUMANITARIAN CONTEXT (SYRIAN CRISIS AS A CASE STUDY)

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Abstract. The purpose of this paper is to discuss the concept of logistics in the humanitarian context, and to point out to the differences between humanitarian logistics and commercial logistics. Based on the lessons learnt during the humanitarian crisis in Syria, which was the reason that made it the destination for a huge number of the international non-governmental organizations along with UN agencies, this paper will point out to the differences between humanitarian logistics and commercial logistics.

Key words: logistics, humanitarian logistics, commercial logistics.

- **1. Introduction.** On 15th March 2011, Syria was one of the countries that were affected by the Arabic Spring. This spring had affected many countries along in the Arabic World, mass demonstrations against the governments, tough clashes took place between the security forces and the protesters, foreign external elements played a major role in turning these clashes into an armed conflict, large waves of displacement people had occurred. All that required the immediate intervention of the international non-governmental organizations INGOs to help and support the displaced and vulnerable people, provide them with all the necessary needs in the shelters, such as:
- 1- Food Kits: which includes calculated amounts of wheat, sugar, rice, tuna, and oil.
- 2- Hygiene Kits: which includes calculated amounts of soap, toothbrush, toothpaste, tissues, and washing liquid.
- 3- NFI kits: Non-food items which includes mattress, water pot, and pillow.
- 1.1 Introduce the Problem. In order to make sure of the proper implementation, allocation of the funds and efficient delivery of all these humanitarian aids to the targeted people at the right time and place, starting from the appropriate sources and suppliers, in a way that achieves the lowest cost and the greatest possible value to the beneficiaries. We need to have

an effective, efficient and well-trained logistics department to coordinate and ensure the proper delivery of all aids to the beneficiaries.

2. Humanitarian Disaster/Crisis Logistics. When we think of the word disaster/crisis, we associate it the loss of life. We also think of how people can be helped. So here, we warp up the general idea of humanitarian disaster logistics. To break it down, the word "humanitarian" refers to improving the lives of other people. The word "disaster" is an extreme event with a natural, technological or social consequence. This refers to casualties, destruction, hardship, damage, unhappiness, disruption or death. The word "logistics" refers to the planning and control of the flow of goods and materials through an organization. (Oloruntoba & Gray, 2002)

However, let us have a look at the overall humanitarian logistics itself. It is all about the mobilizing of people, resources, skills and knowledge to those that are vulnerable people who have been affected by a disaster of some description or an emergency. The whole process consists of a variety of activities such as procurement, transportation, tracking of materials and products etc. customs clearances, warehousing, inventories and deliveries. (Moore & Antill, 2000)

Humanitarian logistics is a sensitive issue for most people around the world. That is why the United Nations Office of Coordination of Humanitarian Affairs (UNOCHA) is always trying to improve their efforts in this area. It is so important because it is the center of most disaster relief. It is in charge of getting the relief aid to those in need in the most efficient manner possible. It is the center, which links preparedness with response, procurement with distribution and headquarters with the field. Since the year 1970, it has been recorded that the amount of natural disasters has tripled, and this number is still on the increase. This has put a strain on all types of emergency services and those organizations associated with them. In the year 2005 alone, the Federation of the Red Cross and Red Cross Crescent Societies (IFRC) reported that there were 256 million people affected by disasters and crisis. This was a 22% increase over the annual average. (Moore & Antill, 2000)

In March 2011 when the Syrian crisis struck, hundreds of thousands of people were affected. Hundreds of aids organizations were doing their best to cope, volunteers were deployed and helping those in needs, tons of supplies were dispatched and offered along with billions of dollars in donations, but unfortunately, the lack of clear ground of information kept the aid from reaching so many people in need. (Oloruntoba & Gray, 2002)

3. Differences between Humanitarian Logistics and Commercial Logistics. Most of the time, crises have negative impacts on the infrastructure of the affected region. Based on the infrastructural issues, chaotic circumstances arise. Furthermore, high cooperative efforts as well as sudden and instable demands keep logisticians busy. Due to these and many other characteristics, the main purpose of humanitarian logistics differs from its commercial counterpart. (Oloruntoba & Gray, 2002).

