

The Efficacy of Procurement Strategies on Operational Performance of Humanitarian Organisations during Covid-19 Lockdown Period in Zimbabwe

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Abstract: The purpose of the study was to determine the efficacy of procurement strategies on operational performance of humanitarian organisations in Zimbabwe during the Covid-19 lockdown period. A mixed-method approach was used, with a randomly chosen sample of 28 supply chain professionals from a population of 30 humanitarian aid organizations who responded to the questionnaire and interviews. The Statistical Package for Social Sciences (SPSS) and Analysis for Moment Structures (AMOS) programs were used to analyse quantitative data while thematic analysis was used to analyse qualitative data from interviews. The findings were that local sourcing; electronic procurement and multiple sourcing had a significant positive effect on inventory levels, operating costs and material availability. The study concluded that local sourcing; electronic procurement and multiple sourcing have a positive and significant effect on operational performance of humanitarian organisations during the Covid-19 lockdown period in Zimbabwe. Therefore the study recommended humanitarian organisations in Zimbabwe to source locally, procure electronically and to source from multiple suppliers during the Covid-19 lockdown period as concluded by the study that doing so is critical in improving operational performance.

Key words: procurement strategy, operational performance, humanitarian supply chain.

I. INTRODUCTION

The aim of humanitarian relief operations is to provide helpful relief services to suffering victims on time and at least costs. In addition, the intention of humanitarian organisations during and after disasters, particularly the Covid-19 pandemic, is to provide relief and recovery materials in order to lower the suffering of victims. For that reason, the supply chain network plays a very crucial role in ensuring that the right materials in the right quantities are provided to humanitarian organisations in order for them to carry out their obligations without difficulties (Maqbool, & Khan, 2020). So, the challenge of shortage of materials, services and other essentials in humanitarian operations is caused by lack of communication, lack of clear sourcing policy, lack of planning and difficulties in fundraising during the Covid-19 period (Vega, 2019). These challenges affect the operations of humanitarian organisations to effectively provide relief services in order to meet sustainable

development goals of countries during the Covid-19 period. This has negatively affected the beneficiaries of humanitarian relief services.

The coming of the Covid-19 pandemic appears to have resulted in significant disruptions on supply chains, resulting in poor operational performance by humanitarian organizations (Ivanov, 2020). Precisely in Zimbabwe, the Covid-19 pandemic has affected every sector and the humanitarian sector was not spared. The operations of humanitarian organisations during the Covid-19 period faced many challenges due to severe shortages of materials, goods, services and other critical essentials because of supply disruptions that are caused by measures implemented to combat the spread of the virus. As a result, there is an increasing pressure on humanitarian organizations to make prudent procurement decisions in order to maintain their resilience in the face of supply chain disruptions (Queiroz, Ivanov, Dologui, & Fosso, 2020). Different humanitarian organisations used different procurement strategies as they struggled to come to terms with various disruptions caused by the pandemic. Therefore, this encouraged the researcher to carry out a study on the efficacy of various strategies that were used by the humanitarian organisations during the Covid-19 lockdown period in Zimbabwe.

II. LITERATURE REVIEW

2.1 Definition of Procurement Strategy

According to Lysons & Farrington (2006), a procurement strategy is concerned with the top-level, longer-term decision relating to high-profit, high supply risk items and low-profit, high supply risk bottleneck product and services.

The process of selecting a procurement strategy is very well linked to sourcing decisions, which are understood by procurement departments as a course of action, not a solitary resolution that always makes equal in-house along with side actions, facilities, and expertise; bring into line trade plan, trade practices, and information technology facilities; in addition to making equal the outcome (Mandal, 2015).

