



EXECUTIVE SUMMARY

Common logistics services: The key to efficient humanitarian aid

A scientific study confirms the benefits of using common transportation services in humanitarian responses

In a study conducted in 2020 at the initiative of Humanity & Inclusion - Atlas Logistique, the WHU – Otto Beisheim School of Management used the example of common transportation to measure the impact of common logistics services in humanitarian responses.¹

faster delivery times (**up to 28% when accounting for accelerated order processing**).

This executive summary outlines the study background, methodology and findings.

Background

Reducing the suffering of people in need and facilitating their return to normal life are at the core of any humanitarian response. An unfortunate constant in all humanitarian responses is the **gap between the funding required and the funding received** to achieve this goal. Moreover, funding needs are constantly increasing and are expected to continue increasing in the future, especially with the rising impact of climate change and health crises.

The humanitarian community is well aware of the urgency to improve efficiencies in humanitarian operations and formalized its intention to do so in the Grand Bargain. Since humanitarian logistics represents **60 to 80% of**



Transportation costs
- 22%



Delivery & Processing times
- 28%

Using an agent-based modelling approach and a scenario inspired by the 2019 humanitarian response in the Central African Republic, the positive benefits for the humanitarian community were quantified to **22% cost reductions in direct transportation** and 6%

¹ Lothar Weichert et al., “Evaluating Common Transportation Services in In-Country Humanitarian Logistics Using Agent-Based Simulation”, working paper (WHU – Otto Beisheim School of Management and Atlas Logistique – an operational unit of Humanité & Inclusion, 2020).

humanitarian operations budgets, it makes sense to take a closer look at this field when considering how to improve efficiency.

Humanitarian common service providers (HCSPs) provide transportation, storage and supply-chain management to other humanitarian organizations.

By pooling the freight volumes of multiple humanitarian organizations and professionalizing operations, HCSPs contribute to better prices from suppliers, ensuring the efficient use of resources and limiting price inflation for logistics services. They also help make viable activities that most humanitarian organizations, particularly smaller ones, would not be able to sustain, such as the use of security or civil engineering experts.

Furthermore, because HCSPs are themselves humanitarian actors, they also have a better understanding of the issues and stakeholders. They respect and promote humanitarian principles, improve access to services for vulnerable and hard-to-reach populations and ensure compliance and transparency of services implemented.

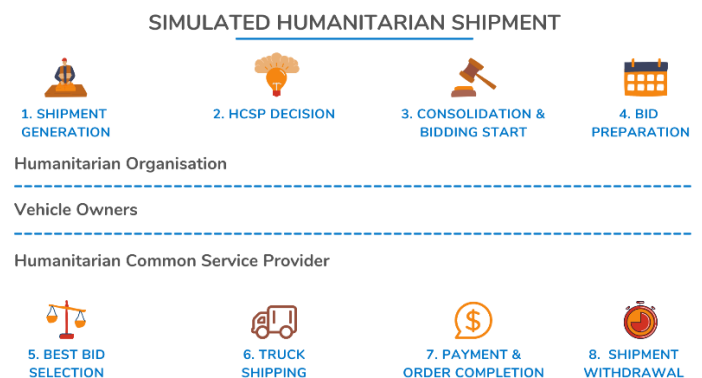
Despite these apparent benefits, HCSPs are quite rare in the field. The WHU study aims to measure the quantitative impact of common transport services on transport costs and overall aid delivery times. The next steps will be to understand the qualitative impacts of pooling, and how the humanitarian sector can accelerate the use of common services in humanitarian logistics.

Methodology

Transportation was selected from a range of logistics services as the crucial representative service that can be managed by HCSPs. To ensure realistic results, the researchers simulated a global humanitarian response, based on real data from the Central African Republic (CAR) context in 2019. The research

was supervised by a scientific committee that consisted of key humanitarian stakeholders (users, donors and the academic community).

