

Enhancing Humanitarian Operations Performance Through Logistics Preparedness: A Conceptual Review in Humanitarian Organizations

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Abstract

This conceptual paper delves into the realm of humanitarian operations by examining the preparedness and response of humanitarian organizations in logistics during disasters. Drawing upon the principles of resource-based theory and stakeholder theory, the study employs a questionnaire as the primary data collection tool. The targeted sample comprises individuals directly involved in disasters, including government agencies such as the Malaysia Civil Defence Force (APM) and non-governmental organizations (NGOs) registered with the National Disaster Management Agency (NADMA) in Malaysia. To evaluate the proposed formative-reflective model, path modeling and bootstrapping techniques are employed using Smart PLS version 3.0. The core objective of this conceptual paper is to provide insights and a theoretical foundation for understanding the relationship between logistics preparedness and the performance of humanitarian operations, as perceived by humanitarian organizations operating in Malaysia.

Keywords: Humanitarian Operations Performance, Logistics Preparedness, Humanitarian Organizations.

INTRODUCTION

The primary aim of humanitarian operations is to safeguard individuals from suffering or death in the face of humanitarian crises, including but not limited to wars, political conflicts, natural disasters, poverty, and violence. These humanitarian missions are firmly grounded in the fundamental belief that every human being possesses an inherent right to life and dignity (Gavidia, 2017). It is imperative to underscore that planning plays an indispensable and pragmatic role, as it allows for the anticipation of potential disasters affecting a given area and the associated needs. The establishment of logistics preparedness, predicated on assessments of vulnerability and available resources, constitutes a comprehensive set of actions that can be undertaken in advance of a disaster's occurrence. Importantly, the execution of logistics preparedness initiatives can involve a collaborative effort among the general population, government entities, and humanitarian organizations (Van Wassenhove, 2006).

The impact of disasters is increasing dramatically over the decade. The communities and their assets are increasingly exposed to the impact of natural hazards. Malaysians are finding themselves more exposed to natural disasters, mainly flood that results in heightened concern about logistics preparedness at times of disaster to protect their lives and assets.

Malaysia is frequently perceived as a nation characterized by a scarcity of significant catastrophes. Nonetheless, being a tropical country, Malaysia is exposed to the potential hazards of flooding, landslides, and mudslides (CFE-DM, 2016; Shaluf & Ahmadun, 2006). In Malaysia, studies on logistics preparedness are still lacking (Jahre et al., 2016). Most of the studies done were on disaster preparedness. Noraini & Khairul (2017) argued that planning and coordination are inadequate during the preparedness phase in a disaster management cycle.

In Malaysia, the management of disaster risk falls under the jurisdiction of Directive No. 20, overseen by NADMA. The Natural Disaster Management and Relief Committee (NDMRC) is responsible for coordinating and supervising relief operations during floods. These operations involve various governmental departments,

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agencies, and social organizations, ensuring the timely provision of shelters, food, and medical supplies to flood victims (Khalid & Shafiai, 2015; Geale, 2012), ultimately aiming for an effective and efficient response to disasters (Zubir et al., 2016).

One of the key government agencies involved in disaster response is APM. APM plays a pivotal role in disaster relief efforts, safeguarding the lives, well-being, and property of individuals during impending disasters and assisting with post-disaster recovery.

Logistics preparedness encompasses activities geared toward designing organizational structures, coordinating supply chain resources, and planning and training for an efficient response if needed (Listou, 2015). However, these endeavours often lack alignment with ongoing resilience development, resulting in disjointed links between disaster response, preparedness, recovery, and long-term development. Furthermore, logistics preparedness tends to primarily focus on specific agencies, such as peacekeeping missions providing international aid, while sometimes overlooking preparedness efforts within local communities and other responding agencies (Listou, 2015).

Hence, this study seeks to address this research gap by proposing and validating a research model pertaining to logistics preparedness and humanitarian operations performance within humanitarian organizations. Additionally, it aims to establish correlations between different dimensions of logistics preparedness and humanitarian operations performance. This survey-based research employs partial least squares path modeling to validate the research model, and it contributes to the existing body of knowledge by examining these relationships through the lenses of resource-based theory and stakeholder theory.