2.2 Types of Procurement Strategies

There are numerous procurement strategies that organizations use to meet the needs of user departments and the entire organization. To name a few, these strategies include local sourcing, international sourcing, multiple sourcing, single sourcing, electronic procurement, and reciprocal dealing. As a result, the following purchasing strategies are discussed in this study:

Firstly, domestic sourcing is a procurement strategy which is also known as local sourcing. According to the International Living Future Institute (ILFI), (2000), local sourcing is an agile supply chain strategy that many organizations employ in response to global supply chain disruptions. Sourcing and purchasing locally is the “simplest transaction with an organization buying materials from suppliers working in the same country” (Monzcka, 2010). The efficacy of local sourcing in ensuring that firms are resilient to supply chain disruptions is that it gives firms an opportunity to obtain quick supply of materials, goods, and services from a nearby local supply market. Moreover, local sourcing enables procuring organisations to avoid financial risks that are related to fluctuations in currency exchange rates especially for companies operating in countries with volatile currencies where currency exchange rate risks can be substantial (Smith, 2018). However, the major problem with local sourcing is that of lack of availability of goods and services on the local market. This problem is mostly faced by companies operating in developing countries especially when they require complex products and services (Kheng, 2010). As well, sourcing from local markets where there are relatively small economies of scale and where capital-productivity and technology levels are low is expensive.

On the other hand, electronic procurement is a procurement strategy that is dependent on a specific information technology that is well thought-out as the contribution side of supply chains and their management (Presutti, 2003). It is critical to stress that procurement has evolved from traditional purchasing processes that required the use of numerous documents which resulted in an increase in administrative costs that inflated organizations' operating costs, and negatively impacting their operational performance. As technological advancements have occurred, organizations have gradually replaced traditional purchasing processes with current procurement methods. As a result, technological advancements all over the world have resulted in modern procurement systems that are critical tools for bridging the geographical gap between procuring firms and their suppliers. The efficacy of electronic procurement in building resilient supply chains is that it helps the operations of organisations as it bridges the geographical gap between procuring organizations and suppliers and thus helps to reduce procurement costs (Vaast & Walsham, 2009). Furthermore, the use of various computer systems and internet network in electronic procurement allows a firm and its suppliers to share information in short time which allows both parties to respond

to each other immediately (Quayle, 2005). However, adopting electronic procurement strategy has many risks. Davila (2003) put forward that with electronic procurement there always exist a risk of leak of information since there will be a great amount of exchange of information between a procuring firm and its suppliers. This usually happens where there is lack of integration between a firm and its suppliers and also where there is lack of investment in development of the required system.

Furthermore, multiple sourcing is a proactive procurement strategy that can be implemented by an organization to avoid the risks associated with dealing with a single supplier. Furthermore, multiple sourcing is a purchasing strategy that procuring organizations can employ when there are numerous supply disruptions. Throughout the Covid-19 movement restriction period, there are numerous global and local supply chain disruptions where organizations should avoid dealing with a single supplier (Ramasesh, 1991). The scourge of corona-virus has affected my suppliers to the point where those who remain on the market have raised the prices of materials, goods, and services in order to stay in business. As a result, many organizations have adopted multiple sourcing strategies in order to reap the benefits of reverse auctions on supply markets. According to Render & Heizer (1996) as cited in Zeng & Beger, (2006), the benefit of multiple sourcing is that when numerous suppliers are present, the buying organisation has the opportunity to receive lower prices and shipping costs since suppliers respond to the demands and specifications of particular quotation. However, the problem of multiple sourcing is that dealing with several suppliers requires longer time in negotiation, and in turn, may delay or disturb the operations of an organisation.

2.3 Operational performance

Heizer (2008) defines operational performance as an organization's ability to reduce administration costs, ordering time, the time between placing an order and receiving it, as well as improve the effectiveness of utilizing resources and delivery capability.

Operational performance is often measured by the inventory level an organisation maintains to minimise both ordering and holding costs whilst at the same time keeping the operations running (Pandey, 2008). To improve the operational performance, organisations usually prepare inventory budgets, review inventory levels on a regular basis, and choose appropriate purchasing strategies.

