Improved Lead Time Efficiency and Cost Efficiency in the Humanitarian Relief Aid in Disaster Supply Chain in Malaysia

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DECLARATION OF ORIGINAL WORK

I hereby declare that all the work of this thesis entitled “Improved Lead Time Efficiency and Cost Efficiency in the Humanitarian Relief Aid in Disaster Supply Chain in Malaysia” is original done by myself and no portion of the work encompassed in this research project proposal has been submitted in support of any application for any other degree or qualification of this or any other institute or university of learning.

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DEDICATION

I would like to appreciate the dedication of my beloved family members who educated me and motive me to learn until degree level. And also, I express a deep sense of gratitude to my lecturer whom also my supervisor for my final year project, Miss Atikah Saadah Binti Selamat and my fellow friends which is Benronica Janam Anak Bennet Baja, Nur Anissa Farzana Binti Azman and Izyan Khalisa Binti Haron. They have provided me fully support and advice throughout this research. Without their blessing and encouragement, this research is impossible to complete within short period of time

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ABSTRACT

This finding highlights the significance of humanitarian organisations' (HOs) efforts to lessen suffering and enhance peoples' quality of life. HOs are forced to pursue more accountability by increasing their efficiency in terms of time and cost in activities, especially in preparedness activities, because the increased donations and assistance to HOs still do not completely resolve this major problem. HOs require partners to collaborate with in order to alleviate suffering because they lack the resources necessary to handle the disaster problem on their own. The performance management method, which measures performance through integration, is the key to helping HOs and their partners achieve cost- and lead-time effectiveness.

Keyword: HOs, cost, lead-time, effectiveness

ABSTRAK

Penemuan ini menyerlahkan kepentingan usaha organisasi kemanusiaan (HO) untuk mengurangkan penderitaan dan meningkatkan kualiti hidup orang ramai. HOs dipaksa untuk meneruskan lebih akauntabiliti dengan meningkatkan keberkesanan dan kecekapan mereka dari segi masa dan kos dalam aktiviti, terutamanya dalam aktiviti kesediaan, kerana peningkatan derma dan bantuan kepada HOs masih tidak menyelesaikan sepenuhnya masalah utama ini. HOs memerlukan rakan kongsi untuk bekerjasama untuk mengurangkan penderitaan kerana mereka kekurangan sumber yang diperlukan untuk menangani masalah bencana itu sendiri. Kaedah pengurusan prestasi, yang mengukur prestasi melalui penyepaduan, adalah kunci untuk membantu HO dan rakan kongsi mereka mencapai keberkesanan kos dan masa utama.

Kata kunci: HOs, kos, masa utama, keberkesanan

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LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
BSc	Balanced Scorecard
CE	Cost Efficiency
EDI	Electronic Data Interchange
ERP	Enterprise Resource Planning
HL	Humanitarian Logistic
HO	Humanitarian Organization
HSC	Humanitarian Supply Chain
HSCM	Humanitarian Supply Chain Management
KPI	Key Performance Indicator
LTE	Lead Time Effectiveness
MEAL	Monitoring, Evaluation, Accountability, and Learning
NGO	Non-Governmental Organization
PEAR	Preparedness to Emergency Action Response
SC	Supply Chain
SCOR	Supply Chain Operations Reference
SCM	Supply Chain Management
SCPI	Supply Chain Process Integration
SOP	Standard Operating Procedures
UN	United Nations

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The relief chain's goal is to deliver humanitarian aid in the form of food, water, medication, accommodation, and supplies to places hit by large-scale disasters. Relief organizations fall into three categories: UN-affiliated organizations (such as the World Food Programme), international organizations (such as the International Federation of Red Cross and Red Crescent Societies, which operates as a union with country offices that are auxiliary to country governments), and non-governmental organizations (such as the International Federation of Red Cross and Red Crescent Societies, which operates as a federation with country offices that are auxiliary to country governments) (NGOs). NGOs also have country offices, although not associated with the countries' governments (Thomas and Kopczak, 2005). Each form of organization has its own set of regulations. Regarding legislation, the United Nations and non-governmental organizations (NGOs) are two separate bodies (Seaman, 1999). In contrast, there may be similarities among NGOs and other relief groups regarding relief chain structures, processes, and operations.

