

Determinants of Effective Logistics Performance in Humanitarian Organizations: A Case of Kenya Red Cross Society

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Abstract: Disasters are on the upsurge and are becoming more complex and at the same time donor support is increasingly unpredictable. To survive in their operations, humanitarian agencies are looking for more efficient and effective solutions. One of these solutions lies in the discovery that flexible but efficient supply chains are needed. This makes high demands on procurement operations. Within disaster relief logistics, procurement accounts for 65% of total expenditures. Despite its significance, literature does not specifically focus on problems related to disaster relief procurement, which creates the need to examine this topic further, from theory as well as from practice. This study sought to find out how humanitarian logistics can be made more effective in Kenya. More specifically, the study sought to find out how procurement planning, high impact collaborations, resource mobilization and professionalism affect logistics performance. This study targeted a population of 73 managers, team leaders, supervisors and field coordinators from KRCS in Nairobi. A census approach was used. Correlation findings indicated that procurement planning, professionalism; high impact collaborations and resource mobilization had a positive and significant correlation with effective logistics performance in humanitarian organizations in KRCS. The study recommends that KRCS should allocate budgets that are inclusive to all aspects in strategic plans. There is also need for Kenya Red Cross to prepare budget to accommodate contingencies. Moreover, humanitarian organizations should provide professional training on logistics matters for procurement staff.

Keywords: *Professionalism, High impact collaborations, Resource Mobilization, Procurement planning, Effective Humanitarian logistics*

Introduction

Humanitarian logistics is the structure and strategy of attaining practical objectives as promptly and methodologically as possible while making the most effective use of available resources (Christopher & Tatham, 2011). Humanitarian supply logistics cannot be improvised at the time of the emergency. As such Tomasini and Van Wassenhove (2009) note that countries and organizations must invest in emergency planning and preparedness. According to Thomas (2013) procurement, storage, mobilization, distribution and all other aspects of providing material assistance to people affected by disasters, and the handling of those provisions employed by humanitarian organizations in their aid operations, need an organizational structure to ensure efficient management and utilization of resources in emergency situations. According to Blecken et.al (2009) focusing on supply chain structures and processes collaboratively to respond to disasters is important to improve preparedness. Another important capability as noted by Jahre (2014) is the ability to cope with uncertainty with speed as was the case for the United Nations Joint Logistics Center (UNJLC) in Iraq where the local team forecasted fuel shortages in the country even before all the humanitarian agencies were deployed. In as far as speed in responding to humanitarian crisis is concerned; the response to the Lebanese crisis of 2006 is a perfect example of an operation where the primary role of the international humanitarian community was to address the security factors affecting the area with urgency.

In Afghanistan, the exchange of information was also crucial to dissolving a trucking cartel that had formed among locals who were taking advantage of the uncoordinated requests from the humanitarian sector for trucking services into the war-torn areas (Dononi, 2009). UNJLC worked with speed to consolidate the rates being negotiated, it normalized the prices by providing a clearer picture of how much demand and supply was at stake in that operation. Coordination of humanitarian response is led by the Government of Kenya and takes place at national and county levels. Statistics in UNOCHA (2016) indicate that Kenya hosts the largest refugee population in the world. There are more than 600,000 refugees in Kenya, of whom over 450,000 are in Dadaab, nearly 100,000 are in Kakuma and over 50,000 in Nairobi. According to Kamau (2013) a push for increased professionalism during disaster relief operations has been reinforced over the last decade in Kenya with more individuals moving to support humanitarian organizations during emergency crisis as in the case of “kenyans for Kenyan” campaign aimed at improving food security in drought stricken areas in the country in 2011. The same was observed when Westgate was under terror attack back in 2013. This is a sure indication that collaboration between Hos and citizens and the governemnt play an improtant role in Humanotarian logistics at times when there is a gap in supply and emergency preparedness.

Statement of the Problem

Humanitarian relief organizations (HROs) worldwide coordinate billions of dollars in relief annually to victims of natural disasters, civil conflict and war. Their principal task is to mobilize resources from local and international donors and administer relief to vulnerable beneficiaries at disaster sites across the globe. As such, logistics not only plays central role to their activities but also a strategic role to their missions (Harrison & Van Hoek, 2008). Planning and anticipation are vital to an effective logistical system. There is a need to restructure the supply chain network, including pooling resources, prepositioning of relief items, and postponement so as to respond appropriately to disaster when it strikes (Lewis & Roehrich, 2009). Logistics is central to disaster relief because it is crucial to the effectiveness and speed of response for major humanitarian programs, such as health, food, shelter, water and sanitation (Moore, Eng& Daniel, 2003).

Every year, there are approximately 150,000 deaths and 200 million people affected by natural disasters and humanitarian crises (OCHA, 2009). As such the speed at which Humanitarian organizations respond to crisis determines whether these numbers will increase or decrease. Addressing the issues of speed and quality are both critical in delivering humanitarian aid effectively. Humanitarian organizations therefore have the responsibility to ensure that aid provided epitomizes the best available option and is suitable for the purpose it is intended. To do that, there should be effectiveness in logistics (Rodman, 2004). Lack of effective logistics was witnessed by poor humanitarian response as in the case of Hurricane Mitch in 1998 in Honduras when HOs failed in their relief efforts due to inadequate preparation in their supply chain management. A case of effective logistics was witnessed in Lebanese crisis of 2006 where the primary role of the international humanitarian community was to address the security factors affecting the area with urgency (Thomas, 2013). As Kenya continues to face a range of humanitarian challenges including recurrent drought (2011 and 2017), malnutrition and food insecurity, disease outbreaks, and inter-communal conflicts over resources that are often compounded by political issues and more recently target of terror attacks, humanitarian NGOs including Kenya Red Cross should have effective logistics plans to respond adequately to these challenges. Previous cases have seen late delivery of humanitarian aid and also shortage in some parts of the country and this leaves a question as to whether the HOs have effective logistics in place (Mung'ou, 2009). This study therefore sought to establish the determinants of effective logistics performance in humanitarian organizations taking a case of Kenya Red Cross Society.

