



Bridging the Gap: Civil-Military Cooperation in Humanitarian Logistics and Emergency Supply Chain Management

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Abstrak

Humanitarian logistics and emergency supply chain management have become increasingly complex due to the growing frequency and scale of disasters. In this context, civil-military cooperation plays a critical role in ensuring the timely and effective delivery of aid. This study examines how collaboration between civilian and military actors contributes to the efficiency and resilience of humanitarian logistics systems. Using a qualitative research approach that integrates a systematic literature review with contextual analysis, the study develops a conceptual framework linking operational capacity, coordination mechanisms, and governance structures. The findings reveal that military involvement significantly enhances logistical capabilities, particularly in transportation, infrastructure access, and rapid deployment. However, challenges related to coordination, institutional differences, and governance frameworks may limit effectiveness. The study contributes to the literature by providing an integrative perspective on civil-military cooperation in humanitarian logistics and offers policy-relevant insights for improving emergency supply chain management in disaster-prone contexts.

Keywords: Civil-Military Cooperation, Humanitarian Logistics, Supply Chain Management, Disaster Response.

INTRODUCTION

The increasing frequency, intensity, and complexity of disasters have placed unprecedented demands on humanitarian logistics systems. Effective emergency response depends not only on the availability of resources but also on the efficiency of supply chain management in delivering aid to affected populations. Humanitarian logistics encompasses the planning, implementation, and control of the flow of goods, information, and resources in disaster contexts, where uncertainty, urgency, and resource constraints are dominant characteristics.

One of the defining features of contemporary humanitarian logistics is the involvement of multiple actors, including government agencies, non-governmental organizations, international organizations, and military institutions. Among these actors, the military plays a unique and often indispensable role due to its logistical capabilities, organizational structure, and operational readiness. Military forces possess assets such as transport aircraft, engineering units, and communication systems, which are critical for responding to large-scale emergencies.

However, the integration of military actors into humanitarian logistics systems introduces both opportunities and challenges. While military involvement can significantly enhance operational capacity, it also raises questions about coordination, governance, and the preservation of humanitarian principles. Civilian and military organizations often operate under different mandates, cultures, and decision-making processes, which can create barriers to effective collaboration.



The concept of civil-military cooperation has therefore become central to discussions on improving humanitarian logistics and emergency supply chain management. Effective cooperation requires not only coordination of activities but also alignment of objectives, communication systems, and institutional frameworks. Despite its importance, achieving seamless integration between civilian and military actors remains a persistent challenge.

This study seeks to bridge this gap by examining the dynamics of civil-military cooperation in humanitarian logistics. It aims to identify key factors that influence the effectiveness of collaboration and to develop a conceptual framework that integrates operational capacity, coordination mechanisms, and governance structures.

By providing a comprehensive analysis of civil-military cooperation, this study contributes to a deeper understanding of how humanitarian logistics systems can be strengthened in disaster-prone environments.

RESEARCH METHODS

This study adopts a qualitative research design that integrates a systematic literature review with conceptual analysis. This approach is appropriate for exploring complex interactions between organizational actors, logistical systems, and governance structures (Creswell, 2014). The literature review draws on peer-reviewed articles indexed in international databases, as well as reports from humanitarian organizations. Sources are selected based on their relevance to humanitarian logistics, supply chain management, and civil-military cooperation. The analytical framework is structured around three key dimensions: operational capacity, coordination mechanisms, and governance structures. These dimensions are used to analyze how civil-military cooperation influences the effectiveness of humanitarian logistics systems.

Data analysis is conducted using thematic analysis, allowing for the identification of patterns and relationships across different sources (Bryman, 2016). The findings are then synthesized into a conceptual model.

RESULT AND DISCUSSION

The findings of this study demonstrate that civil-military cooperation plays a pivotal role in enhancing the effectiveness of humanitarian logistics and emergency supply chain management. However, its impact is shaped by a complex interplay of operational, institutional, and governance factors that determine both the opportunities and limitations of such collaboration. A central advantage of military involvement in humanitarian logistics lies in its superior operational capacity. Military organizations possess extensive logistical assets, including airlift capabilities, naval transport, and engineering units, which enable rapid deployment in disaster-affected areas. These capabilities are particularly critical in situations where infrastructure has been severely damaged or where access is limited. The ability of military forces to operate in austere environments provides a significant advantage in delivering aid to remote or high-risk locations. In addition to physical assets, military organizations also bring structured command systems and standardized operational procedures. These features enhance efficiency by enabling rapid decision-making and coordinated execution of tasks. In contrast to the often decentralized and fragmented nature of civilian humanitarian organizations, military structures provide a level of coherence that can improve overall logistical performance.

