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**Resilience in Humanitarian Supply Chains: A Focus on the
Procurement Decisions**

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RESILIENCE IN HUMANITARIAN SUPPLY CHAINS: A FOCUS ON THE PROCUREMENT DECISIONS

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Abstract

This thesis looks into how the need for resilience in humanitarian aid supply chains influences procurement strategy decisions. Increasingly, the need for resilience in supply chains has become undoubted and management researchers have prescribed diverse ways of pursuing it; not only so that supply chains may be better prepared to avoid, respond and recover from disruptions, but to also provide them with competitive advantage.

Considering that the procurement function has gone beyond a simple business function to include the strategic management of resources and suppliers when pursuing supply chain resilience (SCR), the role of procurement decisions cannot be understated, especially as suppliers could become significant sources of disruptions. This is even more pronounced in humanitarian supply chains where disruptions do not only result in the loss of limited resources but sometimes human lives as well. Due to this criticality for resilience in humanitarian supply chains and the limited research here particularly from a procurement perspective, this research collects qualitative data through semi-structured interviews and document analysis from 8 UK-based humanitarian organisations. The data is analysed to identify how these organisations pursue SCR formative elements from a procurement perspective and also how pre-contract procurement decisions relative to inter-organisational interactions are guided by the need for resilience.

Findings show that cross-training, flexible contracting, and financial resilience are critical to attaining SCR in humanitarian supply chains as they influence many of the identified formative elements. Differences are identified in the relationships between decisions taken under procurement strategy towards resilience from those in commercial supply chains, with monetary value and donor requirements being major influencing factors. Donor influence on procurement decisions in humanitarian organisations is identified to positively influence multiple formative elements including risk avoidance, sustainability, decision making and culture. It however inhibits flexibility and agility.

Contributions from this research include the presentation of a theoretical framework on procurement strategy decisions towards achieving SCR. This is then empirically tested in UK humanitarian supply chain context and a simple but useful framework to aid managerial decision making in the sector is provided.

Keywords: Supply chain resilience; procurement decision making; humanitarian logistics; donor influence.

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List of Acronyms

ABS - Association of Business School

C_1 - Country 1

C_2 - Country 2

C_3 - Country 3

C_4 - Country 4

CAQDAS - Computer Assisted Qualitative Data Analysis Software

CEO - Chief Executive Officer

COVID-19 - Coronavirus 2019

CSCMP - Council of Supply Chain Management Professionals

CSR - Corporate Social Responsibility

CSSE - Centre for Systems Science and Engineering, Johns Hopkins University

Emp_1 - Employee 1

Emp_2 - Employee 2

Emp_3 - Employee 3

GRI - Global Reporting Initiative

HRM - Human Resource Manager

IT - Information Technology

OECD - Organisation for Economic Co-operation and Development

Org_1 - Organisation 1

Org_2 - Organisation 2

Org_3 - Organisation 3

Org_4 - Organisation 4

Org_5 - Organisation 5

Org_6 - Organisation 6

Org_7 - Organisation 7

Org_8 - Organisation 8

PC - Personal Computer

RFP - Request for Proposal

RFP - Request for Proposals

RFQ - Request for Quote

RQ - Research Question

SARS - Severe Acute Respiratory Syndrome

SCM - Supply Chain Management

SCR - Supply Chain Resilience

UK - United Kingdom

UN - United Nations

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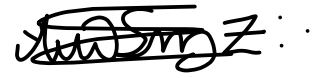
A massive thanks to my mother, Mrs Elizabeth Sawyerr for your support, prayers and encouragement. I could not have done this without you. To my late father, Mr John Kingsley Sawyerr, I am saddened you are not here to see this accomplishment. However, I do know that wherever you are, you are proud.

This research would not have been possible without the support of the participants and organisations. I am truly appreciative of your time and insight.

Finally, I dedicate this thesis to my loving wife Monique, whose daily encouragement and support have been invaluable for this research.

Declaration

I declare that the material contained in this thesis is my own work.

A handwritten signature in black ink, appearing to read 'E. Sawyerr', followed by a colon and two dots.

Emmanuel A. Sawyerr

1. Introduction

1.0 Introduction

This chapter introduces the thesis by establishing the context for this study, outlining the motivations for the research, and highlighting the main issues surrounding the fields of humanitarian logistics and supply chain management and supply chain resilience (SCR). The objectives of the research and the research question are indicated. The utilised research approach, contribution to knowledge and an outline of the overall structure of the thesis conclude the chapter.

1.1 Research Motivation and Justification

Due to climate change and the increase in global population, the impacts of both slow-onset disasters (such as famines, drought, political crises) and sudden-onset disasters (such as earthquakes, hurricanes, epidemics, coup d'états) in the past couple of decades, are higher compared to previous decades (Apta, 2009; Guha-sapir et al., 2016; Vega and Roussat, 2015) - even though the number of unique occurrences has marginally declined.

In about the same period, the vulnerability of organisational supply chains has increased quite considerably because of increasing pressures arising from globalisation including increased outsourcing and heightened competition not just from local but also global competitors (Sawyer and Harrison, 2019). Extreme application of some supply chain principles such as lean operations, supplier base reduction and outsourcing to low-cost countries for cost optimisation has also contributed to this increased exposure of supply chains to disruptions (Norman and Jansson, 2004; Remko, 2020; Scholten et al., 2019; Wagner and Bode, 2006).

The exponential rate of the spread of the novel coronavirus, COVID-19 since the first confirmed case in Wuhan, China late 2019 (The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team, 2020) lends credence to the increased global vulnerability to all forms of disasters. Only a couple of months after its first case confirmation, cases skyrocketed globally to almost 2.4 million in over 185 countries and territories as of 19th April 2020 (CSSE, 2020). This had significant implications on businesses such as Nike which locked down its European headquarters in the Netherlands after an employee was infected (Deutsch, 2020). The Italian football club, Juventus also stopped all training sessions and placed its Under-23 players in

quarantine after three players from a Serie C side Pianese, tested positive for the Coronavirus (May, 2020). Numerous airlines suspended or modified their flights (Darlak et al., 2020). The stock market suffered a slam (Kapadia, 2020) while the Organisation for Economic Co-operation and Development (OECD) warned of a possible halving of its initial global economic growth forecast due to the coronavirus (Giles, 2020). A little over a year later (as of 23rd February 2021), there have been 111,966,689 global cases with 2,480,465 deaths in 192 countries and regions (CSSE, 2021), with the globe facing the deepest economic recession in nearly a century (OECD, 2020).

This, along with the known effects on supply chains in the aftermath of British Petroleum's 2010 oil spillage in the Gulf of Mexico, the fire in Phillips' New Mexico plant which resulted from a lightning strike in 2000, and the volcanic eruptions of Iceland's Eyjafjallajökull in 2010, has made the need for increased resilience of supply chains undisputed (Christopher and Peck, 2004; Oke and Gopalakrishnan, 2009; Wagner and Bode, 2006). This is true not only for commercial supply chains but for humanitarian ones as well.

When disasters occur, humanitarian organisations respond to the needs of the affected people by providing emergency relief (to those affected by sudden-onset disasters) and then continuous aid (to those affected by slow-onset disasters as well as those recovering from sudden-onset disasters) (Bohling, 2014; Cozzolino, 2012; Komrska et al., 2013; Kovács and Spens, 2007). In delivering this aid, logistical efforts account for up to 80% of these humanitarian operations (Kovács and Spens, 2007). This is because, for both ongoing crises and emergency ones, supply chains facilitate the delivery of relief items (including food, portable water, clothing and also financial aid) to the vulnerable as well as the equipment that may be required to set up shelters, health units, boreholes and so on.

However, the success of humanitarian interventions is hinged on the implementation of a resilient supply chain that can deliver the needed resources to those in need in the right place and in a timely manner (Boin et al., 2010). For a supply chain to be resilient, it must be ready (through anticipation and mitigation planning), robust (maintain an acceptable level of performance in spite of a disruption), able to recover after disruptions and adaptable (learn and develop new capabilities) (Sawyer and Harrison, 2019). A supply chain may be vulnerable to risks and uncertainties from within and without as well as in its downstream, upstream and within the focus company (Christopher and Peck, 2004; Giunipero and Aly Eltantawy, 2004). Exposures originating from its supply-side have adverse effects on the overall resilience of the supply chain (Wagner and Bode, 2006; Zsidisin and Wagner, 2010).

In the case of humanitarian supply chains, this is further amplified considering that they are themselves not producers of the materials and some of the services they provide. Unsurprisingly, procurement activities in these supply chains are estimated to account for 65% of expenditures (Blecken and Hellingrath, 2008; Iakovou et al., 2014) – which further accentuates its criticality not only in delivering relief supplies to the vulnerable but also for efficient use of very limited resources. Aid organisations further have to deal with the uncertainties associated with the ability of suppliers to meet the high demand unpredictability (in terms of location, type, time and size), the lack of centralised data (Beamon, 2004; Long and Wood, 1995; Tomasini and van Wassenhove, 2009) and the participation of numerous supply-side actors where clarity on linkages between them is limited (Beamon and Balcik, 2008; Scholten et al., 2014). Things are made even more complex for these organisations because they do not usually generate much funding on their own. They have to rely on raising funds from the general public, governments, and donor agencies, all of whom have different motives and demands.

Mitigation of risks sourced from the supply-side of humanitarian supply chains is therefore crucial to their overall resilience and the success of any humanitarian operation. This thus means that aid organisations have to maintain a good public reputation and do their best to meet the local and global requirements of their donors and host governments in order not to risk losing income and/or risk failure to reach the vulnerable. Further, they also have to make sure that their suppliers are not engaged in unsustainable practices such as modern slavery, money laundering, pollution, and the financing of terrorism.

Considering these complexities, the uniqueness of humanitarian supply chains and the heightened impact of disasters in recent times, research to find out practical means by which these supply chains could be better secured against upstream vulnerabilities is urgently needed since disruptions result not only in resource wastage but sometimes in the loss of human lives (Tatham and Kovács, 2010).

1.2 Research Objectives and Question

The overarching aim of this research is to contribute to theory building in two streams of literature namely, supply chain resilience and humanitarian supply chain management, both of which are relatively recent. This will be done from a procurement perspective, particularly in the setting up and management of inter-organisational relationships between humanitarian organisations and their suppliers. To be able to propose useful means by which humanitarian

aid organisations can improve on the resilience of their supply chains, current practices with regards to their procurement activities have to be reviewed. The following objectives, therefore, have been determined to facilitate the attainment of this research's aim:

1. To determine which supply chain resilience formative elements influence procurement decisions in humanitarian supply chains.
2. To determine the decision areas in humanitarian procurement aimed at creating supply chain resilience, the relationships between them and empirically ascertain whether they align with what is provided in extant literature.
3. To provide an appropriate procurement strategy decision-making framework aimed at incorporating resilience building for humanitarian supply chains.

With these in mind, the research question for this study was developed through an extensive and iterative engagement with the literature. It became obvious that there are gaps to be filled in literature especially with regards to empirical ascertainment of how decisions in the procurement function of humanitarian organisations are informed from a resilience creation perspective (Jahre, 2017). Thus, it is anticipated that the answer to the question below will provide the needed knowledge to fill some of the gaps in the literature.

RQ: How does the need for resilience impact procurement strategy decision making in humanitarian supply chains?

The formulation of the research question suggests an assumption that organisations, whether intently or inadvertently, incorporate measures to guide their procurement decision making to ensure some amount of resilience. If so, the process of answering this question through this research will reveal particular actions or guidelines instituted to guide procurement decisions, why actions are in place and the classification of such actions as belonging to specific decision areas or meant to enhance certain supply chain resilience formative elements. This process should lead to the attainment of the objectives of this research.

The next section briefly introduces the research approach adopted to facilitate the answering of the research question.

1.3 Research Approach

At the micro-level, empirical research on procurement's role in influencing supply chain resilience in humanitarian supply chains is very limited. Notwithstanding, even at the macro-level

of the overall studies of supply chain resilience where empirical research is increasing, more is required – especially, field studies and the use of secondary data (Kamalahmadi and Parast, 2016; Kochan and Nowicki, 2018). Hence, seeking to answer the research question, there is the need to engage practitioners in humanitarian organisations and analyse their policies, guidelines, reports, codes of conduct and similar documents, to understand the reasoning behind their decisions in a procurement strategy.

To this end, multiple case studies composed of the collection and analysis of organisational documents and conducting in-depth semi-structured interviews is a useful research method. This research adopts this approach to investigate 8 humanitarian organisations based in the United Kingdom (UK). An abductive thematic analysis (Carson et al., 2001; Saunders et al., 2009) is used to analyse the data collected towards achieving the aim and objectives of this research.

1.4 Originality and Contribution to Knowledge

A study of this nature is expected to make an original contribution to knowledge (Phillips and Pugh, 2005). Guetzkow et al. (2004) highlight 7 generic types of originality which were original approach, topic, theory, method, data, results or an understudied area. Phillips and Pugh (2005) provide 15 different definitions of originality including, but not limited to writing a major piece of new information for the first time, a continuation of a previously original work, testing somebody else’s idea, carrying out empirical work, synthesis or adding to knowledge in a way that has not been done prior and taking a particular technique and applying it in a new area. It may thus be concluded that originality may be expressed through novelty and/or by contributions to existing knowledge.

This research makes theoretical, empirical, methodological and practical contributions to knowledge. The study provides empirical data that shows the effects of procurement strategy decisions on the overall resilience of supply chains. This is done in the area of humanitarian supply chain resilience research. It delves deep into how humanitarian organisations pursue supply chain resilience and implement identified formative elements. It further explores donor influence on humanitarian supply chain procurement and how this impacts resilience. To the best of the author’s knowledge, this research serves as the first empirical study into UK-based humanitarian organisations exploring procurement’s role in enhancing supply chain resilience. The research identifies – through a rigorous integrative literature review process – and coalesces pre-contract award procurement decision areas targeted at improving resilience, into a conceptual

framework and explores its viability empirically. The framework can be useful for both research and teaching purposes.

Methodologically, this research approaches decision making from a qualitative perspective rather than the quantitative approach that has dominated research on decisions in humanitarian supply chains. The use of multiple case study approach using interviews and documentary analysis in an interpretivist paradigm provides fresh insight into the research phenomenon in this area of supply chain management research.

For managerial implications, this research provides useful new insight into how various UK-based humanitarian organisations pursue SCR. This will provide a better understanding of the need for measures to be put in place to secure their supply chains in terms of procurement and how to do so with evidence from other organisations, backed by literature. The proposed decision-making framework can aid in guiding procurement strategy decisions to ensure that humanitarian supply chains are more resilient. This will be particularly useful for relatively small humanitarian organisations that may lack needed financial and human resources.

The next section provides an overview of the structure of this thesis.

1.5 Structure of the Thesis

A brief overview of this thesis' structure and how the objectives of the research are attained is provided. The thesis is organised into 7 chapters as presented below:

Chapter 1: The introductory chapter presents the research motivation and why it is very important both in terms of its research and managerial implications. The research question and objectives of the research as well as the chosen approach to the research are indicated and the overview of the thesis structure is laid out.

Chapter 2: Useful research has to fill (a) gap(s) in the current state of knowledge on a given phenomenon. To identify the relevant gaps, an extensive literature review is required. This is done in the second chapter of this thesis. The two broad themes for this research, namely humanitarian logistics and supply chain management and supply chain resilience along with the procurement function's role in it are discussed. Procurement decision areas linked with supply chain resilience when it comes to buyer-supplier interactions before contract award are presented as indicated in literature. This partly addresses part of the second objective of this research. With

this, the scope of the research is defined, the research's conceptual framework is presented and the gaps that need to be filled are highlighted.

Chapter 3: This research's ontological and epistemological positions are presented in chapter 3. The research design and data collection methods are indicated. A multiple holistic case study approach employing two qualitative data collection methods (semi-structured interviews and documentary analysis) is adopted and justified here. The research's data analysis method, which is thematic analysis, is discussed and the criteria for ensuring quality data collection and analysis is presented.

Chapter 4: The 8 cases understudied in this research are presented in this chapter. The data collected are presented and discussed in the light of both predetermined themes as well as emergent ones from the data analysis.

Chapter 5: Comparison to identify similarities and differences in the various cases is discussed here through cross-case analysis. The overarching findings and analysis of the research with regards to the second objective of this research are presented in chapter 5. A discussion of how UK-based humanitarian organisations implement supply chain resilience formative elements – especially from a procurement perspective and the impact of donor influence across the 8 studied organisations are discussed in the light of extant literature.

Chapter 6: In this chapter, the findings of the research as regards to its three objectives are presented. An analysis of the findings from collected data is presented to indicate emerging themes which are not presently captured in literature, thereby highlighting some differences between humanitarian organisation's approach to procurement decision making as regards SCR and that of commercial supply chains. Then, based off of the prevailing evidence, a decision-making framework is proposed to aid the enhancement of resilience in humanitarian supply chains.

Chapter 7: The final chapter of the thesis presents a summary of the findings of the research. It highlights the research's theoretical and managerial contributions and implications and points out the limitations of the research. Recommendations for future work are then discussed to conclude the thesis.

1.6 Summary

This chapter has provided the background information on the motivation and justification for this research and the research question and objectives of this study. The contribution to knowledge, thesis structure, and chapter summaries have been explained as well. The next chapter will review the relevant literature and thereby provide more context as well as establish the relevance of this research.

2. Literature Review

2.0 Introduction

This chapter reviews the relevant literature in order to set the boundaries for this research. It discusses the germane concepts critical for the study and identifies gaps in the literature. This is vital if the aim and objectives as indicated in the introductory chapter are to be achieved. For research to be rigorous and exhaustive, it must be properly situated in existing knowledge (Seuring et al., 2005). Therefore, this chapter begins with a quick overview of the use of ‘supply chain management’ and ‘logistics’ historically in academic research and then proceeds to establish how these two terms are applied in this research both in the context of commercial supply chain management and in humanitarian supply chain management. A review of supply chain resilience, vulnerability, risks and uncertainties and disruptions then follows. Supply chain formative elements are introduced and then procurement in SCR and how it has been discussed in literature under the various formative elements is presented. Supply-side risks and associated decision areas targeted at resilience creation come after that. Here, an amalgamation of supply-side decision areas aimed at building resilience before supplier contracting as discussed in literature is captured in a framework (Figure 2.5). The chapter then ends by pointing out the gaps in literature and defines the research framework that trammels the boundaries for the empirical research.

2.1 Supply Chain Management

Keith Oliver, the British logistician who introduced the term ‘Supply chain management’ (Blanchard, 2010; Handfield and Nichols Jr, 1999) defined it as: *“the process of planning, implementing, and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible. Supply chain management spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point-of-origin to point-of-consumption”* (Oliver and Webber, 1982: 43). Supply chain management has therefore been researched academically for less than four decades, even though the ideas posited within its studies are not entirely new. For instance, Forrester (Forrester, 1958: 37) had indicated that *“the flows of information, materials, money, manpower, and capital equipment”* and how they interacted with each other were going to provide the foundation for the effects of investment choices, policies, decisions and organisational forms. Peter Drucker’s 1962 seminal work ‘The economy’s dark continent’ is also another of such earlier studies (Fernie et al., 2010).

A critique of Oliver's definition reveals significant similarities with the prevalent definition of logistics at the time. For example, Magee's (1968: 3) definition of logistics was that it "*is the process of monitoring and managing the flow of materials and products from its sources to its point of consumption*". This overlap in definition, therefore, created a challenge in differentiating Logistics and its management from supply chain management (SCM) and has resulted in four different conceptual perspectives namely traditionalist, re-labelling, unionist and intersectionist (Larson and Halldórsson, 2004). There is, however, an overarching consensus in extant literature in favour of the unionist perspective (especially for commercial supply chain management) which suggests Supply Chain Management as a broader concept of which logistics and its management are constituent. This appears not to be the case for humanitarian supply chain management which aligns more with the re-labelling perspective as will be seen in Section 2.2.

In alignment with the predominant unionist view, the definition of supply chain management adopted for this work is that of the Council of Supply Chain Management Professionals (CSCMP, 2018): "*Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies.*"

Today, the supply chains of many organisations are no longer linear (that is, involving a series of individual firms) but have evolved into a network of various supply chains interlinked with numerous customers and different suppliers (Mills et al., 2004). Hence, the supply chain is defined as "*the network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate consumer*" (Christopher, 2011: 13). These supply networks have also taken a global form with companies outsourcing various assets and functions to suppliers all over the world. Sourcing has also become strategic and has a significant impact on the profitability of firms (Aydin et al., 2014). Benefits to businesses from the management of these supply chains include cost reduction, superior value creation, customer satisfaction and the resultant competitive advantage (Christopher, 2011; Christopher and Peck, 2004; Heckmann et al., 2015; Lee, 2002; Van der Vorst and Beulens, 2002). These changes have however not only produced positive results; they have also introduced greater vulnerability to various disruptions in the supply chains thereby justifying the need to introduce resilience into them. Before

discussing supply chain resilience, the next section presents insights into humanitarian supply chain management, highlighting its uniqueness and similarities with commercial supply chains.

2.2 Supply Chain Management in The Humanitarian Aid Sector

Academic research into supply chain management in the humanitarian aid sector began gathering momentum in the middle of the first decade of the 21st century (Altay and Green, 2006; Beamon and Kotleba, 2006; Kunz and Gold, 2017; Natarajathinam et al., 2009) with seminal works such as Thomas and Kopczak (2005), Van Wassenhove (2006) and Oloruntoba and Gray (2006). This, some have attributed to the 2004 Sumatra earthquake and tsunami (Kovács and Spens, 2007; Thomas and Kopczak, 2005; van Wassenhove, 2006) where a public acknowledgement of the critical role humanitarian logistics plays in effective disaster relief was made. Following this, Kovács and Spens (2007) further suggested that as much as 80% of humanitarian aid operations were logistics efforts. The attribution of the failure of the humanitarian response to Hurricane Katrina to ineffective logistical response was therefore unsurprising (Holguín-Veras et al., 2007; Scholten et al., 2014).

Until this interest from academia, the majority of the research was in practitioner journals (Leiras et al., 2014). Once interest spiked in academic research, works on it have increased in relevance and quantity (Jahre, 2017; Leiras et al., 2014; Natarajathinam et al., 2009). In 2006, Beamon and Kotleba (2006) bemoaned the lack of dedicated journals for humanitarian logistics but this was addressed only 4 years later with the introduction of the Journal of Humanitarian Logistics and Supply Chain Management (Kovács and Spens, 2011).

The most cited definition for Humanitarian Logistics albeit (some have very minor variations) is that of Thomas (2004: 64) which says “*the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials as well as related information from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people. The function encompasses a range of activities, including preparedness, planning, procurement, transport, warehousing, tracking and tracing, customs and clearance*” (Apta, 2009; Bag, 2016; Barve and Yadav, 2014; Cozzolino, 2012; Heaslip and Barber, 2016; Overstreet et al., 2011; Thomas and Mizushima, 2005; Tomasini and van Wassenhove, 2009; van Wassenhove, 2006).

As may have been observed in the paragraphs above, humanitarian supply chain management and humanitarian logistics have been used interchangeably in literature (Barve and Yadav, 2014;

Ertem and Buyurgan, 2013; Heaslip and Barber, 2016; Howden, 2009; Overstreet et al., 2011) which thereby suggests that Larson and Halldórsson's (2004) re-labelling perspective is the dominant view in humanitarian literature in contrast with the unionist view for commercial supply chains. Authors such as Van Wassenhove (2006), Thomas (2004), Tomasini and Van Wassenhove (2009) and Overstreet et al. (2011) argue for looking at things more from the Unionist perspective since the relabelling perspective has in some sense hindered humanitarian organisations from gleaning the full benefits of supply chain management principles as used in their commercial counterparts. Van Wassenhove (2006) even suggests humanitarian organisations to be 15 years behind those in the commercial sector. Tatham and Pettit (2010) further identify an inertia to employ supply chain managers at the strategic level as opposed to functional level logisticians in humanitarian aid organisations because of this perspective. Discussions in the subsequent sections of this study therefore align with the unionist view here as it was for the commercial supply chains.

