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Where next? The future of humanitarian logistics

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Abstract

Following up on important current insights from humanitarian logistics practice and research in the various chapters of this book, this final chapter again attempts to provide a glimpse of the future of humanitarian logistics. It begins with a retrospective look at the predictions of the first edition, following up on what has indeed been implemented, where the forecast was wrong, and where the developments went beyond any prior imagination. The chapter also forms the basis of a study of the future of humanitarian logistics, “Humanitarian Logistics 2020 and Beyond”.

Humanitarian supply chains have always been considered agile but, as the chapters demonstrate, they are also very swift in adapting to changes in their environment. This is significant because both the roles of stakeholders are changing, as is the operational environment, resulting in new areas of emphasis and impacting on supply chain design. Notwithstanding the rapid changes in practice, humanitarian logistics research has to a large extent been reactive in nature. However it is argued that, in the future, both more as well as different types of research are needed in order that academics and practitioners alike can actively contribute to the development of efficient and effective humanitarian logistics.
Introduction

By now, humanitarian logistics has been called a ‘young discipline’ for such a long time that it has passed its youth and has at least reached its adolescence. For example, a recent systematic review of humanitarian logistics research has put the number of articles published in this field at 158 in a three year period of 2009-2011 alone, with a clear jump from the previous years (Kunz and Reiner, 2012), whilst Peter Tatham’s comprehensive bibliography of humanitarian logistics literature had by August 2013 reached an astounding 47 pages of references whilst, in parallel, the Journal of Humanitarian Logistics and Supply Chain Management (JHLSCM) has issued its first three full volumes and will be expanded to more articles in 2014. If anything, humanitarian logistics research has caught fire – though, even so, it cannot keep pace with developments in practice.

The aim of this chapter is, however, not to offer an overview of the current state of affairs but to look ahead at the next steps. In this respect, the chapter forms the conceptual basis for a Delphi study that was initiated in 2013 and which aims to identify the areas in which changes in humanitarian logistics are expected. Nevertheless, this chapter begins with a look back at the predictions made in the very same chapter in the first edition of this book, addressing what has happened since, and where we stand with these original anticipated changes.

Looking back to looking forward: Steps since the first edition

The first edition of this book ended with the same question of “So where next?” and outlined a number of key expectations for developments in humanitarian logistics. These can be summarised as:

1. A shift in focus from inter-agency co-ordination towards relationship management in the supply chain,
2. A renewed emphasis on the sustainability of aid,
3. The development of specialised humanitarian logistics services that organisations offer each other,
4. An emphasis on process as well as product and packaging standardisation and modularisation, and
5. The use of new technologies to capture data.
These topics clearly resonate with the results of Kovács and Spens (2011) gap analysis in humanitarian logistics research, practice and education, which was used as the basis for identifying the future research areas that JHLSCM specifically called for in their very first issue: product/service development for humanitarian purposes; relationship management in the humanitarian supply chain; the combination of inter-agency collaboration with supply chain collaboration; financial flows in humanitarian supply chains; the sustainability of aid and responding to new challenges.

Let us, therefore, address the issues raised in the first edition one by one. Firstly, the suggested shift in focus from inter-agency co-ordination predicted a stronger emphasis on strategic supply chain management and a reorientation from co-ordination across humanitarian organisations to supplier collaboration and development. Furthermore, this topic highlighted the rise of purchasing consortia with a combination of elements of horizontal and vertical collaboration. Much has, indeed, been achieved in terms of supplier relations with the development of supplier databases including joint UN supplier databases. Nevertheless, the forecast move towards supplier integration and management of latent relationships has not yet been seen, and even less investigated through academic research. Indeed, notwithstanding the pooled procurement policies that have been developed in respect of, for example, asset management (Eftekhar et al., sine anno), the purchasing consortia that have been established have not been all that successful. Cooperative purchasing should result in economies of scale as well as an improved power position for the buyers, yet the implementation of purchasing consortia in the humanitarian sector has not yielded such results. In an empirical investigation of this question, Pazirandeh and Herlin (2014) suggest that the reasons behind the unexpected problems encountered by humanitarian purchasing consortia to be a combination of parallel procurement activities, differences in procurement policies across organisations, last minute reductions in volume, information asymmetry, and impacts on the reputations of participating organisations.