Review Of Related Literature

Humanitarian Operations Performance

Several studies have underscored the significance of enhancing performance, yet only a limited number of them pertain to the realm of humanitarian operations (Beamon & Balcik, 2008; Davidson, 2006; Gammelgaard & Larson, 2001; Larrea, O., 2013). Humanitarian operations performance holds a pivotal role in accomplishing the primary objectives of humanitarian endeavours, namely, the preservation of human lives, alleviation of human suffering, and ensuring accountability for donor funding or economic sustainability (Laguna Salvadó et al., 2017). Moreover, humanitarian operations play a crucial part in mitigating the adverse impact of disasters on human lives and livelihoods by providing essential humanitarian assistance like food, water, medication, shelter, and other supplies (Sivadass et al., 2018). Nevertheless, the humanitarian sector grapples with several challenges, including the difficulty of obtaining accurate data, limited use of information technology, operating within chaotic environments, low motivation, potential negative media exposure, human resource concerns, overall reluctance, conflicts between short-term and long-term goals, and insufficient internal recognition of the logistics function (Abidi et al., 2014).

Humanitarian operations encompass a multitude of activities, spanning from the initial procurement to the distribution of aid to beneficiaries. Yet, inadequate planning, inefficient operations, and insufficient coordination among teams represent crucial issues that directly impede humanitarian operations (Schulz & Heigh, 2009). According to Van Wassenhove (2006), a substantial 80% of the costs associated with humanitarian operations are attributed to logistics, underscoring the critical need for effective and efficient logistics in the success of humanitarian efforts. Notably, one of the most formidable challenges in the humanitarian operations domain lies in the scarcity of professional logisticians (Kovács & Spens, 2009).

Neely et al. (1995) explained the efficiency and effectiveness of actions and operations of the humanitarian operations performance. A humanitarian organization needs to know which performance indicators are used to measure and compare performance against the set standards, objectives, goals, and expectations of stakeholders. Van Wassenhove (2006) believed that the consensus for the definition of humanitarian operations performance is equally crucial in the humanitarian sector as the increasing impact of natural disaster is putting pressure on humanitarian operations to deliver more effective operations.

The aim of integrating performance measurement into humanitarian operations is to enhance their effectiveness. This is accomplished by using measurements to offer feedback concerning the objectives of humanitarian operations, thereby increasing the likelihood of achieving these objectives efficiently and proficiently. The anticipated outcome of improved performance is expected to have a positive impact on the entirety of humanitarian operations. It informs all team members about the specific requirements and expectations, offers a means for monitoring their own performance and generating feedback, and assists in pinpointing areas that can be enhanced.

Logistics Preparedness

Logistics preparedness stands as a crucial element of any disaster relief initiative. Within the literature, logistics preparedness has gained significant prominence for a couple of key reasons. Firstly, it aims to differentiate logistics preparedness from general preparedness, and secondly, it seeks to shed light on how humanitarian organizations (and communities) go about preparing their logistics for disaster situations in order to establish a comprehensive comprehension of logistics preparedness (Jahre et al., 2016). Despite the growing focus on this topic, a shared consensus among humanitarian organizations regarding the definition of logistics preparedness and its potential contributions to operational enhancements remains elusive.

Logistics Planning

Humanitarian organizations that engage in comprehensive logistics planning well in advance of an actual disaster can achieve more rapid and well-organized responses when the crisis occurs (Celik et al., 2012). Effective logistics activities necessitate careful preplanning, as adequate preparations are vital for ensuring seamless operations. It is crucial to dispel the common misconception that transportation and other arrangements can be improvised on the spot when a disaster strikes in the field (The International Federation of Red Cross and Red Crescent, IFRC, 2000). Logistics planning within humanitarian organizations evaluates how efficiently inventory, location, transportation, and communication strategies are established before a disaster occurs (Aida & Saiful, 2014). Enhanced preparedness enables humanitarian organizations to enhance their performance during operations, shifting their focus from tactical planning alone to a more comprehensive and long-term strategic planning approach (Maon et al., 2009). Therefore, we propose the following hypothesis:

Hypothesis 1. There is a positive relationship between logistics planning and humanitarian operations performance.

