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## Article

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## MANAGEMENT | RESEARCH ARTICLE

# Business continuity management and supply chain disruptions: A case of humanitarian organizations in Cyclone Idai in Zimbabwe

Judith Moyo<sup>1</sup>, Simba Mutsvangwa<sup>2\*</sup>, Tichakunda Valentine Chabata<sup>3</sup>, Lidion Sibanda<sup>3</sup> and Felix Chari<sup>2</sup>

**Abstract:** Catastrophic events, such as cyclones, floods, droughts, terrorism, or cybercrime, are astronomically on the increase the world over. These events disrupt businesses' smooth continuity leading to reputational digital data and financial losses among others. Zimbabwe's districts of Chimanimani and Chipinge in March 2019 experienced a catastrophic Cyclone Idai that highly disrupted various important business activities and the associated supply chains. This study, therefore, focuses on the impact of business continuity and organizational performance on mitigating the disruptive effects on major supply chains during a disaster. Ordinary Least Squares (OLS) regression model was used to analyse the relationship between supply chain disruption and business continuity. The study had a population of 82 humanitarian organizations and the researchers successfully administered questionnaires to a sample of 65 humanitarian organizations that participated in relief operations during Cyclone Idai in Zimbabwe. The results show that business continuity has a negative and significant effect on supply chain disruption. At 5% level of significance, business continuity has a positive effect of about 8%. This means that a marginal change in business continuity will result in significant 8% influence on mitigation of supply chain disruption in humanitarian relief efforts. The study findings will be useful to practitioners such as supply chain managers in coming up with strategies in case of supply chain disruption threats due to unseen shocks.

**Subjects:** African Studies; Economics; Business, Management and Accounting;

**Keywords:** business continuity; Cyclone Idai; disasters; supply chain disruptions

### 1. Introduction

Global supply chains have been exposed to a wide range of catastrophes, with increased frequents and impact in the last two to three decades. Catastrophic events are also detrimental to economic, social, cultural, and biological systems (Deming, 2018). Disasters such as pandemics, terrorist attacks, strikes, financial crises, unreliable systems, logistics, supply chain failures, as well as unexpected lack of essential production inputs, can severely affect growth and performance of most businesses and their supply chains (Ogibo, 2020). One of the key features of the modern world economy is the reliance on smoothly connected global supply chains. Nevertheless, the

increased over reliance on the global supply chains has a strong correlation to levels of disruptions. The effects of disruption on business and society are evidenced by a United Nations report on disaster risk and resilience which established that in the past 13 years, natural-hazards-related deaths have surpassed 1.1 million and more than 2.7 billion people have been affected (United Nations Office for Disaster Risk Reduction, 2012). Supply chain disruption is an unplanned event that adversely affects a firm's normal operations (Schmidt & Raman, 2019). Each disruption is associated with different effects on organizational resources. Humanitarian needs could grow if additional disasters hit vulnerable populations. Consequently, disasters such as storms, cyclones, floods, wars, and volcanoes may disrupt humanitarian supply chains plunging the victims into further crisis. These harmful and intentional events are also creating awareness of the importance of business continuity in organizations (Andrea & Sánchez, 2016).

Disruptions have a more significant impact on the least-developed countries and could destroy developmental gains which have been built up over decades (United Nations Office for Disaster Risk Reduction, 2012). Cyclone Idai hit four Southern African countries (i.e. Madagascar, Malawi, Mozambique, and Zimbabwe) with an overall infrastructure cost for the affected countries estimated at \$27 billion indicating the extent of economic suffering faced by these countries (Africa News, 2019). On March 2019, Zimbabwe was struck by Cyclone Idai displacing about 51,000 people leaving over 340 people dead and many others missing. Road and bridge infrastructures, homes, agriculture fields, and schools in Chimanimani and Chipinge were severely damaged as a result of flooding and landslides and these disrupted livelihoods (Chatiza, 2019). Zimbabwe's climate change-related disasters are becoming more and more frequent and these disruptions have a huge impact on economic activities. Zimbabwe has endured various natural hazards including droughts, epidemic diseases, cyclones, veld fires, disease outbreaks, road traffic accidents, floods, mining accidents, and storms over the past century.