Research Objectives

- i. To find out the effect of procurement planning on the logistics performance of humanitarian organizations in Kenya.
- ii. To establish the effect of professionalism on the logistics performance of humanitarian organizations in Kenya.
- iii. To establish the effect of high impact collaborations on the logistics performance of humanitarian organizations in Kenya.
- iv. To assess the effect of resource mobilization on the logistics performance of humanitarian organizations in Kenya.

Literature Review

Theoretical Review

Principal Agent Theory

The P-A theory was put forth by Stephen Ross (1973). The theory describes how a Principal-Agent relationship is created between two or more parties when one is designated as the agent acts on behalf of or as the representative of the other designated as the principal in a particular domain of decisions problem. For the purpose of this study, the general public is modeled as the collective principle who delegates to the agents modeled as humanitarian organizations charged with the responsibility for carrying out tasks on their behalf in the domain of humanitarian provision (Ross, 1973). In the context of the principal-Agent model, Humanitarian Organizations are assumed to be absolutely efficient in carrying out tasks delegated to them.

As pointed out by Jahre (2014), there are however instances when there is agency dysfunction that decrease the advantages of delegating for the principal as the agent's ability to perform its mission efficiently diminish. Such instances may occur when the agent focuses on completion so much that the mandate of its existence is not fulfilled. Times when the Hos fail to respond to emergencies in a timely manner or carry out their operations unprofessionally is a depiction of the dilemma portrayed by the Principal-Agent theory. However, it is worth noting that such dysfunctions may be as a result as the Principals actions such as political goals rather than the most acute needs.

Resource Based View theory

The resource based view (RBV) of the firm argues that a company's resources and capabilities are the source of its competitive advantage (Barney, 1991). The RBV has primarily been used in the realm of humanitarian logistics when, for example, discussing risk management and how to manage disruptions in the humanitarian supply network as well as resource mobilization (Kovács & Tatham 2009). In discussion about the specific set of skills needed to be a humanitarian logistician Tatham, et.al (2012) note that the RBV has also proven to be a useful tool. In RBV the resources and capabilities create value and competitiveness through a firm's performance. The theory links two variables of the study which are professionalism and resource mobilization. The theory defines resources as either physical resources or capabilities. In this view, professionalism is seen to emanate from the existence of knowledge which is a resource.

Social Cognitive Theory

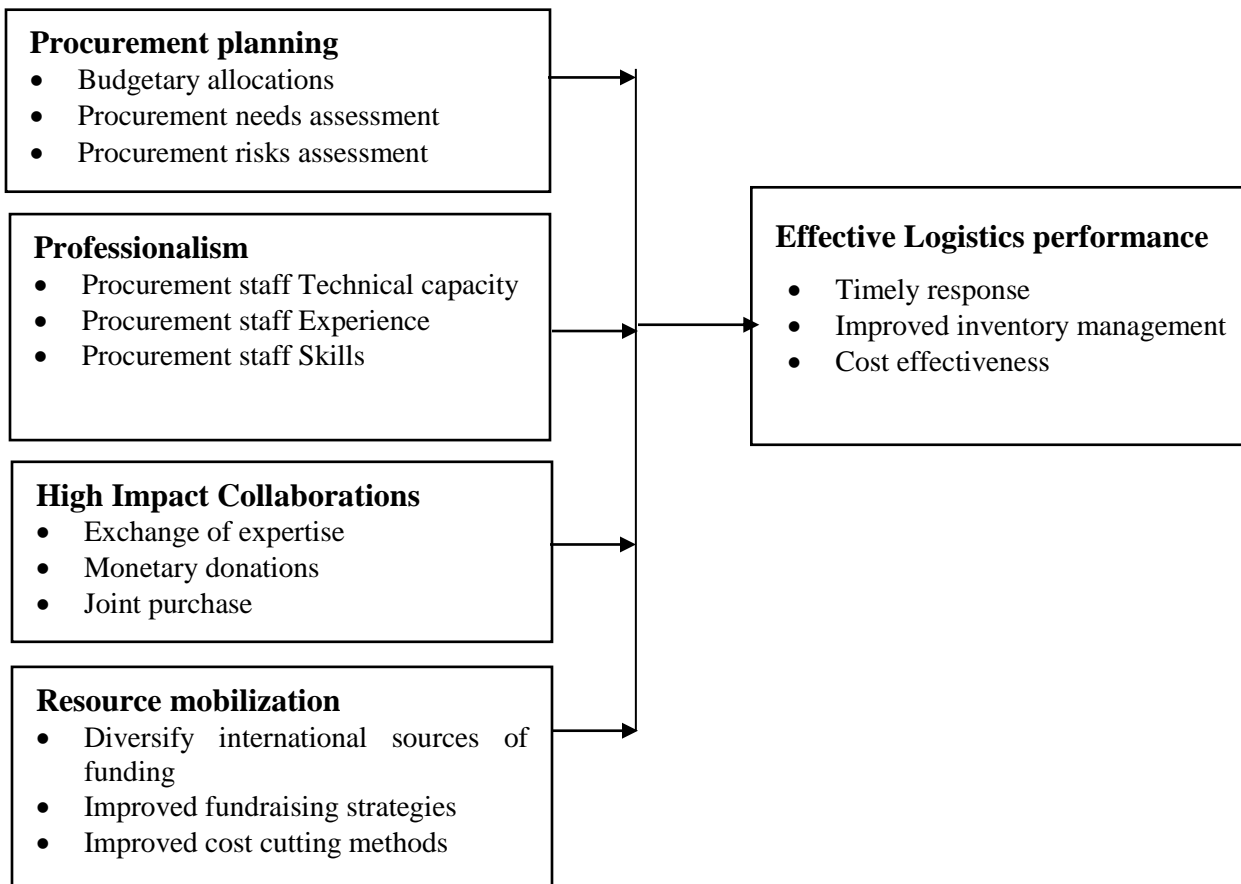
The social cognitive model was first put forth by (Bandura, 1986). According to Bandura (1986) the environment in which an individual operates affects the decisions that they make. The model portray behavior and observational. Preparedness recognizes the steps necessary to increase the likelihood of evading or minimizing hazard outcome consequences. Preparedness policies are developed through a hazard identification and mapping, vulnerability inquiry and risk assessment with behavior change strategies being used to advise how the outcome of this process can transform into protective actions. According to Christopher and Tatham (2011) effective preparedness increases mitigation level, reduces vulnerability, enables timely and effective response to a disaster event while shortening the recovery period from a disaster. Based on the cognitive theory therefore, logistics in emergency preparedness planning should be, an iterative process that needs planning groups to habituate themselves to the discipline thorough ethical analysis, experience and skills gained from previous crises. Humanitarian agencies therefore can take the opportunity of any emergency that has recently occurred to test its own logistical preparedness (Engbrethsen & Monnet, 2013).

