

# Sourcing in humanitarian logistics: Local, regional, and global approaches

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## **Abstract**

Sourcing and procurement of materials and services is a vital part of humanitarian logistics. Humanitarian organisations tend to combine local sourcing and international approaches, resulting in considerable complexity. This paper establishes a better understanding of the factors that influence sourcing decisions in humanitarian supply chains. 38 semi-structured interviews were conducted with individuals involved in both developmental and emergency humanitarian responses. Findings show that the philosophy of a particular humanitarian organisation has a considerable effect on their sourcing strategy, in addition to more practical issues such as local availability of goods and services, and quality control.

**Keywords:** sourcing, procurement, humanitarian logistics

## **Humanitarian Logistics**

Humanitarian logistics (HL) is a system concerned with “planning, implementing and controlling the effective, cost-efficient flow and storage of goods and materials as well as related information, from the point of origin to the point of consumption for the purpose of meeting the end beneficiary’s requirements” (Thomas and Mizushima 2005, p.60). Globally, there is growing demand for developmental aid and disaster relief; and therefore for HL (Thomas and Kopczak 2005, Moe et al. 2007). HL is conducted in situations with resource constraints related to the provision of aid in developing countries or due to chaotic situations where communities and business supply chains (SC) have undergone major disruptions due to a disaster or conflict events. Techniques and strategies from commercial SC management have been applied to the humanitarian context in many instances to improve the response, though not always successfully (Day et al. 2012).

Humanitarian operations are complex, involve many different players, and have a significant financial value. A range of stakeholders including military, governmental, and private organisations of various size, motivation and ability are typically involved in HL activities (Kovács and Spens 2009, Tatham and Houghton 2011, Kovács et al. 2012, Pérouse de Montclos 2012). The annual budget of the major non-government humanitarian organisations and agencies was estimated by Tatham and Pettit (2010) to exceed US\$25 billion. Since supply chain activities are projected to account for as much as 60-80% of the total cost of humanitarian operations (Blecken 2010), it is imperative from an economic standpoint that the provision of HL is effective and efficient, in addition to the moral imperative underlying humanitarian operations.

Both academic research and professional interest in HL have grown significantly in recent years, reflecting an increase in the frequency and magnitude of disasters, in terms of the number of people affected and the economic impact (Kovács and Spens 2011). The demand for disaster relief is high and growing: for example, in 2013, 148.2 million people globally were affected by natural disasters and/or caught up in conflict situations. As response operations to crises are becoming both longer-lasting and more expensive, inter-agency funding appeals have reached an all-time high. In 2014 more than US\$17.9 billion was requested through appeals for humanitarian activity (United Nations OCHA 2015).

The humanitarian sector is a large, global one. All governments globally are involved in humanitarian relief, as beneficiaries, donors or both (Kovács and Spens 2007). Therefore, it is not surprising that there is a multitude of organisations involved in the administration of humanitarian relief. It is estimated that the developed western nations alone are home to about 4,000 international non-governmental organisations (Tatham and Spens 2011). The assembly of organisations that react to a particular disaster are different every time, as the SCs form spontaneously (Day et al. 2012), and include both local and internationally-based organisations. This can be further impacted by the local or national government allowing or prohibiting specific participation in the humanitarian response, creating bureaucratic or political barriers to completing the response activities. This results in a highly complex and dynamic system of interactions between organisations operating in chaotic environments and varying from event to event.

Post disasters and during conflict situations SC establishment takes place in high-stress situations and under extreme time pressures, often in environments that have neither a functioning logistics system nor adequate administrative or governmental structures (Pettit and Beresford 2009, Day et al. 2012). Humanitarian managers need to operate on two levels, by making decisions relating to the immediate response with systematic and strategic consideration of the dynamic complexities of their situation for the long term, in order to avoid a disaster turning into an even more complex crisis requiring the presence of HL for years or decades (Gonçalves 2008). Further complications stem from the project-based nature of much HL activity as this hinders the development of continuous SCs and as such leads to a large proportion of waste compared to commercial SCs (Beresford and Rugamba 1996, Pettit and Beresford 2009, Taylor and Pettit 2009). Information forms the basis for many areas of HL, however depending on the situation this can often be incomplete, rapidly changing or difficult to confirm (Tomasini and Van Wassenhove 2009). For example, accurate information is essential for activities such as fleet management, inventory planning, procurement and sourcing (Blecken 2010). The topic of sourcing for HL situations is the focus of the rest of this paper.