Previous disasters have resulted in the destruction of infrastructure, loss of lives and livelihoods, and a fall in overall economic progress. Globally, there has been an exponential increase in the total number of people affected and economic losses caused by disasters in the last years. More than 1 million Zimbabweans have been classified as food insecure a month prior to the cyclone as a result of the prolonged economic crisis and a drought caused on by El Nino (Samie-Jacobs, 2020). There were also outbreaks of diarrhoea and other infectious diseases as a result of drought, limited water supply, and economic collapse necessitating humanitarian intervention to supply vaccines and food aid (Samie-Jacobs, 2020). According to Chatiza (2019), prior to Cyclone Idai, up to 5.3 million Zimbabweans required humanitarian assistance and as a result, Cyclone Idai interfered with ongoing humanitarian aid activities mostly in Chipinge and Chimanimani districts. Against this background this study sought to establish the role of business continuity in mitigating supply chain disruptions caused by Cyclone Idai. Specifically, the study focuses on how business continuity assisted in containing the damaging effects of humanitarian supply chain disruptions in the face of Cyclone Idai disaster in the two districts.

## 2. Literature review

Supply chain disruption is the interruption in the production and distribution flow of sales, goods, and services. This may be as a result of the contractor failing to perform duties due to unprecedented events like pandemics, and regional conflicts (Ramakrishna, 2022). Disruptions to supply chains can result from unintentional and intentional events. Natural disasters pose huge economic challenges to nations, communities, and corporations worldwide, (Chari, Ngcamu & Novukela, 2020; Reddy et al. 2016). Unintentional supply chain disruptions include disasters, such as cyclones, pandemics, and floods with relatively low probability of occurring but, exert high damage on the company. These types of events could negatively affect transportation infrastructure, supply routes, and manufacturing facilities. Among the intentional disaster events are cyberwars, espionage, hacking, and other new forms of terrorism that are also affecting companies' operations and, hence, the global supply chains.

According to Kim and Cameron (2019), major supply chain disruptions are often chaotic and confusing situations that can cause stakeholders to speculate about the cause and effects of the disruption on the company. Early literature regarding disruption emphasized the need to prevent and protect one's company against facing disruption (Lindwell & Hillary, 2017). Nonetheless, this emphasis has now shifted to a longer-term approach which is to recognize disruptions and strengthen the organizational preparedness in order to build resilience towards disruption risks. Boston and Morris (2019) have recognized that supply chains are becoming increasingly interconnected which therefore means the effects of disruptions can surpass the actual point of occurrence of the disruption, but potentially spread across entire humanitarian supply chains, thereby having far-reaching effects.

A number of researchers believe that the phenomenon of just-in-time (JIT) has worsened the effects of disruption (Newman, 2019). The use of JIT to reduce cost and improve competitiveness may be effective in a stable environment but can be destructive if a disaster strikes due to the JIT system being less flexible.

It has been worrisome that between 2019 and 2020, the overall supply chain disruptions in countries like Malawi, Columbia, and the United Arab Emirates increased by 14% (Onward, 2020). In 2019, there was an average of 3.700 supply chain disruptors. However, this number increased to 4.200 in 2020. According to Onward (2020) only 6% of companies in Columbia reported full visibility on their supply chain. About 69% of companies did not have total visibility. White (2020) reported that 38.8% of US small businesses experienced supply chain delays due to the COVID-19 pandemic.

It is observable that as supply chains continue to become more complex, there is an increasing need to incorporate effective supply chain disruption management and establish effective business continuity management strategies within organizations. Identifying supply chain risks and predicting disruptions can help a humanitarian organization mitigate disruptions within the supply chain (Baymout, 2014). Therefore, supply chain managers should be capable to plan for and respond to incidents and business disruptions in order to continue business operations at an acceptable predefined level. Firms are subject to disruptions of varying degrees. A disruption, if not managed properly, can escalate to become a disaster or crisis and result in significant physical or environmental damage. It may cause significant injuries to employees or even death. For example, Cyclone Idai resulted in destruction of infrastructure and loss of lives in Chimanimani and Chipinge. Organizations should, therefore, be prepared for an incident before it occurs to minimize its impact should it happen.