Turning to the second issue, the sustainability of aid is a key concern not only from the perspective of bridging the humanitarian/development divide, but it is also one which has given rise to a number of new suggestions for logistic-focussed disaster taxonomies (see, for example, Haavisto et al., 2013 and Tatham et al., 2013). A further new angle takes forward the underpinning thinking introduced by Tatham and Hughes (2011) in the first edition of this book by aligning the development of performance management with aid effectiveness overall
and re-orientating performance indicators towards a beneficiary focus (Haavisto and Kovács, 2013). At the same time, the old organisational mandates have prevailed and the recent implementation of Enterprise Resource Planning (ERP) systems across many large humanitarian organisations has shifted the focus back to operational performance reflecting the emerging ability to measure this concept with a degree of robustness. Another aspect of sustainability, the ‘greening’ of humanitarian supply chains has only received limited attention notwithstanding renewed calls (including those from humanitarian organisations) to address the reverse flows of goods and to use greener products and operational approaches. Overall (and understandably), it is clear that greening in the humanitarian sector is of lesser importance than the social maxim of lives saved.

Yet a further aspect of sustainability is the building of local capacity and with it, the handover of programmes from humanitarian and development organisations to governments, companies, and the local population. In this regard Sohn et al. (2013) found that, instead of implementing exit strategies, humanitarian organisations are more likely to shift their focus from one programme to the next, thereby maintaining a presence in the country/region. In short, the question of sustainability, with its multiple dimensions, remains in the ‘unfinished business’ category.

The third trend outlined in the previous edition of this book was the development of logistics services by, and for, humanitarian organisations. Here there is clear evidence of movement and humanitarian organisations have, indeed, begun not only to specialise in different services, but also to offer these to each other. *Procurement services* top the list and are already being offered by agencies such as the United Nations Children’s Fund (UNICEF), the United Nations Humanitarian Response Depot (UNHRD) network and the United Nations Office for Project Services (UNOPS) to other UN agencies as well as to governments. Outside the UN family, the International Federation of Red Cross and Red Crescent Societies (IFRC) have developed a procurement centre and procurement portal that has been accredited by the European Commission’s Humanitarian Aid & Civil Protection agency ECHO, and through which third parties outside Red Cross/Red Crescent national chapters can ask for their services. But other value added logistics services are also available, for example the IFRC is offering its services in areas such as “procurement and transportation”, “warehousing and handling”, “contingency stock”, “fleet service” and “insurance”. In addition to these Heaslip (2013, and also in Chapter 6 of this edition) has demonstrated the existence of further
applications of service operations in the humanitarian logistics context, including a
servitisation trend as demonstrated by humanitarian organisations acting as logistics service
providers (for example the World Food Programme (WFP) acting as a consignee in major
disasters and consolidating transportation), as well as service standardisation. Further
research into all these topics is bound to follow.

Standardisation, the fourth topic from Edition 1 has, indeed, become an important issue in
humanitarian logistics. Thus, Heaslip (2013) refers to standard operational guides and other
process standardisation measures in his discussion of service standardisation. In addition to
the Logistics Operational Guide (LOG) that was already in existence in 2011, the Log Cluster
has developed numerous new templates including, for example, order forms for consolidated
shipments that are currently being used to support the refugees from the Syrian conflict, as
well as to facilitate customs clearance procedures. But it is also clear that the implementation
of ERP systems is driving process standardisation within organisations and, if implementing
the same ERP system, across organisations. Product and packaging standards are quickly
following through the development of inter-agency kits in areas such as the health and
water/sanitation (WASH) clusters. These should enable joint procurement, transportation and
materials handling as well as the potential for one organisation to act as the supplier to
another. What is more, inter-agency kits simplify the user’s handling of the items as,
regardless of the organisation (and its current activities), humanitarians will have the same
experience with the same items, making it easier for them to receive and use them on the
ground. However, although these issues have been explored de Leeuw et al. (2010) in respect
of water and sanitation equipment, there remains a clear gap in our understanding of
standardisation and modularisation issues, and their implications for humanitarian logistics.

More broadly, data gathering has become more systematic with technology implementation
such as in the new ERP systems mentioned earlier - but, arguably, we are only scratching at
this area. For example, social media has been reported as being used during Hurricane Sandy
(2012) in New York for capturing both demand and supply of relief items (Imran et al.,
2013). The use of data from social media does, however, raise significant new questions in
respect of user credibility and data validity (Abbasi and Liu, 2013). Furthermore, and
notwithstanding the challenges of data quality, the sheer availability of such data is already
giving rise to a step improvement in research and practice. In particular, it is opening up the
possibility of both developing, and subsequently applying, quantitative models in
humanitarian logistics. On the other hand, such developments reinforce the importance of determining the feasibility of such models, and how their learnings can be applied in practice.

Where next?