1.2 BACKGROUND OF STUDY

Non-profit relief groups differ from for-profit commercial (private) organizations because they are not for profit. Characterizing the supply networks of charity and for-profit enterprises requires understanding their general characteristics. Firstly, by describing the differences between non-profit and for-profit organizations in this section. Next, look at relief NGOs and for-profit supply chains, describing the distinct characteristics and identifying the fundamental contrasts that affect the establishment of a relief chain performance measurement framework.

Organizations That Are For Profit Versus Those That Are Not.

There is a large body of research that compares non-profit and for-profit organisations from many angles (e.g., O'Neill and Young, 1988; Vladeck, 1988; Moore, 2000). In terms of funding sources, goals, stakeholders, and performance evaluation.

1) *Revenue Source*

One of the key differences among non-profit and for-profit organisations, according to Moore (2000), is the source of revenue: Government money, charitable donations from people and enterprises, and in-kind campaign contributions (non-monetary charitable donations such as commodities) are the defining sources of revenue for non-profit organisations, whereas revenues earned from the distribution of goods and services to customers are the defining source of revenue for for-profit organisations. In other words, for-profit corporations get their money from customers who buy goods and services for their personal advantage; non-profit organisations get their money from people and organisations who don't expect anything in return (Moore, 2000; Henderson et al., 2002; Oster et al., 2004, p. 278). Raising funds and the selling of products and services are other ways for non-profits to generate cash (Oster, 1995, p. 14). Non-profits, on the other hand, are subject to regulatory restrictions on how they can utilise their earned earnings (due in part to the tax relief offered to these organisations); any financial surplus generated by operations cannot be handed to individuals in charge, personnel, or membership (Oster, 1995, p. 4).

2) *Goals*

The primary purpose of private-sector businesses is to make money and give enough financial returns to shareholders (Boland and Fowler, 2000). Non-profit organisations, on the other hand, do not seek to make a profit; rather, they aim to fulfil their social purpose (Moore, 2000; Baruch and Ramalho, 2006). "Money is the means to a desired social objective in public sector firms," writes Moore (2000). The products and services provided in the private sector are "means to an end of producing money." Non-profit organisations must also be concerned about their financial well-being, as it is critical to their aims and existence. Finances, on the other hand, are restrictions for non-profits rather than objectives; that is, while these organisations must manage their spending and adhere to annual financial, their effectiveness cannot be assessed by how closely their expenditure matches the amounts allocated (Kaplan, 2001). Setting the objective of a for-profit corporation based on shareholder wealth does not imply that all other stakeholders' interests must be compromised for the benefit of shareholders (Moore, 2000).

3) *Stakeholders*

Stakeholders are described as "any person or group who can influence or is influenced by an organization's achievement of its objectives" (Freeman, 1984, p. 46). In terms of stakeholder characteristics, for-profit and non-profit organisations can be distinguished. As per Speckbacher (2003), all business enterprises have one favoured interest group that is clearly defined and homogeneous in terms of interests; in other words, the interests of a firm's owners dictate the firm's policy. Non-profits, on the other hand, serve a diverse range of stakeholders with varying goals and needs (Speckbacher, 2003). As a result, a non-profit organization's stakeholders include financial donors, service beneficiaries, staff, and volunteers.

For-profit companies have various stakeholders, including consumers, employees, merchants, and suppliers, all of whom have expectations and needs that must be considered. Multiple stakeholders may necessitate sacrifices but, in for-profit firms, fulfilling the requirements of several stakeholders does not usually conflict with the company's long-term aims. After all, establishing customer loyalty and involving providers and employees in the firm's work maximises shareholder wealth over time (Moore, 2000). Because of the competing interests of sources of revenue (funders), benefit providers, and recipients, managing trade-offs in non-profit organisations may be more difficult.

4) *Performance Measurement*

Because for-profit and non-profit organisations have different characteristics, their performance metrics and assessment systems are also different. Although measuring the performance of any organisation can be difficult, there are additional challenges that have been addressed in the literature (Kanter and Summers, 1987; O'Neill and Young, 1988; Letts et al., 1999, pp. 133-136; Sawhill and Williamson, 2001; Brooks, 2002; Poister, 2003, pp. 8-9, 17-21; Speckbacher, 2003; Parhizgari and Gilbert, 2004; Micheli and Kennerly, 2005).