Business continuity management capabilities have become a need for every business operating in this unpredictable environment. Hence, the rise in the number of interruptions drivers for business continuity (Krell, 2006).

This is regardless of the fact that damage to operations is particularly concerning because operations encompass the fundamental activities of any enterprise that fulfils customer expectations. There is also the damage to the organization's reputation. Reputational damage, in the form of loss of goodwill or credibility, as well as political or corporate embarrassment, can have detrimental effects on the firm's viability (Petersen, 2017).

### **2.1. Business continuity**

Business continuity management (BCM) is a holistic management process that identifies potential threats and impacts to business operations. It also provides a framework for building organizational resilience, with the capability to make effective responses that safeguard the interests, reputation, and brand of the organization (ISO, Editor, ISO 22301, 2012). BCM's main objectives are to keep the time in which products are unavailable at a minimum, maintain optimum volume of sales as the organization awaits resumption of normal operations and ensures survival (Corsi & Macdald, 2013). Business continuity can also be defined as a holistic management program for

identifying risks that could impact continued operations and providing a structure for developing capabilities for effective mitigation and response to disruptions (Bell, 2019). Bless (2018) established that business continuity management (BCM) provides a systemic framework in which the firm's mitigation practices and contingency tools can be developed, improved, and tested.

However, evidence in support of the effectiveness of BCM, or its integration with other functions, is not well-substantiated (Gosling & Hiles, 2009).

## **2.2. Business continuity and supply chain disruption**

There is abundant literature surrounding the ways in which business continuity can help in addressing supply chain disruptions (Azadegan et al., 2020; Wildgoose et al., 2012). Business continuity management helps prevent, mitigate, respond to, and recover from actual disruptions. In relation to preventing and mitigating potential disruptions, specific activities within BCM, such as risk identification, and business impact analysis help proactively address the risks facing an organization before they lead to disruptions. In relation to response to and recovery from actual disruptions, BCM includes activities that are meant to lessen the severity of damage from supply chain disruptions. Response and recovery activities advocated by BCM take front and centre stage during an actual disruption. Indeed, for a business continuity manager, effective disruption management is based not only on how well response and recovery efforts are conducted but also on how well they are communicated (Wong, 2020).

Supply chain vulnerability has been regarded as the susceptibility and exposure of the company's supply system to disturbances that can lead to the obstruction of flows goods and services and to the breakdown of the organizations' operations (Dully, 2018). Simons (2017) further suggests that with rising uncertainty in the smooth operation of supply chains, there is a need to innovate on control measures to keep supply chains operational. This means the higher the uncertainty associated with one's operating environment, the more monitoring is necessary to decipher useful information (Simons, 2017). Therefore, business continuity management becomes more beneficial in containing the reputational damage of disruption in supply chains with rising vulnerability.

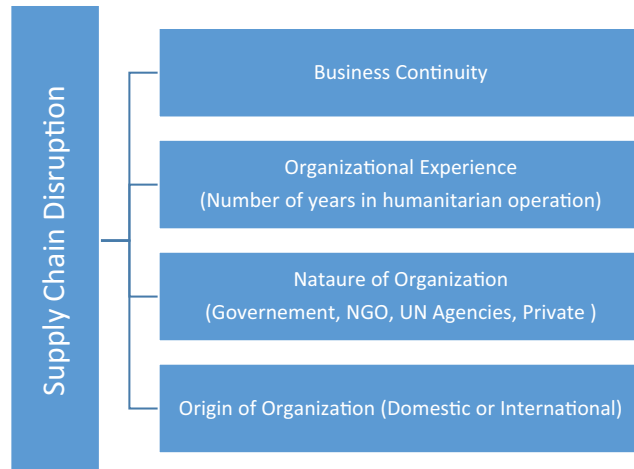
First, business continuity includes a thorough assessment of organizational vulnerabilities. A cornerstone step in the business continuity program is a business impact analysis which identifies how much resources are needed to protect or recover and how quickly it can re-establish its critical functions (Kilwa, 2016).