Considering the nature of humanitarian supply chain management, there needs to be a discussion of disaster management in order to properly appreciate the discussions therein. The next section provides an overview of this.

2.2.1 Overview of Disaster Management in Humanitarian Supply Chain Management Literature

The International Federation of Red Cross and Red Crescent societies classify any “*sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources*” as a disaster (Natarajarathinam et al., 2009: 537; Overstreet et al., 2011: 115).

The traditional classification of disasters has been based on two major characteristics namely speed of onset (either sudden or slow) and the source (either natural or man-made) (Apta, 2009; Dubey and Gunasekaran, 2016; John et al., 2012; Overstreet et al., 2011).

	Natural	Man-made
Sudden-onset	Earthquake Hurricane Tornadoes	Terrorist Attack Coup d'Etat Chemical leak
Slow-onset	Famine Drought Poverty	Political Crisis Refugee Crisis

Figure 2.1 Disaster Classification

(Source: Van Wassenhove, 2006)

Pertinent management of disasters requires an understanding of these classifications so that planning, preparation and response to the disasters can be aligned accordingly.

2.2.1.1 The Disaster Management Cycle

Disaster management has been commonly discussed as the activities involved in several phases of a management cycle (John et al., 2012). There is not a consensus on how many phases exist even though the predominant views are between those who suggest three-phases and four-phases (Altay and Green, 2006; Cozzolino, 2012; Kovács and Spens, 2007; Long, 1997; Pettit and Beresford, 2005; Thomas, 2003; van Wassenhove, 2006).

Proponents of the three-phased disaster management cycle include Kovács and Spens (2007), Listou (2008), Jahre and Jensen (2010), Heaslip et al. (2012), Chakravarty (2014), Dubey and Gunasekaran (2016) and Heaslip and Barber (2016). On the other hand, those aligned with the four-phased include Altay and Green (2006), Banomyong et al. (2017), Boin and 'T Hart (2003), Cozzolino (2012), Dowty and Wallace (2010), Dubey et al. (2014), Elleuch et al. (2016), Holguín-Veras et al. (2012), John et al. (2012), Kunz and Gold (2017), Leiras et al. (2014), Natarajarathinam et al. (2009), Scholten et al. (2014), Sheffi and Rice (2005), van Wassenhove (2006) and Waugh (1999). Having only a slight variation in the names of the phases even within papers with similar classifications, the most significant difference between these two perspectives is the exclusion of the mitigation stage in the three-phased school of thought. The earlier and more cited of the two classifications however is the four-phased cycle which was proposed by the National Governors' Association Centre for Policy Research in 1979 which listed the four phases as mitigation, preparedness, response and recovery (Dowty and Wallace, 2010).

The Mitigation phase is primarily concerned with identifying and assessing possible sources of disruptions and prescribing activities to reduce or eliminate those disruptive sources (Decker et al., 2013; Howden, 2009; Natarajarathinam et al., 2009). It is at this stage that learning and applications of previous experiences are of most importance to aid in the risk management processes carried out in this phase and to inform activities in the subsequent phases of the cycle (Decker et al., 2013; van Wassenhove, 2006).

The next phase is the Preparedness phase. It involves the development of a response plan, defining the roles of all stakeholders in the response phase, organisational and community capability development as well as stock prepositioning in predetermined locations (Decker et al., 2013; Natarajarathinam et al., 2009; van Wassenhove, 2006). These first two phases (described by Van Wassenhove (2006) as the pre-disaster phases) are critical to disruption impact avoidance or reduction (Natarajarathinam et al., 2009).

The Response phase which usually lasts a few weeks (Howden, 2009) consists of the activities initiated in the immediate aftermath of a disaster (Decker et al., 2013; Natarajarathinam et al., 2009). At this stage, the supply chain management is typically in a push mode where relief items are 'pushed' into the disaster-affected location (Long and Wood, 1995).

The final phase of the disaster management phase is the Recovery phase. It is sometimes referred to as the rehabilitation phase (Heaslip and Barber, 2016; Kunz and Gold, 2017) or reconstruction phase (Ghasemian Sahebi et al., 2017; Kunz and Reiner, 2012; Tabaklar et al., 2015; Wild and Zhou, 2011). Its duration ranges from short-term (a few months) to long-term (several years) (Decker et al., 2013; Holguín-Veras et al., 2012; Natarajarathinam et al., 2009). In this phase, the supply chain management transitions from 'push' mode into 'pull' mode and it begins to resemble a commercial supply chain a lot more where demand dictates supply and sourcing progressively gets local (Decker et al., 2013; Kovács and Spens, 2009; Long and Wood, 1995; Oloruntoba and Gray, 2006). Here, the goal is to ensure the community affected by the disaster goes through structural and infrastructural rebuilding to ensure a return to normalcy (Altay and Green, 2006; Kunz and Gold, 2017; McLachlin et al., 2009). This phase hence effectively closes the cycle of disaster management by feeding into the mitigative stage.

2.2.1.2 Emergency Relief versus Continuous Aid

Humanitarian supply chain activities in response to disasters are broadly classified under two streams namely: Emergency relief and continuous or development aid (Bohling, 2014;

Cozzolino, 2012; Komrska et al., 2013; Kovács and Spens, 2007). Emergency relief supply chains are kicked into action immediately after a disaster strikes and are usually in response to sudden on-set disasters. Since their focus is to minimize the immediate dire effects of such disasters, they usually last shorter periods as compared to continuous aid supply chains (Kovács and Spens, 2007; Kunz and Reiner, 2012).

Continuous aid supply chains in contrast are usually in response to slow-onset disasters and therefore tend to be long-term in nature, sometimes spanning for over half a decade (Apta, 2009; Bohling, 2014; Komrska et al., 2013; Kunz and Reiner, 2012). Further, in the recovery phase of the disaster management cycle, the supply chain also goes through a difficult transition from emergency relief into a continuous aid paradigm that focuses on building local capacity (Kunz and Gold, 2017; van Heeringen, 2010). This transition usually requires the Linking Relief, Rehabilitation and Development (LRRD) programme, which manages the changeover from emergency relief focused on the short term to a more sustainable and long-term development aid (Kunz and Gold, 2017; Maon et al., 2009; van Heeringen, 2010).

Even though the conceptualisation of these two streams is quite clear, the names given to them present significant confusion in the literature. Emergency relief is sometimes described as disaster relief (Kovács and Spens, 2007; Kunz and Reiner, 2012; van Heeringen, 2010). The challenge with such a description however is that it is ambiguous considering the definition of disasters. Those suffering from slow-onset and protracted disasters and are receiving aid are also getting relief from disasters. This hence makes it inappropriate to refer to only relief from sudden-onset disasters as disaster relief. The same analogy applies to those who refer to continuous (development) aid as humanitarian relief such as Apte (2009). In this study, the terminology to be used will be emergency relief and continuous aid since these better align with the phenomena they describe.

2.2.2 The Humanitarian Supply Chain

Humanitarian organisations are guided by their principles of humanity, neutrality and impartiality (Apta, 2009; van Wassenhove, 2006). The design and operationalisation of their supply chains is no different. The goal of traditional supply chains has been to deliver quality and satisfaction to the end customer while reducing cost and improving profits (Christopher, 2011; Lee, 2002; Van der Vorst and Beulens, 2002). For humanitarian supply chains, a major cost to be reduced is that which is associated with the losses incurred by needy persons in the aftermath of a disaster

due to delays in an irresponsible supply chain (Balcik and Beamon, 2008; Holguín-Veras et al., 2012; John et al., 2012). These losses here could sometimes include human lives (Dubey and Gunasekaran, 2016; Tatham and Kovács, 2007). Therefore, the overarching goal to deliver value and satisfaction to the end customer in this case is to reduce the loss of lives and assuage suffering (Apta, 2009; Beamon and Balcik, 2008; Thomas, 2003; van Heeringen, 2010) by the movement of food, aid kits (including healthcare materials), finances, equipment, information and personnel from supply sources to the affected population (Barbarosoğlu et al., 2002; Ernst, 2003; John et al., 2012; Kovács and Spens, 2007). Consequently, the overall impact and performance of humanitarian supply chains are evaluated in terms of lives saved and the effectiveness of the aid (Dubey et al., 2014; Matopoulos et al., 2014; Pettit and Beresford, 2005; Trunick, 2005).

The humanitarian supply chain has suffered significant criticism in terms of challenges with stock pre-planning, financial inefficiencies and the lack of coordination and information (Blecken, 2009; Byman et al., 2000; Haavisto and Kovács, 2014; Long, 1997; Long and Wood, 1995; McEntire, 2002; McEntire and Myers, 2004; Tomasini and van Wassenhove, 2009; van Wassenhove, 2006). They are however well-famed for their agility (Oloruntoba and Gray, 2006) and the management of large-scale risks (Cozzolino, 2012). Within the humanitarian supply chain, the key actors may include:

- Governments (who may provide services through the police, military or act as a donor or as a facilitator)
- Aid agencies
- Donors
- Non-Governmental organisations (both Local and International) and
- Private sector companies (particularly Logistics Service Providers) (Cozzolino, 2012; Dubey et al., 2014; Dubey and Gunasekaran, 2016; Ertem et al., 2010; Kaatrud et al., 2003; Kovács and Spens, 2007).

Even though these are considered as the key players, the people in general – those who Dubey et al. (2014) refer to as ‘common people’, may also play some role in the supply chain either as donors of aid material or as volunteers who help alleviate the suffering of those affected. Even though the operational characteristics of humanitarian aid supply chains may differ based on the type of disaster and the actors involved, a typical flow of supplies is as represented in Figure 2.2. Stock pre-positioning and transportation occur before and after disasters occur respectively while procurement begins before disasters strike and continues afterwards (Balcik et al., 2010).

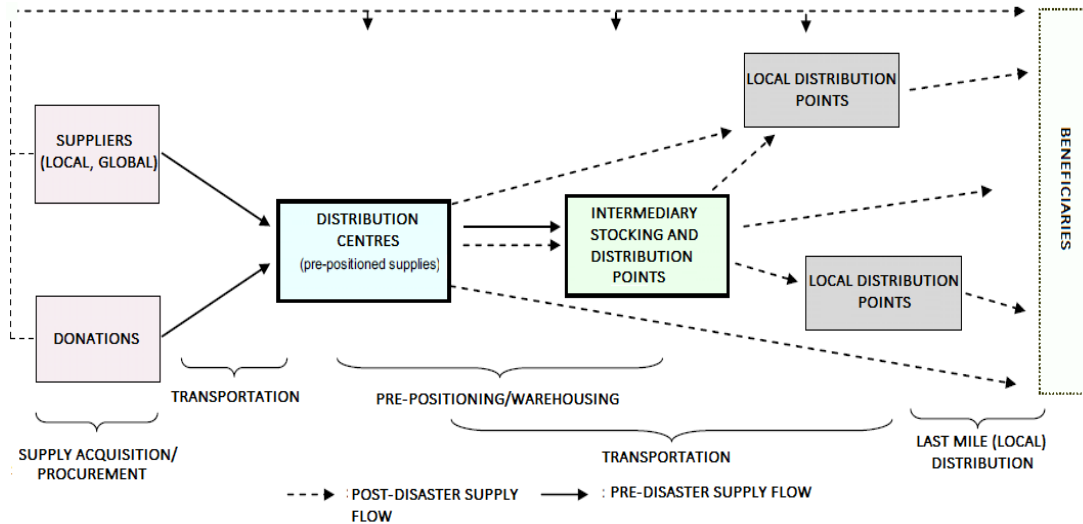


Figure 2.2 Humanitarian Supply chain

(Source: Balcik et al., 2010)

From Figure 2.2 above, humanitarian supply chains undoubtedly differ from commercial supply chains; but there are also similarities. The next section therefore identifies these similarities and discusses their peculiarities as well.

2.2.3 Commercial Supply Chains versus Humanitarian Supply Chains

Generally, a supply chain consists of a set of suppliers, manufacturers and distributors that are linked through information, financial and material or service flows (Christopher, 2011; Kovács and Spens, 2007) with the purpose to deliver the right products and information with the right quality at the right price to the right place at the right time (Tatham and Pettit, 2010). These characteristics are generally true for both commercial and humanitarian supply chains. The difference between the two begins to show once one begins to take a closer look at the disaster management part of the humanitarian aid supply chains (Ortuño et al., 2013).

There is significant consensus that the supply chains in the continuous aid stream of humanitarian operations are very similar to their commercial counterparts (Bohling, 2014; Holguín-Veras et al., 2012; Komrska et al., 2013; Kunz and Gold, 2017; Tomasini and van Wassenhove, 2009) while there exist major differences in emergency relief supply chains (Holguín-Veras et al., 2012; John et al., 2012; Scholten et al., 2014; van Heeringen, 2010; Whybark, 2007). The difference between the two types of supply chains is made manifest in areas of sourcing, inventory storage and distribution, decision making, cost and performance evaluation as well as labour assignment perspectives (Balcik and Beamon, 2008; Holguín-Veras et al., 2012; John et al., 2012;

Natarajathinam et al., 2009; Tatham and Houghton, 2011; Whybark, 2007). Besides the differences in how these are approached, humanitarian supply chains are also characterised by very high levels of uncertainties emanating from all aspects of the chain including erratic demand patterns (in terms of timing, location, type, and size), unreliable and sometimes even non-existing supplies and environmental unpredictability (Balcik and Beamon, 2008; Kovács and Spens, 2007; Scholten et al., 2014).

Further, one peculiar feature of the humanitarian supply chain is the involvement of so many actors and the lack of clarity in the linkages between them (Kovács and Spens, 2007; van Wassenhove, 2006); not forgetting the varying motivations of these different actors (Kovács and Spens, 2007; Long and Wood, 1995). This therefore creates a major problem with coordination and therefore results in wastages in the supply chains.

Finally, the most obvious difference between commercial and humanitarian supply chains is the goal. While that for the former is purely profit-motivated, that of the latter is towards saving lives and alleviating the suffering of vulnerable people. A summary of these is presented in Table 2.1 below.

	Commercial supply chain	Humanitarian supply chain
Goal	Profit motivated	Saving lives and alleviating the suffering of vulnerable people
Supply chain range	From suppliers' supplier to customers' customer	From donors and suppliers to beneficiaries
Suppliers	Only known in advance, usually few	Supplier and/or donor uncertain and multiple
Customers	End user is the buyer	End user (the beneficiary) is not the buyer (who is the donor)
Demand	Usually forecasted or known	Typically uncertain
Information flow	Generally well-structured	High importance of the media; means of communication often reduced (no internet access on field, etc.)
Financial flows	Bilateral and known	Unilateral (from donor to beneficiary) and uncertain
Shelf life	Some years, but tends to shorten	Some weeks to some months in total, mounting and dismantling included Project oriented
Actors	Known, with aligned incentives	Multiplicity in nature, but scarce in numbers. Usually have misaligned incentives

Labour	Labour costs are non-trivial and the key constraints are required tasks	Labour costs are low but yet non-trivial while the key constraint is committed labour
Environment	Increasingly volatile	Highly volatile and unstable

Table 2.1 Some differences between commercial supply chains and humanitarian supply chains

(Source: Charles et al., 2010; John et al., 2012; Wild and Zhou, 2011)

The uniqueness of both types of supply chains however presents great opportunities for collaboration and cross-learning. The nature of the humanitarian terrain makes agility, adaptability and managing supply chains under crisis conditions their core competence and therefore can provide invaluable lessons for their commercial colleagues (Natarajathinam et al., 2009; Oloruntoba and Gray, 2006; Sowinski, 2003; van Wassenhove, 2006). On the other hand, commercial supply chains are experts in efficiency and cost-effectiveness which is particularly needed in the humanitarian sector (Kovács and Spens, 2007; Leiras et al., 2014; Natarajathinam et al., 2009; Tatham and Pettit, 2010; van Wassenhove, 2006).

Having now discussed supply chain management in commercial as well as humanitarian organisations, a discussion of the need for resilience as was established in section 2.1 is presented in the next section.

2.3 Supply Chain Resilience

2.3.0 Background

Resilience has a long history of usage and application in varying fields of study and practice. Its roots can be traced to the Latin word '*resilire*' which means 'to bounce'. This explains the predominant theme of 'bouncing back' (Manyena et al., 2011). The word also found expression in French as '*résiler*' which came to mean 'to retract' or 'to cancel' and then into English as the verb '*resile*' in 1529 where its application was in the sense of 'retract', 'return to a former position' or 'desist' (Alexander, 2013).

This differing sense of usage of the word in its earliest use therefore affirms the widely accepted multifariousness of the word. Not dissimilar from this etymological history, its usage in academia has had varying levels of meaning and application ranging from W. J. M. Rankine's 1858 application in mechanics to describe a property of steel beams, to theory development in the social sciences (Alexander, 2013; Gillespie et al., 2007; Heckmann et al., 2015; Sheffi, 2005b). Holling's (1973) introduction of resilience into ecological science - though not the first in

academic research, appears to have sparked the interest in disciplines such as the social and health sciences on the applicability of the term in their research studies on child development and personal resilience. The interest in resilience continues to grow across disciplines (Karl et al., 2018; Pereira et al., 2020; Pettit et al., 2019; Wang et al., 2016).

The seminal works of Staw et al. (1981) and Meyer (1982) are the earliest cited studies on resilience in management sciences – particularly in relation to organisational resilience. Papers in this area as shown in Figure 2.3 remained in single digits for the next two decades until the turn of the century when research in it increased astronomically. This situation has largely been attributed to the 9/11 terrorist attacks in America (Bell, 2002; Dalziell and Mcmanus, 2004), because it made the vulnerability of supply chains to risks due to their increased globalisation, lengthened and complexity more obvious.

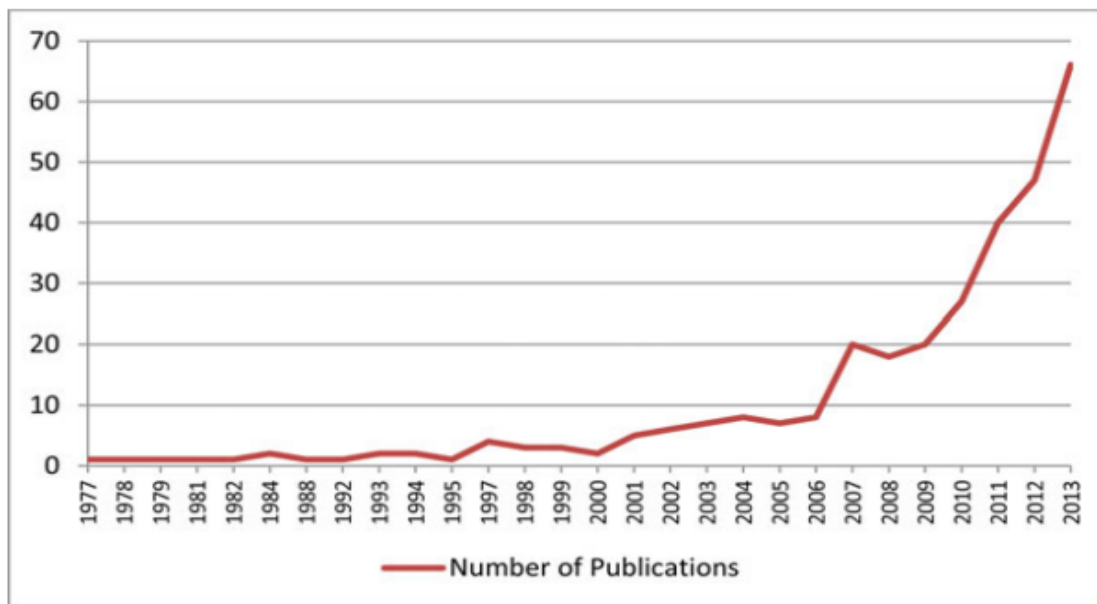


Figure 2.3 Publications on resilience in the business and management field (per year)

(Source: Linnenluecke, 2017)

Generally, its usage has had a positive connotation in the sense of the ability to withstand adversity but authors such as Linnenluecke (2017), Davies and Thomas (2003) and Linnios et al. (2014) discuss its usage in relation to the obstinance or inability to change both at the individual and organisational levels because of deeply entrenched culture. Organisational resilience has been broadly focused on the ability for firms to be properly prepared for unexpected change in the business environment and the aptitude to survive, adapt, and respond to such changes (Kamalahmadi and Parast, 2016; Lengnick-Hall et al., 2011; Schoon, 2005).

However, resilience at an organisational level has proved almost unrealisable if done alone without engaging with other firms the organisations interact with (Seville et al., 2006). This thereby leads to the broader supply chain perspective on resilience. Indeed, improving SCR inadvertently contributes to the business continuity and hence, the resilience of the focus firm in the supply chain. This is because the activities meant to institutionalise resilience will necessarily have to be executed from the perspective of the focus company which may have several supply chains within its supply network. This is particularly so because of the growing reliance of focal firms on these supply chains due to increased outsourcing (Norrman and Jansson, 2004; Pettit et al., 2010). Therefore, the improvement of an organisation's supply chain resilience is part of the improvement of the resilience of the organisation - making it a must for any organisation that seeks to thrive in spite of uncertainties and threats of disruptions. It is therefore unsurprising that SCR has received more attention compared to organisational resilience (Kamalahmadi and Parast, 2016).

2.3.1 Overview of Supply Chain Resilience

Before the 2000s, works like Cooper et al. (1997), Mabert and Venkataramanan (1998), Wilding (1998), Zsidisin and Hendrick (1998) identified issues of uncertainty and risks in parts of the supply chain and prescribed means to address them. However, these were not done within a resilience framework or understanding (Sawyer and Harrison, 2019). Sheffi (2001) therefore represents the first major work meant at addressing resilience in the supply chain, contrary to the suggestion by Pettit et al. (2010) that Christopher and Peck (2003) is the first of such works (Christopher and Peck, 2003; Pettit et al., 2010).

As has been established in the preceding sections, SCR gained research interest after events such as the 9/11 attacks and the 2003 SARS outbreak at the beginning of the 21st century showed that the prevailing SCM practices had exposed the supply chains and that resilience could not be built at just the organisational level. Organisations now operate in a network made up of firms operating at different locations on the globe all being coordinated to deliver quality to the customer at a reasonable cost while providing cost-efficiency for the business. Organisations are therefore exposed to a myriad of risks that cannot all be avoided (Hohenstein et al., 2015). This emphasises the urgency for resilience in supply chains. Despite this needed sense of urgency and the attention SCR has received in recent years, this research area still requires greater research exploration because it is relatively new (Ponis and Koronis, 2012). Businesses are traditionally

disposed to cost reduction and waste avoidance targeted at increasing margins. Without SCR however, businesses are more likely to incur significantly higher costs as a result of disruptions for which adequate preparations were not made (Sheffi and Rice Jr., 2005; Vecchi and Vallisi, 2016); or worse, collapse.

