

Case Study- Humanitarian Supply Chains
Final Report

Group 5

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1- Which aspects of humanitarian supply chains make them different from the business supply chains? What are the similarities?

Introduction to Humanitarian Supply chain: -

Humanitarian logistics as defined by seniors at Fritz Institute: 'The process of planning, implementing and controlling the efficient, cost-effective flow of and storage of goods and materials as well as related information, from point of origin to point of Consumption for the purpose of meeting the end beneficiary's requirements.' (Thomas and Mizushima, 2005) where by logistics they mean set of processes and systems that come together in organizing people, resources, skills and knowledge to aid helpless people affected by disaster. These supply chains have government donor to start with, followed by international agency, international NGOs, Local NGOs (in-aid recipient countries), community-based organizations and finally consumers (aid recipients). The difference between humanitarian supply chains and business supply chains is that humanitarian supply chains are highly unpredictable. They can be broken at any stage, often at the receiving end or at the beginning by governments or private donors that participate in the funding stage. Another difference between them would be the lack of planning, due to the lack of planning, money is wasted because information is not processed properly which causes hasty decision resulting in costly results.

We need to focus on this supply chain just as much as we have been focusing on commercial supply chain because their end users are the helpless people struck from natural or manmade disasters namely Tsunami, Darfur, Bam, the Gujarat earthquake, Hurricane Mitch etc. that every year result into about 500 disasters killing around 75 000 people and affecting some 200 million people.

	Natural	Man-Made
Sudden-Onset	Earthquake Hurricane Tornadoes	Terrorist Attack Chemical Leak
Slow-Onset	Famine Drought Poverty	Political Crisis Refugee Crisis

Table- Explaining Type of Disasters

Difference between Humanitarian Supply chain and Business Supply Chain-

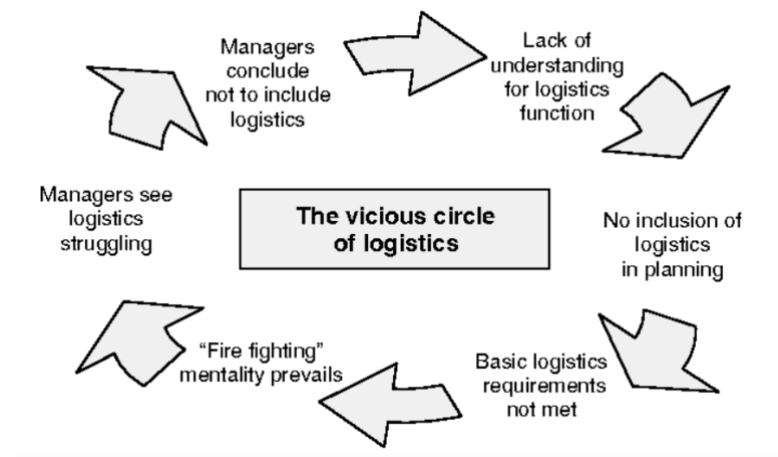
Humanitarian supply chain widely differs from the business supply chains. One significant difference is the level of Uncertainty. Unlike logisticians in the private sector, humanitarians are always faced with the unknown. They do not know the exact requirements like when, where, what, how much, where from and how many times for it differs in every calamity. Another difference is the challenges faced in supply chain due to the involvement of external parties like media, government, donors, military and lastly the beneficiaries which isn't the case with private sector logisticians. We can understand this better from the fact that humanitarians always have to prove to donors that they are reaching those in need and provide reports and updates not just about the input and output but about the whole operation that they takeover thus contrasting to private sector logisticians, humanitarians often have to struggle with many stakeholders, including large numbers of uncoordinated and disparate donors, the governments, the military not to mention the final beneficiaries. The need of multiple agencies, governments, independent NGOs and transportation modes, the end goal may be hindered through bottlenecks caused by the structure of the supply chain. Due to the involvement of multiple players there is lot of chaos which results in delayed distribution of required materials and goods to the end destination. Due to the lack of communication, dispersion of agencies or clear indication of which agency and/or government will facilitate the transaction also stand incomplete. Lastly, In the private sector, performance is rewarded by the market (e.g. stock market, higher revenues and profits) and

internal incentive schemes such as bonuses, stock options and so on, which feeds a culture of continuous improvement but on the other hand under humanitarian sector there has been little incentive hence not creating the scope for improvement.

Another key difference is between the humanitarian supply chains and business supply chains are the end target group. For the business supply chain, the end user is the customer who pays for the product or service in turn creates income for the supply chain. For humanitarian supply chain, the end recipient does not pay for the product, however the supply chain receives its income through its suppliers and donors. Thus, the humanitarian supply chain markets to suppliers and donors while the business supply chain markets to customers.