Business continuity offers policies and procedures that help clarify information about the availability of resources that can be used for response and recovery efforts. The prioritization of activities and consensus on a company's critical functions help focus organizational efforts on what is necessary. According to Kilwa (2016) such understanding can help provide a more accurate and timely assessment of the progress in response and recovery efforts. The assurance provided by the information from business continuity allows business managers to concentrate on positioning their message to stakeholders and employees to focus on the response and recovery efforts that help contain the damage from supply chain disruptions (Kilwa, 2016).

Procedures that clearly differentiate between constructive communications and those that are potentially damaging to company reputation can offer important lines of defence for those operating in high vulnerability settings (Oswell, 2019).

Guntuka et al. (2023) researched on supply chain complexity and business continuity management focusing on the recovery from plant-level supply chain disruptions and found partial support that business continuity management plan will have a negative moderating effect between complexity and recovery time.

Figure 1. Conceptual model.



In line with Simons' explanations on the effectiveness of diagnostic controls under uncertainty, with rising supply chain vulnerability, the need for accurate information rises, leading to business continuity to have a more positive effect on containing the reputational damage from major supply chain disruptions. Therefore, supply chain vulnerability amplifies the effects of business continuity on containing the reputational damage of major supply chain disruptions.

Business continuity can help with effective communication and it allows for the business to quickly understand the cause and scope of damage (Geysler, 2019). With well-developed hazard assessment, business impact analysis, and crisis management plans, the company is able to swiftly untangle facts, frame the scope of the damage, and develop an accurate message in anticipation of what external constituents may need (Elliott, 2018).

In a study conducted by Hill (2018) in American businesses, business continuity allows the firm to effectively monitor the response and recovery activities. Crisis response plans developed as part of BCM can help with the assessment of performance variables for instance, recovery time. In line with Simons' depiction of diagnostic controls, business continuity management acts as a feedback system that specifies procedures and safeguards information handling, record keeping, and correcting deviations, and may help limit reputational damage of disruptions (P. Keith, 2010).

This literature is very critical as it provided the lens with which the case of Cyclone Idai is to be investigated. Some researchers have provided some models of supply chain robustness related to supply chain design information and business continuity planning, which is based on case studies of how businesses dealt with severe natural disasters and humanitarian disruptions (Craighead et al., 2007; Fujimoto, 2011; YoungWon et al., 2013).

### 2.3. Conceptual framework

The conceptual framework presented in Figure 1 predicts that supply chain disruptions can be affected by business continuity management, organizational experience (number of years the humanitarian organization has been operating), nature of the organization and origin of the organization. Supply chain disruption is the dependent variable, and the independent variables are business continuity, organizational experience, nature of organization and origin of organization. In this case, business continuity is humanitarian organization's level of readiness to maintain critical functions which are supply of goods and services after an emergency or disruption.

### 3. Methodology

This section presents an outline of the population, the sampling procedures implemented, and data collection process followed.



### 3.1. Population and sampling

In this study the population is made up of all humanitarian organizations which were operating during Cyclone Idai in Chimanimani and Chipinge, Zimbabwe. A sample size of 65 Humanitarian organizations was considered for the data collection. Existing literature advocated that an evaluation of supplier performance must involve the perceptions of those involved in an activity of concern. Thus the data collection instrument was administered to the 65 organizations. This study used a simple random sampling giving each unit of the population an equal chance of inclusion in the sample (Saunders et al., Citation2016). Survey data was collected in August 2022.

### 3.2. Data and measures

This study used a pragmatism research philosophy. A major underpinning of pragmatism philosophy is that knowledge and reality are based on beliefs and habits that to use a philosophy that brings together quantitative (questionnaires) and qualitative (interviews) research to come up with feasible and desirable solutions to the social problem of supply chain disruptions, Molina-Ramírez and Barba-Sánchez (2021). It is also worthy in researching organizational processes and ensuring research is contextually relevant (Kelly & Cordeiro, 2020).