3.1 Determining the Purpose of Humanitarian Logistics and Commercial Logistics

Defining the main purpose of both kinds of logistics leads to an understanding for the difference between humanitarian logistics and commercial logistics. Deciding therefore is the importance of profitability. Langley and Rutner (2000) mentioned in their work about commercial logistics that the value of logistics lies in "the contribution to profitability". Therefore, the focus concerning business logistics is on cost reduction while the main purpose for logisticians in the humanitarian context is to ensure aid for people located in crisis regions. (Langley & Rutner, 2000). As an example: Reacting as quickly as possible to a disaster often requires the use of airplanes but aerial transportation causes high costs. Thus, cost reduction plays a subordinated role in the phase of immediate response. (Baumgartner & Blome, 2014). The term "profit" in a humanitarian context is linked directly to agencies benefactor's; inefficient use of resources may lead to losses of donations, hence the profit depends on a donor's satisfaction. To secure a high efficiency, an approach to standardize processes would be helpful. (Chandes & Paché, 2010)

3.2 The issue of standardizing processes

Standardized processes are one of the key elements for many companies to achieve success therefore the desire to standardize processes for humanitarian logistics is obvious. The fact that the dimension and the geographical area differ from disaster to disaster makes standardizing procedures in humanitarian logistics complicated. Moreover, humanitarian agencies have to employ their disaster relief systems in chaotic, uncertain environments with short lead times. (Fawcett, 2013). To establish action rules in terms of emergency response implicit and explicit knowledge should be collected from situations already experienced in crises regions. Due to a high turnover of logisticians in the humanitarian context, a loss of experience whenever a logistician leaves is unavoidable. In addition, it is difficult to translate experiences made in one geographical area for decision makers in another geographical area. (Chandes & Paché, 2010)

3.3 Unpredictable demand

Unpredictability of demand is ascribed to the fact that a great number of disasters are unforeseeable. The uncertainty in estimating when, where and to what extent a disaster occurs is a challenging factor for logisticians in disaster relief operations. (Kovács & Spens, 2007). In the aftermath of a catastrophe, a sudden occurrence of demand in large amounts emerges. (Kovacs & Spens, 2009) An increase in demand in turn requires an exceptional use of resources, but resources are limited by nature, therefore shortages, especially in complex disaster projects, arise. (Chang, Wilkinson, Potangaroa, & Seville, 2012). To avoid such shortages, resources must be utilised as efficient as possible. Nevertheless, an anticipation of the exact demand is impossible; hence reaching total efficiency is excludable. (Scholten, Sharkey & Fynes, 2010)

3.4 Infrastructure

In general, disaster relief operations of humanitarian agencies follow the same procedure, at beginning the focus is on establishing and optimizing the delivery process for the first urgent emergency care. Subsequently, rebuilding the destroyed infrastructure to guarantee a sustainable supply becomes more important. (Chandes & Paché, 2010)

Within the disaster-affected region, aid agencies need to be prepared for the worst; Bridges and airfields are potentially destroyed and hinder an adequate supply. Furthermore, a possibly damaged electricity network would have a negative impact on the communication infrastructure. (Kovacs & Spens, 2009)

If the communication infrastructure does not allow a permanent transfer of information, route planning becomes very challenging for logisticians. (Kovacs & Spens, 2009) In extreme situations, supplying goods by land is not possible. As a last resort, humanitarian aid agencies can make use of aircrafts to airdrop supplies. (Kovács & Spens, 2007)

Another issue in terms of infrastructure is the problem of the last mile. For instance, due to a destabilized infrastructure including limited power supplies, an appropriate temperature control for medicines can sometimes not be ensured. (Kovács & Spens, 2007)

3.5 Performance Measurement

A general belief in terms of efficiency and effectiveness is that companies, which apply performance measurement, outperform those that do not. Thus, measuring performance is crucial for an efficient and effective management of the humanitarian supply chain. (Abidi, de Leeuw, & Klumpp, 2014). The function of performance measurement lies in the quantification of the efficiency and effectiveness of an operation. Therefore, specific indicators, such as capacity utilization, get determined.

