



INFORMATION FLOW PRACTICES AND LOGISTICS PERFORMANCE OF NON-GOVERNMENTAL ORGANIZATIONS IN KISUMU COUNTY

Apa, M. A.

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Apaa, M. A.

MSc. Procurement and Logistics Student, School of Business and Entrepreneurship, Jomo Kenyatta University of Agriculture and Technology [JKUAT], Kenya

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ABSTRACT

The movement of information between people and systems describes the idea of information flow. Efficient and secure information flows are a central factor in the performance of any logistics system or process. Sources or targets of an information flow designate sets of objects that can send or receive the conveyed information item.

Key words: Logistics Performance, Customer satisfaction, Information flow, Information Systems Security

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INTRODUCTION

Logistics performance has been a subject of interest for a while now and has been explored by various authors especially in Kenya. Ogao and Kariuki (2020) investigated the effect of corporate strategies on performance of logistics organizations in Nairobi County and noted that there was a strong positive correlation. Achimba and Ombui (2022) looked at the role of supplier relations management on the performance of hospitals in Kisii County, Kenya. The study found that supplier contracting had moderately to greatly impacted supply chain performance in most of the institutions reached. Inferential statistics revealed a positive correlation

is seen between the supplier relations management aspect and Performance. The strongest correlation was obtained between supplier selection and Performance.

Shombe and Ouma (2020) studied supply chain management practices on procurement performance of County Government of Kakamega. The study found that there was a moderate significant relationship between supplier selection practices and procurement performance of County Government of Kakamega.

Mungasio and Moronge (2019) assessed blockchain technology on performance of logistics firms in

Kenya. Their study findings revealed that Supply chain integration; inventory management costs; information sharing and transaction security influences the performance of logistics firms in Kenya. On their part, Mathias and Kwasira (2019) studied Inventory audit and performance of procurement function in selected public universities in Western Kenya. The study showed that elements of inventory audit had a strong positive and significant influence on performance of procurement function in the sampled public Universities.

Langat and Ishmail (2018) paid attention to supply chain vulnerabilities on the supply chain performance in logistics firms in Kenya. The risk related to exposure to supply failure and supply market complexity should be used to as a proactive supply chain risk management process. The study recommended that more technology systems, such as point-of-sales product scanning and vendor-managed inventory should be adopted to improve the performance of the firm. Muiruri (2015) assessed outsourcing logistics services on operational efficiency. The results of the study showed that outsourcing resulted in decreased operating costs, improved customer satisfaction, increased productivity, timely delivery of services to clients, and reduced lead time, improved profits and faster response to customer demands. This was an indication that the performance of the firms was influenced by the outsourcing practices adopted by the firms.

A number of studies have been done in the area of logistic management practices and their influence on performance globally. Green, Whitten, and Inman (2008), established a positive relationship between logistics performance and organizational performance within the manufacturing sector. An interesting observation by Solakivi, Töyli, Engblom and Ojala, (2011); Logistics was being handled equally efficiently in the surveyed companies regardless of whether it had remained in-house or been outsourced. This finding suggests that the fit between the company context and its outsourcing

decision might be more important an operational performance driver than outsourcing per se. These studies point towards one important fact, that logistics performance plays a key role in supply chain management. This debate cannot be overemphasized.

Statement of the Problem

Logistic and supply chain practices and the management issues that arise from them have become central for non-governmental organizations; from the realization of the role they play in the overall performance of the organizations (Tysseland, 2009). Logistics plays key role in supporting organizations as they strive for more efficient management systems (Cozzolino, 2012) as in the business practices, the inefficient logistics system together with the inefficient internal management would disable the organizations.

Despite the interest in logistics performance, most studies done have not paid attention to information flow as one key aspect of logistics management that would have a huge impact on its performance. The reviewed Kenyan studies have focused on corporate strategies (Ogao and Kariuki, 2020), supplier relations (Achimba & Ombui, 2022), supply chain management practices (Shombe & Ouma, 2020), block chain technology (Mungasio & Moronge, 2019) among other studies. Little emphasis is paid on information flow. The aim of this study was thus to assess the contribution of information flow on logistics performance in Kenya.

Objective of the study

This study sought to establish the extent to which information flow influences logistics performance for non-governmental organizations in Kenya, with a focus on NGOs in Kisumu County.

Research Hypotheses

H₁: There is no significant relationship between information flow and logistics performance of NGOs in Kisumu County.

LITERATURE REVIEW

Theoretical framework

Social Network Theory

Social Network Theory which is also called the Network theory, network analysis (Scott, 2001) has nodes and links as independent construct and node size, density, link strength as dependent constructs. Its proponents include Stanley Milgram (small worlds problem, six degrees of separation), Mark Granovetter (the strength of weak ties) and Barnes who was the first to study social networks. It is a theory social network theory that focuses on the many ways that people interrelate and communicate via the various social networking platforms (Scott, 2000).

According to Haythornthwaite (1996), social network theory understands social relationships in terms of nodes and ties. Nodes are the individual actors within the networks, and ties are the relationships between the actors. There can be many kinds of ties between the nodes. The fact that these kinds of ties can vary in intensity and importance is just one of the many variables that can factor into social network theory. Often the analysis of a network will involve dots of varying sizes and colours connected by lines of differing lengths and thicknesses. A social network analyst will try changing variables and looking at the connections in various ways to discover hidden correlations and trends in the network.