Using Krejcie and Morgan table (1970), from a population of 82 organizations which operated during the Cyclone Idai disaster in the two districts, structured questionnaires were administered on 65 humanitarian organizations. The respondents were asked to conduct an overall evaluation of the supply chain disruption caused by Cyclone Idai in the two districts. In order to capture the correct evaluations of the supply chain disruption and the factors that affected it, the humanitarian organizations' representatives involved in the study rated the disruption of supply chain systems and business continuity. These included having to seek the informed consent from the respondents, maintaining the respondents' right to privacy and confidentiality (Saunders et al., 2016). While collecting data some tenets of research ethics were observed and followed. These included having to seek the informed consent from the respondents, maintaining the respondents' right to privacy and confidentiality (Saunders et al., 2016). When collecting data, interview questionnaires were sent via email to avoid breaching of COVID-19 regulations. The semi-structured questions with Likert scales were used to assess business continuity and supply chain disruptions within humanitarian organizations as major suppliers of emergency goods and services.

### 3.3. Model specification

The baseline model was formed as below to accommodate the possibility of a relationship between supply chain disruption and independent variables which include business continuity. A simple linear regression model using the Ordinary Least Squares (OLS) guided by the following quantitative model specification was used.

$$SCD = \beta_0 + \beta_1 ORI + \beta_2 EXP + \beta_4 NAT + \beta_5 CONT + \varepsilon$$

Where *SCD* is Supply Chain Disruption which was caused by Cyclone Idai in Chimanimani and Chipinge, *ORI* is origin of organization that is either domestic or international, *EXP* is number of years the humanitarian organization has been in operation in the country, *NAT* is Nature of Organisation and *CONT* which is the main variable of focus is Business Continuity.  $\varepsilon$  is an error term.

The study's choice of variables was largely informed by both theoretical and empirical literature reviews discussed in the previous chapter. This was mainly influenced by the fact that the business continuity and other independent variables stated above are known to be of significant influence in the determination of supply chain disruption.

Correlations tests, goodness-of-fit using R-squared, reliability test using Cronbach's Alpha were done. To test for multicollinearity this paper used the correlations tests. Crawford (2014) states that correlation can reveal the presence or absence of a relationship between two factors so it is good for indicating areas where trial research could take place and show fresh results. R-squared



was used as a statistical measure in determining the proportion of variance in the supply chain disruption variable that can be explained by the independent variables.

#### 4. Estimation, presentation, and interpretation of results

Table 1 presents descriptive statistics for the main variables. Business continuity and supply chain disruption are continuous variables averaged from measurement scales in the questionnaire with minimum and maximum values of 1.667 and 4.444 for business continuity, respectively. The higher value also depicts a higher degree of disruption. Supply chain disruption has a minimum and maximum of 3.2 and 4.6, respectively, and a mean of 3.996.

##### 4.1. Correlations

Table 2 shows the correlations between different pairs of variables used in this study. Table 2 shows that there is no multicollinearity between all explanatory variables. The dependent variable has high correlations between itself and different independent variables which shows the presence of a causal relationship between Supply Chain Disruption variable and independent variables. The correlation between supply chain disruption and the main independent variable of focus, business continuity is about negative 87%. This shows that there is a potentially high relationship between the two variables.

The correlation among the independent variables is in general very low and basically shows that there are very low chances of having multicollinearity problem. There is no duplication of independent variables. For instance, the correlation between business continuity and experience is negative 15%.

In general, the R-squared for the main results shown in Table 4 column 1 shows that more than 66% of the relationship between the dependent variable and the independent variables is explained by the model.