Human Resource Management

Similarly, an additional dimension was proposed by Aida & Saiful (2014) who discussed the recruitment criteria, employee skills and experience, work ethics, and training to measure the human resources management of humanitarian organisations. Human resources management are widely acknowledged as key elements that contribute to the success and performance of humanitarian organisations (Karami et al., 2004; Luthans & Luthans, 1997; Peace II & Robinson, 1997). Human resources management are considered to be the most important asset of a humanitarian organisation, but very few humanitarian organisations can fully harness the potential (Ahmad & Schroeder, 2003). However, contemporary humanitarian organisations are keen to attract talents to achieve their business vision. Therefore, we hypothesise:

Hypothesis 2. There is a positive relationship between human resources management and humanitarian operations performance.

Logistics Coordination

Akhtar et al. (2012) highlighted the importance of vertical and horizontal coordination role in logistics coordination. Togar et al. (2002) proposed logistics synchronisations, information sharing, incentive alignment, and collective learning to be the dimensions of logistics coordination. Logistics coordination can yield many benefits in humanitarian operations performance such as economic efficiencies, greater service quality, organisational learning, access to new skills, diffusion of risks, improved public accountability, ability to buffer external uncertainties, and conflict avoidance (Gazley & Brudney, 2007). Accordingly, meeting the interests of

humanitarian organisations and achieving humanitarian aid missions are important requirements to enhance the effectiveness of the coordination system. Therefore, we hypothesise:

Hypothesis 3. There is a positive relationship between logistics coordination and humanitarian operations performance.

Resource-Based Theory

Wernerfelt (1984) is credited with introducing the first resource-based publication within the realm of strategic management. One of the key contributions of Wernerfelt (1984) lies in his recognition that the competition for resources, both among organizations and within organizations based on their resource profiles, can have significant implications for an organization's ability to gain advantages in implementing strategies.

Kovacs & Tatham (2009) argued that this theory offers valuable insights into how humanitarian organizations acquire and maintain capabilities in the humanitarian context. In essence, this theory provides a more comprehensive understanding of the capabilities and competencies of humanitarian actors, which in turn can assist humanitarian organizations in devising more effective plans, subsequently enhancing their overall efficiency and effectiveness (Prakash et al., 2020). The author further extended this discussion by emphasizing that the resource-based theory centers on achieving organizational efficiency by leveraging various resources. Among these resources, human resources are particularly highlighted as they offer a competitive edge to humanitarian organizations, which is expected to have a positive impact on the performance of humanitarian operations.

Stakeholder Theory

Stakeholders are defined as individuals or groups who have the potential to influence an organization's actions and outcomes or are influenced by them (Freeman, 1984). Every organization maintains connections with both internal and external entities that can exert an impact on its decisions or be influenced by them—these are collectively referred to as stakeholders. The effectiveness of an organization is contingent on the quality of its interactions with its stakeholders, encompassing individuals such as employees, shareholders, financiers, and the community (Susnienė & Srgūnas, 2011).

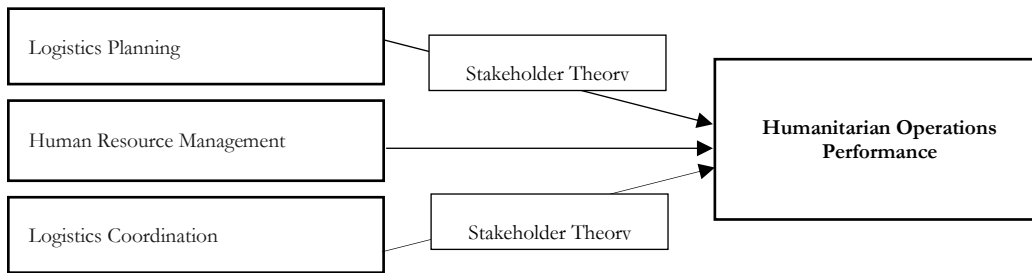
The more the stakeholders there are to coordinate with, the more humanitarian organisations will get involved in humanitarian operations (Balcik et al., 2010). By applying stakeholder theory to humanitarian operations, organisations can better understand the interactions between organisations and other stakeholders (Shubham et al., 2018). Miles (2012) had examined the connection between stakeholder strategies and organisational performance. Based on the assumption of stakeholder theory and the evidence provided by Miles, we can conclude that the effectiveness and efficiency of logistics planning and coordination can affect the performance of humanitarian operations.