Beyond being able to respond and recover from both foreseeable and unanticipated disruptions while satisfying customer needs (Ambulkar et al., 2015), SCR offers businesses the advantage (over competition) for a quicker recovery (Ambulkar et al., 2015; Chopra and Sodhi, 2014; Hohenstein et al., 2015; Jüttner and Maklan, 2011; Melnyk et al., 2014; Namdar et al., 2018; Ponis and Koronis, 2012; Rajesh, 2016; Rice and Caniato, 2003; Sheffi, 2005a) especially for cases where a disruption is mutually suffered. An example is the fire outbreak at Philips' Albuquerque semiconductor plant when even though it affected both Ericsson and Nokia, it had different outcomes for the two companies (Tang, 2006a). Supply chain resilience therefore must attain a status of primary eminence and should be prioritised by businesses (Kamalahmadi and Parast, 2016; Melnyk et al., 2014; Vecchi and Vallisi, 2016) because it is at the very core of business continuity plans (Rice and Caniato, 2003).

Further, the need for a clarification of the relationship between risk management and resilience cannot be overlooked. Predominantly, definitions of supply chain risk management talk of the identification and management of these identified risks either by avoidance or risk impact reduction (Jüttner, 2005; Jüttner et al., 2003; Norrman and Jansson, 2004; Tang, 2006a). As argued by Sheffi (2005a) and Botes et al. (2017), resilience transcends addressing risks to being in a better position in comparison to competitors to deal with and even benefit from disruptions.

The definition of SCR has not escaped its share of diversity over the years. The earliest attempts at definitions can be traced to Rice and Caniato (2003) and Sheffi et al. (2003). After this, over 70 definitions have been provided in literature. Rather than several opposable schools of thought composed of differing perspectives on its construct, the definitions have rather evolved with time as research in it has increased. A review of the provided definitions in literature reveals that a theme of adaptation (that is, learning from disruptions in order to be restored to a better position than before the disruption) instead of restoration (the idea of returning to the supply chain's original state) was first suggested by Fiksel (2006). This idea of adaptation subsequently has generally been captured in the expression 'adaptive capability' of the supply chain.

Further, until the work of Ponomarov and Holcomb (2009), all preceding definitions described a reactive capability post-disruption. Ponomarov and Holcomb (2009) was the first attempt at

introducing a proactive dimension of resilience where preparations for disruptions are incorporated into the supply chain along with its ability to maintain a significant level of operations and quick recovery. Tukamuhabwa et al. (2015) also suggest the inclusion of cost-effectiveness into the definition of SCR but up to date, it remains the only definition explicit with that dimension.

It may be argued that this evolution of the definition may present a risk of dilution such that the concept may lose its exactness. On the other hand, this may be desirable for theory development in this relatively new area of management research because these new dimensions of supply chain resilience have indeed existed in other disciplines for some time and are therefore not entirely new in the discussion of resilience.

Overall, four capabilities of SCR are suggested in the definitions provided in extant literature thus far (Ali et al., 2017; Sawyerr and Harrison, 2019). These are:

1. **Preparation or readiness:** This includes anticipation, avoidance and mitigation planning (Ambulkar et al., 2015; Carvalho et al., 2012; Datta, 2017; Hohenstein et al., 2015; Kamalahmadi and Parast, 2016; Ponis and Koronis, 2012; Ponomarov, 2012; Ponomarov and Holcomb, 2009; Tukamuhabwa et al., 2015),
2. **Robustness:** The ability to resist, cope with or withstand the disruption by maintaining a desirable level of performance (Closs and McGarrell, 2004; Pereira, 2009; Ponomarov and Holcomb, 2009; Schmitt and Singh, 2012),
3. **Recovery:** quick restoration to settle into a new state of equilibrium (Colicchia et al., 2010; Rice and Caniato, 2003; Voss et al., 2009; Williams et al., 2009), and
4. **Adaptability:** Learning and growth through the development of new capabilities thereby exploiting the accompanying advantage over competition (Ali et al., 2017; Datta, 2017; Pettit et al., 2010; Stewart et al., 2009).

With these in mind, the adopted definition of supply chain resilience which captures these four dimensions is that it is “*the ability to proactively plan and design the supply chain network for anticipating unexpected disruptive (negative) events, respond adaptively to disruptions while maintaining control over structure and function and transcending to a post-event robust state of operations, if possible, more favourable than the one prior to the event, thus gaining competitive advantage*” (Ponis and Koronis, 2012: 925-926).

Overall, supply chain resilience – beyond being insurance against disruptions – is of utmost criticality to a supply chain’s profitability and competitiveness today than previously (Jabbarzadeh

et al., 2016). The next section discusses in some detail the vulnerability for which reason resilience is required in the first place.

2.3.2 Supply Chain Vulnerability

It has become well established that the vulnerability of supply chains has significantly escalated in the last few decades (Albino et al., 1998; Jabbarzadeh et al., 2016; Vecchi and Vallisi, 2016; Waters, 2011). Reasons for this include the globalised nature of supply chains in recent years and the pursuance of certain supply chain management practices such as just-in-time (JIT), outsourcing, supplier base reduction and stock level reduction (Hendricks and Singhal, 2005; Jabbarzadeh et al., 2016; Jüttner, 2005; Peck, 2005). The increase in the number, rate and impact of disasters in recent years compared to previous decades (Guha-sapir et al., 2016) also contributes to this increased vulnerability especially within the context of today's globalisation. Supply chain vulnerability is defined as an “*exposure to serious disturbance, arising from risks within the supply chain as well as risks external to the supply chain*” (Christopher and Peck, 2004: 3).

Without question, this exposure has a significant component of uniqueness within each supply chain even from a single organisation perspective (Sheffi et al., 2003). Therefore, a deeper knowledge of a supply chain and how certain characteristics affect its vulnerability is important for managers in the decisions leading to the design of their supply chains (Peck, 2005). Irrespective of the extent of resilience embedded into a supply chain, it will still retain some level of vulnerability because of uncertainties about the occurrence of certain types of changes in relationships and disruptions especially in the environment within which a supply chain operates. This however is no excuse to inhibit vulnerability assessment and reduction (Chapman et al., 2002).

To assess how exposed a supply chain is, one has to go through a vulnerability assessment process by identifying the risks it is exposed to, the likelihood of occurrence and the impact it may have on the supply chain. With this, the highest level of exposure is when the probability of occurrence and the estimated impact of the disruptions are both high. The reverse is also true (Sheffi and Rice Jr., 2005). It hence means that identifying these vulnerabilities and reducing them by reducing the likelihood of the occurrence of disruptions increases the resilience of the supply chain.

Usually, efforts towards reducing the vulnerabilities of a supply chain are inadequate (Pereira, 2009; Wu et al., 2007). This is attributed to the complexity of capturing the would-be economic benefits should a breakdown be prevented and juxtaposing that with the economic loss in the case of a disruption (Datta, 2017; Giunipero and Aly Eltantawy, 2004; Vecchi and Vallisi, 2016). Vulnerabilities exist because of exposure to risks and therefore require a discussion of the risks the supply chain is exposed to (Heckmann et al., 2015; Pereira, 2009; Waters, 2011). In the next section, supply chain risks and uncertainties are discussed in some depth.

2.3.3 Supply Chain Risks and Uncertainties

In supply chain management literature, some authors (such as Ellis et al., 2010; Heckmann et al., 2015; Zsidisin, 2003) have provided definitions for supply chain risks while others (Bogataj and Bogataj, 2007; Pettit and Beresford, 2009; Wagner and Bode, 2006) have adopted the more generic definitions of risk. This paper agrees with Zsidisin (2003) that risk is a multidimensional construct for which one definition may not be befitting for all situations.

Zsidisin and Ritchie (2009) in a rehash of Zsidisin's (2003: 222) definition of supply chain risk defines it as "*the probability of an incident associated with inbound supply from individual supplier failure or the supply market occurring, in which its outcomes result in the inability of the purchasing firm to meet customer demand or cause threats to customer life and safety*". This definition best aligns with the focus for this research because it does not only identify with risks from supplier engagements. It also highlights the potential impact on the life and safety of the 'consumer' which is most applicable in the humanitarian sense. However, the challenge with it is that it views supply chain risks as solely sourced from the supply side of the supply chain without considering risks that originate from the downstream such as the bullwhip effect. A definition that seems to look at it from both supply and demand sides is by Jüttner et al. (2003), which says supply chain risk is "*the possibility and effect of mismatch between supply and demand*".

Peck (2006) looks at these risks from the perspective of flows in the supply chain. She defines supply chain risk as "*anything that (disrupts or impedes) the information, material or product flows from original suppliers to the delivery of the final product to the ultimate end-user.*" This definition however fails to incorporate the fourth type of flows in supply chains which is financial flows. Heckmann et al. (2015: 130) provides quite a comprehensive definition of supply chain risk as "*the potential loss for a supply chain in terms of its target values of efficiency and effectiveness evoked by uncertain developments of supply chain characteristics whose changes*

were caused by the occurrence of triggering-events.” The most widely cited definition of supply chain risk is one adapted from March and Shapira’s (1987: 1404) ‘Managerial Perspectives on risk and risk taking’ wherein risk was defined as “*reflecting variation in the distribution of possible outcomes, their likelihoods, and their subjective values*”. Authors including Jüttner et al. (2003: 200) and Wagner and Bode (2006: 303) have hence proceeded to define supply chain risk as “*the variation in the distribution of possible supply chain outcomes, their likelihood, and their subjective value.*” This definition neither takes on a positive nor a negative connotation of risk. Regarding resilience, it is argued that this perspective best captures the goal of resilience-building since ultimately, overcoming disruptions is not only required for the avoidance or mitigation of the effects of disruptions but also to provide competitive advantage.

2.3.3.1 Supply Chain Risk Categorisation

Different authors have varying perspectives on supply chain risk classification. Some look at them as sources, others as types and also as categories but generally, they are used interchangeably. Gaonkar and Viswanadham (2007) look at supply chain risks from two perspectives - the first being the level. Here they look at it from four levels which are organisational, network-related, environmental-related and then industrial levels. The second perspective is what they call ‘form’ and by this, they identify deviation, disruption and disaster.

Jüttner et al., (2003) with a perspective similar to Gaonkar and Viswanadham’s (2007) first classified them according to environmental, network-related and organisational risk. Tang (2006a) looks at them as either operational or disruption risks while Wu et al. (2007), Kumar et al. (2010), Goh et al. (2007) and Olson and Wu (2010) all categorise them as either internal or external risks. Even though Christopher and Peck (2004) uses a similar approach as the latter, they breakdown the external risks into those external to the focus company but within the supply chain and those external to the entire supply chain. Christopher and Peck’s (2004) classification is summarised in Table 2.1 below with examples from Giunipero and Aly Eltantawy (2004):

Supply chain risk categories	Sub-divisions	Examples
Internal to the firm	Process: Risks from disruptions to sequences of value-adding and managerial activities	Technological changes
	Control: Risks arising from the application or misapplication of the assumptions, rules, systems and procedures that govern how an organisation exerts control over the processes	Financial instability Management turnover

External to the firm but internal to the supply chain network	Demand: Potential or actual disturbances to product, information, and cash flows between the firm and its downstream players	Product availability Bullwhip effect Customer loyalty
	Supply: Potential or actual disturbances to product, information, and cash flows between the firm and its upstream players	Distance from source Poor quality of purchased product
External to the network	Environmental: Events that may directly impact the whole supply chain including the marketplace itself.	Disasters such as floods, earthquakes Terrorist attacks

Table 2.2 Supply chain risk categorisation.

Adapted from Christopher and Peck (2004) and Giunipero and Aly Eltantawy (2004).

2.3.3.2 Supply Chain Uncertainties

The presence of uncertainty in supply chain management is not particularly a new phenomenon except that it has compounded under the current design of supply chains, greater product variety and shorter product life cycles among others (Sheffi, 2001; Sheffi and Rice Jr., 2005; Wagner and Bode, 2006; Wilding, 1998). A major source of this uncertainty is complexity in decision making. This complexity is usually caused by the lack of clarity about supply chain objectives, improper comprehension of the supply chain or its environment, lack of information processing capacities, inability to forecast precisely the impact of potential control actions on the behaviour of the supply and the lack of effective control actions by the decision maker (Van der Vorst and Beulens, 2002).

Other sources identified in literature include data definitions, organisational culture, division of responsibilities and authority and product demand (Sheffi and Rice Jr., 2005; Van der Vorst and Beulens, 2002). Like supply chain risks, these uncertainties are generally grouped into those within the supply chain and those external to it (Trkman and McCormack, 2009).

2.3.3.3 Humanitarian Supply Chain Risks

As has already been established in section 2.2.2, humanitarian supply chains have a relatively high exposure to risks, uncertainties and complexities (Apta, 2009; van Wassenhove, 2006) even though the classification of these risks are consistent with those identified by Christopher and Peck (2004) for commercial supply chains (van Heeringen, 2010). The greatest uncertainties to supply chain planning in the humanitarian sphere are with the place, time and asperity of a disaster relative to life and property (Overstreet et al., 2011).

Within the aid organisations, staff turnover is particularly high while the risk management culture of an organisation evinced in prioritisation of risks and their linkage to organisational goals can also serve as a source of risk (Baharmand et al., 2017; Overstreet et al., 2011; van Wassenhove, 2006). In the downstream of the supply chain, issues on staff security (particularly in areas with high political volatility), last-mile distribution routing, damaged infrastructure as well as corruption during aid delivery present significant challenges (Beamon, 2004; Kovács and Spens, 2007; Long, 1997; Long and Wood, 1995; McEntire, 1999; McLachlin et al., 2009; Overstreet et al., 2011; Thomas and Fritz, 2006; Tomasini and van Wassenhove, 2004).

The risks from the upstream side of the humanitarian supply chain are of particular interest. This is because it is quite different from a commercial supply chain due to the unique actors in its upstream. In addition to the suppliers from whom materials are procured, there is another group under the umbrella of donors (Apta, 2009) which may include government agencies, private philanthropic groups, private businesses as well as the general public. This thereby introduces risks which are peculiar to humanitarian supply chains because of these players. For example, unsolicited or unsuitable donations have been cited as a major cause of bottlenecks in the supply chain especially in terms of time and resources committed to sorting out all such donations (John et al., 2012; Sowinski, 2003; van Wassenhove, 2006).

Further, the short-term nature of funding and the impact of media coverage of disasters (both positive or negative) on funding all provide sources for disruptions in the supply chain (Gustavsson, 2003; Kovács and Spens, 2007; Oloruntoba and Kovács, 2015; Overstreet et al., 2011; Tomasini and van Wassenhove, 2009). The political nature of governmental aid donations also has its impact on strategic decision making further down the supply chain (John et al., 2012; Long and Wood, 1995). Another challenge is the failure of donors to recognise the need for investment in equipment and information technology (Overstreet et al., 2011; Whiting and Ayala-Öström, 2009). Apart from the peculiar risks due to the donors in the upstream, there are risks associated with the selection of and interaction with their suppliers. The risks here have some semblance of their commercial counterparts.

The lack of centralised data makes coordination and matching of supply with demand very difficult especially amidst the complexity and unusual constraints associated with supply uncertainty in the humanitarian sector (Beamon, 2004; Kovács and Spens, 2007; Long, 1997; Long and Wood, 1995; Tomasini and van Wassenhove, 2009; van Wassenhove, 2006). Also, there exist risks associated with unethical procurement behaviour and the effects it could have on donor perceptions and the credibility of the aid organisation (Svensson, 2009; Wild and

Zhou, 2011). In terms of supplier selection, choices are so limited that sometimes even unwanted suppliers may have to be engaged (Kovács and Spens, 2007).

2.3.3.4 Managing Supply Chain Risks and Uncertainties

Managing supply chain risks requires a holistic and comprehensive approach that incorporates multiple views (Tang and Musa, 2011; Trkman and McCormack, 2009). This should include making a conscious effort to understand the risks to the supply chain, the nature of these risks and the implications of these on the supply chain using modern techniques such as Delphi studies, scenario planning, and expert panels (Zomorodi, 2016). In the pursuit of resilience, effective supply chain risk management plays a fundamental part (Mitchell and Harris, 2012) and must be formalised both within and between organisations (Christopher and Peck, 2004).

There is no one-size-fits-all solution for managing supply chain risks and uncertainties. Every organisation must identify the most effective and efficient way for protecting each of its supply chains as best as it can and this is possible without affecting cost-effectiveness (Sheffi et al., 2003). Investments in risk management proposed in extant literature include security, collaborative supply management efforts, mergers and alliances as well as hiring and training of employees (Giunipero and Aly Eltantawy, 2004; Sheffi et al., 2003).

2.3.4 Supply Chain Disruptions

In supply chain literature, disruption and disturbance have been used interchangeably to represent any event (whether or not it is foreseeable) that directly interrupts the usual operation and stability of a supply chain (Barroso et al., 2008; Craighead et al., 2007). Typically, these disruptions affect at least one of the flows of the supply chain which are goods or services, financial flow and information flow. The scale of the disruption does not necessarily water down their potential effects. As an example, Hendricks and Singal (2005) after reviewing 827 disruption announcements made between 1989 and 2000 provide an account of between 33 to 40% lower stock returns in comparison to industry benchmarks for companies that suffered from smaller-scale disruptions irrespective of the size of the firm.

Supply chain disruptions have varying long-term and short-term impacts on the supply chain's operations, performance, its supplier and customer relationships as well as shareholder value (Hendricks and Singhal, 2005; Tang, 2006a; Wagner and Bode, 2006). For instance, Sheffi and

Rice (2005) indicate that customer relationships when adversely affected have lasting implications and are usually difficult to recover from. There are also times when it is the decisions in the aftermath of a disruption, rather than the disruption itself that affect the supply chain. After the 9/11 attacks, challenges to supply chains were as a result of the governments' responses such as border closures, the shutdown of air traffic and the evacuation of many buildings in the country that caused disturbances to the supply chain (Sheffi, 2001).

The severity of a supply chain disruption is a function of the density, complexity and node criticality of the supply chain design (Craighead et al., 2007) as well as the time of the impact (Falasca et al., 2008). Ambulkar et al. (2015) thereby classifies disruption based on their severity as high-impact as against low-impact disruption while the likes of Tang and Musa (2011) and Sheffi and Rice (2005) look at them from the perspective of the nature of the disruption. They identify them as random events (including natural disasters), accidents, intentional disruptions (such as job actions or acts of terrorism or sabotage) (Sheffi and Rice Jr., 2005) and information disruptions (as a result of the uses of software platforms) (Tang and Musa, 2011). Notwithstanding, each type of disruption has to be anticipated and mitigated differently.

In cognisance of these and the many risks and their dire implications on the supply chains including potential loss of lives, the discussion for resilience in the humanitarian supply chains is gathering momentum and this is discussed in the following section.

2.3.5 Resilience in Humanitarian Aid Supply Chains

Until recently, interest in resilience research in humanitarian supply chains was low (Dubey et al., 2014). This is surprising considering that the very nature of humanitarian supply chains presents a very suitable model for resilience studies. The exasperating frequency, magnitude and aggravating impact of both man-made and natural disasters (Scholten et al., 2014), in addition to the regular interruptions in information and material flows (Blecken, 2010) in humanitarian supply chains underline this observation and affirm that managers within this sphere are knowledgeable in working under high levels of risk and uncertainty. However, over the past few years, research in this aspect of humanitarian supply chain management has begun gaining momentum (Blecken, 2010; Charles et al., 2010; Dowty and Wallace, 2010; Dubey et al., 2014; Dubey and Gunasekaran, 2016; Kunz and Gold, 2017; Natarajarathinam et al., 2009; Papadopoulos et al., 2017; Scholten et al., 2014; Stewart et al., 2009; Tatham and Pettit, 2010; van Heeringen, 2010).

To move critical relief items to persons in dire need, there should be an agile, adaptable and properly aligned supply chain network that can quickly recover when disrupted (Dubey et al., 2014; Tatham and Pettit, 2010). Stewart et al. (2009) and Papadopoulos et al. (2017) agree that the relevance and impact of supply chain resilience in the humanitarian sector go beyond just the supply chain to impact a community's resilience to disasters. Stewart et al. (2009) through a literature review posits that improvements in supply chain resilience positively influence critical infrastructure/key resource resilience and vice versa. Using big data, a survey and a case study, Papadopoulos et al. (2017) based off of the work of Stewart et al. (2009) developed and tested a framework that affirmed that indeed SCR impacts community disaster resilience which in turn improves the supply network resilience. Both studies also highlight the positive impact the presence of public-private relationships has on the resilience of supply chains.

Scholten et al. (2014) propose the four phases of the disaster management cycle are directly related to resilience and from their findings state that the mitigation processes are critical as they are antecedent to the building of supply chain resilience capabilities that facilitate the processes in the final three phases of the disaster management cycle. In a minor departure from Scholten et al.'s (2014) perspective, Oloruntoba and Kovács (2015) in their commentary on humanitarian supply chain agility state their belief that resilience in the humanitarian supply chain should be the most appropriate goal of the supply chain design in the longer-term recovery phase while Dubey et al. (2014) say resilience is relatively more important to the supply chain in post-disaster. Overall, the importance of resilience in humanitarian supply chains is not in dispute. The question however is 'how is this to be achieved?' A discussion on the formative elements which are required to build in or enhance supply chain resilience as discussed in the existing literature is provided in the following sub-section.

2.3.6 Supply Chain Resilience Formative Elements

Without question, various strategies and techniques have been prescribed in literature as requisite for achieving resilience in supply chains. These, as indicated by Ali et al. (2017) and Sawyerr and Harrison (2019), have been termed differently by various authors. Examples include core dimensions (Ponis and Koronis, 2012), antecedents (Ponomarov and Holcomb, 2009; Scholten and Schilder, 2015), capabilities (Jüttner and Maklan, 2011; Pettit et al., 2013), enablers (Pereira et al., 2014; Soni et al., 2014), competencies (Wieland and Wallenburg, 2013) or simply elements (Ali et al., 2017; Christopher and Peck, 2004; Hohenstein et al., 2015; Peck, 2005).

Similar to Jüttner and Maklan (2011), Ponis and Koronis (2012) and Soni et al. (2014), this research maintains them as formative elements.

Numerous systematic literature reviews (Ali et al., 2017; Bhamra et al., 2011; Datta, 2017; Hohenstein et al., 2015; Kamalahmadi and Parast, 2016; Linnenluecke, 2017; Pereira et al., 2014; Sawyerr and Harrison, 2019; Tukamuhabwa et al., 2015; Wang et al., 2016) have been conducted over the years to identify these formative elements. The most emphasised have been flexibility, redundancy and collaboration (Hohenstein et al., 2015; Sawyerr and Harrison, 2019; Vecchi and Vallisi, 2016). Others are avoidance (Brusset and Teller, 2017; Jüttner et al., 2003; Manuj and Mentzer, 2008), agility (Christopher and Peck, 2004; Hohenstein et al., 2015; Ponis and Koronis, 2012), robustness (Durach et al., 2015; Kleindorfer and Saad, 2005; Klibi and Martel, 2012), security (Govindan et al., 2017; Oke and Gopalakrishnan, 2009; Sheffi, 2001) and integration (Datta, 2017; Ponomarov and Holcomb, 2009; Zsidisin et al., 2000). Human Resource Management (Lengnick-Hall et al., 2011; Linnenluecke, 2017; Rice and Caniato, 2003), sustainability (Blome and Schoenherr, 2011; Fahimnia and Jabbarzadeh, 2016; Srivastava et al., 1999), Information Technology (Boin et al., 2010; Falasca and Zobel, 2011; Majewski et al., 2010; Schultz and Søreide, 2008), top managerial commitment (Sawyerr and Harrison, 2019), culture (Ali et al., 2017; Finch, 2004; Spiegler and Wikner, 2012) and decision making (Jabbarzadeh et al., 2016; Laios and Moschuris, 1999; Manuj and Sahin, 2011) have also been proposed.