Layton (2006) argues that basically there are two elements in any social network, online or offline; nodes and ties. Nodes are the elements of the network that act - whether they are organizations, small groups, or individuals - and ties are the ways these nodes relate to each other. This could be as minor as an email correspondence or as intimate as a marriage. In its most simple form, a social network is a map of all of the relevant ties between the nodes being studied. The network can also be used to determine the social capital of individual actors. These concepts are often displayed in a

social network diagram, where nodes are the points and ties are the lines.

The power of social network theory stems from its difference from traditional sociological studies, which assume that it is the attributes of individual actors whether they are friendly or unfriendly, smart or dumb among others that matter. One of the defining elements of social network theory that differentiates it from other sociological sciences is the weight it gives to the relationships between the nodes, as opposed to the attributes of the nodes themselves. Social networks have also been used to examine how Humanitarian Organizations interact with each other, characterizing the many informal connections that link executives together as well as associations and connections between individual employees at different Humanitarian Organizations (Layton, 2006).

These networks provide ways for NGOs to gather information, deter competition, and even coordinate in setting operational policies (Layton, 2006).

Literature on Information Flow Practices

With the development of ICT, the flow of information offers a special benefit to connect one activity to the others and make available in the company as well as with external providers, channels and customers in real time data created by business. For the efficient and successful flow of information, the logistics processes of the organization need to be strengthened through planning, tracking, collaboration and tracking logistics processes. The successful operation of the logistics information technology system involves the use of hardware and technology transfer, according to Nowakowska and Grunt (2007), and the information system should be configured to best support a logistics system to improve the contact line (Wisner et al. 2007).

Long and Wood (2005) indicated that knowledge management during a crisis is the single biggest success factor. IT helps integrate activities and provide proof of information to improve the

functioning of the supply chain. The monitoring and management of relief operations includes complex decision support structures, communications and information structures. These programs enable the planning, response and management of crisis, disasters and emergency situations. Thomas and Kopczak (2005) argued that humanitarian supply chain practitioners need to find ways in which donors and the public can connect about how the effectiveness of the supply chain improves.

Maspero and Ittmann, (2008) asserted that it was an opportunity for the humanitarian supply chain to increase its contribution to and for disaster relief by introducing information management, technology, measuring and positioning initiatives. While delivery of disaster relief items is an important role in the

supply chain for humanitarian aid, it should be strategic to provide timely information and analyze information for improved information on how operations can be improved.

METHODOLOGY

The study was carried out to determine the influence of information flow practices on logistics performance of non-Governmental organizations in Kisumu County, Kenya.

STUDY RESULTS

Information Flow Practices

The study further sought to know the extent to which information flow is practiced by the humanitarian organizations in Kisumu County. The findings of the study were as shown in Table 1.

Table 1: Information Flow Practices

Information Flow Practices	Mean	Std. Deviation
Information flow through ICT practices is used to plan logistical processes	4.40	0.70
Logistics management process is monitored using information flow through ICT	4.30	0.90
The firm information flow through ICT is used to control the logistics process	4.30	0.90
The information flow through ICT is used to coordinate	4.20	0.80
The information flow through ICT is used to communicate	4.10	0.70
Overall	4.26	0.80

The study found that information flow was practiced in the humanitarian organizations in Kisumu County to a large extent as evidenced by the overall mean of (M= 4.26, SD= 0.80). Majority of the respondents agreed to a large extent that the information flow through ICT is used to communicate as shown by a mean of (M=4.40, SD=0.70). The information flow through ICT is used to coordinate the logistics process, and logistics management process is monitored using information flow through ICT was practiced to a large extent as shown by a mean of 4.30 in each case, followed by the information flow through ICT practice is used to plan logistics processes as shown by a mean of (M=4.20, SD=0.80), and that the firm information flow through ICT is used to control the

logistics process as shown by a mean of (M=4.10, SD=0.70).

The finding of the study is in line with the findings of Azevedo et al (2007) that for information flow to be effective and efficient; it must enhance the firm's logistics processes by planning, controlling, coordinating and monitoring the logistics process.

Relationship Between Information Flow practices and Logistics performance

The study sought to link information flow practices to logistics performance. The values of the variables to be collected were estimated by factor analysis and stored as dummy variables. The researcher then carried out a regression analysis to explain this relationship using SPSS version 21. The obtained findings are described below and discussed.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.919	0.844	0.796	.223

The research aimed at defining the effect of information flow practices on logistical efficiency in Kisumu County of non-governmental organizations. Research findings suggest a clear relationship ($R^2=0.844$) exists between information flow practices and non-governmental organizations' logistics efficiency. The result of the study also indicates that the value of adjusted R-squared is 0.796. This implies that 79.6% of the variance in humanitarian organizations' performance can be accounted for by information flow practices. The remaining 20.4% can be explained by other variables which were not included in the model and the chance of variations.

CONCLUSIONS AND RECOMMENDATIONS

The study showed that information flow through ICT is used by the NGOs in Kisumu County to

organize their activities in relation to the flow of information within the business.

Non-Governmental organizations in Kenya need to adopt an integrated ICT-controlled system, which will make it possible to monitor and manage logistic operations clearly and thus improve the overall efficiency of the company.

Areas for Further Research

The study focused only on non-Governmental organizations, particularly those in the Kisumu County. The results of this study may not be adequately extrapolated to generalize the role of logistics management in other organizations. Different work should be done with an emphasis on other organizations.

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