Proposed Conceptual Model

Based on the literature from various studies, the paper has produced a proposed conceptual model, as shown in Figure 1, to illustrate the various components of logistics preparedness and humanitarian operations performance. This is a representation of the conceptualised relationship between the variables. Logistics preparedness is the independent variable, while humanitarian operations performance is the dependent variable.

Figure 1 displays the conceptual model with the logistics preparedness and its dimensions on the left-hand side, the humanitarian operations performance on the right-hand side and the resource-based theory and stakeholder theory acting as a bridge in the middle.

Logistics Preparedness



Perceived Outcome

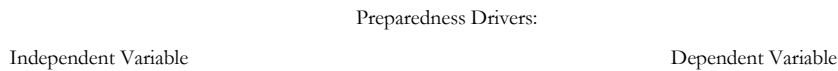


Figure 1. Proposed Conceptual Model

RESEARCH METHODOLOGY

Figure 2 summarises the research process that will be adopted for this study.

To ensure a robust research design, a deductive approach is selected for its ability to enable the testing of theory and the generation of empirical evidence regarding causality. The research will involve conducting a cross-sectional quantitative survey aimed at individuals directly involved in disaster management within government agencies, specifically APM and NGOs in Malaysia. The potential pool of respondents will be sourced from the Operation Disaster Management Division and Registrar of Societies (www.ros.gov.my).

The survey questionnaire comprises three distinct sets. The first set serves to collect demographic information from the respondents. The second set contains questions related to logistics preparedness, with its measurement relying on the instrument developed by Aida & Saiful (2014). This instrument encompasses a comprehensive array of dimensions for gauging specific constructs, namely: i) logistics planning, ii) human resources, and iii) logistics coordination. The third set of the questionnaire includes queries pertaining to humanitarian operations performance, drawing upon items from Tatham & Hughes (2011). This particular instrument was chosen because it reflects how individuals can be directly involved in humanitarian organizations in terms of response time, flexibility, efficiency (resources), and quality (process). Responses to all questions are elicited using a five-point "Likert" scale, where 1 signifies "strongly disagree" and 5 corresponds to "strongly agree."

For data analysis, Partial Least Square Structural Equation Modelling (PLS-SEM) will be employed, with the assistance of Smart PLS 3.2.8 (Ringle et al., 2015). PLS-SEM is the preferred analytical method since the research aims to predict relationships between the variables in the research model. Furthermore, as suggested by Hair et al. (2017), PLS-SEM is considered a superior approach for prediction. Additionally, PLS-SEM is well-suited for analyzing models that incorporate both formative and reflective constructs. This choice aligns with recommendations from several researchers, such as Rasoolimanesh et al. (2016), Chin (2010), and Hair et al. (2011). Lastly, PLS-SEM leverages the data to estimate path relationships, thereby reducing error terms (Hair et al., 2017).