However, the integration of military capabilities into humanitarian supply chains is not without challenges. One of the primary issues is the difference in organizational cultures between civilian and military actors. Military organizations typically operate within hierarchical command structures, emphasizing discipline, speed, and efficiency. Civilian organizations, on the other hand, often prioritize inclusivity, flexibility, and participatory decision-making. These differences can lead to misunderstandings, coordination difficulties, and conflicts over priorities.

Coordination mechanisms therefore play a critical role in bridging these differences. Effective civil-military cooperation requires the establishment of clear communication channels, shared information systems, and joint planning processes. Without these mechanisms, the potential benefits of collaboration may

not be fully realized. Fragmented coordination can lead to duplication of efforts, inefficient resource allocation, and delays in response. Information sharing is another key component of effective coordination. Humanitarian logistics relies heavily on accurate and timely information to support decision-making. Military organizations often have access to advanced information systems and intelligence capabilities, which can enhance situational awareness. However, concerns about data sensitivity and security may limit the extent to which information is shared with civilian actors. Balancing the need for information sharing with security considerations is therefore a critical challenge.

Governance structures represent a third important dimension of civil-military cooperation. Effective governance provides the framework within which collaboration takes place, defining roles, responsibilities, and rules of engagement. In the absence of clear governance structures, coordination efforts may be undermined by ambiguity and lack of accountability.

The findings suggest that successful civil-military cooperation is characterized by the alignment of operational capacity, coordination mechanisms, and governance structures. These dimensions are interdependent, and weaknesses in one area can undermine overall effectiveness. For example, strong operational capacity may be offset by poor coordination, while effective coordination may be constrained by inadequate governance frameworks. Another important consideration is the need to maintain humanitarian principles, such as neutrality, impartiality, and independence. The involvement of military actors can create perceptions of bias or politicization, particularly in conflict-affected areas. These perceptions may affect the willingness of affected populations to accept assistance and cooperate with response efforts. Ensuring that military involvement is clearly aligned with humanitarian objectives is therefore essential.

The study also highlights the importance of adaptability in humanitarian logistics systems. Disaster environments are characterized by high levels of uncertainty and rapidly changing conditions. Civil-military cooperation must therefore be flexible and responsive, allowing for adjustments in strategies and operations as new information becomes available. The proposed conceptual framework integrates these insights into a model of civil-military cooperation in humanitarian logistics. The framework emphasizes the need for balance and alignment across operational, coordination, and governance dimensions. It also highlights the role of trust and communication in facilitating effective collaboration. From a practical perspective, the findings suggest several strategies for improving civil-military cooperation. These include the development of joint training programs, the establishment of integrated command centers, and the adoption of standardized communication protocols. Such measures can help to build mutual understanding, enhance coordination, and improve overall system performance.

In disaster-prone contexts, where the demand for rapid and effective response is particularly high, strengthening civil-military cooperation is essential. By bridging the gap between civilian and military actors, humanitarian logistics systems can become more resilient, efficient, and responsive to the needs of affected populations.

CONCLUSION

Civil-military cooperation represents a critical component of effective humanitarian logistics and emergency supply chain management. The integration of military capabilities enhances operational capacity, while coordination mechanisms and governance structures determine the effectiveness of collaboration. This study demonstrates that successful cooperation requires alignment across multiple dimensions, including operational efficiency, institutional coordination, and governance frameworks. Addressing challenges related to organizational differences, information sharing, and humanitarian principles is essential for improving outcomes. The findings contribute to the literature by providing an integrative framework for understanding civil-military cooperation in humanitarian logistics. Future research should focus on empirical validation and the development of context-specific strategies to enhance collaboration.

REFERENCES

Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.

- Creswell, J. W. (2014). *Research design*. Sage Publications.
- Kovács, G., & Spens, K. M. (2007). Humanitarian logistics in disaster relief operations. *International Journal of Physical Distribution & Logistics Management*, 37(2), 99–114. <https://doi.org/10.1108/09600030710734820>
- Kapucu, N. (2006). Interagency coordination in emergencies. *The American Review of Public Administration*, 36(2), 207–225. <https://doi.org/10.1177/0275074005280605>
- Van Wassenhove, L. N. (2006). Humanitarian aid logistics. *Journal of the Operational Research Society*, 57(5), 475–489. <https://doi.org/10.1057/palgrave.jors.2602125>