Similarities between Humanitarian Supply Chain and Business Supply Chain-

Talking about similarities between the two, both humanitarian as well as private sector supply chain need to be 'multiple, global, dynamic and temporary' in order to be responsive on a global scale. Significant similarity between the two is that 80% of supply chain is all about logistics which is crucial to the performance of the entire supply chain. Logistics not only brings down the costs of supply chain as a whole but also it is the department that handles the tracking of goods, which could be used to analyze post-event effectiveness. In addition, the end goal for both the supply chains is to satisfy their end users and hence they both plan, strategize and react to uncertainty.



The Vicious circle of Logistics

Another noticeable similarity between the two supply chains is the quick moving of the supply chain network. The uncertainty the humanitarian supply chain faces are the funds received through donors and suppliers. When natural disasters occur, the agencies have little time to collect and raise large amounts of funds to service and come up with a quick response to the areas in need. The nature of the Humanitarian supply chain is that it reacts to short term notice events/disasters (the customer end of the supply chain) rather than predictable future disasters, whereas in business supply chains, the uncertainty comes from the customer end. The business supply chain has typically a better forecast for future expectations in their business rather than humanitarian supply chains that react to natural disasters.

Although humanitarian and business supply chains are significantly different in their nature, they both must have proper planning, strategy and must be able to react to instability and uncertainty.

2- Bring examples of humanitarian supply chains

Government Donors:

FEMA- Federal Emergency Management Agency:

The Federal Emergency Management Agency coordinates the federal government's role in preparing for, preventing, mitigating the effects of, responding to, and recovering from all domestic disasters, whether natural or man-made, including acts of terror.

International Agencies:

1. ***UNDP (United Nations Development Programme) :***

It promotes and supports disaster preparedness activities in member countries. UNDP works in about 170 countries and territories, helping to achieve the eradication of poverty, and the reduction of inequalities and exclusion.

2. ***World Food Programme (WFP):***

The World Food Programme is the food-assistance branch of the United Nations and the world's largest humanitarian organization addressing hunger and promoting food security. It is on the frontlines in the fight against hunger.

WFP: Elements to Supply chain

- FOOD PROCUREMENT: Purchasing the right food at the right time to benefit the people they serve
- GOODS & SERVICES PROCUREMENT: Procuring the goods and services that keep the organization running
- BUSINESS SUPPORT: Providing back-end support to keep operations running
- LOGISTICS CLUSTER: Working together with other organizations to improve the logistics response in emergencies
- UNHRD (United Nations Humanitarian Response Depot): Maintaining a global network of hubs that store and dispatch prepositioned relief supplies to emergencies
- UNHAS (United Nations Humanitarian Air Service): Flying humanitarians to the most remote and hard-to-reach locations
- RISK AND INSURANCE: Developing and implementing risk management and insurance programmes for evolving organizational needs
- SHIPPING: Using ocean transport to deliver high-volume humanitarian assistance worldwide
- CASH-BASED TRANSFERS & MARKETS: Strengthening markets to empower beneficiaries to make their own food choices
- FOOD SAFETY AND QUALITY ASSURANCE: Ensuring beneficiaries have access to safe and high-quality food
- BILATERAL SERVICE PROVISION: Providing partners with key logistics services to support their programme interventions
- PLANNING: Identifying the best operational solutions
- SOLVE: Strengthening health supply chains globally
- NORMATIVE GUIDANCE AND COMPLIANCE: Harmonizing business models and processes and ensuring a high degree of compliance
- AVIATION: Providing vital assistance to the most remote and hard-to-reach locations by air
- LOGISTICS: Managing an intricate storage and transport network to ensure effective and efficient delivery

Success Stories:

Swine- flu (H1N1 Virus)-

In March and early April 2009, a new Swine- H1N1 influenza A virus originated in Mexico and USA. The virus spread by human-to-human transmission worldwide to over 30 countries, causing the World Health Organization (WHO) to raise its pandemic alert level to Phase 5 of 6.

CAUSES OF LOGISTICS SUCCESS FOR SWINE FLU OUTBREAK:

- Early detection and reporting of the novel virus
- Early and ongoing scientific investigations
- Functional global communications among countries and organizations
- Wide sharing of viruses, genetic sequences, and related information
- Provision of assistance and guidance
- On-time development and production of a pandemic vaccine
- Increased access to antiviral drugs
- Modest enactment of trade and travel restrictions
- Support with emergency relief supplies
- Conduction of pandemic preparedness exercises

Gujrat Earthquake- 26 January 2001,

An earthquake with a magnitude of 7.9 struck in the early morning on the West Coast of India. It ravaged the country destroying five districts in its wake and killing over 20,000 people.

International Federation of Red Cross and Red Crescent Societies (IFRC):

- Proper communication and collaboration among the donors
- Proper transportation to and from the affected areas
- Proper distribution of supplies

Failure Stories:

Hurricane Katrina: August 29, 2005

Hurricane Katrina is considered the costliest and deadliest hurricane in the history of the United States. The storm surge caused massive and catastrophic damage along the Gulf Coast, affecting Mississippi, Louisiana, and Florida in particular.