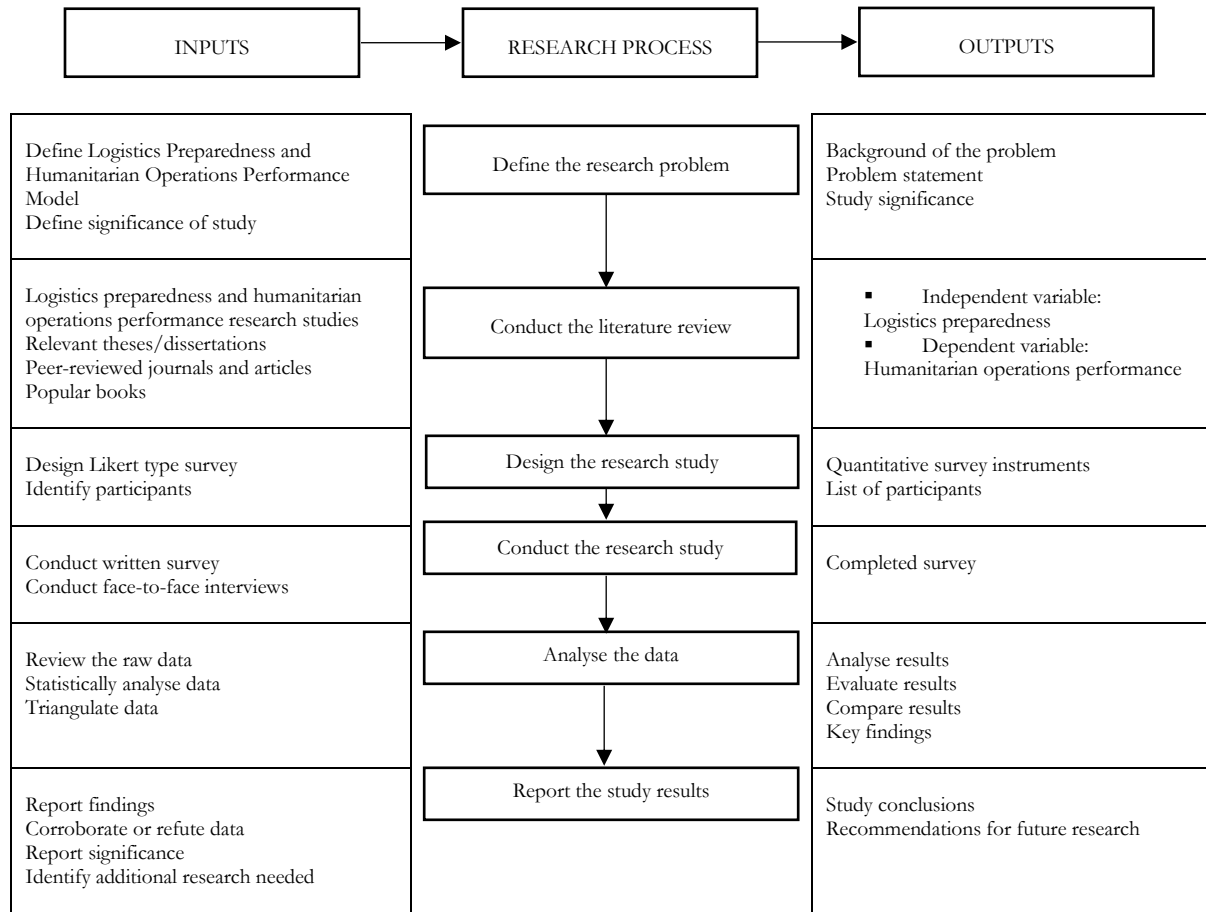


Figure 2. Research Process

CONCLUSION

In recent years, the occurrence of disasters in Malaysia has been on the rise, particularly affecting those in flood-prone areas. This study is aimed at enhancing the logistics preparedness of humanitarian operations within Malaysia's humanitarian organizations. Additionally, we have put forth a framework for logistics preparedness, along with recommendations for future research directions. Despite the growing attention to this issue, there remains a lack of consensus among humanitarian organizations regarding what constitutes logistics preparedness and how it can contribute to the enhancement of humanitarian operations. Our examination of academic literature highlights a similar deficiency in understanding logistics preparedness, specifically in the areas of planning, human resources, and coordination within the realm of humanitarian operations research.

By achieving higher levels of performance in humanitarian operations, humanitarian organizations can cultivate a positive perception among their stakeholders. This, in turn, has the potential to enhance the overall state of preparedness and simultaneously elevate the country's image.

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