Seeing that this study is looking at SCR from a procurement perspective, a discussion of these formative elements is presented in section 2.4.1 after an introduction to procurement in supply chain resilience is discussed.

2.4 Procurement in Supply Chain Resilience

Procurement is regarded as the highly integrated strategic procedure which includes all activities necessary to acquire goods and services consistent with user requirements in terms of the right quantity, quality, time and cost from the right supplier (Coyle et al., 2013; Kaur and Singh, 2016). From the definition, it can be inferred that the procurement process goes well beyond the identification of needs in terms of goods and services and their purchase to include the evaluation and selection of supplier(s), the most useful relationships to have with the supplier(s) and the assessment of the delivery status of the required goods or services through supplier management (Castaldi et al., 2011; Nix, 2001; Szwejczewski et al., 2005). Therefore, when properly managed

and incorporated into the overall corporate strategy, procurement can give an organisation competitive advantage (Coyle et al., 2013; Heberling, 1993; Lawson et al., 2009; Pereira et al., 2014).

At the same time, procurement – if not properly managed – can adversely impact business continuity and profitability because of the increased exposure to risks through the engagement of other organisations (that is, suppliers). Further, the cost associated with procurement and supply management processes is estimated to range between 30 to 70% of the cost of goods sold, depending on the industry (Nair et al., 2015). Indeed, upstream disruptions can seriously affect an organisation’s resilience considering that almost 80% of purchased materials are from multiple suppliers across the globe (Pereira et al., 2020; Sheffi, 2005c). Procurement therefore, is critical to the resilience of an organisation’s supply chain since sourcing is directly related to supply chain disruptions and can present proactive mechanisms for avoiding, coping with and/or recovering from these disruptions (Yu et al., 2009).

The next section discusses from a procurement perspective, the various formative elements prescribed in literature for pursuing supply chain resilience.

2.4.1 Supply Chain Resilience Formative Elements from a Procurement Perspective

Following the discussion of formative elements in section 2.3.6, it is worth mentioning that these do not differ from those identifiable in humanitarian supply chain management research. Researchers here have identified flexibility (Baharmand et al., 2017; Scholten et al., 2014), network design (Kumar and Havey, 2013; Oloruntoba and Kovács, 2015; Scholten et al., 2014), agility (Dubey et al., 2014; Scholten et al., 2014), understanding of the supply chain (Scholten et al., 2014), redundancy (Dubey et al., 2014; Jahre, 2017; Raich et al., 2014), collaboration (Baharmand et al., 2017; Jahre, 2017; Papadopoulos et al., 2017; Scholten et al., 2014; Tomasini and van Wassenhove, 2009), visibility (Long, 1997; Scholten et al., 2014; Tomasini and van Wassenhove, 2009), risk managing culture (Dubey et al., 2014; Kumar and Havey, 2013) and management of the human resources including volunteers and members of the local communities (Bhushan and Tirupati, 2013; Dubey and Gunasekaran, 2016; Schultz and Søreide, 2008; Tomasini and van Wassenhove, 2009).

These align with those formative elements mentioned in 2.3.6 albeit some of the implementations are tailored for the humanitarian context. For example, the development and

training of human resources to be multi-skilled in order to achieve flexibility and redundancy is established in SCR literature. In the context of humanitarian supply chains, this sometimes goes beyond just the organisation or supply chain players and extends to building the capacities of the local residents in the disaster-affected communities (Bhushan and Tirupati, 2013; Dubey and Gunasekaran, 2016; Tomasini and van Wassenhove, 2009).

Also, considering the many actors in the humanitarian supply chain and their various motivations, collaboration is extremely critical to ensure a resilient chain. Unsurprisingly, it has received significant attention in literature (Baharmand et al., 2017; Balcik et al., 2010; Chandes and Paché, 2010; Heaslip and Barber, 2016; Jahre, 2017; Jensen and Hertz, 2016; Junko Mochizuki et al., 2015; Kovács and Spens, 2007; Papadopoulos et al., 2017; Schniederjans et al., 2016; Scholten et al., 2014; Tomasini and van Wassenhove, 2009) unlike in commercial supply chains where redundancy and flexibility are the most dominant formative elements proposed. The idea of prepositioning, where high levels of redundant stock, funds, vehicles and even human resources are provided across the supply chain network as a means to ensure a highly responsive and resilient supply chain is also not uncommon (Dubey et al., 2014; Jahre, 2017).

2.4.1.1 Collaboration

The proposition for collaboration in supply chain management predates supply chain resilience research but the end goal was for better customer satisfaction at a lower cost (Van der Vorst and Beulens, 2002). Subsequently, it has been highly prescribed as a very useful formative element in supply chain resilience studies (such as Christopher and Lee, 2004; Christopher and Peck, 2004; Sahebjamnia et al., 2017; Sawyerr and Harrison, 2019; Scholten and Schilder, 2015; Thomé et al., 2016; Tukamuhabwa et al., 2015). This may be attributed to how it facilitates trust, visibility and awareness across the supply chain which then makes other formative elements such as risk avoidance (Brandon-Jones et al., 2014; Craighead et al., 2007; Kleindorfer and Saad, 2005), decision-making (Brandon-Jones et al., 2014; Christopher and Lee, 2004; Handfield and Nichols, 2002; Hohenstein et al., 2015; Pereira, 2009), agility, flexibility and integration easier to pursue (Botes et al., 2017; Sawyerr and Harrison, 2019).

In terms of procurement, collaboration is regarded by scholars as critical to dealing with upstream disruptions (Botes et al., 2017; Chen et al., 2013; Leat and Revoredo-Giha, 2013; Li et al., 2015). It helps reduce lead-times, cut down on costs and hence improve profits (Handfield and Nichols, 2002). It also reduces the probability of supplier failure (Lee, 2002) by enhancing control and

closer monitoring of suppliers for early detection, avoidance and/or mitigation of upstream risks and overall, enhanced supplier performance (Blome and Schoenherr, 2011; Christopher and Lee, 2004; Datta, 2017; Sáenz and Revilla, 2014). In case disruptions are inevitable, collaboration also improves suppliers' recovery rate (Namdar et al., 2018).

For humanitarian organisations, collaboration is not only useful for resilience in terms of dealing with suppliers directly, it is also useful because of the benefits of collaborative procurement (Balcik et al., 2010) - where several organisations may procure from suppliers as a unit and are therefore able to benefit from economies of scale, better negotiations, reduced risk exposure among others (Balcik et al., 2010; Majewski et al., 2010; Nikkhoo et al., 2018; Walker and Maxwell, 2009). Collaborative procurement could be as basic as information sharing about suppliers, staff and officials to a more complex relationship involving resource sharing (Maghsoudi and Pazirandeh, 2016).

2.4.1.2. Avoidance

This formative element involves the ability of a supply chain to identify sources or areas of risks and avoiding them as much as possible. This requires a good understanding of the supply chain to identify processes that must necessarily go right, those that can suffer disruptions, how the disruptions can occur and by collecting information on previous disruptions in the supply chain (Bode et al., 2011; Sawyerr and Harrison, 2019). Further, an understanding of existing links and relationships, the power dynamics with suppliers and distributors, which of the relationships are critical and which are dispensable is necessary (Christopher and Peck, 2004; Durach et al., 2015; McManus et al., 2008). With the relevant gathered data, actions to avoid risks may range from dropping products with uncertain demands to network design issues such as avoiding certain geographical locations for siting manufacturing plants or warehouses because of political instability or unfavourable market conditions (Jüttner et al., 2003; Klibi et al., 2010; Thun and Hoenig, 2011; Tukamuhabwa et al., 2015).

For supplier engagement, high-risk suppliers must be identified and avoided through due diligence. The due diligence processes involve engaging in ethical procurement whereby all prospective suppliers are treated equally and fairly (Ertem et al., 2012) and also, that suppliers are vetted to see if they are ethical in their operations (Wild and Zhou, 2011). This is particularly critical for humanitarian organisations (Oloruntoba and Gray, 2006) because dealing with unethical suppliers carry significant reputational risks. Getting references for suppliers from other

organisations, checking that suppliers have the requisite certifications for their field of expertise, that they are listed on reputable stock markets and that they have healthy and publicly available financial statuses (Sawyer and Harrison, 2019; Schultz and Søreide, 2008; Walker and Maxwell, 2009) are some other means by which supplier due diligence is carried out. For organisations within the supply chain, instituting procurement policies, procedures and codes of conduct for both suppliers and employees, investing in employee training, having reporting and whistleblowing mechanisms in place and establishing accountability frameworks through auditing, monitoring and evaluation, and regulation are useful ways by which supply-related risks can be avoided (Maria et al., 2018; Schultz and Søreide, 2008; Walker and Maxwell, 2009).

Consequently, visibility, information sharing, and supply chain understanding are crucial for this formative element (Ali et al., 2017; Grötsch et al., 2013; Kamalahmadi and Parast, 2016; Kleindorfer and Saad, 2005).

2.4.1.3 Flexibility

Flexibility is another formative element that is very highly cited in supply chain resilience literature (Hohenstein et al., 2015; Linnenluecke, 2017; Sheffi and Rice Jr., 2005; Vecchi and Vallisi, 2016). It can be achieved in a supply chain through operational, decision and sourcing flexibility.

Operational flexibility includes flexibility in logistics (Hohenstein et al., 2015; Pereira et al., 2014; Singh et al., 2011; Spiegler and Wikner., 2012; Tang, 2006), processes (Chiang et al., 2012; Rice and Caniato, 2003), products (Chiang et al., 2012; Simangunsong et al., 2012), production/manufacturing (e.g. through postponement) (Ali et al., 2017; Christopher and Lee, 2004; Govindan et al., 2017; Jahre, 2017; Jüttner et al., 2003; Lee, 2002; Yang and Yang, 2010) and order fulfilment (Ali et al., 2017; Pettit et al., 2010, 2013). Another way to achieve operational flexibility is through human resource management where the number of workers may be varied depending on customer needs or service requirements (Gong, 2008; Lummus et al., 2005; Manders et al., 2017).

Decision flexibility can be achieved through decentralisation and/or flexible decision-making structure (Sawyer and Harrison, 2019; Sheffi, 2005b; Vecchi and Vallisi, 2016). From a procurement perspective, employees in different departments can be cross-trained (Manders et al., 2017; Sheffi, 2005a) so that procurement can be handled at the departmental or local level albeit with oversight by a centralised procurement team. However, in case a disruption occurs,

the subject matter experts irrespective of their hierarchical position have to be involved in the decision making (Sawyer and Harrison, 2019).

Sourcing flexibility is pursued through the use of flexible supplier contracts (such as framework agreements, quantity flexible contracts and option contracts) (Datta, 2017; Nikkhoo et al., 2018; Pettit et al., 2010, 2013; Tang, 2006b; Tukamuhabwa et al., 2015), backup suppliers (Hohenstein et al., 2015), multiple sourcing including the use of location (local/overseas) and service/product mix (Jüttner et al., 2003; Pereira et al., 2014; Tukamuhabwa et al., 2015), and supplier selection which carefully considers a supplier's ability to respond to variations in supply requirements (Manders et al., 2017).

2.4.1.4 Agility

Agility as a supply chain resilience formative element is concerned with a supply chain's swift and effective responsiveness to both internal and external unforeseen changes and/or disruptions (Christopher and Peck, 2004; Ponomarov and Holcomb, 2009). For a supply chain to be agile, significant effort needs to go into preparation (Jahre, 2017; Jahre et al., 2016; Jahre and Heigh, 2008; Scholten et al., 2014; van Wassenhove, 2006).

To be adequately prepared to respond swiftly to changes and/or disruptions by minimising impact and facilitating fast recovery, there's the need to invest in redundancy (Lentz et al., 2013; Torabi et al., 2018), flexibility (Braunscheidel and Suresh, 2009; Christopher, 2000; Kovács and Spens, 2007; Ponis and Koronis, 2012; Swafford et al., 2006; Tang and Tomlin, 2008), velocity (Christopher and Peck, 2004; Jüttner and Maklan, 2011; Tukamuhabwa et al., 2015; Wieland, 2013), integration (Braunscheidel and Suresh, 2009; Pereira et al., 2014), collaboration (Christopher and Peck, 2004; Hohenstein et al., 2015; Scholten et al., 2014; Wieland and Wallenburg, 2013) and robustness (Park et al., 2013). These allow the supply chain to reduce its reactionary time through early detection of risks (made possible by collaboration in the supply chain), the actuation of response processes (Braunscheidel and Suresh, 2009; Hohenstein et al., 2015), and accelerated adaptability (through process modification, rapid supply chain redesign etc) (Ivanov and Sokolov, 2013; Kamalahmadi and Parast, 2016; Pettit et al., 2019; Swafford et al., 2006; Tukamuhabwa et al., 2015; Wieland and Wallenburg, 2013).

From a procurement perspective, activities to enhance the supply chain's agility include procuring extra stock to serve as buffer (Zhang et al., 2019), local and regional procurement (Lentz et al., 2013), establishing quality, long-term supplier relationships (Balcik and Ak, 2014;

Torabi et al., 2018) and improving the reliability and speed of delivery from suppliers (Krause et al., 2007; Nair et al., 2015) through supplier development and/or supplier performance measures. Various forms of supplier contracting such as framework agreements (Balcik and Ak, 2014), option contracts (Liang et al., 2012; Wang et al., 2015) and quantity flexible contracts (Torabi et al., 2018), not only increases the flexibility of the supply chain but also puts it in a position to respond quickly in case of disruptions or unexpected demand hikes (Zhang et al., 2019).

Agility as a formative element is particularly critical for humanitarian supply chains because of the primary objective of reducing human suffering (Larson, 2011; Maghsoudi and Pazirandeh, 2016) and so they tend to make decisions on procurement and allocation of resources *ex-ante* (Bhattacharya et al., 2012). Unsurprisingly, they have been described as the most agile (Oloruntoba and Gray, 2006; Tatham and Kovács, 2012).

2.4.1.5 Redundancy

This is one of the earliest and highly cited means for improving resilience (Heckmann et al., 2015; Linnenluecke, 2017; Rice and Caniato, 2003; Sheffi, 2005a). It provides the quickest means to respond to a disruption before other remedial measures can be activated. Predictably however, the obvious challenge usually cited is the issue of cost-effectiveness (Christopher and Peck, 2004; Sheffi and Rice Jr., 2005) which then is indicated as a limit to its utility (Sheffi, 2005b) even though it is easier to implement (Vecchi and Vallisi, 2016). This is because the traditional understanding of redundancy for many translates into having excess stock available for emergencies (Ali et al., 2017; Chopra and Sodhi, 2004; Datta et al., 2007; Pereira et al., 2014; Sheffi, 2001; Sheffi and Rice Jr., 2005) but redundancy can be attained in more diverse ways than just extra inventory. It may be pursued through tangible (extra inventory being one of such) and intangible means.

Tangible redundancy can also be achieved through facility and/or low capacity utilisation or excess capacity (Jüttner, 2005; Knemeyer et al., 2009; Park et al., 2013; Rice and Caniato, 2003; Sheffi and Rice Jr., 2005), alternate transport modes (Linnenluecke, 2017), additional employees (Sheffi, 2005a; Schultz and Søreide, 2008), and backup equipment (such as for IT and power) (Kleindorfer and Saad, 2005; Pettit et al., 2010, 2013; Sheffi, 2001). Procurement may use multiple suppliers for the same good or service (Chopra and Sodhi, 2004; Hohenstein et al.,

2015; Kleindorfer and Saad, 2005; Park et al., 2013; Sheffi, 2001; Sheffi and Rice Jr., 2005) or vendor-managed inventory (Jahre, 2017; van Wassenhove and Pedraza Martinez, 2012).

Intangible redundancy however may be attained by knowledge (data) backup through cross-training of employees and electronic backup of documents and procedures (Sheffi, 2001; Zsidisin and Wagner, 2010), having pre-planned continuity plans (Zsidisin and Wagner, 2010), using multiple processes (Johnson et al., 2013; Jüttner, 2005) and decision redundancy where critical decisions (even when communicated verbally) are documented. Decisions may be sent through emails to all relevant stakeholders to ensure consistency, monitoring and evaluation of their impact and effectiveness (Sawyer and Harrison, 2019). This helps generate and maintain acquired knowledge from previous experiences which thereby influence future decisions (Pereira et al., 2020). All these are applicable within procurement, but additional means may include supplier relationships (Jüttner and Maklan, 2011; Zsidisin and Wagner, 2010) where some suppliers are designated as lead and others as alternate or backup (Namdar et al., 2018).

2.4.1.6 Robustness

Resilience and robustness have been used interchangeably or alongside each other in some supply chain literature (such as Asbjørnslett and Rausand, 1999; Brandon-Jones et al., 2014; Colicchia and Strozzi, 2012; Pereira, 2009) but it is important to distinguish between the two because though robustness may be desirable for resilience, it - by itself - does not make a supply chain resilient (Christopher and Peck, 2004; Christopher and Rutherford, 2004; Decker et al., 2013; Durach et al., 2015; Kleindorfer and Saad, 2005; Kristianto et al., 2014; Pereira, 2009; Spiegler and Wikner, 2012; Tang, 2006; Wieland, 2013).

Robustness is that quality of a supply chain to be able to maintain an acceptable level of performance during a disruption (Kouvelis et al., 2006; Meepetchdee and Shah, 2007) either by resisting or avoiding detrimental change induced by the disruption (Durach et al., 2015). A supply chain's robustness is hence determined by the weakest link in the chain since that would be the place least resistant to the disruption risks the supply chain is exposed to (Kleindorfer and Saad, 2005). Identifying the weakest links relative to specific risks and improving their ability to resist or avoid disruptive change therefore increases a supply chain's robustness.

This is a basic prerequisite when dealing with supplier-side risks, as it serves as a proactive approach to coping with vulnerabilities (Andreas and Carl Marcus, 2012); thus, its assessment is necessary for sustainable value creation (Klibi et al., 2010). Procurement efforts at redundancy

(Ivanov and Sokolov, 2013; Kleindorfer and Saad, 2005; Wieland, 2013), avoidance and flexibility when targeted at ensuring the weakest supply links are more resistant to disruptions improve the supply chain's robustness. Specific actions may include multiple sourcing, backup suppliers, procuring safety stock, supplier performance monitoring and consequent change of underperforming suppliers, and also, supplier development programmes.

2.4.1.7 Security

Security as a supply chain resilience formative element requires knowing the vulnerability points in the supply chain and putting in place contingency plans to address them; it protects the supply chain from deliberate attacks (Ali et al., 2017; Manuj and Mentzer, 2008). Actions taken may include information systems security (Manuj and Mentzer, 2008; Tang, 2006; Tang and Musa, 2011; Urciuoli et al., 2014), insurance (Kleindorfer and Saad, 2005; Sheffi, 2001), physical protection and preservation of valued assets through copyrights, licensing and well-written contracts (Tang, 2006). Others are personnel security (Tang, 2006), freight security (Manuj and Mentzer, 2008; Stevenson and Busby, 2015; Tang, 2006; Urciuoli et al., 2014) and financial hedging as well as inventory hedging (Jüttner and Maklan, 2011; Manuj and Mentzer, 2008; Thun and Hoenig, 2011). Security can be improved by creating synergies with supply chain partners (Ali et al., 2017; Bakshi and Kleindorfer, 2009; Stewart et al., 2009; Voss and Williams, 2013); especially suppliers when looking at things from the perspective of procurement.

2.4.1.8 Integration

Integration in a supply chain may be pursued internally and/or externally for resilience. Internal integration serves as a means to reduce uncertainty by enhancing visibility across functional units for smoother operations and to allow for more reliable managerial decision making (Braunscheidel and Suresh, 2009; Chiang et al., 2012; Christopher and Peck, 2003; Foerstl et al., 2013; Pereira et al., 2014, 2020; Van der Vorst and Beulens, 2002).

From a procurement perspective, internal integration may be pursued strategically and laterally (Kaufmann and Gaeckler, 2015). Strategic integration involves the strategic focus and status of the function, and the visibility of its professionals (Paulraj et al., 2006). It would also include evaluating procurement's performance on its strategic contribution to the supply chain's success and the cross-functional training of procurement managers and officers (Chen et al., 2004; Kaufmann and Gaeckler, 2015) to improve their decision making. Lateral integration employs

stakeholder, process and data integration (Flynn et al., 2010; Germain and Iyer, 2006; Koufteros et al., 2005) which would involve the formation of cross-functional teams (Foerstl et al., 2013) and the sharing of useful information and requirements between procurement and its internal customers (Pereira et al., 2014; Szwajczewski et al., 2005). Internal integration positively impacts the responsiveness of suppliers (Pereira et al., 2014) thereby improving the agility of the supply chain.

External or vertical integration helps to ensure visibility and control over the full supply chain thereby serving, among other things, as a risk-mitigating strategy (Braunscheidel and Suresh, 2009; Datta et al., 2007; Giunipero and Aly Eltantawy, 2004; Jüttner et al., 2003; Klibi et al., 2010; Manuj and Mentzer, 2008). It may involve integrating logistics (Beske and Seuring, 2014; Manuj and Sahin, 2011; Ponomarov and Holcomb, 2009) and technology (Beske and Seuring, 2014). Much like internal integration, external integration from a procurement perspective also requires collaboration at an interdependent or highly integrated level to enhance the supply chain's agility (Christopher and Jüttner, 2000; McDonald and Woodburn, 2007; Pereira et al., 2014).

Overall, integration facilitates quick procurement decision making (Kaufmann and Gaeckler, 2015) and improves supplier relationships, supplier development, risk identification, knowledge backup and both internal and external communication (Pereira et al., 2014).

2.4.1.9 Human Resource management

Management of human resources towards the attainment of resilience in the supply chain includes recruitment, development of the human resources, knowledge management, staff retention and enforcement of policies and codes of conduct (Ali et al., 2017; Blackhurst et al., 2011; Kamalahmadi and Parast, 2016; Namdar et al., 2018; Pettit et al., 2013).

Typically, the development of human resources involves various forms of training programmes (such as induction programmes, drills and simulations) which help improve employees' understanding of the supply chain, creates risk management culture and prepares them to respond adequately in times of disruptions (Ali et al., 2017; Finch, 2004; Hohenstein et al., 2015; Kern et al., 2012; Lengnick-Hall et al., 2011; Norrman and Jansson, 2004; Pettit and Beresford, 2009; Rice and Caniato, 2003; Sawyerr and Harrison, 2019; Singh et al., 2018; Yadav and Barve, 2014). It also requires the identification of the risk attitudes of decision-makers (Namdar et al.,

2018) in order to properly manage the types of decisions they may take and to tailor the appropriate training for each type.

Knowledge management is carried out through training (Ali et al., 2017; Jüttner and Maklan, 2011) and documentation of decisions, processes and records as well as the management of access to the documents (Sheffi, 2001). Knowledge may be spread across the organisation through cross-training as well as the formation of cross-functional teams (Hohenstein et al., 2015; Sheffi, 2001). This helps to mitigate some of the challenges of staff turnover – particularly in the humanitarian sector (Schultz and Søreide, 2008). Despite the mitigative benefits of documentation against the effects of staff turnover, retention of core staff with significant experience, personal skills and expertise that is hard to replicate is critical in mitigating corruption risks and other forms of disruptions from suppliers (Nair et al., 2015; Sawyerr and Harrison, 2019; Schultz and Søreide, 2008).