The disaster recovery response to Hurricane Katrina included federal government agencies such as the Federal Emergency Management Agency (FEMA), the United States Coast Guard (USCG), state and local-level agencies, federal and National Guard soldiers, non-governmental organizations, charities, and private individuals.

CAUSES OF LOGISTICS FAILURE IN HURRICANE KATRINA:

1. FEMA response to Katrina- incapability and lack of preparation to face catastrophic disaster.
2. No transportation for people to evacuate.
3. No proper communication- loss of communication between the authorities and the aid recipients.
4. no proper distribution of supplies- lack of warehousing and access to supplies on site.
5. lack of serious consideration for the disaster by the authorities- mandatory evacuation order came only after Katrina had climbed dangerously to a Category 4 and then to a Category 5.

Indian Ocean Earthquake and Tsunami- 26 December 2004

It was an undersea megathrust earthquake that registered a magnitude of 9.1–9.3 Mw, which resulted in a series of large tsunami waves up to 30 meters (100 ft) created by the underwater seismic activity. The epicenter was off the west coast of northern Sumatra, Indonesia. The earthquake was the third largest ever recorded and had the longest duration of faulting ever observed; between eight and ten minutes. 12 countries were affected by the Tsunami.

CAUSES OF LOGISTICS FAILURE IN INDIAN OCEAN EARTHQUAKE AND TSUNAMI:

1. Lack of Infrastructure- infrastructure inadequacies lead to bottlenecks, delays, and congestion at entry points to the disaster area
2. Lack of communication
3. Unsolicited and unsuitable goods- Goods are location sensitive and expensive to transport, due to both weight and the location of the people that need it. The beneficiaries are often in hard to reach locations or in places with damaged infrastructure. The goods need to be culturally and technologically appropriate.

4. Lack of assessment- No proper determination of the disaster, the extent of the damage, the initial needs of the victims
5. Political Pressure- Tsunami aid became politicized adding unpredictable constraints to the relief logistics.
6. Problems with financial Supply Chain- The financial response from public and private donors to the Tsunami was unprecedented.

3- To address the above two items, try to use the framework that we used to analyze supply chains in this class

The Five Key Elements-

For Better preparedness to produce effective results, there are five elements of preparedness that needs to be in place which leads to effective disaster management.

These are-

- Human Resources- The main aim of humanitarian aid is that people and countries can help themselves and each other as much as they can. Selecting and training people who can help, plan, coordinate and intervene as and when required is an important aspect of human resources. It is also very important to train the locals instead of foreigners who can only speak English. Better trained locals can respond to situations in a better manner.
- Knowledge Management- Having learnings from previous disaster cases by capturing information, analyzing them and transferring it about logistics operations.
- Operations and Process Management- Since logistics plays the most significant part in preparedness, it is important to set up agreements, goods and means that are required to move resources quickly. It also includes having alternative mode of transportation, suppliers, and trade lanes in place.
- Financial Resources- Arranging for financial resources and sufficient funds so as to further prepare for supply chain operations in order to have a smooth execution.
- The Community- With the help of mutual framework agreements, collaborating with government, other humanitarian organizations, military and business effectively.

All these key elements are required to be interconnected and in coordination with each other so that they can respond more effectively. They also need to ensure a proper flow of goods, information for better coordination, and funds between each link of the chain.

A Typical Humanitarian Supply Chain-

A typical humanitarian supply chain starts with a government donor then international agency, followed by international NGOs, Local NGOs (in-aid recipient countries), community-based organizations and finally consumers (aid recipients). The Humanitarian key focus is to provide resources such as food, water and shelter to areas affected by disasters, epidemics and other such tragedies in a quick response. The humanitarian supply chain values are humanity, neutrality and impartiality; to which it means that they help everyone in need of help



Fig- A typical Humanitarian Supply Chain

The key supply chain drivers are facilities, inventory, transportation, information, sourcing, and pricing. After the disaster occurs or even in preparation of the disaster facilities are placed near the area affected to ensure quick response to distribute and provide materials. With inventory for humanitarian supply chain there is a prepositioned stock in areas in pre-positioned warehouses. Most of the materials arrive after the disaster occurs once the onset of the affect is determined and

sponsors/donors are influenced by mass media to contribute. The initial transportation within the first 72 hours by air to send supplies. For the remainder 90-100 days' supplies will arrive by less expensive means such as sea and land. Information for humanitarian supply chains needs to be rapidly processed due to lives that are at stake however, this is extremely complex due to the influx of humanitarian organization that are at the scene of a disaster, not always acting in a harmonious fashion. Sourcing is completed locally. Once shipments and workforce arrive they evaluate the material and organize in a timely fashion to distribute. Pricing of the supply chain is costly but, their main goal is to save lives and without a logistic supply chain the cost would only increase. The value or cost of this operation is covered by the donors and suppliers. Although with logistical work incorporated there are differences and similarities between business/commercial supply chains and humanitarian supply chains.

Team Member Contribution:

We all read the articles given and did some research regarding the NGO's that use the Humanitarian Supply Chain and some.

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