The study entailed programming a mathematical simulation of the logistics market in CAR and simulating local transport during a humanitarian intervention, from customs or production to drop-off near the distribution point. The simulation integrates all stages of the process, from negotiation and contracting to the implementation of road transport. This approach made it possible to study the conflict between the sudden increase in demand for logistics in peak crises and the limited local transport capacity, which leads to price inflation.



In the simulated humanitarian shipment process, the humanitarian organization either negotiates with vehicle owners and hires vehicle owners itself or seeks the support of an HCSP to manage the process on its behalf.

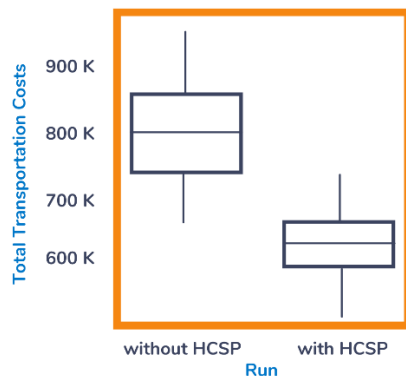
The on-site logistics market simulations were run in different configurations, 50 times each:

- Without any humanitarian shipments
- With humanitarian shipments but no HCSP
- With an HCSP

Because the simulation can only be an approximate representation of the complex humanitarian context, it was designed conservatively to avoid overestimating the benefits of common services.

Findings

In the simulation, **the active use of a transportation HCSP yielded, on average, 22% savings on direct transportation costs** for the humanitarian community and a 6% reduction in total delivery times compared to the average.



Simulation example of common transportation services, showing 22% savings in total transportation costs.

However, as mentioned above, a mathematical simulation cannot capture the full complexity of humanitarian operations. For instance, it is estimated that the simplified HCSP process can speed up overall transport operations by 28% when accounting for accelerated order processing.

This overall efficiency gain is based on three factors:

1. **Reduced inflation:** Local rates increased at the beginning of the response but at a much slower pace than without the HCSP.
2. **Better offers:** The HCSP's wider supplier network facilitated the identification of more cost-efficient bids and decreased the likeliness of truck breakdowns.
3. **Increased efficiency:** The use of the HCSP reduced transportation costs and accelerated delivery times. It also lowered transportation rates for local businesses.

Qualitative impacts

The authors of this study are convinced that given the complexity of humanitarian operations in the real world, the benefits of logistics pooling go far beyond efficiency.

The following impact assumptions need to be further investigated:

- HCSPs can strengthen the community's capacity to achieve its critical humanitarian objectives as efficiency gains allow organizations to reach more beneficiaries with the same aid budgets.
- Pooling allows for a dedicated HCSP focus on the management of physical access (rehabilitation of roads, drains, bridges, etc.) and transport routes that enable the humanitarian community to reach isolated communities.
- HCSPs link evolving humanitarian needs with supply flows; they can anticipate and optimize delivery strategies.
- HCSP's specific focus on the safety of transport routes limits the safety risks of transport and at the same time optimizes operations. This can lead to significant cost savings by favoring road, river or sea transport over air transport.
- Common logistics services also facilitate transparency, coordination and innovation within the humanitarian logistics community.

Conclusion

The agent-based model is based on many assumptions and simplifications of the complex reality "on the ground". Nevertheless, the WHU study is a first step towards understanding the positive impact of common logistic services in humanitarian operations. The efficiency gain is a first clear indication of how the humanitarian community would benefit from mobilizing more pooled logistics services.

Other major benefits of pooling – such as a more timely response, respect of humanitarian principles and quality standards, improved humanitarian access, reaching the most isolated populations and better coordination between humanitarian actors – cannot be captured by a single quantitative analysis.

Given these benefits and the economic potential identified by this study, a more systematic use of pooling would seem appropriate in future humanitarian responses. We can also assume that, due to the network

effects involved, the benefits of the approach would increase with each additional user.

On the basis of the results of this study, and as a follow-up to the 2019 “[Strength in numbers](#)” study carried out by the Humanitarian Logistics Network - RLH, the authors recommend continuing to explore the benefits of logistical pooling and encourage the development of this approach in the field.

To read the full study, please send an email to: d.egreteau@hi.org.