When hiring personnel, specific considerations may be made in terms of recruiting specialists in procurement and finance (Walker and Maxwell, 2009), knowledge of local market dynamics (Schultz and Søreide, 2008), candidate references (Schultz and Søreide, 2008) and personal flexibility in terms of ability to handle different tasks and responsibilities (Manders et al., 2017). Another aspect of recruitment is the ability to engage varying numbers of employees depending on demand or service requirements (Manders et al., 2017). Further, employees may be made to sign codes of conducts that spell out possible cases of conflict of interest, how they are to be addressed, procedures for supplier engagement and prescribed actions in cases of breach (Schultz and Søreide, 2008).

Proper management of human resources not only improves a supply chain's effectiveness but also its resilience through culture inculcation, increased flexibility, improved quality and speed of decision making and risk avoidance (Sawyerr and Harrison, 2019; Singh et al., 2018; Yadav and Barve, 2014).

2.4.1.10 Sustainability

Of all prescribed formative elements in supply chain resilience studies, sustainability tends to be one of the least often cited (Ali et al., 2017; Sawyerr and Harrison, 2019). However, increasing environmental concerns and the effects of various forms of disasters is heightening its interest in a lot of areas including supply chain management studies (Behl and Dutta, 2019). There is also increasing pressure on organisations – particularly in the humanitarian sector (Kovács and Spens,

2011; van Kempen et al., 2017) from various quarters including competition, regulators and the general public (Sarkis et al., 2013). With these pressures come additional risks that need to be mitigated as well as opportunities to gain competitive advantage which thereby makes sustainability important in resilience studies.

The triple bottom line - which looks at sustainability studies from the social, environmental (or ecological) and economic perspectives - has proved a useful framework for sustainability studies (Beske and Seuring, 2014); even though this is underdeveloped in humanitarian supply chain management (van Kempen et al., 2017). Organisations may develop more sustainable products and services through the knowledge of their customers' wishes as well as their supplier base. This knowledge then forms the basis for supplier sustainability risk management (Beske and Seuring, 2014; Blome and Schoenherr, 2011). Procurement actions towards resilience through sustainability includes considerations on transport, energy use, packaging, material management, supplier location, labour composition and sources of raw materials (Blome and Schoenherr, 2011; Kunz and Gold, 2017; Turner and Houston, 2009). These help organisations to ensure sustainability not only from the social and ecological perspectives but also on the economic (Beske and Seuring, 2014).

Collaboration through information sharing, visibility and enhanced trust facilitate sustainability (Giménez and Tachizawa, 2012; Gold et al., 2010; Han and Dong, 2015; Kunz and Gold, 2017; van Hoof and Thiell, 2014).

2.4.1.11 Information Technology

The use of information technology (IT) helps to improve the resilience of the supply chain primarily by facilitating other formative elements. It is very useful during complex and chaotic crisis to assist in decision making (Tveiten et al., 2012). IT can support procurement to improve responsiveness, visibility, information sharing, financial control, knowledge management, flexibility, integration, security and decision making (Boin et al., 2010; Ertem et al., 2010; Falasca and Zobel, 2011; Fritz Institute, 2005; Schultz and Søreide, 2008; Thomas and Kopczak, 2005).

2.4.1.12 Top managerial commitment

To have a resilient supply chain, there is the need for a supportive management culture and direct commitment from top management (Christopher and Peck, 2004; Ponomarov and

Holcomb, 2009; Sawyerr and Harrison, 2019; Scholten et al., 2014). Like information technology, the commitment of top management facilitates many other formative elements. Support from top management has been shown in literature to enhance flexibility (Datta, 2017; Skipper and Hanna, 2009; Spiegler and Wikner, 2012), management of risks (Ponomarov and Holcomb, 2009; Waters, 2011), integration (Wong et al., 2012), collaboration (Datta, 2017), human resource management, redundancy, decision-making and resilience culture (Sawyerr and Harrison, 2019; Tukamuhabwa et al., 2015). Beyond making resilience a priority for the whole organisation, top management prove their commitment by making the needed investments to ensure that resilience is pursued.

Not only is this commitment required but its absence adversely affects risk management, trust and collaboration, robustness and culture (Christiansen, 2015; Fawcett et al., 2008; Giménez, 2004; Singh and Power, 2009). Even though it may be difficult justifying the time and resources spent on ensuring a resilient supply chain when risks do not materialise (Zsidisin et al., 2000), the total cost incurred in case of a disruption must be evaluated in comparison to the benefits of having strategies in place; that not only reduces the likelihood and/or effects of disruptions (Giunipero and Aly Eltantawy, 2004) but also provides competitive advantage.

2.4.1.13 Culture

The non-negotiable antecedents for this formative element are managerial commitment and collaboration. These help to establish a resilience-seeking culture which encourages information sharing and institutes clear reporting channels (Datta, 2017; Lengnick-Hall et al., 2011; Schultz and Søreide, 2008; Sheffi and Rice Jr., 2005; Walker and Maxwell, 2009), ensures continuous learning (Braunscheidel and Suresh, 2009; Lengnick-Hall et al., 2011; Sheffi and Rice Jr., 2005), and prioritises risk identification, avoidance and/or mitigation (Ali et al., 2017; Christopher and Peck, 2004; Hohenstein et al., 2015; Kamalahmadi and Parast, 2016; Pettit et al., 2010; Tukamuhabwa et al., 2015; Urciuoli et al., 2014).

Recruitment and training of employees to enhance flexibility in technical and cognitive competencies; documentation, review and implementation of lessons from disruptions; ensuring a heightened look out for and reporting of disruptions and a flexible decision-making structure during crisis have been shown in literature as needful for pursuing a supply chain level resilience-seeking culture (Blackhurst et al., 2011; Braunscheidel and Suresh, 2009; Christopher and Peck, 2004; Jüttner, 2005; Lengnick-Hall et al., 2011; Norman and Jansson, 2004; Pettit et al., 2010;

Sawyerr and Harrison, 2019; Sheffi, 2005a; Sheffi, 2005c; Sheffi, 2001; Sheffi and Rice, 2005; Urciuoli et al., 2014; Walker and Maxwell, 2009).

Procurement can extend these interventions to suppliers by identifying upstream risks and proposing the appropriate supplier development needs for strategic suppliers and also incorporating some of them in contractual agreements and performance indicators.

2.4.1.14 Decision making

In the formative elements discussed so far, decision making underpins almost all of them because of its role proactively and reactively in how the overall strategy towards resilience is developed and implemented.

The network to be (re)designed, what information to share to create the needed visibility, the needed collaboration to achieve flexibility, how much safety stock to keep, how many suppliers to work with, the criteria for selection, their geographical locations and many others all come down to decisions (Ali et al., 2017; Carvalho et al., 2012; Christopher and Peck, 2004; Fattahi et al., 2017; Govindan et al., 2017; Jabbarzadeh et al., 2016; Jüttner, 2005; Klibi et al., 2010; Kristianto et al., 2014; Rice and Caniato, 2003; Sawyerr and Harrison, 2019; Sheffi, 2001; Tang, 2006; Vecchi and Vallisi, 2016). Decision making towards resilience is enhanced by supply chain understanding (balance of power in the supply chain, the criticality of various relationships, trade-off decisions), awareness (of chokepoints in the supply chain, sources of uncertainty, previous disruptions and lessons etc.) and the elimination of unnecessary complexity (Bode et al., 2011; Carvalho et al., 2012; Christopher and Peck, 2004; Durach et al., 2015; Falasca et al., 2008; McManus et al., 2008; Park et al., 2013). With these, decision makers can formulate a supply chain resilience strategy through a delicate combination of the various formative elements that suits their supply network and delivers its objectives (Van der Vorst and Beulens, 2002).

Table 2.3 below presents a summary of how extant literature indicates the pursuit of these SCR formative elements from a procurement perspective.

Formative Element	Pursuit Mechanisms	References
Collaboration	Collaborative procurement through procuring as one unit, information sharing (about suppliers, staff, officials), resource sharing.	Balcik et al. (2010), Maghsoudi and Pazirandeh (2016), Majewski et al. (2010)), Nikkhoo et al. (2018), Walker and Maxwell (2009)

Avoidance	<p>Due diligence of suppliers.</p> <p>Instituting procurement policies, procedures and codes of conduct across the supply chain.</p> <p>Employee training.</p> <p>Setting up reporting and whistleblowing mechanisms.</p> <p>Establishing accountability frameworks.</p>	<p>Ertem et al. (2012), Maria et al. (2018), Oloruntoba and Gray (2006), Sawyerr and Harrison (2019), Schultz and Søreide (2008), Walker and Maxwell (2009), Wild and Zhou (2011)</p>
Flexibility	<p>Decentralisation and/or flexible decision-making structure.</p> <p>Cross-training of employees.</p> <p>Use of flexible supplier contracts.</p> <p>Backup suppliers.</p> <p>Multiple sourcing including the use of location (local/overseas) and service/product mix.</p> <p>Supplier flexibility as a selection criterion.</p>	<p>Datta (2017), Hohenstein et al. (2015), Jüttner et al. (2003), Manders et al. (2017), Nikkhoo et al. (2018), Pereira et al. (2014), Pettit et al. (2010) (2013), Sawyerr and Harrison (2019), Sheffi (2005a,b), Tang (2006b), Tukamuhabwa et al. (2015), Vecchi and Vallisi (2016)</p>
Agility	<p>Procuring extra stock.</p> <p>Local and regional procurement.</p> <p>Establishing quality, long-term supplier relationships.</p> <p>Supplier development.</p> <p>Supplier performance measures.</p> <p>Flexible supplier contracts.</p>	<p>Balcik and Ak (2014), Krause et al. (2007), Lentz et al. (2013), Nair et al. (2015), Oloruntoba and Gray (2006), Tatham and Kovács (2012), Torabi et al. (2018), Zhang et al. (2019)</p>
Redundancy	<p>Multiple suppliers for the same good or service.</p> <p>Vendor-managed inventory.</p> <p>Knowledge (data) backup.</p> <p>Electronic backup of documents and procedures.</p> <p>Pre-planned continuity plans.</p> <p>Using multiple processes.</p> <p>Decision redundancy.</p> <p>Alternate or backup suppliers.</p>	<p>Chopra and Sodhi (2004), Hohenstein et al. (2015), Jahre (2017) Johnson et al. (2013), Jüttner and Maklan (2011), Jüttner (2005), Kleindorfer and Saad (2005), Namdar et al. (2018), Park et al. (2013), Pereira et al. (2020), Sawyerr and Harrison (2019), Sheffi and Rice (2005), Sheffi (2001), van Wassenhove and Pedraza Martinez (2012), Zsidisin and Wagner (2010)</p>
Robustness	<p>Multiple sourcing.</p> <p>Backup suppliers.</p> <p>Safety stock.</p> <p>Supplier performance monitoring.</p> <p>Replacement of underperforming suppliers.</p> <p>Supplier development programmes.</p>	<p>Ivanov and Sokolov (2013), Kleindorfer and Saad (2005), Wieland (2013)</p>
Security	<p>Information systems security.</p> <p>Insurance.</p>	<p>Ali et al. (2017), Bakshi and Kleindorfer (2009), Jüttner and</p>

	Physical protection. Copyrights, licensing and contracts. Personnel security. Freight security. Financial hedging. Inventory hedging.	Maklan (2011), Kleindorfer and Saad (2005), Manuj and Mentzer (2008), Sheffi (2001), Stevenson and Busby (2015), Stewart et al. (2009), Tang and Musa (2011), Tang (2006), Urciuoli et al. (2014), Thun and Hoenig (2011), Urciuoli et al. (2014), Voss and Williams (2013)
Integration	Cross-functional training of procurement personnel. Formation of cross-functional teams (such as procurement committees). Sharing of useful information and requirements between procurement and its internal customers. Logistical integration with suppliers. Technological integration with suppliers.	Beske and Seuring (2014), Chen et al. (2004), Flynn et al. (2010), Foerstl et al. (2013), Germain and Iyer (2006), Kaufmann and Gaeckler (2015), Koufteros et al. (2005), Manuj and Sahin (2011), Pereira et al. (2014), Ponomarov and Holcomb (2009), Szejczewski et al. (2005)
Human Resource management	Recruitment. Staff training. Knowledge management (documentation and access to information). Staff retention. Enforcement of policies and codes of conduct.	Ali et al. (2017), Blackhurst et al. (2011), Finch (2004), Hohenstein et al. (2015), Jüttner and Maklan (2011), Kamalahmadi and Parast (2016), Kern et al. (2012), Lengnick-Hall et al. (2011), Nair et al. (2015), Namdar et al. (2018), Norrman and Jansson (2004), Pettit and Beresford (2009), Pettit et al. (2013), Rice and Caniato (2003), Sawyerr and Harrison (2019), Schultz and Søreide (2008), Sheffi (2001), Singh et al. (2018), Walker and Maxwell (2009), Yadav and Barve (2014)
Sustainability	Modes and types of transport used. Energy use. Packaging. Material management. Supplier selection considerations. Labour composition. Choice of sources of raw materials.	Blome and Schoenherr (2011), Kunz and Gold (2017), Turner and Houston (2009)
Information Technology	Assisting decision making. Data storage, protection and accessibility. Facilitate staff training. Mitigate against corruption.	Boim et al. (2010), Ertem et al. (2010), Falasca and Zobel (2011), Fritz Institute (2005), Schultz and Søreide (2008), Thomas and Kopczak (2005), Tveiten et al. (2012)

Top managerial commitment	Making resilience a priority. Investments into SCR needs of the organisation. Influence organisational culture. Lead by example.	Christiansen (2015), Fawcett et al. (2008), Giménez (2004), Giunipero and Aly Eltantawy (2004), Singh and Power (2009), Zsidisin et al. (2000)
Culture	Staff training. Documentation. Review and implementation of lessons learnt. Ensuring a heightened look out for disruptions. Facilitating easy reporting of disruptions or near accidents. Flexible decision-making structure. Extension of organisational culture to suppliers. Supplier development. Contractual requirements and performance indicators.	Blackhurst et al. (2011), Braunscheidel and Suresh (2009), Christopher and Peck (2004), Jüttner (2005), Lengnick-Hall et al. (2011), Norrman and Jansson (2004), Pettit et al. (2010), Sawyerr and Harrison (2019), Sheffi and Rice (2005), Sheffi (2001), Sheffi (2005a,c), Urciuoli et al. (2014), Walker and Maxwell (2009)
Decision making	Improving supply chain understanding. Creating awareness. Elimination of unnecessary complexity. Flexible decision-making structure.	Bode et al. (2011), Carvalho et al. (2012), Christopher and Peck (2004), Durach et al. (2015), Falasca et al. (2008), McManus et al. (2008), Park et al. (2013), Van der Vorst and Beulens (2002)

Table 2.3 The pursuit mechanisms of SCR formative elements from a procurement perspective

Having concluded the discussion of SCR formative elements from a procurement perspective with the discussion on decision making, it is noted that extant literature provides useful insights as to how to go about decision making proactively. The next section coalesces useful insights on proactive pre-contract award procurement decisions into a framework that provides a simplified overarching view of how procurement can improve upon the resilience of the supply chain.

2.4.2 Procurement Decisions for Supply Chain Resilience

The majority of Supply chain resilience literature has focused on the full supply chain with a relative few looking into how specific aspects of the supply chain (such as the downstream or upstream risks and uncertainties) impact its resilience (Giunipero and Aly Eltantawy, 2004; Norrman and Jansson, 2004; Pereira et al., 2014). The same can be said of how proposed

mitigative techniques are applied within these parts of the supply chain. This research focuses on one out of the five sources of risks provided in Table 2.2 as highlighted in red in Figure 2.4.

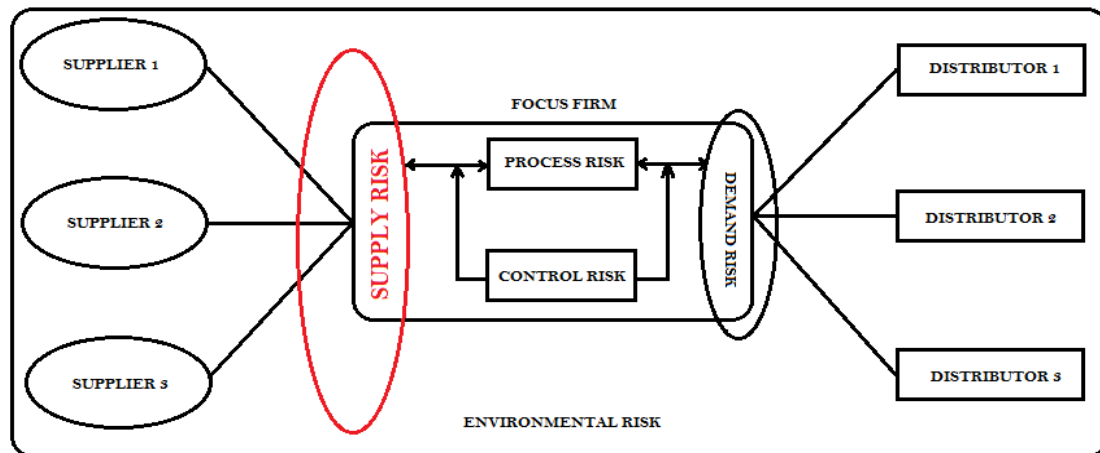


Figure 2.4 Sources of Risk in a supply chain
(Adapted from Christopher and Peck, 2004)

Reviewing the literature on mitigation of supply risks, pre-contract award decisions made in relation to suppliers fall under supply base strategy, supplier relationship determination, supplier selection and supplier location. These define the organisation's procurement. A detailed discussion on these is presented below.

2.4.2.1 Procurement Strategy

In putting together a strategy for procurement, decisions have to be made on the supplier base strategy, selection of suppliers, the type of relationships to have with them and where they are located (Datta, 2017). Here, procurement strategy refers to the consolidated set of decision-options put together to help direct an organisation's procurement function to achieve specific strategic objectives including but not exclusive to its supply chains' resilience.

Fundamental decisions on whether to pursue single or multiple sourcing, source locally or overseas and whether to have a closer relationship with suppliers or interact at arm's length require the decision makers' understanding of trade-offs between cost and resilience (Blackhurst et al., 2011; Christopher and Peck, 2004). All these aspects of procurement strategy are related and may have varying influences on other decisions depending on the context. For example, choices made in defining a supplier base strategy may influence the criteria for supplier selection and this will also go with an accompanying supplier relationship choice that will ensure a reasonable level

of efficiency and resilience. Further, the location of a supplier may find itself in the criteria for supplier selection. It is the careful permutation of these factors that culminates into a procurement strategy capable of improving the resilience in a supply chain.

2.4.2.1.1 Supplier Base Strategy

A supplier base strategy usually revolves around sourcing decisions related to the number of suppliers per good or service that the supply chain requires (Torabi et al., 2015). This means that an organisation may decide to single-source all its materials out of a pool of possible suppliers, multi-source all of its materials or apply both to different materials depending on a number of factors. There are situations where there may be only one supplier capable of delivering a particular good or service; in which case organisations are forced to sole-source.

In a bid to enhance cost-efficiency, some firms in the past significantly reduced the size of their supplier base by opting for single sourcing per product line which ended up leaving their supply chains exposed to disruptions (Christopher and Peck, 2004; Peck, 2005). Hence the development of effective sourcing strategies to mitigate disruptions is necessary (Namdar et al., 2018). The various strategies prescribed include single and various forms of multiple (including dual) sourcing like having backup supplier contracts, hedging and a flexible supplier base (Jahre, 2017; Namdar et al., 2018; Yu et al., 2009).

Sheffi and Rice (2005) argue that the correct alignment of the corporate-supplier relationship with the procurement strategy is the way to go and not whether they use single or multiple suppliers. Ho et al. (2015) however prove that academic research has come to a consensus that dual-sourcing in times of disruptions outperforms single-sourcing and hence must be the preferred option. In something of a merger between the two, Christopher and Peck (2004) propose using a lead supplier approach with the option of alternative suppliers wherever possible. This may afford organisations the needed flexibility to respond positively in case of supply-side disruption.

2.4.2.1.2 Supplier Selection

The criteria for selecting suppliers is a set of qualifying strategic and operational standards used by organisations to align external resources with internal stakeholder goals (Nair et al., 2015; Sarkis and Talluri, 2002). Usually, the primary considerations for selecting suppliers focus on

cost, quality, lead time, and service level (Aissaoui et al., 2007; Balcik and Ak, 2014; Hosseini and Barker, 2016; Hu and Dong, 2019). Increasingly, the strategic role of suppliers in the success of a supply chain is being highlighted and so supplier selection has been identified as a strategic decision that may be the basis for long-term integrative relationships (Hu and Dong, 2019). Further, supplier selection ensures the supply base is designed and aligned to firms' strategic priorities and that the roles played by them strengthen organisations' strategic capabilities (Hillebrand and Biemans, 2004; Nair et al., 2015).

Consequently, supplier selection criteria must include the suppliers' capabilities, risk profile and risk awareness (Barroso et al., 2008; Christopher and Peck, 2003). Increasing social and environmental awareness globally and much stringent government regulations have meant that organisations must make significant effort to ensure that their suppliers are not only economically sustainable but also socially and environmentally sustainable (Blome and Schoenherr, 2011; Gaziulusoy, 2015; Govindan et al., 2013, 2016; Grimm et al., 2014; Luthra et al., 2017).

Supplier selection not only deals with the definition of criteria but also the procedure to be used. By far, the most cited sourcing procedure – especially for humanitarian supply chains, is competitive bidding (Balcik et al., 2010; Balcik and Beamon, 2008; Coulter et al., 2007; Lentz et al., 2013; Pazirandeh and Herlin, 2014; Torabi et al., 2018). This ensures transparency and helps offer equal opportunities to all suppliers thereby increasing trust; which is critical for useful collaboration towards resilience (Balcik and Beamon, 2008; Pazirandeh and Herlin, 2014).

2.4.2.1.3 Supplier Relationship Determination

Supplier relationships are critical in ensuring resilience in a supply chain due to collaborated risk assessment and information sharing at supply chain linkages (Christopher and Peck, 2004; Hu and Dong, 2019). For humanitarian organisations, the determination and development of the various types of relationships must be done in the preparedness phase of the disaster management cycle (Refer to Section 2.2.1.1) to ensure the supply chain's ability to be responsive in case of disruption (Jahre, 2017; Torabi et al., 2018).

The determination of the type of relationship to have with suppliers is usually influenced by the supplier base strategy, the type of good or service being procured, its criticality to the supply chain and the frequency of requirement. Generally, the more suppliers there are for a material or service, the less strong the relationship is likely to be (Sheffi, 2001; Sheffi, 2005b); the reverse is also true. In cases where the need for a material or service is repetitive, the relationship with a

supplier is likely to be long-term. The supplier relationship spectrum ranges from arm's length on one end to strategic alliances or integration on the other side. A combination of these aimed at efficiency and resilience best suits business strategy (Sheffi, 2001; Sheffi, 2005b). Sourcing of core components usually requires stronger and longer relationships with single-sourced suppliers while less critical components may require less close and shorter relationships with suppliers (Waters, 2011).

Furthermore, organisations establish the parameters (such as duration, generic and tailored expectations, compliance etc.) of their relationship with suppliers through the use of contracts and codes of conduct (Svensson and Baath, 2008) – especially in the humanitarian sector. Certain basic ethical requirements may be made for all suppliers (irrespective of duration or nature of contract) such as compliance with modern slavery – without which no contract is signed (Taupiac, 2001). This is because the engagement of unethical suppliers poses serious reputational and financial risks to these organisations (Svensson, 2009). In humanitarian supply chains, long-term relationships are used to ensure flexibility, agility, reliability, visibility and as a security against uncertainty in funding and beneficiary needs (Balcik and Ak, 2014; Hu and Dong, 2019; Liang et al., 2012; Torabi et al., 2018; Wang et al., 2015).

