

Humanitarian Logistics in Zimbabwe: A Taxonomic Literature Review

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Abstract— This paper aims to provide an overview of the key problems and perspectives to-ward a sustainable supply chain of HIV/AIDS related commodities. It is based on an extensive literature study, taking into account recent major reviews, and considering a wide range of different views from eminent experts worldwide. Most research has focused on trying to implement and introduce humanitarian logistics and supply chain management to Humanitarian organizations in trying to make their efforts quicker, efficient and cost effective such researchers include, Clark and Culkin , Thomas, Van Wassenhove, Kleindorfer and Van Wassenhove, Thomas and Mizushima, Tomasini and Van Wassenhove , Qiang and Nagurney , Thompson . Some even further suggest Supply Chain Analytics for Humanitarian Logistics Transformation focuses on the important role of humanitarian logistics, Networks for Africa in support for the implementation of the Millennium Development Goals. Some research has also focused on comparing the lessons learnt from both humanitarian and private sector logistics and supply chain management. Rolando M. Tomasini and Luk N. Van Wassenhove explore the way one such odd couple operates.

Index Terms—Humanitarian Logistics, taxonomic literature review, HIV/AIDS.

I. INTRODUCTION

The number of scientific publications dedicated to logistics and humanitarian supply chains is growing exponentially, and the number of reviews is also increasing rapidly as well. It has become difficult to find robust referenced material and solid guidance for researchers and policy makers, this study intends to make it easier. Numerous studies were reviewed and critically studied, and those that directly or indirectly considered humanitarian supply chains of HIV/AIDS commodities in Zimbabwe were recorded. A taxonomy of literature is presented. The taxonomy categorizes literature according to: (a) focus; (b) goal; (c) perspective; (d) coverage; (e) organization; and (f) audience [4].

This paper aims to provide an overview of the key points and perspectives to-ward a sustainable supply chain of

HIV/AIDS related commodities in Zimbabwe. This study will critically assess the most relevant existing humanitarian logistics studies in the area of HIV/AIDS, particularly those relating to procurement, distribution and storage.

II. METHODOLOGY

In total, 27 studies were reviewed. Literatures that were available at the time of the study via library, internet search and suggestions from the experts in the field of humanitarian logistics and supply chain management were used in this study. The articles reviewed are listed in Table 1. The initial screening process took into account over 50 different types of documents including technical reports, scientific articles and publicly available executive summaries of proprietary reports. Only those that were found to be directly indicating or related to the Zimbabwean situation were used.

III. RESULTS AND CONCLUSION

Most research that has been done has focused on Research out comes, the main common goal was identification of central issues and resolving them. Coverage was mostly representative but in some cases it was exhaustive and most content was conceptual with a historical background also shown in some cases. The literature mostly attracted and is of interest mostly to General scholars and Practitioners or policy makers.

Most research has focused on trying to implement and introduce humanitarian logistics and supply chain management to Humanitarian organizations in trying to make their efforts quicker, efficient and cost effective such researchers include, Clark and Culkin [3], Thomas [23], Van Wassenhove [30], Kleindorfer and Van Wassenhove [11], Thomas and Mizushima (2005), Tomasini and Van Wassenhove [30], Thompson [25]. Some even further suggest Supply Chain Analytics for Humanitarian Logistics Transformation [19] focuses on the important role of humanitarian logistics, Networks for Africa in support for the implementation of the Millennium Development Goals.

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Table I. Summary of reviewed literature