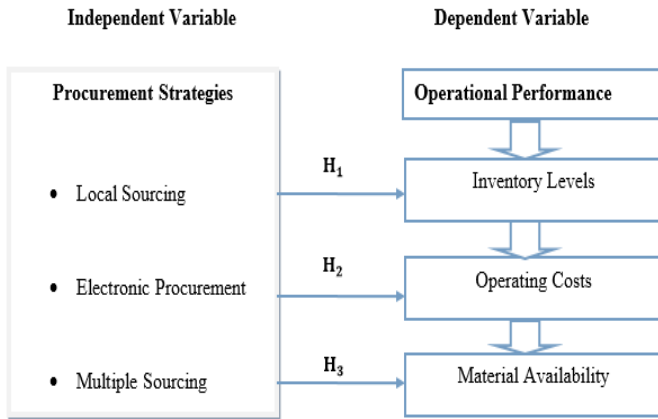
As well, operational performance is measured by the procurement costs the organisation incurs. Hill (2000) put forward that when an organisation manages and minimises its procurement costs, it minimises the total operating costs and consequently improve the operational performance.

Furthermore, operational performance is also measured by the availability of stock of materials that used to support the operations of an organisation. Usually organisations prefer to keep adequate inventories of materials and goods in their

storage facilities to protect themselves from supply inconsistencies that are caused by supply disruptions (Niemann, 2018). It is deemed prudent for organizations to always keep sufficient inventories of materials to ensure that their operations are not interrupted (Manziona, 2017).

2.4 Conceptual framework.

The following is the conceptual framework of the study;



Source: Authors (2021)

2.5 Hypotheses of the study

The following are the hypotheses of the study;

H₁ : Local sourcing has a negative effect on inventory levels.

H₂ : Electronic procurement has a negative effect on operating costs.

H₃ : Multiple sourcing has a negative effect on material availability.

III. METHODOLOGY OF THE STUDY

This study has followed a pragmatic paradigm to grant the researcher the freedom to use both interpretivism (qualitative) and positivism (quantitative) methods to examine the impact of purchasing strategies on operational performance and hence determine the efficacy of the procurement strategies used by humanitarian organisations in Zimbabwe during the Covid-19 lockdown period. A total target population of 30 humanitarian organizations based in Harare focusing on food, security, and agriculture, as well as water, sanitation, and hygiene (WASH), health and nutrition, and protection was used (Emergence Response Report, 2020). The study has employed stratified and simple random techniques to increase the accuracy and efficiency of data collection by segmenting the population into homogeneous strata and ensuring that every member of the population had an equal chance of being chosen as a subject (Walliman, 2011).

A questionnaire with structured questions was used to collect data. Telephone interviews were conducted to collect data as face to face interviews were not feasible to execute because of Covi-19 lockdown movement restrictions. The researcher used the Structural Equation Modelling (SEM) to examine the

relationship between the study variables. The Statistical Package for Social Sciences (SPSS) version 22 and Analysis of Moment Structures (AMOS) version 22 software’s were used to calculate the correlation between constructs and to tabulate data.

IV. RESULTS AND THEIR DISCUSSION

This section presents, interprets and discusses the findings of this study. **The results will show the effects of procurement strategies on operational performance in humanitarian organisations during Covid-19 lockdown period in Zimbabwe.**

Table 4.2 below shows the regression weights which show the results on the effects of procurement strategies on operational performance of humanitarian organisations during Covid-19 lockdown period in Zimbabwe.