2.4.2.1.4 Supplier Location

The location of suppliers by itself should not usually be much of a difficult decision to make because a close supplier is the default decision. However, many other factors come into play especially in the face of today's globalisation where it may be more economical to source from overseas. However, risk reduction and consideration for resilience are recommended in literature to play a key role when considering the location of suppliers (Christopher and Peck, 2004; Vecchi and Vallisi, 2016). The operating environment of overseas suppliers including the prevailing political status of the country, exposure to natural disasters, labour regulations and other environmental risks exposed to these suppliers must be considered in supplier selection. Relationships with overseas suppliers are more complex and susceptible to faults because of the international connections involved (Thun and Hoenig, 2011). Both local and overseas suppliers could be used to provide the needed supply-side flexibility to provide both efficiency and resilience (Sheffi, 2001).

2.4.2.1.5 Relationships between Decision Areas

A culmination of all the insights from literature as explained above and their relationship with each other is what is discussed in Table 2.4 and is presented schematically in Figure 2.5. Under procurement strategy, decisions made for supplier base strategy may influence decisions on supplier selection and relationships with suppliers and vice versa. Decisions on supplier locations may influence all the other decisions areas. For example, when the supplier of a critical good or service is the proprietor for that offering required for a firm's supply chain, that necessarily dictates sole sourcing and location (irrespective of where the supplier may be located). This would typically demand a closer relationship with that supplier. On the other hand, when there are multiple potential suppliers, supplier selection decisions may extend to make supplier location considerations while supplier base decisions may include dual-sourcing or back-up supplier considerations where different levels of relationships may be pursued with the various suppliers.

From all the preceding and juxtaposing that with the generic supply-side decision-phase framework (Figure 2.5) provided below, it can be seen that notwithstanding the rather broad number of supply-side risks to humanitarian supply chains, there are significant similarities in commercial supply chains and humanitarian supply chains when focusing on the decision areas under the procurement strategies employed. This thereby delimits this research and establishes the areas of interest for the empirical data collection.

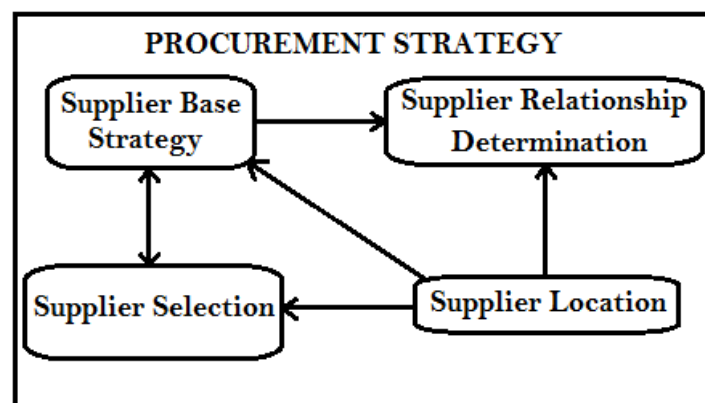


Figure 2.5 Research Conceptual framework

Relationships			Description	References
Decision Area 1	Type of relationship	Decision Area 2		
Supplier Base Strategy	⇒	Supplier Relationship Determination	To mitigate against possible supply-related risks, supplier base strategy decisions necessitate accompanying relationship decisions. For example, closer relationships are mandated when there are fewer suppliers available. In the case of sole-sourcing, the need for close relationships is non-negotiable.	Sheffi (2005a), Sheffi and Rice (2005), Zeng (2000), Iakovou et al. (2014), Yu et al. (2009), Namdar et al. (2018), Kekre et al. (1995), Ellram (1991), Cavinato (2004), Choi and Krause (2006), Svensson (2004), Wagner and Bode (2006)
Supplier Base Strategy	⇔	Supplier Selection	Resilient supply chains require the careful selection of suppliers that will not increase their vulnerability because of the chosen supplier base strategy. When supply requirements are deemed critical or cannot be provided by a single supplier, the supply base strategy must be modified to not only meet the requirement but also not compromise the supply chain's resilience.	Torabi, Baghersad, and Mansouri (2015), Namdar et al. (2018), Pazirandeh and Herlin (2014)
Supplier Location	⇒	Supplier Relationship Determination	Supplier location decisions can necessitate supplier relationship decisions e.g. closer relationships can be used to mitigate risks associated with global sourcing.	Thun and Hoenig (2011), Cavusgil (1998), Svendsen and Haugland (2006), Christopher and Peck (2004), Christopher et al. (2011)
Supplier Location	⇒	Supplier Base Strategy	When a buyer deems some locations as risky, it may dictate the supplier base strategy. For example, an organisation can decide to multiple source and have a mix of location and global sources to mitigate supply risks	Balcik and Ak (2014), Jüttner et al. (2003), Pereira et al. (2014), Tukamuhabwa et al. (2015)

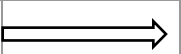
Supplier Location		Supplier Selection	<p>When supplier location decisions are predetermined, supplier selection must be done in a manner so as to mitigate the risk exposure due to the determined location. As an example, if an organisation decides to source from a country where there is the likelihood of modern slavery, supplier selection criteria must require suppliers to prove they do not present such risks</p>	<p>Shahadat (2003), Ertem and Buyurgan (Ertem and Buyurgan, 2013), Schultz and Søreide (2008), Duran et al. (2013), van Kempen et al. (2017)</p>
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Table 2.4 Description of Relationship between Decision Areas

A discussion of the conceptual framework within the humanitarian supply chain is discussed in the next section.

2.4.2.3 Procurement Strategy in Humanitarian Supply Chain Resilience Creation

Procurement in the humanitarian sector is largely executed in the traditional form (Pazirandeh, 2016) despite issues of the unpredictability of the needs of beneficiaries, funding uncertainties and the evolution of procurement strategy between the various phases of the disaster management cycle (Balcik et al., 2010). Generally, procurement decisions are to be made in line with an overarching organisational strategy on procurement (Pazirandeh, 2016). By their decisions, managers in charge of procurement can create or enhance their supply chain's resilience by the elimination of unnecessary complexity, quick assessment of expected vulnerabilities, potential or actual supply disruptions and developing or modifying strategies to address them (Falasca et al., 2008; Sheffi and Rice Jr., 2005; Stewart et al., 2009).

Within supply chain resilience literature, the decision areas for such a strategy include the supplier base strategy, supplier selection, supplier relationship determination and supplier location as shown in Figure 2.5. On supplier base strategy, multiple sourcing is the widely prescribed option for humanitarians (Ertem et al., 2010; Iakovou et al., 2014; Sheu, 2007; van Heeringen, 2010) and has been expressed in terms of having a flexible or diversified supplier base (Day, 2014; Jahre, 2017; Pazirandeh, 2016; Pelchat, 2004) and also alternative suppliers (Raich et al., 2014).

In determining supplier selection with resilience in mind, Balcik and Ak (2014) and Lodree (2011) consider the supplier's ability to deliver quantities flexibly while Hu et al. (Hu et al., 2017) look at suppliers pliable to lead time discounts in cases where late deliveries are allowed. A major consideration in supplier selection for humanitarian supply chains is ethics. Considerations on the possible use of child labour, environmental abuses and connections to weapons manufacturing are high on the radar (Berger and Garyfalakis, 2013; Maria et al., 2018; Oloruntoba and Gray, 2006; Taupiac, 2001) because these threaten an organisation's credibility and could have adverse effects on their funding (Berger and Garyfalakis, 2013; Svensson, 2009; Wild and Zhou, 2011).

Determination of supplier relationships within humanitarian supply chains is not as straightforward as they are with commercial supply chains. Relationships with suppliers are described as dormant where existing framework agreements (Balcik and Ak, 2014; Fritz Institute,

2005), pre-purchasing option contracts (Wang et al., 2016) and vendor managed inventory (Bhattacharya et al., 2014; Kovács and Tatham, 2009) are used to make spot purchases post-disaster for non-food items, medical supplies and vehicles (Balcik et al., 2010; Fritz Institute, 2005; Kovács and Spens, 2011; Pazirandeh, 2016; van Heeringen, 2010). This generally is targeted at curbing excessive delays and possible hikes in prices in the aftermath of disasters. Corruption risks from the supply-side as well as issues with ethical behaviour are prescribed to be addressed through contracts and/or codes of conduct (Schultz and Søreide, 2008; Svensson and Baath, 2008; Wild and Zhou, 2011).

Increasingly, the growing trend in humanitarian purchasing is moving towards local sourcing primarily on its economic benefits on the local economy especially in the recovery phase (Kovács and Spens, 2011). However, from a resilience perspective, the choice between sourcing from local suppliers and globally is not very clear cut. For relief materials where quality standards are non-negotiable e.g. medical supplies and vaccines, global sourcing is to be the preferred option (Balcik and Beamon, 2008; Ertem and Buyurgan, 2013; Falasca and Zobel, 2011; Pazirandeh, 2016; Shahadat, 2003; Sowinski, 2003) but even then, risky suppliers because of their geographical locations are to be avoided (van Heeringen, 2010). When delays cannot be accommodated, local sourcing becomes the preferred option but contingencies for non-local sources must be made (Balcik and Beamon, 2008; van Heeringen, 2010). For food items, local sourcing is the preferred option considering perishability, cultural and legal appropriateness as well as the possible detrimental health consequences of changes in diet (Matopoulos et al., 2014; Tomasini and van Wassenhove, 2004). Another prescribed mitigative measure to the risks of quality while avoiding delays at the same time is the development of local sources as has been done by some relief organisations (Maon et al., 2009; van Heeringen, 2010).

2.5 Summary

This chapter has reviewed the relevant literature necessary to pursue the aim and objectives of the research. It commenced with a brief introduction to supply chain management, followed by a discussion on its practice in humanitarian supply chains and a comparison between these and their commercial counterparts. Supply chain resilience was then introduced and discussed. Following this, discussions of procurement in SCR studies and SCR formative elements are presented. Seeing the need for resilience – especially in humanitarian supply chains, and the critical role procurement plays in its attainment, a review of remedial actions targeted at supply-

side risks is carried out. Procurement strategy decision areas were identified by reviewing preferred and necessitated complimentary decisions made before supplier engagement to ensure the vulnerability of the supply chain is not worse off. Here, decisions to be made were identified to be centred around the definition of a supplier base strategy, supplier selection, supplier relationship determination and considerations for supplier locations. The relationships between these are presented in Table 2.4 and Figure 2.5, and this is followed by a discussion of procurement strategy in humanitarian supply chains for creating SCR to conclude.

2.5.1 The Resultant Research Question

As a result of this literature review, it can be observed that over the years, many research articles have been published on supply chain resilience but very few have directed interventions to the appropriate contexts in the sense that the prescribed enhancing practices are not linked with outcomes. For example, there is no doubt on the negative impact of supply-side risks and uncertainties on the supply chain's resilience and that they can inform the excogitation of appropriate supply chain strategies. However, no supply chain resilience research identifies all the decision areas related to supply-side risks and uncertainties as provided in extant literature and how the prescribed formative elements inform the resilience enhancing decisions in these areas. Consequently, having demonstrated through the review that the procurement strategy decision areas identified in commercial supply chains were consistent with those in humanitarian supply chains (see section 2.4.2), the need to empirically explore these areas and the formative elements in humanitarian supply chains became apparent. Hence, the question this research seeks to answer logically followed:

“How does the need for resilience impact procurement strategy decision making in humanitarian supply chains?”

The main gaps in the literature identified from the review are highlighted below and the objectives of this research are restated to accentuate how relevant gaps are to be addressed in this study as it seeks to answer the research question.

2.5.2 Identified Gaps and Research Objectives

Further research is needed to address the following gaps:

- *How decisions in the upstream (specifically, the procurement function) are informed from a resilience creation perspective.*
- *The role of donors and their impact on decision making in humanitarian supply chains.*
- *The role of humanitarian logistics in development aid programmes.*
- *Collaboration among humanitarian organisations across the disaster management cycle.*
- *Procurement management and procurement decisions in the humanitarian sector.*

These gaps will be addressed in meeting the objectives of this research, namely:

1. To determine which supply chain resilience formative elements influence procurement decisions in humanitarian supply chains.
2. To determine the decision areas in humanitarian procurement aimed at creating supply chain resilience, the relationships between them and empirically ascertain whether they align with what is provided in extant literature.
3. To provide an appropriate procurement strategy decision-making framework aimed at incorporating resilience building for humanitarian supply chains.

Using the conceptual framework (Figure 2.5) to demarcate its boundaries, this research seeks to find out which resilience formative elements influence procurement strategy decisions in humanitarian supply chains, as indicated in the first objective. By identifying which formative elements influence these decisions and how this happens in the humanitarian sector, this research will contribute to empirically examining and validating the theoretical foundations of SCR).

Having determined the procurement decision areas in humanitarian procurement aimed at creating supply chain resilience and the relationships between them as presented in extant literature (See section 2.4.2), the research will proceed to completely achieve the objective 2 by empirically ascertaining these. The successful attainment of the first two objectives should then help answer the research question. An appropriate procurement strategy decision-making framework aimed at incorporating resilience-building for humanitarian supply chains (the last objective) can then justifiably be proposed. The framework will then help clarify how specific interventions may be directed to appropriate contexts, in this case, contexts within humanitarian supply chain management. Overall, all the findings of this research will contribute to helping address the need for more research on procurement management and procurement decisions in the humanitarian sector.

The next chapter discusses the research philosophy guiding the study and the resulting methodology adopted to obtain the aim and objectives of the research.

3. Methodology

3.0 Introduction

Following the previous chapter which established the boundaries of the research and pointed out the relevant gaps to be addressed, this chapter provides an overview of the research philosophical approach and methodology adopted to achieve the aim and objectives of this study. The chapter starts with an introduction of the chosen philosophical stance and a case for the selected qualitative approach is made. The research design is then spelt out and justified after which the ethical issues associated with the adopted research methods are discussed. Details about the data collection process and data analysis follow and the chapter concludes with an insight into the application of quality criteria to accentuate the quality of the processes used for this research.

3.1 Research Philosophy

In carrying out any research, there are underlying assumptions whether cognitively acknowledged or not that inform ‘What to research’, ‘How to research’ and ‘Why research’ (Solem, 2003). Answers to these reflect the researcher’s philosophical position which influences their methodological choice (Blanche et al., 2007). Thus, it is important in the research process for the researcher to go through the philosophical review to enrich their research abilities and to enhance their confidence in the appropriateness of their methodology (Holden and Lynch, 2004). Research philosophy is captured in the two independent but closely related concepts of ontology and epistemology.

Ontology refers to the assumptions made about the nature of reality (Burrell and Morgan, 1979; Guba, 1990; Holden and Lynch, 2004; Mertens, 2010) and attempts to delimit what knowledge is acceptable within a field of study (Saunders et al., 2009; Tashakkori and Teddlie, 2003). Arguments range between two opposing viewpoints of objective reality (described as realism or objectivism) on one end and subjectivity (described as nominalism or subjectivism) on the other (Denzin and Lincoln, 1994; Guba, 1990; Holden and Lynch, 2004; Solem, 2003). Since these positions are considered as being at the ends of a paradigmatic spectrum, there are intermediary positions that may be closer to one perspective than the other (Holden and Lynch, 2004). One such intermediary position that argues reality as a construct between the two extremes is Easterby-Smith et al.’s (2015) relativism. This research borrows from the constructivist perspective as its

ontological disposition because it acknowledges the unique realities of different humanitarian organisations.

Consequential to a researcher's ontology position is their epistemological perspective and eventually their chosen methodology (Holden and Lynch, 2004; Solem, 2003). After settling on what the nature of reality is, the assumptions made about how knowledge about reality is gathered (Bryman and Bell, 2007; Burrell and Morgan, 1979; Easterby-Smith et al., 2002; Hughes and Sharrock, 2016; Mertens, 2010; Saunders et al., 2009; Tashakkori and Teddlie, 2003) and the delimitation of the means by which knowledge can be gathered in a field of study (Bryman and Bell, 2007; Saunders et al., 2009) is epistemology. The first of the two extremes of epistemology is positivism which suggests knowledge is real and tangible and can be obtained through objective, measurable and quantifiable form (Easterby-Smith et al., 2002; Lincoln and Guba, 1985); it aligns with the objectivist ontological perspective. The other - which aligns with subjectivist ontological position, is phenomenology or interpretivism; it argues knowledge is soft and experience-based (Robson, 2002; Saunders et al., 2009). This research has an interpretivist leaning, in that, it is believed that understanding is created by the knower and the would-be-known (respondents and documents).

The philosophical underpinning of this research is that it allows for the reporting of the multiple realities (Creswell, 2007) - considering that the phenomena under investigation vary across different organisations. The procurement strategies, the influencing factors in designing them, the goals and the targeted recipients of these organisations differ. This constructivist-interpretivist perspective also gives cognisance to the varying experiences of the persons involved in crafting the procurement strategies in the different organisations and how these influence their procurement strategy decisions. Further, it is acknowledged that organisational experiences and organisational learning may influence procurement strategy decisions and since these vary in different organisations, this will reflect in their approach to procurement.

The next section justifies the adopted qualitative approach and accentuates the need for more of such research in supply chain management studies and specifically for supply chain resilience research.

3.2 The Qualitative Approach

As a consequence of the research paradigm within which this research is being conducted, a qualitative method approach to data gathering has been adopted. In answering research

questions, exploratory research which asks 'How?' questions require qualitative methods (Wong, 2014). Thus, to understand a particular phenomenon, its various aspects need to be given attention and this results in the consideration of multiple variables in a single case or few cases for qualitative research (Harling, 2002). This, however, is not the predominant methodological approach within supply chain management research. The positivist paradigm exhibited in the perception of SCM as primarily a normative science along with the consequent use of quantitative methodologies has dominated the field of study (Burgess et al., 2006; Ellram, 1996; Frankel et al., 2005; Ho et al., 2015; Kovács and Spens, 2005; Mangan et al., 2004; Mentzer and Kahn, 1995; Näslund, 2002; Solem, 2003; Tukamuhabwa et al., 2015). Both Mentzer and Kahn (1995) who investigated the articles in the *Journal of Business Logistics* from 1978 to 1993 and Ho et al. (2015) who reviewed supply chain risk management articles between 2003 and 2013 found out that over 70% of these studies were quantitative.

Resultant from this positivist paradigmatic dominance has been a narrow theory development in the field which has left a gap in its understanding from a subjective, involved and cognitive perspective (Frankel et al., 2005). The quantitative method is deductive and tends to examine relationships between variables using statistical techniques. On the other hand, the qualitative approach is usually inductive and is helpful in understanding the meaning of the world from the lens of the participants. The use of quantitative designs, which are based on cause-effect relationships, is too simple and cannot be used to properly investigate the depth and complexity of supply chain resilience. Thus, authors such as New (1997), Voss et al. (2002), Näslund (2002) and Burgess et al. (2006) have advocated for an increase in qualitative research. These, in addition to the inadequacy of empirical work on supply chain resilience (Ho et al., 2015; Tukamuhabwa et al., 2015) justify the need for qualitative research to broaden the theory of this field of management.

Qualitative research is by no means monolithic. It is characterised by various approaches to knowledge claims and varying perspectives on how these inform research practice differently (Creswell, 2007). Therefore, this study though qualitative follows the scientific approach to research. This is evident in its design where a series of logically related steps are followed as indicated in Figure 3.1 and the report (as shown in the structure of this thesis) takes the form of quantitative approaches - that is, from problem definition to question(s), data collections, results and then conclusions (Creswell, 2007). An overview of this design is presented in the next section.

3.3 Research Design

“The research design process in qualitative research begins with philosophical assumptions that the inquirers make in deciding to undertake a qualitative study” (Creswell, 2007: 15). In putting together a research design, all aspects and activities in the research process must be considered. These may include problem conceptualisation, the definition of research questions and data collection. The others are the analysis of the data to be collected and subsequent conclusions, the domain of generalisability of findings and report presentation (Bowker et al., 1978; Creswell, 2007; Easterby-Smith et al., 2002; Nachmias and Nachmias, 1992; Wong, 2014; Yin, 2014). An overview of the research design for this research is provided in the schematic diagram shown in Figure 3.1.

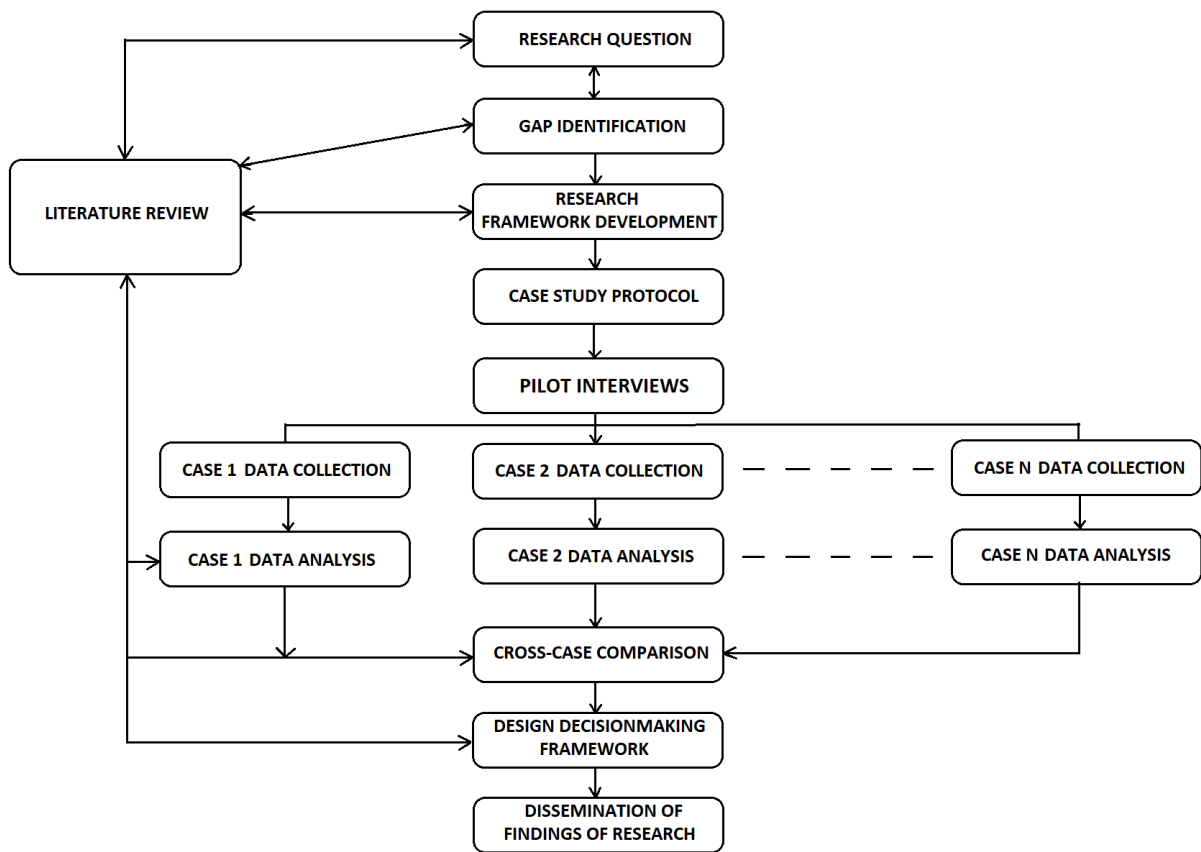


Figure 3.1 A schematic representation of the research design developed and undertaken for this research

Yin (2014) identifies five components of a research design for case studies that are of importance. These are the research question(s), propositions (if any), the unit(s) of analysis, the logic linking the data to the propositions and the criteria for interpreting the findings. The next section discusses how the research question for this research was formulated.