1.3 PROBLEM STATEMENT

Humanitarian logistics refers to the process of engaging people, assets, abilities, and knowledge to assist victims of disasters. Logistics is at the heart of all mobilisation activity in the humanitarian process, serving as the link between disaster response, warehousing and distribution, and hub and the field. Furthermore, it could be one of the greatest complex pieces of the relief effort. The operation's effectiveness is constantly monitored in order to minimise operating costs while achieving the best possible results. As a result, disaster management is a critical key to the successful implementation of humanitarian efforts (Tomasini & Van Wassenhove, 2009).

Natural disasters seem to strike all corners of the world in today's environment due to climate change, so the significance of humanitarian logistics is undisputable. Human failure and infrastructure destruction could be managed and avoid if proper planning and execution were carried out. The disaster's negative impact can be severe at times. The magnitude of the disaster may overwhelm authorities and all other interested parties. As a result, relief aid and reaction operations may be inadequate and ineffective. As a result, various stakeholders must know their roles in international aid and disaster relief and take proactive measures to respond effectively in order to reduce the disaster's negative impact on the emergency community (Sahay et al., 2015).

1.3.1 The Stage of Preparedness

The ability of the HOs to maintain the movement of supplies, data, financial services, people, and understanding during the preparedness stage is critical to the success of the response stage in addressing urgent problems during and after disasters (Tomasini & Van Wassenhove, 2009a). Jahre and Heigh (2008) contend not only that the HSC performance of the instant disaster response but also the subsequent reconstruction is inextricably linked with the preparedness stage and advocate for better preparation in a position to react and reconstruct better. According to Thomas and Mizushima (2005), logistics serves as the link that connects preparedness and response, procurement and distribution, and headquarters and local units.

The logistics expenses during the preparedness stage can make up a significant portion to 80% of the actual expenses (Van Wassenhove, 2006). Furthermore, the increased number of disasters results in complex disaster relief operations regarding information availability, duplication of efforts, transparency, resource and financing accessibility, and planning and scheduling (Jahre et al., 2016). These challenges necessitate an evaluation of relief operations to improve operating effectiveness, reduce redundant work, and maintain resources more effectively (Ibid).

However, the actual definition of preparedness remains puzzling regarding how logistics aid the preparedness operation (Jahre et al., 2016). Nonetheless, Tomasini and Van Wassenhove (2009a) attempted to define preparedness as a phase in which all actors collaborate to minimize harmful repercussions before a disaster occurs. Personnel training, institution establishment, financial resource indicators, preparation of logistic support shelter, prepositioning goods, household preparedness, first aid, and coordination can all be components of the preparedness phase (Jahre et al., 2016). Van Wassenhove (2006) further subdivided the readiness stage into five activities: inventory (prepositioning goods), infrastructure (establishing a distributed system and information exchange), human resources (skills and training), operational processes and service management (framework arrangements), financial resources (funding), and community.

A humanitarian organization (HO) works to prevent or mitigate the effects of natural disasters. Donors, suppliers, and logistic service providers are examples of partners. They work directly with HOs and are responsible for delivering physical products such as aid to affected areas and non-physical products such as transportation and warehousing. According to the Business Dictionary (2020), a natural disaster is a sudden thing in nature, such as earthquakes, storms, and floods, that injures or kills people and causes damage.

1.4 RESEARCH QUESTIONS

The researcher determined three research questions in this study:

i. What are HSC performance measurements required during the HSC preparation process to achieve lead time effectiveness and cost efficiency?

ii. How can the HSC performance management process be integrated into the HSC readiness stage to improve lead time effectiveness and cost efficiency?

1.5 RESEARCH OBJECTIVES

In this research, there are three research objectives to be figured out:

i. To determine performance measurements required in the HSC's mobility stage to reach lead time effectiveness and cost-efficiency.

ii. Trying to implement a recommended continuous improvement process by utilizing IT technologies, improving language, and implementing standardization in HSC.