Chaos Theory

The Chao theory was put forth by Bower (1988). The theory explains the desire to create order and control a situation in speed and agility to reduce negative spillover effects of a disaster. Further the theory explains that during times of high instability such as disasters and occasions when emergency services reach peak levels of activity it is essential to recognize that stability can only be regained by developing strategies that quick to elicit timely response. The chaos theory treats HOs readiness as a shared psychological state in which organizational members feel committed to responding to crisis. Response, and recovery, emergency managers can organize their programs for an all-hazard approach through implementing a series of broad strategies and specific tactics.

According to Benita and Beamon (2008) when planning for emergencies, whether connected to terrorism, epidemics, hurricanes, earthquakes, fires, floods or any other manmade or natural cause, the value of the planning process will add markedly to the degree of preparedness and response attainment. Given that logistics to enhance timely response may be complex there may be need to involve all layers of public institutions and private citizenry.

Conceptual Framework



Independent Variables

Dependent Variable

Figure 1: Conceptual Framework

Procurement Planning

Weele (2010) describes procurement planning as a process used by companies or institutions to plan purchasing activity for a specific period of time. Each year, departments are required to request budget for staff, expenses, and purchases which are then reviewed, and in an organization that is committed to procurement planning, the accountants spend the time to find common purchasing requirements (Caldwell, Roehrich, and Davies, 2009). Based on the budgets submitted, departments are directed to work with central purchasing to combine their planned spending for specific commodities.

This process helps organizations to reduce costs. Issues surrounding delivery dates, contract compliance, and customer service issues must be resolved internally before going out to contract (Lewis & Roehrich, 2009). Caldwell, Roehrich, & Davies (2009) indicates that advanced planning, scheduling, and group buying will result in cost savings, more efficient business operation, and therefore increased profitability.

Professionalism

According to Harvey (2004) most humanitarian organizations lack the skills and capacity to successfully analyze or measure impacts of their interventions especially in chaotic and complex emergencies. For humanitarian organizations to analyze and measure the impacts of the programs they implement effectively, greater investments should be made in human resources and research and evaluation capacity if the desire to focus more on the results is to be realized. Moreover agencies should consider conducting a review of existing capacities for design and implementation of the various tools and create materials or capacity-building strategies as necessary. The development of training materials or capacity-building strategies should build upon work by agencies or initiatives which have made substantial investment in these topics (OCHA, 2009). Agencies have established strong capacity-building programs while others need to strengthen substantive and technical capacity to develop and implement assessment tools and conduct multi-sectoral analysis.

High Impact Collaborations

According to Schulz an Heigh (2009) collaboration through joint plans could help humanitarian organizations to efficiently use the available resources. At the same time joint procurement of resources could lead to higher negotiation power and lower costs. Accordingly, this will eventually could decrease the level of competition among them and improve service to beneficiaries. Furthermore, through collaboration, organizations can share know-how, routines, and best practices, which eventually increase the efficiency of their operations and strengthen the relations among each other and improve the quality of humanitarian assistance or international humanitarian system. These goals are conceivable by methods such as providing a platform to discuss the successes and challenges within humanitarian operations, or sharing information and best practices, which allows for joint-learning innovative approaches. Skipper and Hanna (2009) observe that there is often the possibility for humanitarian organizations to carry out their primary or secondary tasks through collaborating with other organizations or to engage the methods or mechanisms have developed by the combined effort of other organizations.

Resource Mobilization

Most Humanitarian organization receives donations in the form of money or supplies. The supplies donated may not necessarily be what is required at times, also donors may dictate on how the funds are to be used. A situation may arise where particular supplies are required but the funds cannot be used to procure these supplies. This is a big challenge in procurement. Private funding from individuals, trusts and foundations, and companies and corporations is not only valued for its volume, humanitarian agencies also value the flexibility and reliability of private funds because they come with less earmarking and a longer time frame than funding from institutional or state donors (Heutel, 2009). According to Herzer & Nunnenkamp (2012), Government grants crowd in private donations in the long run, whereas commercial revenues crowd out donations in the long run. Because of this "crowding out" effect, a government choosing to increase funding to a charity by a given amount may actually increase the charity's revenues by only a fraction of that amount. The same effect can occur in the opposite direction.