3.3.1 Research Question

The definition of the research question(s) is perhaps the most critical part of the research process (Marshall and Rossman, 2006; Miles and Huberman, 1994; Neuman, 2003; Yin, 2014) since it has significant implications for the ‘what to research’ and ‘how to research’ (Bryman and Bell, 2007). The research question for this study is:

“How does the need for resilience impact procurement strategy decision making in humanitarian supply chains?”

Inherent in the research question is the ontological and epistemological assumptions of the research(er) thereby defining the boundaries of the research paradigm within which the research is to be carried out (Yin, 2014). For this research, this is seen in how the research question evinces constructivist and interpretivist perspectives on reality and knowledge. Implicit in this research’s question is the assumption that the effects of ‘the need for resilience’ on procurement decisions can be known albeit through the varying perspectives of different humanitarian organisations.

This research began with an iterative process cycling between an in-depth literature review and the formulation of a research question targeted at filling the identified gap in the supply chain resilience and humanitarian supply chain management literature.

3.3.2 Research Framework Development

Using an integrative literature review (like Ponomarov and Holcomb, 2009), this study integrated existing procurement insights in supply chain resilience literature. The integrative literature review method is used to critically review and synthesise relevant literature on a topic to produce a conceptual framework that facilitates new perspectives on the research topic and insight for future research (Alcayaga et al., 2019; Torraco, 2005). Literature data were primarily collected through computerised database search and the ancestry method (Christmals and Gross, 2017; Torraco, 2005).

The search terms, which were a combination of either ‘procurement’ or ‘purchasing’ and ‘supply chain resilience’, were used in Google Scholar, EBSCOhost (Business source complete database and only peer-reviewed journals), Emerald (only journal articles) and Wiley online library (Business and management). Judging from the titles, relevant articles were selected, duplicates were removed. Abstracts and full texts were read as necessary, to select the useful sources with

particular focus on the Association of Business School (ABS) ranked journals. From this, additional papers were again added using backward searching.

Using NVivo 12 Plus for thematic coding and analysis, 4 second-order codes (decision areas) were derived from the data. These are presented in Figure 2.5 showing the current state of knowledge on the decisions in the upstream section of the supply chain before contracts are awarded and the relationships between them from a SCR perspective. Procurement strategy decision areas were identified to be common to both commercial and humanitarian supply chains and thus is adopted as the research framework to guide the research. Supplier-base strategy, supplier selection, supplier location and supplier relationship determination (and their effects on each other; refer to Figure 2.5) were the major decision areas that were identified as influential in the resilience of a supply chain.

Concomitant to the ontological and epistemological positions indicated in Section 3.1, the methodological approach adopted for this research is the multiple case study methodology within which semi-structured interviews and document analysis were the methods to provide qualitative data. The data collected were within the boundaries that have been clearly defined by the research framework. These data collection methods are advocated in logistics and supply chain management research (Larson and Halldórsson, 2004) as valid research methods for in-depth data gathering (Bonoma, 1985; Perry et al., 1999; Robson, 2002; Wong, 2014). They facilitate the study of real-life phenomena from an informant's and/or organisation's experience and insight. Before data collection could begin, there was the need to design the case studies and specify various aspects of it. This is discussed below.

3.3.3 Case Study Design

Case study designs are generally crafted based on two factors, which are the number of cases (single case or multiple) involved and the number of units of analysis (holistic or embedded). From these, four different types of case study designs emerge, namely single-case holistic, single-case embedded, multiple-case holistic and multiple-case embedded designs (Yin, 2011). The single-case holistic design involves the study of a single case whereby there is a single unit of analysis while the single-case embedded involves multiple units of analysis. The rationale for pursuing single-case study research include when the case represents a critical case, an extreme or unique case, is a representative case, a revelatory case or a longitudinal case.

However, the more commonly used designs in recent years are the multiple-case designs. This is because they are considered to be more robust and that, their results more convincing (Yin, 2011). Considering that the requirements for single-case studies are inapplicable in the case of this research and that it seeks to establish rigour and reliability (Yin, 2014), a multiple-case holistic design is adopted. A holistic approach is adopted because the phenomenon under investigation in each of the organisations is of a global nature and no logical subunits are identifiable in the organisation's approach to procurement strategy relative to supply chain resilience.

A recurring question with multiple cases is with regards to how many cases are considered enough. When there are only a few cases studied, generalisation of findings becomes questionable while having too many cases also compromises the depth of analysis (Creswell, 2007; Easton, 2003). The focus of this research was to gain in-depth information about each organisation being studied. This was done to provide conceptual and pragmatic understandings of their approach to procurement as well as to explore the intent of the guidelines specified in their policy documents. To achieve this, 8 humanitarian organisations were studied. A total of 60 organisational documents (see Table 4.1 for details) were collected from these organisations and a semi-structured interview was conducted in each. The interviews comprised of an average of 30 different questions, over 15 probing questions and other questions which were targeted at seeking clarity on responses given by respondents (See section 3.4.1.1 for more details and Appendix A4 for the generic interview questions). Together with the document analysis of the organisations, this number of cases was deemed to be enough to provide the required depth, sufficient breadth and enough rigour of analysis (Rose et al., 2015), particular as theoretical saturation was achieved (Eisenhardt, 1989; Manuj and Pohlen, 2012).

As is common with qualitative research (Kuzel, 1992; Miles and Huberman, 1994), sampling for this research was purposive. All selected organisations are located in the UK, but all interactions took place in London because almost all UK-based humanitarian organisations either have their headquarters in London or have a London office. Thus, not only did this offer the needed type of organisations to interact with, it also afforded proximity and set the boundaries for the research sample as UK-based organisations while taking into consideration available time and resources (Miles and Huberman, 1994; Yin, 2014). In line with Mena et al. (2013) and Pereira et al. (2020), case selection was done with a couple of purposes in mind, namely theoretical replication and control. To achieve theoretical replication, cases that were selected had to be humanitarian aid organisations, located in the UK and deliver both emergency relief and development aid. The decision to focus on UK organisations did present some challenges for this research in terms of

generalisability but this is addressed under section 3.6.3. With regards to control, factors such as culture, language, legal and regulatory system, economic and political environment, and donor funding were considered. Consequently, cases included organisations serving different demographics or focus groups and also a variety of locations of aid delivery. Table 3.1 below clarifies these considerations.

Criteria	Justification
Humanitarian aid organisations	These organisations are the ones from which relevant data could be collected to answer the research question. Due to the uniqueness and complexity of their supply chains and the high levels of uncertainties under which they operate, compared to commercial organisations (Beamon and Balcik, 2008; Scholten et al., 2014; Tomasini and van Wassenhove, 2009), they provide an invaluable source for insights on supply chain resilience from a procurement perspective.
Located in the UK	The UK context was selected to understand the phenomenon within the country, as very few previous empirical studies have done this. The lack of research on SCR in UK-based humanitarian organisations also influenced this decision. Further, it limited the scope of the study and allowed for practicality and proximity.
Delivery of both Emergency relief and development aid	This was to allow for comparisons and to best evaluate how procurement decisions taken, incorporate the need for responsiveness in the unpredictable humanitarian terrain.
Organisations that serve different demographics	Variety in aid recipients facilitated the collection of enriched data that captured views from different aid providers. It also helped understand whether the type of aid recipients affects the procurement strategy decisions for SCR. It further helped clarify common issues among companies and identify differences (Blackhurst et al., 2011; Christopher et al., 2011; Pereira et al., 2020)
Organisations that serve local, international or both	This was to help compare if the organisation’s approach to SCR differed based on the location of service delivery. It also allowed perspectives into how UK laws and regulations affect the international operations of these organisations with regards to SCR.

Table 3.1 Case selection criteria

This leads into the next component that must be clearly defined in a case study research; that is, the unit of analysis.

3.3.4 Unit of Analysis

The unit of analysis for a case study research may be a single unit within a case or could be multiple units within each case. It can be in terms of a person, groups of persons, an organisation or groups of organisations (Davis and Marquis, 2005; Neuman, 2003; Yin, 2014). It delimits the context and scope of the data to be collected (Yin, 2014), clearly setting out what is of interest for the research being conducted (Stake, 1978). Thus, the unit of analysis for this research is a humanitarian aid organisation located in the United Kingdom that is engaged in the procurement of goods and services to provide aid either locally or internationally or both.

3.3.5 Justification for the Adoption of the Case Study Research Methodology

A case study is an empirical inquiry in which a researcher investigates in depth a phenomenon such as an event, activity, process, or individual(s) within its real-life context – particularly when the boundaries between phenomena and context are not distinctly evident (King, 1991; Yin, 2014). It often includes various methods such as interviews and assembling documents for collecting data from multiple sources to analyse and draw conclusions within a defined framework developed from a priori constructs (Proverbs and Gameson, 2008; Yin, 2014). The use of case study methodology in logistics and supply chain management has grown in acceptability over the years – from not been well-understood and utilised (Ellram, 1996) to becoming fully developed, rigorously carried out (Seuring, 2008) and being widely employed for research (Hilmola et al., 2005; Mentzer and Flint, 1997; Seuring, 2005). It has become a highly ranked methodology (Larson and Halldórsson, 2004).

The case study approach to scientific inquiry is widely advocated for theory building, particularly in the early stages of the knowledge-building process for contemporary phenomena which are under-researched, or to provide fresh perspectives on an already established research area (Aastrup and Halldórsson, 2008; Benbasat et al., 1987; Eisenhardt, 1989; Ellram, 1995; Näslund, 2002). This is the case for this study since research into resilience in humanitarian supply chains is new and still at the exploratory stage. This research also brings new viewpoints to the discussion on the overall theme of supply chain resilience.

Further, being a relatively new research area, the number of people and organisations that would fit the sampling criteria is too narrow to justify a large-scale quantitative approach. Thus, a qualitative approach that acquires detailed data from multiple sources – which case studies affords – best suits the research. This is epistemologically consistent with the interpretivist

position of this research since an in-depth understanding of the research interests in the organisations to be studied (Creswell, 2002) is required to properly investigate the researched phenomena within the proposed analytical framework. Moreover, the nature of the research question for this study as Yin (2014) affirms, favours the use of case studies. The use of multiple cases also helps reduce bias and allows for replication (Yin, 2014).

Finally, considering that incorporeal elements such as experiences, perceptions, interests, reasons and opinions of the procurement managers in organisations influence their procurement strategies, the case study methodology affords the researcher the tools to explore these and their impacts on the resilience of their supply chains. This thereby made this means the most appropriate to pursue the objectives of this research as indicated in the introductory chapter of this thesis.

Notwithstanding the appropriateness of the case study methodology for this research (as has been shown here), the case study method has its fair share of criticisms. Some of these are briefly discussed in the next section.

3.3.6 Criticisms of the Case Study Method

Case study research may now be a well-established highly rated approach to supply chain management research, but it has – like all other research strategies – its criticisms and limitations. Its rigorous, coherent and distinctive form of empirical inquiry (Perry, 1998) which gives it its characteristic uniqueness and strengths may also be the source of its weaknesses (Easterby-Smith and Thorpe, 1991; Eisenhardt, 1989; Wong, 2014). The first of these is that it is usually criticised for a lack of rigour often owed to a researcher's sloppiness and also researchers allowing their bias to impact the direction of the research's findings and conclusions (Easterby-Smith and Thorpe, 1991; Yin, 2014). Even though this challenge is also evident in other research strategies, its relatively high frequency of occurrence in case study research and the difficulty in mitigating it cannot be denied (Yin, 2014). This can however be quite well addressed by a comprehensive research design that employs techniques such as studying multiple cases, using a case study protocol with its accompanying database and the use of rival explanations and cross-case synthesis at the interpretation stage to enhance rigour and reliability (Voss et al., 2002; Wong, 2014; Yin, 2014).

Another criticism for the case study method is that it affords very little basis for scientific generalisation (Ackroyd and Fleetwood, 2000; Easterby-Smith and Thorpe, 1991; Easton, 2003;

Yin, 2014). However, this criticism – because it primarily comes from positivist researchers – seeks statistical generalisation. This is not the case for a qualitative research of this nature which rather seeks a theoretical concept generalisation (as was the case in Jüttner and Maklan, 2011; Scholten et al., 2014). The goal is to expand and generalise theories rather than enumerate frequencies (Yin, 2014).

Others have also cited the difficulty in conducting case study research because of the potential intensive resource requirement in terms of logistics, time and cost, and also the sheer size of the research report (Easterby-Smith and Thorpe, 1991; Seuring et al., 2005). This criticism may be misplaced because it points to the potential challenges of particular methods of data collection (such as ethnography or participant observation) to discredit an overarching strategy. The use of data collection methods such as interviews and document analysis – as is the case for this research, minimises the likelihood of encountering these challenges. Further mitigation is attained by the detailed planning of this investigation through an extensive literature review and pilot interviews, the design of a comprehensive research protocol and the preparation of an interview guide (Wong, 2014). A systematic collection of data during interviews in a consistent manner across all studied organisations also helps in this regard.

Piekkari et al. (2009) highlight a limitation in the overreliance of researchers on interviews even when documentary material had also been collected alongside. They indicate in their findings that the contents of documents are seldom quoted and that not enough effort is made to show that they brought any additional value to the interview data. This is not the case for this research as some of the questions participants were asked were based on the documents collected from their organisations. Also, the analysis of the data for each organisation was done using both interview data and organisational documents. Further discussions about how the quality of this research is assured through the design, data collection and data analysis stages are provided in Section 3.6. The next section however discusses the data collection methods and processes and their suitability for this research.

3.4 Data Collection

The foundation of every research work is data, whether primary or secondary. Primary data refer to data collected with specific research goals in mind using methods that best fit the problem at hand while secondary data is data originally collected for a different purpose but reused for another research question (Hox and Boeije, 2005). Different types of research require different

types of data and hence differing methods for collecting the appropriate data. While quantitative research may employ the use of methods such as surveys and experiments, qualitative ones may use interviews, extraction and observation (Harrell and Bradley, 2009; Saunders et al., 2009).

In case study research, data collection combines methods such as questionnaires, archives, interviews and observations (de Weerd-Nederhof, 2001; Eisenhardt, 1989) and these are guided by the principles of multiple sources, case study database and maintaining a chain of evidence (de Weerd-Nederhof, 2001; Yin, 2014). How these principles are approached for this study is discussed in the sections below.

3.4.1 Methods for Qualitative Data Collection

The use of appropriate data collection methods in a qualitative research ensures data is collected scientifically and consistently (Harrell and Bradley, 2009). As already intimated, qualitative data collection methods include observation, extraction, focus groups and interviews (Harrell and Bradley, 2009; Yin, 2011). Each of these provides different types of data that may or may not be relevant depending on the type of research being carried out.

Observation as a research method involves a researcher collecting data from a setting where he or she does not participate in the interactions being observed. This can serve as an extremely useful data collection method since the researcher collects the data first-hand through their senses without suffering any form of tampering or filtering by others (Yin, 2011). However, it is also clear that within certain settings, the researcher's presence can influence participants (Harrell and Bradley, 2009). Hence this method, apart from its impracticality for this research – in terms of resources and time, could also have altered the way participants would have gone on with their procurement activities because of my presence. It was thereby inappropriate for this research.

Focus groups are a form of interview whereby dynamic group discussions are induced by a trained moderator with prepared questions aimed at eliciting qualitative data in the form of perceptions, feelings, attitudes, and ideas of participants about a selected topic (Kitzinger, 1995; Vaughn et al., 1996). The groups are typically composed of between six and twelve participants. This method also proved inappropriate for this research since the information required from each humanitarian organisation is specialised and could be retrieved from just a single participant or two at most.

Extraction (Harrell and Bradley, 2009) or collecting and examining (Yin, 2011) refers to data collection related to a researcher's study topic from documents, artefacts, records or other archival sources either from the field or other sources such as electronically based sources, libraries and historical archives. Interviews on the other hand usually involve one-on-one interaction between the researcher and the participant to solicit relevant data relative to a research topic. Considering available resources, time, accessibility constraints and the appropriateness of the type of data required, the extraction and analysis of organisational documents and interviews are the selected methods for this research. Hence, data from each unit of analysis (that is, the humanitarian organisation) comprised of interview transcripts and relevant documentation such as procurement policy documents and annual reports.

Using multiple sources in research improves the quality of the research by ensuring construct validity. Further discussion on this is provided in Section 3.6.1. An in-depth discussion of the two adopted methods is provided as follows.

3.4.1.1 Interviews

Interviews may be used by a researcher to collect primary data from research participants about their practices, opinions, experiences and expertise (Ryan et al., 2009). Typically, interviews are considered under three formats, namely: structured, unstructured and semi-structured depending on the amount of control an interviewer has on the interaction (Doody and Noonan, 2013; Harrell and Bradley, 2009). Each of these has its advantages and disadvantages and when it may be most appropriate to use.

Structured interviews involve the use of a formal questionnaire which lists every question participants will be asked (Yin, 2011) and these questions are asked in the same order for each participant (Corbetta, 2011; Harrell and Bradley, 2009). This is facilitated by the use of an interview guide throughout all interviews (McKenna et al., 2006; Ryan et al., 2009). The researcher in this type of interview - after study-specific training - adopts the same consistent behaviour and demeanour for each participant (Yin, 2011). Advantages of structured interviews include time efficiency, limitation of researcher's bias, significant control for the researcher over the interviews and relatively easier analysis of data (Doody and Noonan, 2013; Holloway and Wheeler, 2010). The downside however is that the data gathered is not in-depth because participants are usually unable to elaborate much on their answers.

With unstructured interviews, the researcher's interview guide bothers on themes rather than specific questions; and so questions asked are broad, open and may depend on participants' responses (Holloway and Wheeler, 2010; Moyle, 2002). Hence, this format has no specific framework for questioning (Ryan et al., 2009). Unstructured interviews are particularly useful for topics about which little is known (Ryan et al., 2009) and they provide very detailed data. They are however unsuitable for inexperienced researchers because their biases are more likely to influence the research (Doody and Noonan, 2013). Data analysis here also proves to be relatively more difficult.

The last format of interviews to be discussed is the semi-structured interview. This is the most common type of interviews adopted in qualitative research (Doody and Noonan, 2013; Holloway and Wheeler, 2010). It tends to take on a conversational mode (Patton, 2015; Yin, 2011), in that, it is relatively more structured than unstructured interviews, yet unlike the rigidly structured ones, it offers enough flexibility in the interview process. This flexibility affords the researcher the room to explore issues raised by participants and to seek clarifications from them (Gray, 2009; Lune and Berg, 2016; Ryan et al., 2009). Like structured interviews, an interview guide is developed with specific questions to collect similar types of data from all participants (Bridges et al., 2008; David and Sutton, 2004; Holloway and Wheeler, 2010); however, open-ended questions are used (Ryan et al., 2009; Tod, 2006). Further, the researcher can vary the order of questions, their wording and may even ask additional questions (Corbetta, 2011; Doody and Noonan, 2013). Nonetheless, all questions asked are based on a framework developed to capture all the relevant themes in the research topic (Barnes, 2001; Bridges et al., 2008). This format of interviews therefore, helps to collect richer and better-detailed data from participants albeit in a structured manner (Ryan et al., 2009); thereby appropriating the advantages of both structured and unstructured interviews while mitigating their disadvantages.

Having considered these advantages and its suitability for this research, the semi-structured interviewing format was selected to solicit structured but in-depth data from the participating procurement managers of the humanitarian organisations.

3.4.1.1.1 Preparing for the Interviews

Before the data collection through interviews could commence, there had to be preparation to ensure that the process was appropriate, consistent and not biased. Thus, there was the need to define the criteria for possible participants, design a participant information sheet, research

overview sheet, consent form and interview protocol. The need for clarity about the recording procedure and the physical context of the interviews also had to be planned for.

The first thing that was done was to decide the type of respondents that needed to be included in this research. A prerequisite for this step is the definition of a study's main research question (Stewart and Shamdasani, 1990). Having defined this step already as discussed in sub-section 3.3.1, it was determined that respondents for this research had to be the procurement managers, procurement officers or programme managers of the various humanitarian organisations to be studied. This is because the research question sets out to find out how the need for resilience impacts procurement decision making in humanitarian organisations. Considering that procurement decisions are made by these persons (depending on the structure of the organisation), they were the most qualified to provide the required information being sought. There were engagements with employees of humanitarian organisations in a workshop themed 'The Future of Humanitarian Resilience' organised on 22nd November 2017 by Start Network where acquaintances were made so as to provide information of the organisational structure of some of the organisations being considered for the research, as well as to use them as 'insiders' to help recruit participants for the research when they were identified. Through this, access was gained to the first two organisation and then through purposive snowball sampling (Kabra et al., 2015; Mena et al., 2013; Raju and Becker, 2013), other respondents were identified.

Having identified the right type of participants from each organisation, a participant information sheet, research overview sheet and consent form were designed to facilitate the recruitment process. The participant information sheet was designed to prepare participants and to provide them with all the information they are required to know about the research (Doody and Noonan, 2013). Hence, it provided information on the title of the research, a brief introduction to the purpose of the sheet, the full contact details of the researcher and the purpose of the research. Moreover, it detailed out why he or she has been identified for the research, what was required of them, assurance of confidentiality and anonymisation for both the participant and organisation as well as uses of the data to be collected. Furthermore, they were provided with information about where the interviews were to be conducted, the duration, audio recording of the interviews, evidence of the research's approval by the University Research Ethics Committee and contacts of University personnel they could contact in case of complaints.

In addition to this, a research overview sheet which is a one-page extraction from the Participant Information Sheet providing an initial overview of the research and assurance of confidentiality was also developed. It was the first document shared with possible participants and/or

gatekeepers because it was identified that these are very busy people and it would be much easier to get them to read a single-page document first rather than provide them with the full participant information sheet. A consent form containing 12 questions with 'Yes' or 'No' options was also developed using Creswell's (2007) guidelines to satisfy ethics requirement and also to secure participants' signed confirmation of willing participation (Hopf, 2004; Ryan et al., 2009). A sample each of the Participant Information Sheet, Research Overview Sheet and Consent Form is provided in Appendix A2, A3 and A6 respectively.

Usually, before one can have access to participants identified for a research, the researcher has to go through a gatekeeper (Easterby-Smith et al., 2015; Hammersley and Atkinson, 1995; Yin, 2011). A gatekeeper may be defined as "*someone who has the authority to grant or deny permission to access potential participants, and/or the ability to facilitate such an access*" (King et al., 2019: 59). These gatekeepers need to be assured of the level of anonymity for the participants and organisation, ethical obligations and confidentiality of other members of their organisations (King et al., 2019). To cater for this, the Participant information sheet, Research Overview Sheet and Consent Forms were also shared with them. They were also kept in copy for most of the email communications with participants. Apart from contacting gatekeepers, this research also made good use of 'insiders' who helped pass on the relevant documents to particular gatekeepers and/or identified prospective participants. This helped make the process comparatively easier considering that the request and documents were coming from known and trusted colleagues (King et al., 2019).

Interview guides or protocols play a critical role in data collection through semi-structured interviews. They allow researchers to structure interviews and its development helps a researcher to clarify and prioritise the information wanted from each interview (Harrell and Bradley, 2009). Further, they help an interviewer prioritise questions considering that time might be a constraint. The interview protocol for this research was composed of two parts: the interview checklist and the interview questions.

