



MIT SCALE RESEARCH REPORT

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Research Report: ZLC-2009-3
Robust Supply Chains for Humanitarian Aid in Africa
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Robust Supply Chains for Humanitarian Aid in Africa

Victor Ashagbley

EXECUTIVE SUMMARY

For more than a quarter of a century, humanitarian organizations have been providing aid to many countries in Sub-Saharan Africa under many conditions – from droughts to floods, conflicts to immunizations, emergency relief to long-term development programmes. In 2008, there were dozens of organizations in Africa delivering aid to several millions of people. In many of these interventions, humanitarian organizations have had to work under difficult conditions to alleviate suffering while relying on supply chains that are exposed to a variety of risks.

Focus of Study

This thesis takes one of the first steps towards developing robust supply chains for humanitarian aid in Africa. The objective is to improve understanding of risks and mitigation strategies in this hitherto unexplored area. In this regard, a research design was developed for a future case study research to examine risks and mitigation strategies in depth. In addition, an interview script was developed as a data-gathering tool for this future research. This thesis focuses on risks affecting humanitarian operations that use two road transport corridors in East Africa: the Northern Corridor, and the Dar es Salaam Corridor.

Methodology

Three interviews were conducted with the European Supply Centre of a humanitarian organization, its in-country logistician, and a freight forwarder. It was found through the interviews that the most common risks to humanitarian supply chains using these corridors were delays and disruptions. Delays were most often caused by congestion at sea ports and on roads, i.e., long customs procedures and difficult roads that were made worse by the rainy season. In addition, disruption to the flow of goods was frequently due to conflicts leading to the closure of transport routes because of lack of security.

The mitigation strategies found to be employed by the organizations included pre-clearance of goods at ports, keeping safety stock of three months, using alternate routes, and delivering most of the required quantity of goods to the final destinations before the start of the rainy season. It was also found that information flow and organizational variance, such as the

degree of accountability within an organization, played important roles in risk perception and mitigation.

Results

A conceptual framework was developed based on findings from the interviews and available literature. The components of this framework influence the degree to which an organization perceives and mitigates risks. They include modes of transportation, the settings (location), events such as conflicts or seasonal changes, and the type of aid intervention - emergency relief or development programme. The importance of the framework to the research design is its focusing and bounding function.

Based on the conceptual framework, the research design was developed by specifying the components and making recommendations of the factors to be considered. The components of the research design include the research questions, propositions, units of analysis, logic linking the data to the propositions, and the criteria for evaluating the findings. It is recommended that the future study gather both qualitative and quantitative data before and during the interviews. This is especially important to eliminate bias and inaccurate information. Quantitative data also enables statistical analysis that leads to stronger conclusions.

Conclusion

There are many lessons and practices that can be adapted from the commercial sector to improve humanitarian supply chains. Companies like Dell and Nokia have developed highly efficient and effective supply chains due to the proactive management of supply chain risks. With mounting pressure from increasing needs and greater donor scrutiny about the impact of aid, humanitarian organizations must become more result-oriented in order to meet their objectives. Having robust supply chains to withstand the many logistical challenges in Africa is vital to ensure the high efficiency of operations.