TITLE	FOCUS	GOAL	COVER AGE	ORGANISATIO N	AUDIENCE
Beamon, B.M. and Balcik, B. (2008)	Research outcomes	Identification of central issues	Representative	Conceptual	General scholars Practitioners or policymakers
BRYMAN, A. AND BELL, E. (2011),	Research outcomes	Identification of central issues Generalization and linguistic bridge building	Representative exhaustive	Conceptual	General scholars
Clark, A. and Culkin, B. (2007)	Research outcomes Methods	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
Crawford, I. M. (1990)	Practices or applications	Identification of central issues	Representative	Conceptual	General scholars
Davidson, L. S. (2006)	Research outcomes	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
Ellram, L.M. (1996),	Research outcomes	Identification of central issues	Representative	Conceptual	General scholars
Global AIDS Responds Progress Report (2012)	Research outcomes	Identification of central issues	Representative	Conceptual. Historical	General scholars, Practitioners or policymakers
Gray, R and Oloruntoba, R (2006) Humanitarian	Research outcomes	Identification of central issues	Representative	Conceptual	General scholars
Kerina, D., Stray-Pedersen, B. and Muller, F. (2013	Research outcomes	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
Kleindorfer, P. R., L. N. Van Wassenhove. 2004.	Research outcomes	Identification of central issues	Representative	Conceptual	General scholars
Kovács, Gyöngyi & Spens, Karen M. 2007	Research outcomes	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
Mentzer, J.T., DeWitt, W., Keebler, J.S., Min, S., Nix, N. W. Smith, C.D. and Zacharia, Z.G. (2001)	Research outcomes	Identification of central issues	Representative	Conceptual	General scholars
Mbohwa, C. (2008)	Research outcomes	Identification of central issues Generalization and linguistic bridge building	Representative	Conceptual	Practitioners or policymakers
Na'slund, D. (2002),	Research outcomes	Identification of central issues	Representative	Conceptual	General scholars
Na'slund , D. andWilliamson, S.A. (2008	Research outcomes	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
Noguera, Ms. Marilyn, Mr. David Alt, Dr. Lisa Hirschhorn, Dr. Chiedza Maponga, Dr. Patrick Osewe, and Dr.Amos Sam-Abbenyi. (2003).	Research outcomes	Identification of central issues. Generalization and linguistic bridge building	Representative	Conceptual	General scholars
Nyaguthie, (2008).	Research outcomes	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
Rickard, J. (2006)	Research outcomes	Identification of central issues	Representative	Conceptual	General scholars
Takang, Erick, Dragana, Veskov, Celestine, Kumire, and Jabulani Nyeriwa. May. (2006	Research outcomes	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
Thomas, A. (2003	Research outcomes	Identification of central issues	Representative	Conceptual	General scholars
Thomas, A. and Kopczak, L. (2005	Research outcomes	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
Thompson (2008	Research outcomes	Identification of central issues	Representative	Conceptual	General scholars
Tomasini, R., Van Wassenhove, L.N. (2004	Research outcomes	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
UNIDO (2011)	Research outcomes	Identification of central issues	Representative	Conceptual Historical	General scholars And policy makers
Van Wassenhove, L. N. (2006	Research outcomes	Identification of central issues	Representative	Conceptual	Practitioners or policymakers
Zimbabwe National HIV and AIDS strategic Plan 2011-15 (2011)	Research outcomes	Identification of central issues	Representative	Conceptual Historical	General scholars and policy makers

Some research has also focused on comparing the lessons learnt from both humanitarian and private sector logistics and supply chain management. [26; 27] explore the way one such odd couple operates. Learning from each other. moving

the world, a unique partnership between TNT, a global corporation specializing in transportation and logistics, and the U.N. World Food Program shows how two organizations can combine their core strengths to make a life-saving difference and increase a company's competitiveness and reputation. Mbohwa [15], focuses his study on Zimbabwe, discussing the challenges, difficulties and problems faced by humanitarian organizations in running logistic systems. Case studies of humanitarian organizations were conducted. Logistics Performance measurements were also done for the World Food Program, the International Red Cross Society and the Zimbabwe Red Cross Society, the World Health Organization, the United Nations Children's Fund and the Zimbabwean Civil Protection Organization in Zimbabwe are discussed.

A. *Defining major terms and concepts*

Humanitarian logistics can be distinguished into these main categories; continuous aid work and disaster relief (Kovacs & Spens, 2007). Usually, the term disaster relief covers natural disasters and some man-made disasters such as terrorist attacks or nuclear attacks. Generally, disaster relief includes three distinguished phases, which are the preparation phase, the immediate response phase and the reconstruction phase [12]. The first phase includes preparing to the possible disaster, such as having an evacuation plan for possible volcano eruption in Iceland. As stated in the report written by Kovacs and Spens [12], most material about humanitarian logistics concentrate on the first phase of preparedness often assuming particular scenarios and the fact that there is only demand for particular goods. Reconstruction phase includes the rebuilding and long-term recovery of the disaster.

There are a few key characteristics that are distinctive to humanitarian logistics as opposed to commercial operations [27]: Non-profit operations, Equality and neutrality, Impartiality, Limited resources, Limited amount of skilled staff, Bias or restrictions, Donors, Unstable and unpredictable supply chain.

Hence, humanitarian logistics is defined as 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 alleviating the suffering of vulnerable people [27]. The function encompasses a range of activities, including preparedness, planning, procurement,

transport, warehousing, tracking and tracing, customs and clearance by Thomas [23]. Many humanitarian organizations have engaged in long term development activities as well as disaster management activities supporting people affected by disaster [23].

Humanitarian supply chain refers to the network created through the flow of supplies, services, finances and information between donors, beneficiaries, suppliers and different units of humanitarian organizations for the purpose of providing physical aid to beneficiaries [14]. Humanitarian supply chains might include functionalities which may not typically fall into the field of humanitarian logistics. Managing relationships with donors, performing needs assessments, planning for supplies required and monitoring and evaluating the impact of distributed supplies, are usually the responsibility of non-logistics program units. According to source [24], Humanitarian supply chains include units implementing programs, managing grants with donors, controlling budgets and monitoring activities which must coordinate with logistics units. Humanitarian supply chains cannot be built by solely increasing the capacity or responsibility of individual units, but are formed by the creation of stronger links between units within the supply chain. Humanitarian logistics information systems can improve the flow of information with other units, in a mutually constructive manner, improving the effectiveness of the humanitarian supply chain.