## **Sourcing**

Like their commercial counterparts, humanitarian supply chains operate in a complex international environment, creating linkages between diverse partners across national boundaries and cultures (Kovács and Spens 2007, Day et al. 2012). One important element of supply chain management is the sourcing and procurement of materials and services (Vitasek 2010). Sourcing and procurement have a highly significant impact on the bottom line of commercial operations and are key components of developing a sustainable advantage over business competitors (Mena et al. 2014). Since the 1980s, there have been calls for a move from purely transactional purchasing towards more strategic, longer-term relationships with suppliers and a thorough understanding of the organisational demands and the supply market (Kraljic 1983). It is now widely acknowledged that strategic procurement should follow a cycle starting with a clearly articulated vision, mission, and goals. These are then analysed and a procurement strategy developed and implemented based on these factors, with the ultimate aim creating a cycle of learning and subsequent improvement from the procurement activity over time (Mena et al. 2014).

Where possible, humanitarian organisations tend to combine local sourcing and international approaches, resulting in considerable complexity in the delivery of goods and services (Blecken 2010). The key issues faced in these situations include geographical and political access to the operating area, which is often inhibited due to remoteness, destroyed infrastructure or security concerns. However, this depends on the developmental situation or type of disaster response that a particular humanitarian supply chain supports (Thomas and Kopczak 2005). As financial pressures are also considerable, value for money in the provision of supplies and services is essential, which results in a variety of management approaches, for the example, engaging in consortia (Kovács and Spens 2011) or clusters of organisations around specific activities. To mitigate all these risks, dual sourcing may be employed (Iakovou et al. 2014).

## **Research Methodology**

The aim of this research is to achieve a better understanding of the factors that influence sourcing decisions in humanitarian supply chains, both in developmental and emergency (disaster / conflict) responses. Primary data was collected through a series of semi-structured interviews with a convenience sample of individuals involved in humanitarian responses, including logisticians and non-logisticians from head-office and field level positions from a range of humanitarian organisation. In total, 38 interviews were conducted. 20 of these interviews were conducted with individuals who were currently - or had been - engaged in developmental humanitarian responses in Sub-Saharan Africa or South and South-East Asia. To supplement and contrast their experiences, individuals involved in two emergency responses to natural disasters were also interviewed using the same interview guide. Two prominent disaster responses were selected for this, namely the 2010 Haiti earthquake and the 2010 Pakistan floods with ten and eight interviews conducted for each one respectively.

Interviews are the most widely employed qualitative research method in general (Bryman 2012) and are among the preferred research method of logistics researchers (Larson and Halldórsson 2004). As with other qualitative techniques, interviews are concerned not with measurement, but with gaining improved understanding of a context or phenomena and the collection of rich data (Walker 1985). This is particularly conducive to gathering a wide range of information (Wengraf 2001). The richness of data that can be collected through interviews is particularly important in case studies

from a critical realist perspective, as it aids the understanding of causal powers (Aastrup and Halldórsson 2008). Sayer (2000) classifies interviews as an intensive research method, that is one that focuses on individual agents in particular contexts.

Semi-structured interviews were employed in this study. Therefore, the interview tool was developed initially based on theoretical information and updated as the interviews progressed based on emerging data (Barratt et al. 2011). There was a broad interview guide with indicative questions to be covered, but departures from this guide were possible depending on the particular direction the interview was taking (Bryman 2012). While there were certain key topics to be covered, a flexible and adaptive interviewing style was used to encourage expression of uninhibited views and discovery of unique aspects, thus creating a holistic picture of the context under investigation (Hindle et al. 1995). The interviews were recorded and later transcribed and supplemented with observations made during the interview.