Table 4.1Regression Weights

Parameter		Estimate	Lower	Upper	P
Inventory Levels	< - - Local Sourcing	1.220	.580	2.212	.018
Operating Costs	< - - Electronic Procurement	1.680	1.019	3.368	.009
Material Availability	< - - Multiple Sourcing	1.826	1.072	3.601	.015

n=25Source: Primary data (2021)

IBM SPSS v22

Table 4.1 above show the findings of the study on hypotheses which were formulated in literature review. The findings show that there is a positive relationship between local sourcing and inventory levels which is shown by a standardised coefficient with a value of 1.220 which is statistically significant at p < .05 (0.018). Therefore, the first hypothesis (**H₁**) which states that local sourcing has a negative effect on inventory levels is rejected. This means that local sourcing helped humanitarian organisations to maintain optimum inventory levels during the Covid-19 lockdown period in Zimbabwe. The findings corroborate with the interview findings that during the lockdown period, organisations prefer to source locally as they benefit from shorter lead times that are associated with dealing with close suppliers who are located in the local market. Therefore this enables humanitarian organisations to maintain ideal inventory levels and keep their operations running during the Covid-19 lockdown period. This also agree with the findings of a study by Paul and Chowdhury (2020) that humanitarian organisations source from local suppliers during Covid-19 lockdown period as sourcing locally helps them to obtain quick supply of materials, goods, and services hence allowing them to maintain optimum inventory levels.

As well, the results on table 4.2 above show a positive relationship between electronic procurement and operating costs which is shown by a standardised coefficient with a value of 1.680 which is statistically significant at p < .05 (0.009). Therefore, the second hypothesis (**H₂**) which states

that electronic procurement has a negative effect on operating costs is rejected. This means that electronic procurement has a positive and significant effect on operating costs in humanitarian organisations during the Covid-19 lockdown period. This agrees with the interview findings that humanitarian organisations procure electronically during the Covid-19 lockdown period to bridge the geographical gap between them and suppliers as well as to reduce administrative costs in order to improve procurement efficiency. The findings are supported by the findings in a study by Hana (2020) that during the Covid-19 pandemic lockdown period, the use of technology for administrative purpose is essential to support the operations of humanitarian organisations. This means that during the Covid-19 lockdown period procuring electronically saves procurement costs and this reduces the operating costs of humanitarian organisations.

Furthermore, the results on table 4.2 above show a positive relationship between multiple sourcing and stock availability which is shown by a standardised coefficient with a value of 0.826 which is statistically significant at $p < .05$ (0.015). Therefore, the third hypothesis (H_3) which states multiple sourcing has a negative effect on material availability is rejected. This means that sourcing from multiple suppliers during Covid-19 lockdown period improves material availability in humanitarian organisations as an organisation can easily switch to the next supplier when one supplier fails to supply. The findings are in line with the interview findings that humanitarian organisations have opted to source from multiple suppliers during the Covid-19 lockdown period in order to spread the risk of supply disruption that comes through sourcing from a single supplier. Furthermore, the results from the study are in tandem with that of Mokhelesi (2004) that organisation must have multiple suppliers to avoid the risk of succumbing to supply disruptions when dealing with single suppliers. It has to be noted that, multiple sourcing directly affects stock availability in humanitarian aid organisations in Zimbabwe during Covid-19 lockdown period.

V. CONCLUSION AND RECOMMENDATIONS

Based on the results presented, it can be concluded that local sourcing, electronic procurement, and multiple sourcing strategies are effective in maintaining optimum inventory levels, minimizing operating costs and ensuring that there is adequate material availability in humanitarian organizations in Zimbabwe during the Covid-19 lockdown period for successful operational performance. These strategies are effective as they enable humanitarian organizations to obtain quick supplies of materials, goods and services from local markets, to minimize operating costs through electronic sourcing and to spread the risk of supply failure amongst multiple suppliers during the Covid-19 lockdown period. In view of this it is recommended that humanitarian organisations need to source from close suppliers who are located in local markets, to source electronically and to source from many suppliers in order to be resilient to supply disruptions in periods of pandemics like the Covid-19 period.

VI. RECOMMENDATION FOR FURTHER STUDIES

The study recommends that further studies be carried out on the effects of procurement studies on operational performances of humanitarian organisations during the Covid-19 period in other sub-Saharan African countries.

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