Although measuring the performance brings advantages such as a simplification of the communication between supply chains actors, many humanitarian aid agencies fail to implement convincing key figures. For instance, an important part of humanitarian aid is to reduce suffering, but quantifying a relation between supply chain performance and alleviation of suffering is highly complex. In addition, logisticians have to deal with various critical elements that complicate the measurement of performance in humanitarian supply chains. Among others, humanitarian aid agencies operate in a chaotic environment with a limited information technology capacity and infrastructure. Therefore, reliable data collection is problematic.

Regarding performance measurement, development potential is given. Humanitarian organisations need to increase their research efforts in this respect to ensure continuous performance-improvement in disaster relief operations.

4. Humanitarian Logistics: Core Challenges

This paper suggests that certain common challenges face the field of humanitarian logistics:

4.1 Lack of Recognition of the Importance of Logistics

Most humanitarian organizations have two broad categories of activities: programs and support services. Programs refers to the front-line activities in relief and development, the provision of services such as food, water, shelter, sanitation, etc. Support services refer to the activities of the "back room", which support the front line: logistics, technology, finance, communication, human resources, etc. Funds are usually allocated by donors to programs with a certain percentage allowed for administration, which includes support. Thus, the focus is on short- term direct relief rather than investment in systems and processes that will reduce expenses or make relief more effective over the long-term. As a consequence, logistics and other support services may not have adequate funding for strategic disaster preparedness, and investing in infrastructure, such as information systems, is discouraged. (Oloruntoba & Gray, 2002).

4.2 Lack of Professional Staff

In general, humanitarian organizations are defined by their personnel who share a common value system based on alleviating the suffering of those whom affected by disasters and humanitarian emergencies. People who choose a career in this world come from diverse and varied backgrounds, and driven by a desire to resolve crises and do well in the world. They achieved their positions by trial and error and have honed their valuable skills through experience in multiple disaster theaters over several decades. However, the vast majority of people with logistics responsibilities do not have training in logistics. While this is changing in large multilateral organizations, the trend toward the "professionalization" of logistics has been slow to take hold as field experience is considered much more valuable than formal training in logistics. (Barton, 2000).

4.3 Inadequate Use of Technology

A survey of logisticians that participated in the Syrian relief operations showed that only 26% of the respondents had access to any tracking and tracing software. The remainder used Excel spreadsheets or manual processes for updates and tracking of the goods arriving in the field. Despite this, 58% stated that they received accurate and timely information of what was going on in the field. (Barton, 2000).

4.4 Lack of Institutional Learning

Once a crisis is dealt with, aid workers are immediately assigned to the next mission, rather than taking the time needed to reflect and improve their capabilities. Input from the organizations we interviewed suggested that turnover of field logistics personnel was as high as 80% annually. Thus, while logisticians have a remarkable record of accomplishment for getting the job done under the most adverse and extreme circumstances, the lessons learned from one disaster to the next are often lost. The experience of the occasional veteran logistician is largely tacit and difficult to communicate to the next generation, nor is it transferred from one field context to another. (Barton, 2000).

4.5 Limited Collaboration

With the emerging competition for funding among major relief organizations, the heads of logistics tend to each fight their own battles with little collaboration. Although many of them

face the same challenges and know each other, or of each other, they do not often meet or talk to one another except during an actual disaster response operation. For example, we found that several of them were thinking of deploying a regional warehouse structure for faster response. Coincidentally, three were actually talking with warehouse providers in the same city. Similarly, two others had commissioned expensive analyses to select a fleet management system and three were wrestling with the idea of a training program for field logisticians. None knew that their counterparts had the same objectives and, therefore, there was little collaboration or resource sharing. (Barton, 2000).