Data analysis was conducted using NVivo. Codes were assigned both deductively (based on themes identified in the extant literature) and inductively (emerging from the data) to assign symbolic meaning to the information gathered through primary research (Miles and Huberman 1994). In formulating the codes, care was taken to ensure their meaningfulness in relation to the coded data (the internal aspect) and their meaningfulness in relation to other codes (the external aspect) (Saunders et al. 2006). The codes were continuously revisited and altered where appropriate as the research progressed (Marshall and Rossman 1999). Each interview was coded on at least two separate occasions as recommended by Miles et al. (2014), revisiting the initial codes after several days to ensure internal consistency. As data analysis evolved, more codes were developed, and hierarchies and analytical links emerged among them (Corbin and Strauss 2008). Miles and Huberman (1994) recommend revising codes throughout the course of a research project in order to capture emic issues (those that emerge from the study) in addition to the original etic issues as a researcher's understanding and field experience increases. The second cycle coding focused on the identification of patterns from which to develop larger themes (Miles and Huberman 1994, Marshall and Rossman 1999).

## **Findings and Discussion**

Sourcing was a topic of importance for the interviewees involved in developmental responses, stating *“our biggest issue is the way of sourcing and the continuity”* (D17). Sourcing is part of a complex network of interactions with donors, beneficiaries and authorities around the world. There were advocates of both local sourcing (D12, D14, D17) and global imports (D16, D19). The latter highlighted that *“the sheer variety of items is immense and everything will come from different sources and present different challenges”* (D16). Furthermore, they extolled the virtues of having higher and more consistent quality standards in the global market, and also being able to negotiate better prices by utilising economies of scale (D16, D19). As the continuity of funding remains a concern (D16, D17, D19), such savings are fundamental to HL.

Local sourcing is chosen by organisations in order to make a positive impact on the local economic situation and to build capacities with local companies and is thus linked to the interests of the stakeholders, as well as the socio-economic impact (D2, D9). However, further complexity is added due to the previously discussed bureaucratic barriers and administrative deficiencies, as D12 explains *“it is a nightmare to get stuff through customs. There is so much corruption... we tend to source within country”*. Moreover, local sourcing can enable a more precise identification of local needs and the

timely response to them (D2), in comparison to the long lead times that are almost inevitable within a global SC (D14).

Despite these advantages, there are situations in developmental work which even organisations that firmly believe in local sourcing will resort to importing materials if there are shortages or difficulties with suppliers within the country: *“We did have a situation in Tajikistan... the team there were working in a remote area and needed constant supplies of blankets and whatever, and we did ship from the States, we shipped container loads of blankets and tents and warm clothes... but that is very unusual.”* (D12)

Furthermore, while tangible items are sourced within country, expertise is often brought in from outside, as some specific capabilities are non-existent within the recipient locality; or cannot be identified within a suitable timeframe (D2).

To meet quality, quantity and cost targets, organisations tend to employ global sourcing policies (D1, D3, D5, D6, D8, D11). Despite efforts to support the local economy, the majority of sourcing of products and services, even for developmental humanitarian responses, takes place outside of the country in which a response occurs. A main reason for that is the lack of products of an acceptable quality locally (D1, D5, D11).

*“In Liberia we’re actually unable to purchase food locally in the right quantities, qualities and consistency throughout the year, so we import the food.”* (D5)

*“It’s not like [humanitarian organisation] is against local sourcing, but it really hasn’t been all that successful for them. They do it, it’s not like they don’t do it at all. For certain items, technical things and like the ordinary day-to-day items, they source within the country. But there have been some really bad experiences with that... you know ordering a new truck and then the local log goes down to pick it up and that’s the last we ever saw of the log or the truck... that’s just not sustainable.”* (D8)

*“That’s a conviction that [humanitarian organisation] has that when we offer our services to our beneficiaries they should be of equivalent quality that we would acquire for ourselves, that we are used to. So that obviously ups the bar a bit and we all know the horror stories of what is out there in the third world, if you travel you see on the market heaps of pills in nice bright colours in bright sunlight that are supposedly antibiotics and that sort of stuff that obviously needs to be temperature controlled and shielded away from direct sunlight and so on. So since people get more sick from these types of things we just want to know, want to be in control of what we provide our patients. But it also means that we have much more international shipping and we then, also have to cross international boundaries and in more and more countries that is, I think, a real challenge.”* (D11)

However, an opposing view to external sourcing also exists, with some organisations sourcing globally because they regard products that are deemed to be of inferior quality in one part of the world as perfectly suitable for distribution in Sub-Saharan Africa.