Research Methodology

A descriptive case study design was adopted in this study. The population for this study was drawn from the staff in management positions at the national headquarters for KRCS in Nairobi. This study targeted a population of 73 managers, team leaders, supervisors and field coordinators from KRCS in Nairobi. They were drawn from planning, communication, human resources, and procurement and partnership departments within the organizations. A census was adopted for this research. Israel (1967) asserts that when a population is less than 200, a census approach should be undertaken. In this case, all the entire population of 73 participated. Questionnaires were administered to the respondents to collect data. Quantitative data was analyzed using descriptive statistics such as frequencies and percentages and inferential analysis techniques such as correlations and regressions. The multiple linear regression models is as shown below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where: Y = Effective logistics performance, X_1 = Procurement planning, X_2 = Professionalism, X_3 = High Impact Collaborations, X_4 = Resource Mobilization, ε is error term, β_0 represents the constant and $\beta_{1,2,3,4}$ are regression coefficients

Results

The total number of questionnaires that were administered was 73. A total of 59 questionnaires were filled and returned. This represented an overall successful response rate of 80.8%.

Demographic Characteristics

This section details the description of the population based on the gathered information. The study asked the respondents to indicate their age, duty station, number of years in the organization and highest education level completed.

Table 1 Demographic Characteristics

Demographic Characteristic	Category	Percentage
Age	Below 30	8.5%
	31-40	22%
	41-50	49.2%
	Above 50	20.3%
Duty Station	Partnerships	42.4%
	Planning Procurement	16.9%
	Human Resource	18.6%
	Communications	22%
Experience	Less than 1 Year	8.5%
	1-5 Years	28.8%
	5-10 Years	49.2%
	Over 10 Years	13.6%
Level of Education	Certificate	6.8%
	Diploma	28.8%
	Undergraduate	13.6%
	Post Graduate	50.8%

Procurement Planning

The study also sought to find out the effect of procurement planning on the logistics performance of humanitarian organizations in Kenya. The respondents were asked to indicate on a scale of 1 to 5 the extent to which they agree with the statements on procurement planning where; 1-very much disagree, 2-disagree, 3-not sure, 4-agree, 5-very much agree. The results of the study were as shown in table 2. The findings showed that 81.4% of the respondents indicated that they very much agree that budget allocations at Red Cross society Kenya is holistic and inclusive of all aspects in strategic plans while only 18.6% indicated not sure. The study findings also showed that 100% of the respondents indicated that they very much agree that Kenya Red Cross budget is prepared to accommodate contingencies. Moreover, 16.9% of the respondents indicated that they very much agree that At Kenya Red Cross thorough assessment is done on the required accessories before procurement begins, those who indicated agree were 27.1%, 39% indicated not sure while only 6.8% of the respondents indicated disagree and 10.2% of them indicated very much disagree. Further, the results of the study revealed that 13.6% of the respondents indicated that they very much agree that all the procurement risks are assessed and mitigated in advance, 30.5% of them indicated agree, those who indicated not sure were 25.4% while 16.9% of them indicated disagreed and only 13.6% of the respondents indicated very much disagree.

Finally, the results of the study showed 27.1% of the respondents indicated that they very much agree that at Kenya Red Cross, planning, scheduling, and group buying is done which result in cost savings, 25.4% indicated agree, those who indicated not sure were 27.1% while only 6.8% indicated disagree and 13.6% of them indicated very much disagree. The implication of the results is that majority of the respondents indicated that they agree with the statements on procurement planning as shown by a mean of 3.91. The responses given by the respondents had little variation (standard deviation=0.90). The findings are of the study are consistent with the results of a study by Natarajarathinam *et al.*, (2009) which indicated that operations in many humanitarian crises still have their management models founded on principles of military and governmental organizations.

Table 2 Procurement Planning

Statements	Very much disagree	Disagree	Not sure	Agree	Very much agree	Mean	Std Dev
Budget allocations at red cross society Kenya is holistic and inclusive of all aspects in strategic plans	0.0%	0.0%	18.6%	0.0%	81.4%	4.63	0.79
Kenya red cross budget is prepared to accommodate contingencies	0.0%	0.0%	0.0%	0.0%	100.0%	5.00	0.00
At Kenya red cross thoroughly assessment is done on the required accessories before procurement begins	10.2%	6.8%	39.0%	27.1%	16.9%	3.34	1.15
All the procurement risks are assessed and mitigated in advance	13.6%	16.9%	25.4%	30.5%	13.6%	3.14	1.25
At Kenya red cross, planning, scheduling, and group buying is done which result in cost savings	13.6%	6.8%	27.1%	25.4%	27.1%	3.46	1.33

Professionalism

The study sought to establish the effect of professionalism on the logistics performance of humanitarian organizations in Kenya. The respondents were asked to indicate on a scale of 1 to 5 the extent to which they agree with the statements on professionalism where; 1-very much disagree, 2-disagree, 3-not sure, 4-agree, 5-very much agree. The results of the study were as shown in table 3. The findings showed that 55.9% of the respondents indicated that they very much agree that procurement staff at Kenya Red Cross have professional training on logistics matters, 23.7% of them indicated not sure while 15.3% of the respondents indicated disagree and 5.1% of them indicated very much disagree. Moreover, 44.1% of the respondents indicated that they very much agree that Kenya Red Cross considers past experience before hiring procurement staff, 18.6% indicated not sure while 25.4% indicated disagree and only 11.9% of them indicated very much disagree. Further, the results of the study revealed that 57.6% of the respondents indicated that they very much agree that Kenya Red Cross have highly experienced and skilled personnel in the procurement department, 11.9% of them indicated agree, those who indicated not sure were 8.5% while 13.6% of them indicated disagree and only 8.5% of the respondents indicated very much disagree. The results of the study also showed 28.8% of the respondents indicated that they very much agree that Procurement staff at Kenya red cross have procurement risk management skills, 13.6% indicated agree, those who indicated not sure were 27.1% while only 15.3% indicated disagree and 15.3% of them indicated very much disagree. The implication of the results is that majority of the respondents indicated that they agree with the statements on professionalism as shown by a mean of 3.57. The responses given by the respondents were varied (standard deviation=1.39). The findings are of the study are consistent with the findings of a study by Tatham (2011) who noted that there is an amassed shift towards professionalization.