Information plays a significant role in humanitarian supply chains. In humanitarian supply chains the end recipient of aid (the beneficiary) is decoupled from the commercial transaction and has no direct influence over what supplies they receive [9]. The key decision makers within the humanitarian supply chain are the donors who are funding the operation and many non-governmental organizations (NGOs) regard the donor as the customer in the humanitarian supply chain [1]

In commercial supply chains, the end recipient decides what supplies they require, and fulfilment can be easily evaluated by monitoring the receipt of these supplies. In humanitarian operations the supplies are determined by external assessments of the needs of the beneficiary. Evaluating fulfilment becomes more difficult, as additional analysis must be done to determine if these needs have been met by the supplies. Humanitarian logistics information systems can

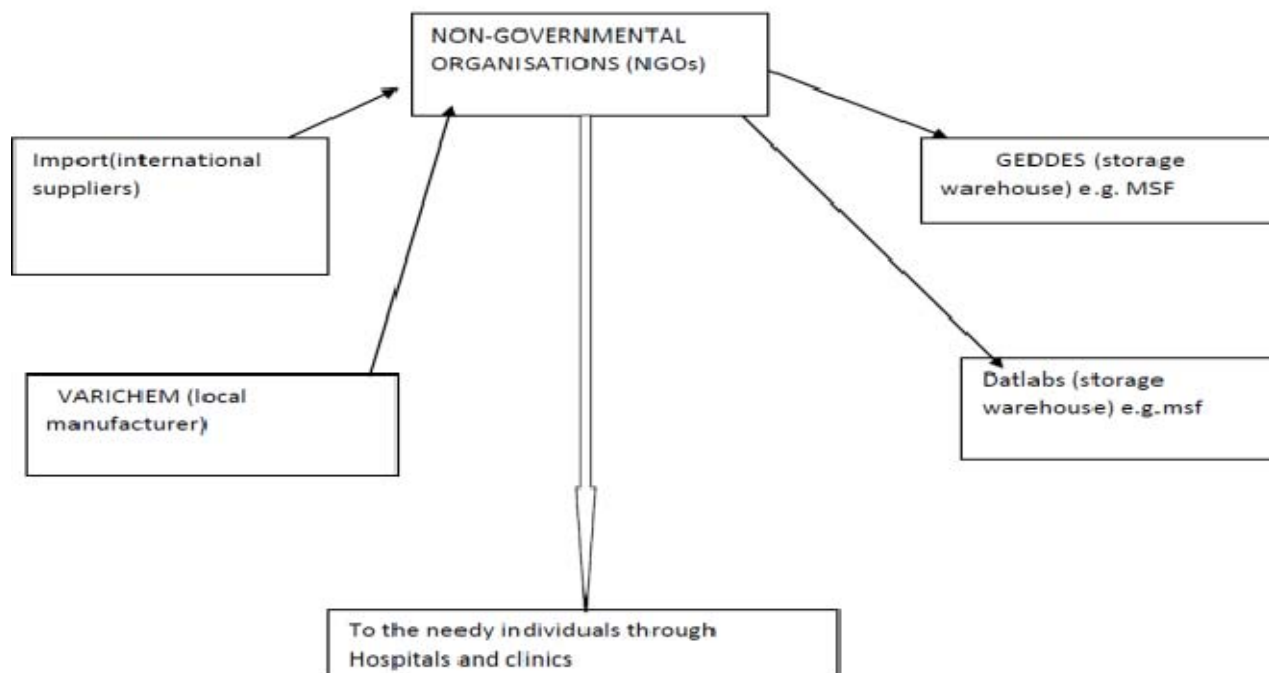


Fig 1. Overview of NGOs HIV/AIDS related commodities supply chain.

- Enhance needs assessments by ensuring that field staff knows what supplies are available for beneficiaries, either in local warehouses, pre-positioned emergency stocks or from local and international markets.
- Share lists of supplies available in both local and international markets, including prices and lead times, logisticians to empower program staff to better plan their procurement activities.
- Keep program staff informed of procurement activities will help to develop an understanding of the constraints within logistics and create trust.
- Provide budget holder more accurate financial information regarding funds which are committed within the procurement process, to avoid the over or under spending of budgets.
- Provide warehouse inventory reports to program staff to allow them to take more responsibility for their supplies, and ensure that they are utilized effectively.
- Share information on the distribution of supplies to allow program staff to better monitor and evaluate activities and avoid the need for duplicate record keeping between logistics and programs.
- More accurately divide logistics overhead costs such as warehouse rental, transportation and logistics staff wages into program budgets according to the activities logistics is supporting [14].

The literature also shows that, the national antiretroviral therapy program is in an expanding, roll out phase with the number of people living with HIV/AIDS receiving antiretroviral therapy increasing exponentially [29] but also according to the report the program has recently been

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