1.6 SCOPE AND LIMITATION OF STUDY

This research paper is focusing on the is concerned about the improvement lead time efficiency and cost efficiency in humanitarian relief aid in Malaysia.This study will be conducted among 100 respondents from NGOs near Melaka. The selected respondents will be chosen randomly. The researcher will be carried out by distributing questionnaires to the respondents.

The limitation of the study is the inaccurate data from respondents due to them was chosen randomly by the researcher. The researcher may not focus on every single company. Besides, the researcher experienced the time limitation in conducting the study. The research faced time constraints since the study needed to be completed in a short period of time which is 10 months.

1.7 FRAMEWORK

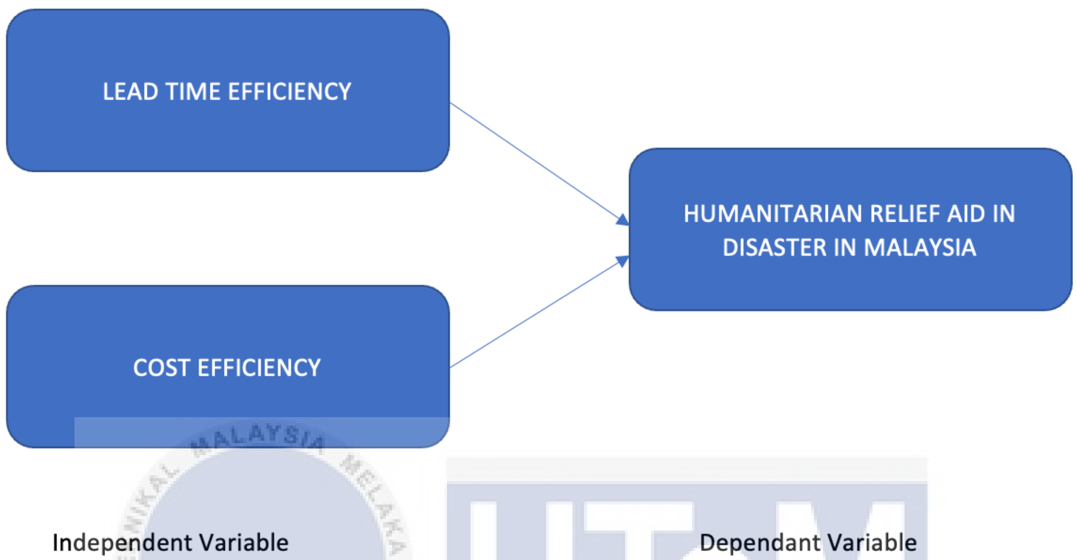

Figure 1: Framework (*Own Illustration*)

1.8 SUMMARY

In conclusion, this chapter is discussed about the overview of the study. It discussed the background of the study, problem statement, research questions, research objectives, scope of the study, framework and summary. In the coming chapter, the researcher will carry out the literature review of the study. The information will be broader and more understandable by audience.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents the overall theory for the research. The goal is to provide sufficient details on the humanitarian supply chain, disaster management, and preparedness phase to the viewers so that they can understand the issues described in the current chapters and assist the researchers in building the foundation of the analysis. The distinction between humanitarian logistics and humanitarian supply chain will be discussed first. The disaster management cycle and disaster management will then be introduced to as the main goals and problems of disaster risk management. Finally, the stage of preparation will be discussed in greater depth. The literature review is required to develop a suitable research methodology method such as quantitative research.

2.2 CONCEPT

The HSC's primary goal is to provide help to everyone affected by the crisis or pandemic. Its goal is to get the appropriate supplies to the right people at the right time and in the right place (Banomyong et al., 2019). It's vital to remember that not all crises or tragedies have the same qualities or consequences. The HSC is complicated, and it necessitates the participation, activity, and intervention of a variety of stakeholders. There are four types of disasters, according to Van Wassenhove (2006) which is abrupt onset, slow onset, natural causes, and anthropogenic causes. As a result, three fundamental issues during a disaster crisis or pandemic are proposed by Kovac and Spens (2009) which is disaster types, disaster relief, and pandemic relief.