*“If you look at the UK, or the EU really, we have such high standards here for everything, which is good of course, but also harms things. A lot of goods will be rejected because they do not meet our high standards. They will be rejected and we can offer the companies an alternative. We take the goods right off their hands; essentially we provide a chain of custody from their door to the beneficiaries. It is developing another market where their rejected goods can go and even do some good. By giving us their surplus products, they protect their organisation. They have to take a hit financially, but that’s better than risking these products hitting the market and not being up to scratch, or even going to landfill.”* (D3)

From a SC point of view, centrally controlled sourcing can increase overall efficiency of distribution (D5, D10, D12). In pursuing this strategy, organisations also have the opportunity to build up a large supplier base, which they can utilise for price comparison (D1, D11). Furthermore, combining the demand patterns of several humanitarian projects can even out the order fluctuations and thus make the buying behaviour more predictable (D5, D11, D12).

In Haiti, after the 2010 earthquake, organisations also highlighted their efforts to conduct local sourcing of both goods and services. This strategy provides advantages of economies of scale, as well as the development of global, long term relationships that guarantee reliable suppliers with acceptable quality. When organisations rely mainly on a small number of global suppliers (H2, H10), this potentially makes sourcing *“the easiest part, because we are working globally, we are procuring with 10-20 different suppliers”* (H10), as demand becomes consistent when combined across a number of different humanitarian responses. In addition, there are concerns about the availability of even basic supplies within Haiti due to the level of disruption of the local commercial supply chains.

*“In somewhere like Haiti locally there isn’t enough food that you could buy locally, again with consistency, quality throughout the year so we could probably do the odd pilot, I think probably we will do some piloting on local purchases but it’s likely for the foreseeable future we might look at getting better at purchasing and importing ourselves”* (H2).

*“We tried to source within the country first, but had to acknowledge that there just wasn’t the supply there and we then looked at Dom[inican] Rep[ublic] to see what we could get there, and only then moved in goods from the USA. That can make sense because there are less restrictions on local goods.”* (H6).

In addition to easier bureaucratic processes, there is also the benefit for the local market, by using local sourcing, which is a particular concern in a country like Haiti:

*“Global procurement contracts [are] fine and they do great rates but they are basically shipping in everything so there is no added value to the community.”* (H5)

In Pakistan, after the 2010 floods, continuity and coordination of sourcing proved to be particularly difficult as organisations struggled to move aid deliveries into the affected area (P1, P3, P4, P6, P8). Respondents highlighted that their *“biggest issue is the way of sourcing and the continuity”* (P3). It was noted that local sourcing is very much desirable for the ease of logistics, avoidance of additional import costs, as well as the general concern with supporting, instead of undermining, the economy of the affected area, but interviewees pointed out the difficulties of sourcing locally in a country that had been devastated to such a scale as Pakistan in these floods (P1, P3, P6). Furthermore, it was highlighted that large agencies especially can utilise economies of scale and long-standing agreements with suppliers to ensure that the best value for money is delivered to the beneficiaries through global procurement contracts (P4, P8).

In sharp contrast to the Haiti case, a particular problem was the lack of continuity of funding to this particular humanitarian response (P1, P3, P8). Given the immense scale of the request for aid that had been issued to the United Nations, distribution was poor and other agencies too struggled to fulfil their pledges of assistance in the aftermath of the floods (P4, P7, P8). The following quote provides a striking illustration of the slow contribution, collection and distribution of funds:

*“A year later there were still millions of people in need of humanitarian assistance, especially in Sindh and Baluchistan, still living in camps, just waiting for some funding to help rebuild their lives. Millions of people still waiting and the UN has not even distributed half of that appeal, that’s just unacceptable.”* (P8)

Local knowledge is of vital importance in coordinating and instigating a humanitarian response and provides the best source of information (P1, P2, P4, P8). Respondents recognised this is critical for both planning and executing their operations, in particular when a sustainable progress is desired in response to humanitarian situations.