Table 3 Professionalism

Statements	Very much disagree	Disagree	Not sure	Agree	very much agree	Mean	Std Dev
Procurement staff at Kenya red cross have professional training on logistics matters	5.1%	15.3%	23.7%	0.0%	55.9%	3.86	1.37
Kenya Red Cross considers past experience before hiring procurement staff	11.9%	25.4%	18.6%	0.0%	44.1%	3.39	1.54
Kenya Red Cross have highly experienced and skilled personnel in the procurement department	8.5%	13.6%	8.5%	11.9%	57.6%	3.97	1.41
Procurement staff at Kenya red cross have procurement risk management skills	15.3%	15.3%	27.1%	13.6%	28.8%	3.25	1.42
Professionalism among procurement staff enhances the general logistics performance in humanitarian organizations in Kenya.	13.6%	3.4%	28.8%	40.7%	13.6%	3.37	1.19
Average						3.57	1.39

High Impact Collaborations

The study sought to determine how high impact collaborations affect logistics performance of humanitarian organizations in Kenya. The respondents were asked to indicate on a scale of 1 to 5 the extent to which they agree with the statements on high impact collaborations where; 1-very much disagree, 2-disagree, 3-not sure, 4-agree, 5-very much agree. The results of the study were as shown in table 4. The findings revealed that 49.2% of the respondents indicated that they very much agree that Kenya Red Cross involves experts from other organisation in logistics management, 15.3% indicated agree, those who indicated not sure were 22% while 3.4% indicated disagree and 10.2% of them indicated very much disagree. Moreover, 59.3% of the respondents indicated that they very much agree that Kenya Red Cross sub-contracts delicate and complex procurement matters to experienced experts from other professional organisations, 27.1% indicated agree, those who indicated not sure were 6.8% while 3.4% indicated disagree and only 3.4% of them indicated very much disagree.

Further, the results of the study revealed that 13.6% of the respondents indicated that they very much agree that Kenya Red Cross mobilizes procurement funds through donations, 61% of them indicated agree, those who indicated not sure were 5.1% while 11.9% of them indicated disagree and only 8.5% of the respondents indicated very much disagree. The results of the study also showed 39% of the respondents indicated that they very much agree that Kenya Red Cross share know-how, routines, and best practices with other professional in procurement management, 28.8% indicated agree, those who indicated not sure were 10.2 % while only 18.6% indicated disagree and 3.4% of them indicated very much disagree. Finally the findings of the study showed that 49.2% of the respondents indicated that they very much agree that Red Cross often participate in Joint procurement in bid to cut procurement costs, 15.3% of them indicated agree, those who indicated not sure were 22% while those who indicated disagree were 3.4% and 10.2% of them indicated very much disagree.

The implication of the results is that majority of the respondents indicated that they agree with the statements on high impact collaborations as shown by a mean of 3.91. The responses given by the respondents were varied (standard deviation=1.21). The findings of the study are consistent with the findings of a study by Rawls and Turnquist (2012) which posited that the lack or failure of collaboration among humanitarian organizations results in unproductive aid distribution particularly in the last mile.

Table 4 High Impact Collaborations

Statements	Very much disagree	Disagree	Not sure	Agree	very much agree	Mean	Std Dev
Kenya Red Cross involves experts from other organization in logistics management	10.2%	3.4%	22.0%	15.3%	49.2%	3.90	1.34
Kenya Red Cross sub contracts delicate and complex procurement matters to experienced experts from other professional organizations	3.4%	3.4%	6.8%	27.1%	59.3%	4.36	1.00
Kenya Red Cross mobilizes procurement funds through donations	8.5%	11.9%	5.1%	61.0%	13.6%	3.59	1.13
Kenya Red Cross share know-how, routines, and best practices with other professional in procurement management	3.4%	18.6%	10.2%	28.8%	39.0%	3.81	1.24
Red Cross often participate in Joint procurement in bid to cut procurement costs	10.2%	3.4%	22.0%	15.3%	49.2%	3.90	1.34
Average						3.91	1.21

The study also asked the respondents to indicate some of the organisations that Kenya Red Cross has collaborated with in procurement and logistics management. The findings are presented in figure 2 below. The results of the study showed that majority 52.5% of the respondents indicated other humanitarian organizations, 20.3% indicated professional procurement consultancy, and 15.3% indicated non-governmental organizations while only 11.9% indicated government agencies. The implication of the study findings is that Kenya Red Cross collaborated more with other humanitarian organizations in procurement and logistics management.