5. Conclusion

Humanitarian logistics has the opportunity to increase its contribution to disaster relief and to be recognized for that contribution by implementing initiatives in the areas of knowledge management, technology, measurement, community, and positioning. While moving relief items to disaster sites will continue to be an important role for logistics, the strategic focus must be on providing timely information, analysing that information to garner insight as to how to improve operations, and learning internally and with others. Establishing a community that shares and invests jointly in advancing the field can leverage each logistician's efforts many-fold. It is through these two mechanisms of information and community that humanitarian logistics can find its voice and create its future, rather than limit itself to responding to the present.

References

- Abidi, de Leeuw, Klumpp. (2014). Humanitarian Supply Chain Performance Management: A Systematic Literature Review. Amsterdam Business Research Institute. p.17.
- Barton, N. I. M. (2000). Logistic Support to Humanitarian Aid operations: Logistic Solutions to Food Security. MSc Defence Logistics Management No. 2 Dissertation, Cranfield University. RMCS. Shrivenham. p.39.
- 3. Baumgartner, Blome. (2014). Supply chain integration capabilities. Green design strategy and performance: A comparative study in the auto industry. p.53.
- 4. Chandes, Paché. (2010). Investigating Humanitarian Logistics Issues: From Operations Management to Strategic Action. Journal of Manufacturing Technology Management. p.33.

- 5. Chang, Wilkinson, Potangaroa, Seville. (2012). Resourcing For Post-Disaster Reconstruction: A Comparative Study of Indonesia and China. p.67.
- 6. Fawcett, Tom. (2013). Data Science and its Relationship to Big Data and Data-Driven Decision Making. p.24.
- 7. International Federation of the Red Cross (IFRC) (2020). "World Disasters Report" International Federation of the Red Cross and Red Crescent Societies, Geneva.
- 8. Kovács, Spens. (2007). Humanitarian logistics in disaster relief operations, International Journal of Physical Distribution & Logistics Management. Volume 37. Issue 2. p.66.
- 9. Kovács, Spens. (2009). Identifying challenges in humanitarian logistics. International Journal of Physical Distribution & Logistics Management. Volume 39. Issue 6. p.44.
- 10. Lambert, DM; Stock, JR & Ellram, LM. (1998). Fundamentals of Logistics Management. Boston: McGraw-Hill International Editions.
- 11. Langley, Rutner. (2000). Logistics Value: Definition, Process and Measurement. The International Journal of Logistics Management. Volume 11. Issue 2. p.45.
- 12. Moore, D and Antill, P. (2000). 'Humanitarian Logistics: An Examination of and Military Involvement In, The Supply Chain for Disaster Relief Operations' in Global Logistics for the New Millennium, Proceedings of the ISL 2000 Conference. July. Iwate. Japan. p.51 57.
- 13. Oloruntoba, R. and Gray, R. (2002). Logistics for humanitarian aid: A survey of aid organizations" in Griffiths. J. Hewitt, F. and Ireland, P. (Eds). Conference Proceedings of the Logistics Research Network, Institute of Logistics and Transport. Birmingham.
- 14. Scholten, Sharkey, Fynes. (2010). Leagility in humanitarian aid (NGO) supply chains. International Journal of Physical Distribution & Logistics Management. Volume 40. Issue 8. p.38.
- 15. Thomas, Mizushima. (2005). Humanitarian supply chains and performance measurement schemes in practice. International Journal of Productivity and Performance Management. Volume 64. Issue 6. p.57.
- 16. Whiting & Ayala-Öström. (2009). Advocacy to promote logistics in humanitarian aid. p.51.