Moving forward from the analysis of the accuracy of the predictions made some three years ago, we can now consider two further dimensions of the “where next?” question, namely: “what else has happened?”, and “what else is expected to happen?” which are core to a current study on “Humanitarian Logistics 2020 and Beyond”. This is aimed at understanding future trends in a similar way to the MIT “supply chain 2020” project, TU Eindhoven’s “value chain 2020” project, and even the European Union’s own 2020 strategy. In humanitarian logistics, however, there has been only limited research into such trends with the study by Kovács and Spens (2011) and, to an extent, Christopher and Holweg’s (2011) “supply chain 2.0” analysis being notable exceptions.

Developments in any sector may be a response to outside pressure from various stakeholders, a response to expected changes in the operational environment, or a result of internal efforts to improve performance. Future studies will, without doubt, reflect all three drivers of change whilst evaluating the extent of their imminence, urgency and priority.

Pressure for change comes from many directions. Stakeholder theory highlights the importance of various interest groups that have a “stake” in an organisation and its activities. Some of these interest groups are clearly defined in the humanitarian sector. First and foremost, beneficiaries are named as the most important stakeholders of humanitarian aid and are highlighted in the very definition of humanitarian logistics offered by Thomas and Mizushima (2005, p.60) which is the one most frequently used within the sector. This states that humanitarian logistics is “the process of planning, implementing and controlling the efficient, cost-effective 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.” This adjustment to the definition of logistics management offered by the Council of Supply Chain Management Professionals (CSCMP) from a focus on end customers to that of end beneficiaries is more than a semantic one as it emphasised that there is a clear distinction between the status of customers and beneficiaries. For example, beneficiaries typically do not pay for humanitarian products or services, do not
have a choice between alternative products and services, and ideally do not make a repeat purchase.

At the same time, one of the trends that the previous edition of this book clearly identified is a change from a notion of passive beneficiaries being aided to one of beneficiaries becoming active members of the humanitarian supply chain. Cash donations and voucher schemes were first used by the IFRC in the aftermath of Hurricane Mitch (1998) but have since become more popular and new telecommunication solutions for cash transfers have enabled their use in various African countries. The use of vouchers and cash empowers beneficiaries to make active purchasing choices to cover their needs. At the same time, from a logistic perspective, it eliminates the need for costly transportation, storage, and other similar activities. In short, a shift from material to financial flows diminishes the total cost of aid whilst simultaneously empowering beneficiaries. This implies a reconfiguration of the humanitarian supply chain with consequential important contributions to the reinstatement of the local economy. But how to determine the point of shifting from material to financial flows – if material flows are needed at all – is a key question of the future.

Different actor and stakeholder models in the humanitarian supply chain highlight a myriad of other interest groups relating to humanitarian organisations. Some of these are directly involved in the humanitarian supply chain such as donors, governments, logistics service providers, suppliers and, at times, even the military (Kovács and Spens, 2008; Kovács and Tatham, 2010). Others, such as the media, or society at large, express an interest in humanitarian organisations without necessarily being actively involved with the management of material, information, or financial flows in the humanitarian supply chain (Heaslip et al., 2012). Of all these actors and stakeholders, the biggest current change is in the role of donors.

Due to the financial crisis, the availability of funding is at a record low, heating up the competition for the funds that remain. This situation has increased the power of donors who are demanding not only accountability but also supply chain visibility, including the tracking of items right up to their point of use. This situation has already resulted in the development and implementation of tracking programmes – albeit these rarely go all the way to beneficiaries but, rather, up to the point of transfer of goods to implementing partners within the affected country/region.
Indeed, the role of implementing partners also deserves more attention. Largely neglected in research, it is often not the big international NGOs (BINGOs) or aid agencies which conduct the last mile distribution but their implementing partners on the ground. In this respect it is relevant to note that whilst there is a clear growth in the number of certification programmes, executive education training modules, masters programmes etc. that are focussed on supporting the professionalisation of humanitarian logisticians, most are targeted at logisticians working with BINGOs and aid agencies rather than their implementing partners. Whilst such professionalisation is clearly a key step in improving the skills, resources and capabilities in the humanitarian supply chain, the skill requirements of logisticians for the humanitarian sector (Allen et al., 2013; Kovács et al., 2012) are equally important for logisticians working with implementing partners. In this respect, capacity building has been emphasised for some time when it comes to governments, society, and even beneficiaries. Such capacity building activities include secondments to governments, the hiring of local staff, and reinforcing the ability of governments to take in charge of co-ordinating relief and development programmes. Extending such training and education programmes to implementing partners (including governmental actors) is a logical next step in this direction, and this is a clear goal of the Humanitarian Logistics Association (HLA) in the creation of its professionalisation initiative that has already led to the development of a few certification programmes (developed by the Fritz Institute and offered by CILT UK) and is being extended to create a recognised career path for humanitarian logisticians.