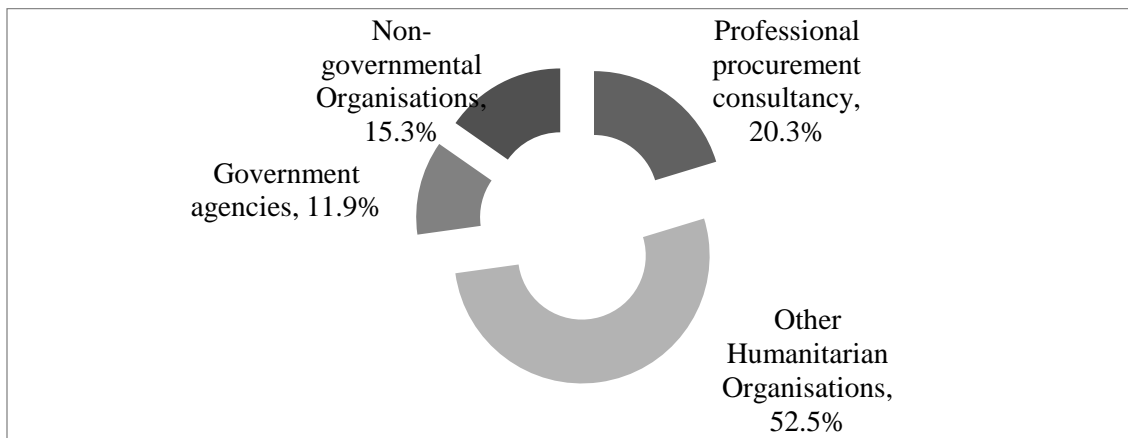


Figure 2 Collaborations

Resource Mobilizations

The study sought to assess the effect of resource mobilization on the logistics performance of humanitarian organizations in Kenya. The respondents were asked to indicate on a scale of 1 to 5 the extent to which they agree with the statements on resource mobilization where; 1-very much disagree, 2-disagree, 3-not sure, 4-agree, 5-very much agree. The results of the study were as shown in table 5. The findings revealed that 81.4% of the respondents indicated that they very much agree that Kenya Red Cross has adequate resources at its disposal for logistics management while only 18.6% indicated not sure. Moreover, 79.7% of the respondents indicated that they very much agree that Kenya Red Cross has reliable and diversified sources of funding and only 20.3% indicated agree. Further, the results of the study revealed that 59.3% of the respondents indicated that they very much agree that Kenya Red Cross has adopted improved fund mobilization strategies and 40.7% of them indicated agree.

The results of the study also showed 59.3% of the respondents indicated that they very much agree that Kenya Red Cross has adopted improved procurement cost cutting strategies, 20.3% indicated agree and those who indicated not sure were 20.3%. Finally the findings of the study revealed that 40.7% of the respondents indicated that they very much agree that Resource mobilization enhances logistics performance of humanitarian organizations in Kenya while 5.93% of them indicated agree. The implication of the results is that majority of the respondents indicated that they very much agree with the statements on resource mobilization as shown by a mean of 4.56. The responses given by the respondents were less varied (standard deviation=0.60). The findings of the study are consistent with the findings of a study by Oloruntoba and Gray (2014) who noted that following a disaster hit, speed at any costs is of utmost importance, as the first 72 hours are crucial for providing relief.

Table 5 Resource Mobilizations

Statements	Very much disagree	Disagree	Not sure	Agree	very much agree	Mean	Std Dev
Kenya Red Cross has adequate resources at its disposal for logistics management	0%	0%	18.6%	0.0%	81.4%	4.63	0.79
Kenya Red Cross has reliable and diversified sources of funding	0%	0%	0.0%	20.3%	79.7%	4.80	0.41
Kenya Red Cross has adopted improved fund mobilization strategies	0%	0%	0.0%	40.7%	59.3%	4.59	0.50
Kenya Red Cross has adopted improved procurement cost cutting strategies	0.0%	0%	20.3%	20.3%	59.3%	4.39	0.81
Resource mobilization enhances logistics performance of humanitarian organizations in Kenya	0%	0%	0.0%	59.3%	40.7%	4.41	0.50
Average						4.56	0.60

Effective Humanitarian Logistics

The study sought to determine whether the respondents agree with the statements on logistics performance of humanitarian organizations in Kenya. The respondents were asked to rate the extent to which they agree or disagree based on a Likert scale of 1 to 5 where 1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree, 5= Strongly Agree. The results of the study are as shown in table 6. The results of the study revealed that majority, 81.4% of the respondents indicated that they very much agree that Kenya Red Cross always get timely response from the suppliers and other logistics management partners while only 18.6% indicated not sure. 100% of the respondents indicated that they very much agree that Kenya Red Cross has reliable up to date inventory. Further, the results of the study revealed that 67.8% of the respondents indicated that they very much agree that Kenya Red Cross has adopted modern technologies in management of inventory while 28.8% of them indicated agree and only 3.4% of them indicated not sure.

The results of the study also showed 44.1% of the respondents indicated that they very much agree that reduced resources associated with procurement processes, 8.5% indicated agree while those who indicated not sure were 28.8% and those who indicated very much disagree were 18.6%. Finally the findings of the study revealed that 10.2% of the respondents indicated that they very much agree that Budget allocations to procurement management at Kenya Red Cross have reduced because proper procurement planning while majority 86.4% of them indicated agree and 3.4% of them indicated not sure. The implication of the results is that majority of the respondents indicated that they agree with the statements on effective Humanitarian Logistics as shown by a mean of 4.39. The responses given by the respondents had a small variation (standard deviation=0.64). The results agree with the finding of a study by Holguín-Veras et al. (2013) which revealed that in humanitarian supply chains, preparedness ensures effectiveness which in turn ensures time saving and consequently lifesaving.

Table 6 Effective Humanitarian Logistics

Statements	Very much disagree	Disagree	Not sure	Agree	very much agree	Mean	Std Dev
Kenya Red Cross always get timely response from the suppliers and other logistics management partners	0.0%	0%	18.6%	0.0%	81.4%	4.63	0.79
Kenya Red Cross has reliable up to date inventory	0.0%	0%	0.0%	0.0%	100.0%	5.00	0.00
Kenya Red Cross has adopted modern technologies in management of inventory	0.0%	0%	3.4%	28.8%	67.8%	4.64	0.55
Kenya Red Cross has significantly reduced resources associated with procurement processes	18.6%	0%	28.8%	8.5%	44.1%	3.59	1.51
Budget allocations to procurement management at Kenya Red Cross have reduced because proper procurement planning	0.0%	0%	3.4%	86.4%	10.2%	4.07	0.37
Average						4.39	0.64

Correlation Results

The study carried out correlation tests to establish the association between the independent and dependent variables.