Table 3 shows the reliability test performed on all the selected variables mentioned above. The reliability coefficient is 0.72 which shows that there is internal consistency among the variables. Thus they are consistent with measuring this phenomenon. The reliability coefficient is 0.72 which

**Table 1. Descriptive statistics of main variables**

Variable	Observations	Mean	Std. Dev.	Min	Max
Business Continuity	63	2.818	0.874	1.667	4.444
Organization	63	2.778	1.170	1	4
Experience	63	2.095	0.734	1	3
SCD	63	3.996	0.481	3.2	4.6

**Table 2. Correlation matrix**

	SCD	International	Experience	Organization	Business continuity
SCD	1.0000				
International	0.5386	1.0000			
Experience	0.6643	-0.0763	1.0000		
Organization	0.5563	-0.2143	-.1251	1.0000	
Business Continuity	0.8563	-0.2439	-.1542	-0.0738	1.0000

**Table 3. Reliability test: Cronbach's alpha**

<b>Test scale = mean(unstandardized items)</b>	
Average interitem covariance:	.1109916
Number of items in the scale:	5
Scale reliability coefficient:	0.7220

**Table 4. Linear regression results**

	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
<b>VARIABLES</b>	<b>SCD</b>	<b>SCD</b>	<b>SCD</b>	<b>SCD</b>	<b>SCD</b>
National/ international	0.801*** (0.148)	0.584 (0.0821)			
Experience	-0.235* (0.0488)		-0.228** (0.0739)		
Organization	-0.138* (0.0681)			-0.0587 (0.0469)	
Business continuity	0.079** (0.0486)	0.045*** (0.0572)	0.057* (0.0639)	0.080** (0.0652)	0.086*** (0.0637)
Constant	3.950*** (0.179)	3.224** (0.200)	4.316*** (0.250)	3.608*** (0.223)	3.754*** (0.200)
Observations	63	63	63	63	63
R-squared	0.664	0.591	0.543	0.645	0.504

Robust standard errors in parentheses.

\*\*\* p<0.01 is 1% level of significance, \*\* p<0.05 is five level of significance, \* p<0.1 is 10% level of significance  
 Dependent variable is SCD (Supply Chain Disruption).

shows that there is internal consistency among the variables. Thus they are consistent in measuring this phenomenon. The main regression results are presented in Table 4.

Table 4 presents the main linear regression results with Supply Chain Disruption (SCD) as the dependent variable. The main independent variable of focus is the business continuity, and other control variables like experience and organization. The first column presents all the independent variables against SCD, while the other columns present business continuity and one control variable against the dependent variable. That is done as a robustness check for the main regression results.

As indicated in Column 1, business continuity has a positive and significant effect on supply chain disruption. At 5% level of significance, business continuity has a positive effect of about 8%. This means that a marginal change in business continuity will result in supply chain disruption by about 8%, confirming results from related studies by Wong (2020); and Geyser (2019). As robustness checks, columns 2–5 still support the above statement. There is a positive relationship between business continuity and SCD on all the results in those columns. Business continuity planning has a significant and positive influence on mitigation of supply chain disruption in humanitarian relief efforts.

The authors used the organizational structure, operational experience on the organization in the humanitarian business and main source of the organization as control variables. In the case of

supply chain disruptions, business continuity planning can help humanitarian organizations to identify potential risks and develop strategies to address them.

Reducing the effects of disruptions, business continuity assists humanitarian organizations in evaluating the possible effects of interruptions on their supply chains and developing mitigation plans. Finding substitute routes and means of transportation is part of the strategies that can be followed. Business continuity planning can enhance responsiveness, that is having a business continuity plan enables humanitarian organizations to react to disruptions as quickly as possible and cut down on the amount of time needed to recover from them. Time is of the essence in emergencies, therefore this is especially crucial. Accountability is ensured by a business continuity planning, which holds humanitarian groups responsible to both their donors and the impacted population. They can demonstrate that they are doing proactively to lessen the effects of disruptions by putting a plan in place. It is crucial to underline the significance of business continuity planning for humanitarian organizations' supply chains. Organizations can respond to disruptions more effectively, lessen their effects, and guarantee that vital resources and services continue to be provided to the affected population by implementing a business continuity plan.

Some related studies, Guntuka et al. (2023) found partial support that business continuity management plan will have a negative moderating effect between complexity and recovery time.