*“To operate sustainably, you really need the connections on the local level and that will inform planning as well.”* (P2)

Local knowledge can prove to be particularly important when local sourcing is an option for an organisation, as extensive network building is desirable:

*“It’s basically just using our local staff and local knowledge to go to all the different suppliers we possibly can.”* (P4)

## **Discussion**

While it was generally agreed that local sourcing is a desirable long-term goal in HL, principally for reasons of sustainability of supply, interviewees highlighted that sourcing decisions are strongly linked to organisational beliefs, previous HL experience and external factors relating to the specific disaster and complexities inherent in the location (this could be due to geographical or political issues). In developmental HL as time progresses, local sourcing - as far as possible - becomes an important contributor to the long-term sustainability of a SC. However, this may not be possible in the initial stages of emergency responses, where local availability can be severely curtailed due to disruption of business activities and SC function. While considerations of quality, quantity and cost make global sourcing desirable; the interview respondents acknowledged that the difficulties in ensuring continuity and coordination of sourcing from external locations is a major contributor to the inherent complexity in successfully managing HL.

The dichotomy between and coexistence of local and international sourcing identified in this study is congruent with a previous survey of humanitarian organisations that found that the decision making process in sourcing and procurement is mostly dependent on the types of goods required (Blecken 2010). This was also a point that several interviewees made in the present study. A common theme in the humanitarian literature focuses on concerns about information flows that enable successful sourcing, however, this can prove difficult to implement on the ground (Long and Wood 1995, Day et al. 2009, Blecken 2010)., This was also a recurring issue raised by the respondents. A further complexity is that the requirement for accurate and reliable information can also be linked to the broader issue of pre-planning and possibly pre-positioning of supplies in the earlier phases of the disaster response cycle (Ghanmi and Shaw 2008, Salmeron and Apte 2010, Lodree 2011, Rawls and Turnquist 2011, Bozkurt and Duran 2012, Galindo and Batta 2013, Kunz et al. 2014).

## **Conclusion**

Respondents expressed a keen awareness of the importance of local sourcing, particularly in developing countries, as the import of goods can contribute to creating aid dependencies and may undermine the development and sustainability of local supplies. It was generally agreed by respondents in this study that local sourcing is desirable, principally for reasons of sustainability. However, a particularly pertinent issue in developmental humanitarian responses that was highlighted by the interviewees was that sourcing decisions are products of a combination of organisational beliefs and external factors. Several respondents favoured global sourcing to ensure consistent quality across all of their organisation’s operations, stating that it is unacceptable to

provide beneficiaries in developing countries with goods of inferior quality to what would be used in donor countries, particularly for medical supplies. Other respondents favoured the move to local sourcing of products and services for humanitarian responses as far as possible.

Especially in the emergency response there are some challenges with local sourcing, as availability of goods and services is often severely curtailed with limited regional sourcing. This situation was particularly evident in the Haiti earthquake response. Considerations of quality, quantity and cost made global sourcing desirable - and even necessary - in many scenarios. Larger organisations in particular are keen to achieve savings based on economies of scale. Furthermore, many organisations pre-position supplies in disaster-prone regions or store pre-assembled kits centrally to enable a quicker response. Both strategies are commonly tied to global sourcing. Nevertheless, respondents acknowledged that continuity and coordination of sourcing are major sources of complexity in humanitarian logistics. This includes import regulations, which in many countries were reported to be cumbersome, to the extent of disabling international supply chains into an affected region, thus necessitating the use of local products and services.

The dichotomy between and coexistence of local and international sourcing is congruent with a previous survey of humanitarian organisations that found that the decision making process is mostly dependent on the types of goods required (Blecken 2010). However, this study contributes to knowledge by adding further variables to the decision-making process, such as organisation beliefs and wider supply chain strategies. Findings might be of wider relevance in commercial operations in developing countries.

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