Table 7 Correlation Results

Correlations		Procurement Planning	Professionalism	High Collaborations	Impact	Resource mobilization	Effective performance	Logistics
Procurement planning	Pearson Correlation	1						
	Sig. (2-tailed)							
Professionalism	Pearson Correlation	-0.23	1					
	Sig. (2-tailed)	0.08						
Collaborations	Pearson Correlation	-0.163	-0.205	1				
	Sig. (2-tailed)	0.216	0.12					
Resource mobilization	Pearson Correlation	0.153	0.074	.311*		1		
	Sig. (2-tailed)	0.246	0.578	0.016				
Effective Logistics performance	Pearson Correlation	.344**	0.246	.434**		.491**	1	
	Sig. (2-tailed)	0.008	0.06	0.001		0.000		
	N	59	59	59		59		59

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

The findings of the study revealed that there was a positive and significant correlation between procurement planning and the effective logistics performance in humanitarian organizations in Kenya Red Cross Society as indicated by a Pearson coefficient of 0.344 and significance level of 0.008. This implies that holistic budget allocations that are inclusive of all aspects in strategic plans, preparation of Kenya Red Cross budget to accommodate contingencies, thorough assessment of the required accessories before procurement begins, assessment of all procurement risks and mitigating them in advance and planning, scheduling and group buying at red cross to save costs leads to a positive and significant effect in the effective logistics performance in humanitarian organizations in Kenya Red Cross Society. The study findings are consistent with the results of a study by Blecken et al., (2009) which revealed that preparedness for humanitarian crises have been necessitated by the upsurge in the quantity and magnitude of disasters and, subsequently, in the number of victims.

The results of the study indicated that there was a positive and significant correlation between professionalism and the effective logistics performance in humanitarian organizations in Kenya Red Cross Society as shown by a Pearson coefficient of 0.246 and significance level of 0.06. This implies that professional training on logistics matters for procurement staff at Kenya Red Cross, consideration of past experience before hiring procurement staff, having highly experienced and skilled personnel in the procurement department, Procurement staff at Kenya red cross have procurement risk management skills, Professionalism among procurement staff leads to a positive and significant effect in the effective logistics performance in humanitarian organizations in Kenya Red Cross Society. The study findings are consistent with the findings of a study by Kovacs and Tatham (2010) which showed that an increase in disasters has had a knock on effect with logisticians resulting in an emphasis on training, education and professionalism.

Furthermore, the results of the study showed that there was a positive and significant correlation between high impact collaborations and the effective logistics performance in humanitarian organizations in Kenya Red Cross Society as shown by a Pearson coefficient of 0.434 and significance level of 0.001. This implies that involving experts from other organisation in logistics management, sub-contracting delicate and complex procurement matters to experienced experts from other professional organisations, mobilizing procurement funds through donations, sharing know-how, routines, and best practices with other professional in procurement management, participating often in Joint procurement in a bid to cut procurement costs leads to a positive and significant effect in the effective logistics performance in humanitarian organizations in Kenya Red Cross Society. The study findings agree with the results of a study by Engebretsen and Monnet (2013) who found that this investigation does not support the theory that the strategic and operational compatibility of partners play critical roles in the success or failure of their collaboration. Lastly, the results showed that there was a positive and significant correlation between resource mobilization and the effective logistics performance in humanitarian organizations in Kenya Red Cross Society as shown by a person correlation value of 0.491 and a significance level of 0.000. This implies that having adequate resources at disposal for logistics management, having reliable and diversified sources of funding, adopting improved fund mobilization strategies, adopting improved procurement cost cutting strategies leads to a positive and significant effect effective logistics performance in humanitarian organizations in Kenya Red Cross Society. The findings are consistent with the results of a study by Oloruntoba and Gray (2014) who noted that after a disaster hit, speed at any costs is of utmost importance, as the first 72 hours are crucial for providing relief.

Regression Results

The study used a multivariate regression model to establish the determinants of effective logistics performance in humanitarian organizations taking a case of Kenya Red Cross Society. The overall regression model of the study was $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ Where; Y= effective logistics performance in humanitarian organizations, X_1 = Procurement planning, X_2 = Professionalism, X_3 = High impact collaborations, X_4 = Resource mobilization, and ε = Error term. The results for model summary are presented in Table 8. The study findings revealed that procurement planning, professionalism, resource mobilization and high impact collaborations accounts for 62.7% of the variation in the effective logistics performance in humanitarian organizations in Kenya. This is shown by a by an R-square value of 0.627. The regression results show that R was 0.792 which indicate that the correlation between the independent variables and the dependent variable is positive and significant.

Table 8 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.792a	0.627	0.599	0.26273

a Predictors: (Constant), Resource mobilization, Professionalism, procurement planning, High Impact Collaborations

The results of the study also showed that the overall regression model linking procurement planning, professionalism, resource mobilization and high impact collaborations and effective logistics performance in humanitarian organizations in Kenya was significant as indicated by a significant F (4, 54) statistic as indicated by (0.000) significance level which was less than 0.05 at 5% level of significance. F calculated is 22.678 while F critical is 2.543. F calculated is greater than the F critical (22.678>2.543), this showed that the overall model was statistically significant at 5% significance level. The results of the study are as shown in table 9.

Table 4.9 Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.262	4	1.565	22.678	.000b
	Residual	3.727	54	0.069		
	Total	9.989	58			

a Dependent Variable: Effective logistics performance

b Predictors: (Constant), Resource mobilization, Professionalism, procurement planning, High Impact Collaborations

The summary results of regression analysis are as presented in table 4.10 above. The results of the study indicated that procurement planning had a positive and significant effect on logistics performance in humanitarian organizations ($\beta = 0.319$, Sig = 0.000). This implies holistic budget allocations that are inclusive of all aspects in strategic plans, preparation of Kenya Red Cross budget to accommodate contingencies, thorough assessment of the required accessories before procurement begins, assessment of all procurement risks and mitigating them in advance and planning, scheduling and group buying at red cross to save costs leads to 0.319 unit increase in logistics performance in humanitarian organizations in Kenya. The findings agree with the findings of a study by Kessler (2013) which established that in humanitarian preparedness the response phase should be a fast process with high level of urgency because the lead time for materials has the potential of jeopardizing the rescue operation. The findings of the study also reveal that professionalism had a positive and significant effect on logistics performance in humanitarian organizations ($\beta = 0.164$, Sig = 0.000).

