Outsourcing of Humanitarian Logistics

Private-humanitarian outsourcing partnerships and contracts
Falagara Sigala Ioanna, Wakolbinger Tina, WU

Research Questions
1. Why are HOs and LSPs entering into outsourcing partnerships and how do they choose partners throughout the disaster phases?
2. Which humanitarian logistics activities are outsourced to LSPs throughout the disaster phases?
3. Which types of partnerships and contracts exist between humanitarian organizations and logistics service providers throughout the disaster phases and what is the motivation for their choice?

Method
This study is based on empirical data collected by interviewing 24 practitioners from commercial logistics service providers and humanitarian organizations. A review of the related literature guided this research.


Results
- The outsourcing process of humanitarian logistics is highly affected by the disaster phases. It differs with respect to incentives to initiate outsourcing partnerships, partner selection criteria, activities to be outsourced and types of partnerships and contracts pursued.
- Many HOs lack a specific outsourcing policy.
- HOs can play an important role with respect to development and capacity building of local logistics providers.
- Five areas for future research were identified based on practitioners' priorities.

Horizontal cooperation between humanitarian organizations: the UNHCR case*
Toyasaki Fuminori (York University)

Research Questions
1. What are members’ incentives to join the UNHCR network?
2. What are the effects of introducing the premium fee on member HOs? Can the premium be used as a coordination mechanism which achieves system optimality?
3. What are the impacts of members’ decisions about the ratio of stocks allocated between UNHCR’s warehouses and members’ own warehouses?

Method
Two-step research approach: collection of empirical data and quantitative modeling.
1. Interviews with members of UNHCR network: CARE, NCA, UNR, MercyCorps, ShelterBox and World Vision, JICA and UNHCR.
2. Newsvendor model in the context of non-cooperative game theory

Results
- Incentives to join the network: cost efficiency is a major single reason for some HOs but it does not always lead HOs to participate in the network fully.
- Members follow different policies concerning stock transshipments.
- Some member HOs are reducing their stocks in the UNHCR and use the stock transshipment system to compensate for their stock deficits.
- Long lead times of restocking, lack of traceability, and long tendering processes.
- Premia fees for backup stocks would achieve system optimality.
- No applicable premium fee exists under partial participation of members.

Managerial recommendations for UNHCR
- As long as every member HO has stocks to loan in warehouses of the UNHCR, charging the premium would achieve first-best system optimality.
- Implementing the premium would lead partially-participating HOs to enjoy a free-rider benefit. This would accelerate member HOs’ reduction of their stock ratio in UNHCR’s warehouses.
- Managerial recommendation for HOs
- HOs would enjoy cost-saving benefits by participating in the UNHCR.
- For a higher (lower) premium, member HOs should increase (decrease) their order quantities.
- Partial participants could enjoy a lower expected inventory cost than full participants.

How to increase the impact of disaster relief: A study of transportation rates, framework agreements & product distribution
Gossler Timo, Wakolbinger Tina (WU), Anna Nagurney (University of Massachusetts), Patrizia Daniele (University of Catania)

Research Questions
1. How are transportation rates negotiated in framework agreements between humanitarian organizations (HOs) and logistics service providers (LSPs), considering the competition among HOs and among LSPs?
2. What is the influence of framework agreements on relief allocation and distribution decisions, considering restricted budgets and competition among HOs?
3. How can policy makers and aid agencies best intervene in order to mitigate the existing limitations and increase the impact of disaster relief?

Method
Game-theoretic models on (1) simultaneous negotiations of framework agreements between multiple HOs and carriers and (2) simultaneous decisions of HOs on purchase volumes, relief allocations and carrier selection

Solution approach: Numerical simulations leveraging the concepts of Nash Equilibrium, Variational Equilibrium and Variational Inequalities

Results
- Increasing the number of preselected carriers, with which framework agreements are set up, strengthens the bargaining power of HOs and improves impact up to a certain limit.
- Reductions of transportation costs have a positive, but decreasing marginal benefit for all types of relief items.
- Extending the volumes of framework agreements provides the highest benefits when the bargaining power of HOs is strong, or when spot market rates are high.
- Strongly asymmetric demands, budgets, capacities or cost structures can entail relevant differences and need to be considered by decision makers when assessing the improvement potential of interventions.
- Interventions can also lead to inefficiencies when humanitarian organizations over-fulfill the needs of beneficiaries to signal their performance to donors.

Prospects and bottlenecks of reciprocal partnerships in cash transfer programming for humanitarian response
Falagara Sigala Ioanna (WU) Toyasaki Fuminori (York University)

Research Questions
1. What are the main challenges in partnerships between humanitarian organizations and financial service providers implementing Cash Transfer Programming (CTP)?

Method
This study is based on empirical data collected by interviewing 8 humanitarian organizations (DRC, NRC, WKPRCS, Red Cross, Welthunger, 2 cash consultants), 2 private companies (Mastercard and Red Rose) and a donor DG ECHO.

Results
- Knowledge on finance: One of the challenges of the relationships between FSPs and HOs is the different expertise that may result in communication gaps and different perceptions.
- Market competition and service offered: HOs demand tailored solutions to adapt to the environment where they operate. This adaptation may not be affordable for FSPs.
- Humanitarian data protection: Concerns about beneficiaries’ privacy and data protection by using financial products to distribute CTNs.
- Differences in governance structure and planning horizon between HOs and FSPs.
- Signs of new donation flows from institutional donors, that they are willing to contract directly the FSPs to implement CTNs.

Literature review of outsourcing in humanitarian logistics
Gossler Timo, Wakolbinger Tina (WU)

Research Questions
1. How is the practice of outsourcing in humanitarian logistics described and analyzed in literature?
2. What are promising directions for future research?

Method
- Systematic literature review
- Development of an integrative framework for outsourcing in humanitarian logistics which includes five dimensions: subject, object, partner, design and context

Results
- 37 peer reviewed publications refer to outsourcing in humanitarian logistics to commercial, humanitarian or armed service providers.
- Further research is required with respect to the suitability of outsourcing under different circumstances, the formalization of the outsourcing process, the specification of the outsourcing design and the development of the service provider market.

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Best practices for outsourcing logistics in disaster relief
Gossler Timo, Falagara Sigala Ioanna, Wakolbinger Tina, Bubel Renate (WU)

Details are provided on the poster of Timo Gossler