It is also important to note that, in addition to the core stakeholders, other humanitarian organisations are extremely important to the functioning of any humanitarian organisation in their delivery of aid. Thus, even though the focus is shifting from horizontal co-ordination to supply chain collaboration, the combination of the two is essential. The current boom in implementing ERP systems should substantially improve the transparency of material flows, but ERP systems also offer the possibility for such visibility across organisations if the necessary interfaces are created. The implications of this sea change have yet to be fully understood, but they have the potential to deliver a major improvement in the co-ordination of material flows into and within a disaster area. Furthermore, such interoperability also offer the potential to deliver a pan-agency overview of the extent to which demand is being matched by supply, in other words the creation of “common humanitarian logistics picture” (Tatham et al., 2013) which, in turn, would facilitate vastly improved inter- and intra-agency decision making – albeit the associated processes will require considerable effort to tease out,
and would unquestionably require a degree of inter-agency cooperation that has been lacking to date. It also offers the ability for agencies to move further towards product and process standardisation, the creation of inter-agency kits, and/or joint pre-positioning. In short, such systems are a key step towards enhancing the interoperability of humanitarian organisations.

Apart from the changing role of stakeholders, other external changes are impacting on humanitarian logistics. Sadly, wars and war-related crises are on the rise, and the security situation in many countries is deteriorating. This brings not only a reorientation in civil-military relations in which logistics is a core component (Tatham and Rietjens, *sine anno*), but together with kidnappings and attacks on humanitarians, a heightened requirement for the security of humanitarian staff. Hand in hand with this staff-related security requirement, comes security of supply and the problem of negotiating access to beneficiaries. This latter challenge has became a joint Office for the Coordination of Humanitarian Affairs (OCHA)-led effort in many countries which operates in parallel with the Log Cluster developing common humanitarian transport that consolidates the cargo of several humanitarian organisations to conflict zones. For example, building on the success of this approach during the aftermath of the 2010 Haiti earthquake, WFP hauled 11,027 m$^3$ cargo on behalf of multiple other organisations into Syria during the first three months of 2013 alone (Logistics Cluster, 2013).

Even though this is but a fraction of what was needed, *access barriers have proven time over time to be an actual enabler of the co-ordination of humanitarian supply chains* whether in terms of consolidation (e.g. in Haiti and Syria), acting as consignees one to another (e.g. in Myanmar and Syria), or the offering of services to one another across humanitarian organisations. Increasingly, organisations are becoming the procurers, the transportation and storage providers, customs clearance guides, or asset providers to one another – with, as noted by Heaslip (2013), value-added services such as tracking being added to the list.,

But it is not only wars that can be described as ‘disasters with a man-made component’. Climate change is shaping the nature of weather-related disasters, adding to the effects of storms, heavy rainfalls, floods, or droughts and, as a result, a ‘new normal’ temperature is emerging in many countries. *Climate change mitigation and adaptation* is, therefore, rising on the agenda of the humanitarian sector. Preparedness for disasters has become not only a question of pre-positioning stock, but also one of understanding the changing climate and
what this implies for populations in the future. Thus, as we move towards the next high level United Nations Framework on Climate Change conference (UNFCCC) in November 2013, not only emissions capping, but also the development of “climate-friendly technologies for mitigation and adaptation that meet . . . key low-carbon and climate-resilient development needs” are on the top of the agenda (UNFCCC, 2012, p.13). It is not only expected that products and services delivered by the humanitarian sector will follow suit, but also, that decisions in humanitarian supply chains will be impacted by the new patterns of weather-related disasters.

Concluding remarks

The field of humanitarian logistics is, unquestionably, developing at a fast pace and this has been recognised by some major organisations which have established units to help them manage the implications for innovation and change. Thus, whilst humanitarian supply chains have always been praised for their agility, they have also become increasingly swift in adapting to changes in their environment above and beyond being simply agile in delivering aid. But, to date humanitarian logistics research has followed these developments, establishing comparisons with other sectors, and emphasising the possibilities for cross-learning from different sectors (e.g. Tomasini, 2012). It is argued, however, that as the field comes of age, such research must move its focus to be at least a step ahead and to demonstrate both how the systems can (and should) change, as well as demonstrating the potential perils of false developmental paths, if it is to impact on operations and assist in the adaptation to future demands – “for the purpose of meeting the end beneficiaries requirements”.

Moving away from situation descriptions is also important for solidifying research. As Jahre et al. (2009) have pointed out almost half a decade ago, a major aspect is the use and development of humanitarian logistics. A core question that remains is, however, which theory this should be, and even, from which disciplines humanitarian logistics research can or should borrow theories from.
References


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