This implies that professional training on logistics matters for procurement staff at Kenya Red Cross, consideration of past experience before hiring procurement staff, having highly experienced and skilled personnel in the procurement department, Procurement staff at Kenya red cross have procurement risk management skills, Professionalism among procurement staff leads to 0.164 unit increase in logistics performance in humanitarian organizations in Kenya. The findings agree with the findings of a study by Klumpp et.al (2013) which indicated that in the absenteeism of some form of humanitarian association with agreed standards, professionalism presently rises within the humanitarian sector in an ad hoc manner, through the best-efforts of individuals and employers.

In addition, the findings of the study also revealed that that high impact collaborations had a positive and significant effect on logistics performance in humanitarian organizations ($\beta = 0.227$, Sig = 0.000). This implies that involving experts from other organisation in logistics management, sub-contracting delicate and complex procurement matters to experienced experts from other professional organisations, mobilizing procurement funds through donations, sharing know-how, routines, and best practices with other professional in procurement management, participating often in Joint procurement in a bid to cut procurement costs leads to 0.227 unit increase in logistics performance in humanitarian organizations in Kenya. The findings agree with the findings of a study by Simatupang and Sridharan (2012) which established that reciprocal commitment and mutual trust are key drivers of collaborative performance among international humanitarian Non-Governmental Organizations NGOs.

Finally, the findings of the study also showed that resource mobilization had positive and significant effect on logistics performance in humanitarian organizations ($\beta = 0.249$, Sig = 0.026). This implies that having adequate resources at disposal for logistics management, having reliable and diversified sources of funding, adopting improved fund mobilization strategies, adopting improved procurement cost cutting strategies leads to 0.249 unit increase in logistics performance in humanitarian organizations in Kenya. The findings agree with the findings of a study by Boas (2012) who established that that the mainstream financing methodology for NGOs is broadening their wellsprings of salary/subsidizing.

Table 10 Regression coefficients

Model	Variables	B	Std. Error	Beta	t	Sig.
1	(Constant)	0.525	0.489		1.073	0.288
	Procurement planning	0.319	0.057	0.506	5.564	0.000
	Professionalism	0.164	0.032	0.459	5.068	0.000
	High Impact Collaborations	0.227	0.039	0.545	5.771	0.000
	Resource mobilization	0.249	0.109	0.21	2.282	0.026

a Dependent Variable: Effective logistics performance

Conclusion

The study concluded that procurement planning positively and significantly influences effective logistics performance in humanitarian organizations in Kenya. The study also established that allocation of budgets that are inclusive to all aspects in strategic plans, preparation of Kenya Red Cross budget to accommodate contingencies, thorough assessment of the required accessories before procurement begins, assessment of all procurement risks and mitigating them in advance and planning, scheduling and group buying at Red Cross to save costs positively influences effective logistics performance in humanitarian organizations in Kenya. Moreover, the study established that professionalism positively and significantly influences effective logistics performance in humanitarian organizations in Kenya. The study also concluded that professional training on logistics matters for procurement staff at Kenya Red Cross, consideration of past experience before hiring procurement staff, having highly experienced and skilled personnel in the procurement department, Procurement staff at Kenya red cross have procurement risk management skills, Professionalism among procurement staff positively influences effective logistics performance in humanitarian organizations in Kenya.

Further, the study concluded that high impact collaboration significantly and positively influences effective logistics performance in humanitarian organizations in Kenya. The study established that involving experts from other organisation in logistics management, sub-contracting delicate and complex procurement matters to experienced experts from other professional organisations, mobilizing procurement funds through donations, sharing know-how, routines, and best practices with other professional in procurement management, participating often in Joint procurement in a bid to cut procurement costs positively influences effective logistics performance in humanitarian organizations in Kenya. Finally, the study concluded that resource mobilization positively and significantly affects the effective logistics performance in humanitarian organizations in Kenya. The study established that having adequate resources at disposal for logistics management, having reliable and diversified sources of funding, adopting improved fund mobilization strategies, adopting improved procurement cost cutting strategies influences effective logistics performance at Kenya Red Cross positively influences effective logistics performance in humanitarian organizations in Kenya.

Recommendations of the Study

The study recommends the Red Cross in Kenya to allocate budgets that are inclusive to all aspects in strategic plans. There is also need for Kenya Red Cross to prepare budget to accommodate contingencies. The study further recommends thorough assessment of the required accessories before procurement begins. There is also need for scheduling and group buying at Red Cross to save costs at Kenya Red Cross. Moreover, the study recommends the humanitarian organizations to provide professional training on logistics matters for procurement staff. The study further recommends the humanitarian organizations to consider past experience before hiring procurement staff. In addition, there is need to have highly experienced and skilled personnel in the procurement department. Further, the study recommends the Kenya Red Cross to involve experts from other organizations in logistics management. There is also need to sub-contract delicate and complex procurement matters to experienced experts from other professional organizations. The study also recommends the humanitarian organizations to mobilize procurement funds through donations. There is also need to share know-how, routines, and best practices with other professional in procurement management. The study further recommends the Kenya Red Cross to participate often in Joint procurement in a bid to cut procurement. There is need to have adequate resources at disposal for logistics management.

Conflict of Interest

No potential conflict of interest was reported by the authors.

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