## 5. Conclusions and limitation of the study

This study focused on how business continuity assisted in containing the damaging effects of supply chain disruptions in the face of Cyclone Idai disaster. Based on the above findings, this study concludes that business continuity planning has significant and positive influence on mitigation of supply chain disruption in humanitarian relief efforts. Specifically, at 5% level of significance the results show that business continuity has a negative effect of about 8%. That means, a marginal change in business continuity will result in supply chain disruption by about 8%. Therefore, it is prudent that humanitarian organizations and even commercial organizations set up vibrant business continuity planning processes before, during and after a disaster occurrence. Humanitarian organizations that implemented business continuity plans were resilient to supply chain disruption caused by Cyclone Idai.

This research contributes to the body of knowledge on business continuity and supply chain disruption. It is to the best knowledge of these researchers that studies on the influence of business continuity on organizational damage containment during supply chain disruptions were limited. This study offers theoretical contribution on Business Continuity role in improving organizational damage containment. This study may also be useful to practitioners such as humanitarian supply chain managers in coming up with strategies in case of supply chain disruption threats. On the other hand, the researchers recommend that future studies must be extended to other disasters in the country and beyond. This study has a major influence on organizational policies, especially for organizations that are directly involved with the supply of goods and services in disaster or shock affected areas. Business continuity planning assists humanitarian organizations in mitigating the severity of disruptions during disaster periods. We expect similar studies to be done on slow onset disasters like droughts. This study has shaded light on the fast onset disasters.

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### Disclosure statement

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**Appendix  
QUESTIONNAIRE**

**BUSINESS CONTINUITY AND SUPPLY CHAIN DISRUPTIONS: A CASE OF CYCLONE IDAI IN ZIMBABWE: SURVEY QUESTIONNAIRE**

**Section A: Organizational Characteristics**

National	01
International	02

**1. State whether your organization is national or international (Origin)**

0 ≤ years ≤ 5	01
6 ≤ years ≤ 15	02
Years ≥ 16	03

**2. Number of years you were in humanitarian operation**

Government department	01
Local government institutions	02
Non-governmental organizations	03
UN agencies	04
Private companies	05

**3. Nature of organization**

**Section 2: Impact of supply chain disruptions on operations**

Estimate the extent of impact caused by supply chain disruptions during Cyclone Idai in Zimbabwe.

*In the following section, please indicate how did the reported disruption negatively affect (directly or indirectly) your business unit on the following dimensions in the short-run.*

Statement	Please tick against relevant response				
	1	2	3	4	5
2.1 Overall efficiency of operations					
2.2 Lead time for delivery					
2.3 Purchasing costs for supplies					
2.4 Employee attendance					
2.5 Level of production output					

(1=Not at all 2= Slightly 3=Average 4=Significant 5=A great deal)

**Section 3: Explore Business Continuity management strategies used by players to mitigate supply chain disruptions during Cyclone Idai in Zimbabwe.**

For the following question use the below scale to respond to the questions and tick against the chosen number:

(1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree)

Statement	Please tick against relevant response				
	1=SD	2=D	3=N	4=A	5=SA
3.1 My organization's business continuity plan(s) are exercised(tested) on a regularly scheduled basis.					
3.2 My organization has conducted a physical site assessment(s) to identify risks.					
3.3 My organization has a detailed plan that outlines how to communicate with its employees in the event of a disaster.					
3.4 My organization provides a mechanism for employees to contact during a disaster or severe outage situation.					
3.5 My organization has established recovery time objectives (RTOs) for its critical business functions.					
3.6 My organization has established recovery point objectives (RPOs) for its critical data.					
3.7 Results of business continuity exercises (testing) are reported to the senior management of my organization					
3.8 I believe that my organization invests enough financial resources in business continuity planning to enable the organization to recover quickly and effectively in the event of a disaster or severe outage situation					
3.9 I believe that my organization invests enough human resources (employees supporting business continuity planning) to enable it to recover quickly and effectively in the event of a disaster or severe outage situation.					