The checklist dealt with all activities that had to take place before and after each interview. The checklist provides a chronology of activities such as contact of organisations and the sharing of relevant documents with them, request for documents from the organisation, agreements to be made for the interview with respect to time and location, equipment required for the interview and the taking of notes from observation of the organisation's premises. It further provides for the introduction of the researcher, a discussion of information in the participant information sheet as well as the consent form with the needed assurances of confidentiality and anonymity,

an indication to agree on the duration of the interview with the participant, start the interview, appreciate participant at the end of the interview and a reminder to begin transcription by the close of the day of interview (Harrell and Bradley, 2009; Ryan et al., 2009). Proper planning for interviews is critical for a successful and useful interview (Doody and Noonan, 2013; Smith et al., 2009). Thus, not only does this checklist ensure a consistent and similar interaction with all participants but it also ensures all necessary steps to make participants comfortable are adhered to and that adequate preparation is made for possible difficulties that may arise.

The other part of the protocol for this research dealt with the questions to be asked. Questions asked may be scoped differently for interviews; either in a proper sentence form or by using single words or short phrases as reminders of the topics to touch on (King et al., 2019). This research adopted the writing of specific questions for each interview. The reasons for this choice include the fact that it requires careful thinking and formulation, it helps avoid asking leading questions and endorsement of participant opinions as well as the fact that it is the preferred choice for a relatively inexperienced interviewer (King et al., 2019). The downside of this however is the inadequate use of the flexibility semi-structured interviews afford but this is readily remedied by not sticking overly strictly to the exact wording of the questions all the time. Questions were grouped under categories (King et al., 2019; Polit and Hungler, 1995; Yin, 2011) which had been identified under the research framework: supplier base strategy, supplier selection, supplier relationship determination and supplier location (Refer to Figure 2.5). However, interviews began with a couple of easy introductory questions (Bryman and Cassell, 2006). An additional benefit of having developed questions from the research framework was that it helped to overcome the common setback for holistic case study designs – which is that the study may end up being conducted at an extremely abstract level and may lack adequate data or clarity (Yin, 2014).

Besides those questions, there were questions that did not belong to any of these categories but were aimed at addressing the organisation's general attitude towards supplier engagement. The final set of questions – which varied from organisation to organisation – were based off of their procurement policies, annual reports, supplier code of conduct and any other documents either available from their websites or supplied directly by the organisation. These were meant to seek clarity and further insight on these documents. The last question which every interviewee was asked is whether or not they were familiar with the idea of supplier chain resilience or a concept of such nature which formed the basis of their decisions and guidelines towards procurement. This question was meant to explore whether these organisations were intentionally pursuing

resilience or that their actions were inadvertent. Generally, questions were crafted in such a way as to solicit as much information from participants as possible. In addition to main questions, probing questions expected to follow up on anticipated answers were also provided for in the protocol. The interview checklist and the main set of questions employed in the interviews are provided in Appendices A4 and A5.

3.4.1.1.2 The Pilot Interviews

Before actual data collection, it is important to test interview questions with other researchers or persons familiar with the research topic (Harrell and Bradley, 2009; Lune and Berg, 2016; Ryan et al., 2009). This is useful because it helps to identify questions that may be unclear, unrelatable, inappropriate or poorly worded so that the needed refinement can be done. Further, it helps to judge if the flow of topics and questions seem sensible and natural (Harrell and Bradley, 2009) and to ascertain whether questions are soliciting the right type of answers expected from the formulated questions. More significantly, piloting interviews also serve as a form of training for researchers before they enter the field (Barriball and While, 1994).

Consequently, before the data collection process began, two pilot interviews were conducted to test the validity, clarity, and appropriateness of the interview questions. Two procurement professionals, one from the public sector with about 5 years of experience and the other from the private sector with under 2 years' experience were engaged in this process. The diversity in the working field and experience of these participants was to ensure that interview questions were appropriate and relatable to all participants that would be engaged in the main interviews. It was identified after the pilot interviews that some questions were not clear enough since they required too much explaining before interviewees could answer them. All such questions were reworded for the main interviews. Further, because there was constant referencing to the four decision areas mentioned in the research framework, they were printed with examples in bold eligible font on a sheet of paper which was given to interviewees to aid their understanding of questions and help obtain the most appropriate answers.

As afore indicated, the other method employed in this research is document analysis. A discussion on this is thus provided below.

3.4.1.2 Document Analysis

Documents refer to standardised artefacts which are in the form of written texts that serve as a record or piece of evidence of an event or fact; and may be used in socially organised ways (Bowen, 2009; Wolff, 2004). These may include notes, minutes of meetings, contracts, annual reports, certificates, proposals and plans of organisations (Barnes, 2001; Wolff, 2004) which may be required to evaluate past events and intentions over time – whether actualised or not (Barnes, 2001). Analysis of documents can be used in addition to other research methods to achieve triangulation (Barnes, 2001; Bowen, 2009). Thus, apart from being a required method for this kind of research which aims at analysing the organisational approach to procurement – part of which is captured in relevant documents, it also enhances the quality of the research by improving its data reliability and validity.

Document analysis may be defined as a “*systematic procedure for reviewing or evaluating documents – both printed and electronic (computer-based and Internet-transmitted) material*” (Bowen, 2009: 27). Fundamentally, it is an analysis of documents to gather facts (Owen, 2014). Thus, beyond being a research method, it also refers to a specific mode of access to written records (Wolff, 2004).

The analytic procedure of document analysis involves first finding the documents, selecting, appraising and then synthesising the data contained in the documents (Bowen, 2009). This iterative process involves skimming through, a thorough examination by reading, followed by an interpretation which yields data organised in major themes, categories and case examples (Labuschagne, 2003). It thereby combines elements of content analysis and thematic analysis (Bowen, 2009). This can prove to be very useful – particularly for a qualitative case study research such as this one – by providing rich descriptions of a phenomenon within an organisation (Bowen, 2009; Stake, 1995; Yin, 2014). For this research, documents were collected before interviews were scheduled; thus, interviews were situated in the right contexts. This also allowed questions about specific procurement guidelines provided in these documents to be asked to attain clarity or the intent of the instructions in them (Owen, 2014; Yanow, 2007).

When there are suitable, adequate and accessible data sources available, document analysis is a cost-effective, efficient and stable research method (Barnes, 2001; Bowen, 2009). It provides exactness and coverage while avoiding obtrusiveness. However, low retrievability, insufficient detail and biased selectivity are its limitations. The bias in selectivity may be seen in the selection of only documents that support the researcher’s viewpoint or hypothesis, or in the type of information provided in them by the source organisations. To mitigate these, documents used

for this research were retrieved from official websites of participant organisations and/or were requested from officers within the organisations. The usefulness of each document was verified, and the content reviewed cautiously, keeping in mind the original purpose, context, intended audience as well as possibility of bias (Barnes, 2001; Bowen, 2009). The types of documents collected from organisations included procurement policies and procedures, annual reports, modern slavery statements, supplier code of conduct, supplier terms and conditions, anti-bribery and corruption policies and safeguarding policies.

3.4.2 Ethical Issues

Ethical issues play a critical role in all forms of management research. It is particularly important for ones that include having personal contact with participants such as is the case for this research which involves the use of interviews (Easterby-Smith et al., 2002; Saunders et al., 2009). Research ethics in the social sciences does not only encompass how the relationships between researchers and research participants are handled (Hopf, 2004) but also involves the analysis and reporting of results (Creswell, 2007).

In a university-supervised research like this one, ethical issues usually begin with an ethical review which involves seeking approval from a research ethics committee (Creswell, 2007; Miles and Huberman, 1994; Saunders et al., 2009). Before setting out to commence data collection, it is obligatory for a researcher to carefully think through the ethics of the situation and define the needed mitigative steps before access requests and permissions are sought (Stake, 1995). Thus, the research ethics committee serves as a competent independent arbiter to evaluate the purpose of the proposed research, the methods defined to collect data and the procedures prescribed by the researcher to address all issues of ethics. This may manifest in either of two ways or a combination of both. The committee may proactively design an ethical code and make provision for sharing the ethical implications of aspects of research design (Saunders et al., 2009) through university platforms or workshops for researchers. Alternatively, they may request for research proposals, sample informed consents and similar documentation for review or provide guidance for ethical dilemmas researchers may face in order to protect the university, researchers and prospective participants from any form of damage or harm (Miles and Huberman, 1994; Saunders et al., 2009). Besides attending University workshops 1.1 titled ‘The professional, ethical researcher’ on 5th October 2017 and 1.2 titled ‘Communicating and Disseminating Your Research’ on 8th May 2018, where training on ethical issues was provided, an ethics review

application with Ethics Reference Number, ETH1718-1606 was made on 5th April 2018 and approved accordingly on 28th June 2018.

Requirements for research ethics emanate from three research practice standard principles and guidelines. These are autonomy, non-maleficence and beneficence. Autonomy deals with confidentiality, anonymity and the privacy of participants (Gary, 2011; Rule and John, 2011). These play a crucial role in gaining access to both organisations and individuals (Saunders et al., 2009) and are fundamental to participants' rights (Ryan et al., 2009). Thus, explanations of the nature, format and duration of the interviews, assurance of confidentiality and anonymity as well as the purpose of the research were provided for all prospective participants in the Participant Information Sheets so that they could make informed decisions (Harrell and Bradley, 2009).

Further, consent forms were shared with participants via email before the interviews to afford them ample time to reflect on their participation (Ryan et al., 2009; Wong, 2014). The choice of time and location were arranged with participants to ensure their convenience. Before interviews, opportunities were provided for participants to ask questions to seek clarity with regards to all of these provisions. Their permission was sought before recordings commenced and they were also informed of their right to end participation in the research at any point during the interview (Saunders et al., 2009; Wong, 2014). Careful attention was given to avoid rabid questioning and pressing of participants for responses so as not to make them feel uncomfortable (Saunders et al., 2009; Sekaran, 2003) even though the interview questions did not bother on personal or sensitive information. Participants were allowed to hold on to signed consent forms until interviews were completed so that their wilful hand-over meant they were pleased with the whole process up to that point. All of these were done to ensure that provisions of the European Union's Directive 95/46/EC (General Data Protection Regulation) were adhered to.

In cognisance of the above legal provision, processing, movement and storing of the data collected were done with much care. Risks of data loss and accidental or malicious damage or manipulation were mitigated by the protection of anonymised data through encryption and password-protected personal computer (PC). At the data analysis stage, a conscious effort was made to avoid misrepresentation and selective reporting (Zikmund, 2000).

The second principle, non-maleficence, requires a researcher to not cause any harm to anyone involved in the research process while beneficence is about making a positive contribution to the public (Gary, 2011; Rule and John, 2011). These two principles were maintained for this research as no physical or psychological harm was inflicted on participants and the insight from this

research is expected to benefit the general public who are stakeholders to humanitarian organisations either as donors and/or beneficiaries.

Overall, deliberate attention was given to ensure openness of intent, guaranteed individual and organisational privacy, fairness, honesty, and an informed willingness of voluntary participation of interviewees (Leedy, 1997).

Once data collection commenced, there was the need to begin analysis immediately. Hence, the next section discusses the specific methods of data analysis available to a qualitative research of this nature and how they are applied in interpreting gathered data.

3.5 Data Analysis

The fourth and fifth components of the case study research design foreshadow the data analysis stage in case study research (Yin, 2014). The fourth requires there to be logic which links the data collected to the initial propositions made for the research. This serves to guide the type of data required to answer the research questions, the relevance of data acquired and to provide a basis for understanding and lucidly explain observed phenomena (Miles and Huberman, 1994; Yin, 2014). The research framework (see Figure 2.5) along with the resilience formative elements discussed in section 2.4.1 serves this purpose.

The fifth and final component is the definition of the criteria for interpreting the findings. Specific techniques which are to be employed for this study in the interpretation of the data will include constant comparisons between the findings, alertness to negative instances, rival explanations, cross-case synthesis and a continual posing of questions about the data during the analysis (Yin, 2011, 2014). Considerations for variations, checking for the representativeness of the data, the building of a logical chain of evidence, triangulation through documentary corroboration of interview data and obtaining feedback (Miles and Huberman 1994) also played a significant role in this. Data obtained for each were juxtaposed with the research framework to test for alignment or deviation and explanations and rival explanations used to discuss identified phenomena.

Qualitative data analysis has been discussed extensively in literature. The two most prevalent constituent tasks within the analytical process have been proposed by Miles and Huberman (1994) and Yin (2011). Miles and Huberman (1994: 10) define qualitative data analysis as consisting of “*three concurrent flows of activity*” namely, data reduction, data display, and conclusion drawing or verification. Data reduction – which occurs throughout the data collection

process - is where data are simplified, focused, sorted and organised. When part of the data is from interviews - as is the case here, they are first transcribed. Display of the data involves the visible presentation of the data in the form of graphs, charts, networks and matrices to understand possible relationships and similarities and to decide whether or not to analyse further or to take action based on that understanding. The last flow of activity refers to the drawing of possible conclusions and providing explanations from the data as the researcher proceeds with the analysis. The emerging meanings will then have to be tested for plausibility, sturdiness and validity. Without a doubt, qualitative data analysis is a continuous and iterative process (Braun and Clarke, 2006; King et al., 2019; Miles and Huberman, 1994; Saunders et al., 2009) which overlaps data collection (Eisenhardt, 1989; Ryan et al., 2009). Thus, Miles and Huberman (1994) adds data collection to the three flows of activity and calls them 'nodes' which the researcher shuttles among for the remainder of the study.

Similarly, Yin (2011) identifies a five-stage iterative and non-linear process for the analysis of qualitative data (see Figure 3.2). They include the compilation of data into a formal database, the disassembly of the data which may include a formal coding procedure and the reassembly (and arraying) of the data in order to identify emerging patterns or themes. The two other stages are the interpretation of the reassembled data to create a narrative (and may be accompanied by the relevant tables and graphics) and the drawing of conclusions from the entire study which should relate to the interpretation of the data and the other three phases (Yin, 2011). These processes were hence adhered to in the analysis of all data collected.

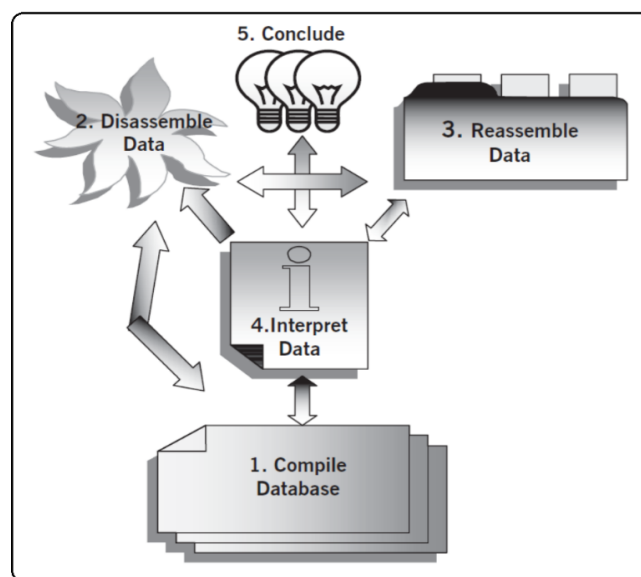


Figure 3.2 Five phases of analysis and interaction

(Source: Yin, 2011)

The data that was analysed for each case involved organisational documents and recorded interviews. Analysis of recorded interviews start with transcription, that is, if the transcription is to be done by the researcher (King et al., 2019); thus, the next section provides a brief discussion on transcription.

3.5.1 Transcription

Semi-structured (as well as unstructured) interviews require a researcher to gain a verbatim account of the interview to analyse the data; thus, such interviews are usually audio-recorded and then transcribed (Ryan et al., 2009; Saunders et al., 2009). Transcription involves a rigorous and thorough reproduction of the verbal (and sometimes non-verbal) discourse as a written (word-processed) account (Braun and Clarke, 2006; Saunders et al., 2009); including pauses, laughing, coughing and interjections (King et al., 2019). It is expedient that transcriptions are done no later than a day after field contact (Miles and Huberman, 1994) to avoid distorted memory. This ‘rule’ was strictly adhered to for all cases. Under certain conditions (such as upon participant’s request or where confidential information was shared), it was important to share the transcript with the interviewee for them to check and affirm them as the right representation of their views (Ryan et al., 2009).

Even though transcription is very time-consuming, it provides an opportunity for a researcher to familiarise himself with the data (Langdridge, 2004; Riessman, 1993) and facilitates the needed reading and interpretative skills required for analysis (Braun and Clarke, 2006; Lapadat and Lindsay, 1999). Thus, not only is transcription the first step in data analysis (Langdridge, 2004), it is a critical phase in the process (Bird, 2005).

Challenges with transcription may include a poor recording quality, missing context and ‘tidying up’ of transcribed talk (King et al., 2019) and a researcher must commit effort to minimise these. To avoid poor recording quality, questions were asked in a clear, well-paced manner and the recorder positioned close enough to interviewees to capture their voices without distortion or fading. Files were also saved and labelled with easily identifiable descriptors immediately after each interview (Patton, 2015). To mitigate missing out on certain contexts, notes were taken before, during and after interviews to capture observations made during the entire process. During transcriptions, researchers are tempted to correct errors such as mispronunciations and improper grammar so as not to present participants or themselves as inarticulate (Poland, 2002).

Such instances were avoided since the goal of the transcription was for accurate representation and not a ‘cleaned up’ version (King et al., 2019).

The next section discusses the qualitative data analysis technique adopted to analyse the resultant documentary data from both transcripts and organisational documents.

3.5.2 Thematic Analysis Method

Though qualitative approaches are incredibly diverse, complex and nuanced (Holloway and Todres, 2003), they all consist of the preparing and organising of data for analysis, coding of the data and condensing of codes into themes. These are then represented in the form of figures, tables or a discussion (Creswell, 2007; Ryan et al., 2009). Thematic analysis is a fundamental method for this process (Braun and Clarke, 2006).

Thematic analysis may be regarded as a pattern recognition method used to identify themes within a collected data set for the analysis and reporting of phenomenon (Braun and Clarke, 2006; Fereday and Muir-Cochrane, 2006). The process involves heedful, focused re-reading and review of the data, whereby a categorisation of data based on identified characteristics to form themes relevant to the study, is carried out (Bowen, 2009; Fereday and Muir-Cochrane, 2006; Rice and Ezzy, 1999). A theme may thus be defined as “*a pattern in the information that at minimum describes and organises the possible observations and at maximum interprets aspects of the phenomenon*” (Boyatzis, 1998: 161). It captures relevant information about the data relative to the study’s research questions and constitutes some level of patterned response or meaning within the given data set (Braun and Clarke, 2006; King et al., 2019).

Theme identification is not particularly simple as it requires a researcher to make choices about what to include or discard and how to interpret the words of participants. A theme must typically be about issues (including particular perceptions and/or experiences) raised repetitively in the data so that a powerfully raised issue that occurs just once cannot be considered a theme even though it may yet be useful in the analysis (King et al., 2019). Even though the prevalence of themes may vary in a given study (Braun and Clarke, 2006), themes must be well-defined and distinct from each other with the thematic structure of the study clearly defined and comprehensible (King et al., 2019). To facilitate this, a record of all major steps in the development and organisation of themes must be kept and discussed to demonstrate how themes were developed and how the final thematic structure was arrived at (Braun and Clarke, 2006;

King et al., 2019). The audit trail showing the process of theme development and thematic structure for this research is provided in Appendix A7.

Before discussing the approaches to theme development, it is worth pointing out some advantages of thematic analysis for qualitative research. It affords great flexibility in the determination of themes which thereby provides the potential for a rich, detailed but complex account of the study's data. Apart from its usefulness in highlighting similarities and differences across cases, generating unanticipated insights and producing qualitative analyses useful for informing policy development, it is also a relatively easy and quick method to learn and do (Braun and Clarke, 2006) thereby making it very appropriate for doctoral research.

3.5.2.1 Approaches to Thematic Analysis

Some authors such as Fereday and Muir-Cochrane (2006) and Daly et al. (1997) have suggested themes to 'emerge' in their definitions of thematic analysis. Such definitions risk being interpreted to suggest thematic analysis as inherently inductive since the suggestion appears to be that without any prior theoretical framework, themes within a given data set could be unravelled nonetheless. This will not be entirely accurate since a thematic analysis may also be pursued by first commencing with a predefined theoretical framework by which the data is analysed. Hence, identification of codes and subsequently themes in qualitative data may be approached from primarily two perspectives (Braun and Clarke, 2006; Harrell and Bradley, 2009; Saunders et al., 2009); that is, the inductive or 'bottom up' approach and the deductive or 'top down' approach. In designing a study, there is the need for the researcher to be cognisant of this so that an appropriate strategy can be adopted to guide the study (Saunders et al., 2009) since this will affect the questions in the interview protocol and how respondents' answers are analysed.

The inductive approach is regarded as theory-generating since it focuses on a strong engagement with the data (Patton, 2015) in a 'bottom-up' manner seeking to build theory that is adequately grounded in the data (Creswell, 2007; Saunders et al., 2009). Thus, an inductive thematic analysis is data-driven (Braun and Clarke, 2006). It requires the researcher to explore the data, identify a comprehensive set of themes and see which themes or issues to follow up and concentrate on, and to find out what unexpected relationships may exist between these emergent themes (Creswell, 2007; Harrell and Bradley, 2009; Saunders et al., 2009). Eisenhardt (1989) strongly proposes the inductive approach while pursuing case study research. Here, modifications to questions in the interview protocol as research proceeds from one interview to the other is

permitted based on insights from previous interviews (Eisenhardt, 1989). Despite the utility of the inductive approach for the generation of new theory, it has some disadvantages such as the risk of 'rediscovering' already existing theory so that the research does not contribute to knowledge and the difficulty in comparing cases due to its rather unstructured nature, thereby making analysis difficult (Wong, 2014). It also proves to be a difficult strategy to adopt, particularly for inexperienced researchers (Saunders et al, 2009; Yin, 2014).

Contrary to the data-driven inductive approach, the deductive approach is analyst-driven (Braun and Clarke, 2006) in that a researcher adopts a 'top-down' approach to engage intimately with the data through a theoretical framework to make meaningful interpretation (Barnes, 2001). Hence, it typically approaches data in a well-structured manner with the view of testing, confirming or refuting prior theory through the development of hypotheses and rival hypotheses (Carson et al., 2001; Harrell and Bradley, 2009). This requires an engagement with the literature prior to analysis (Braun and Clarke, 2006) in order to shape the approach adopted during the data analysis (Saunders et al., 2009). Thus, instead of engaging the data to develop codes from therein - as is the inductive way, the deductive approach may adopt the use of pre-existing or a priori codes to guide the coding process (Creswell, 2007). This approach thus proves useful for new qualitative researchers working on topics where some significant theoretical understanding already exists in available literature (Miles and Huberman, 1994; Wong, 2014). The downside of this approach however is that the use of structured predefined codes or categories tends to produce a less detailed description of the overall data because more focus is given to only some aspect of the data (Braun and Clarke, 2006).

Considering the merits and demerits of these two approaches, authors such as Carson et al., (2001), Perry (2001), Fereday and Muir-Cochrane (2006) and Saunders et al. (2009) among others have prescribed a hybrid, known as the abductive approach (Klag and Langley, 2013; Reichertz, 2007) where aspects of both are combined to ensure benefitting from existing theory as well as allowing for the development of new and utile theory. Thus, it is not atypical for studies to adopt this alternative (Harrell and Bradley, 2009) since it links the research to the extant literature and provides an initial analytical framework for the researcher (Saunders et al., 2009) while allowing for the possibility of new theory. This hence, like was used in Pereira et al. (2020), is the approach adopted for this research.

Existing theory was used to formulate the research's question and objectives, and theoretical propositions were used to devise a framework where key procurement decisions areas were identified and the relationships between them spelt out in it (Saunders et al., 2009; Yin, 2014).

Once the interview protocol was developed based off of the framework, two pilot interviews (See Section 3.4.1.1.2) were organised to fine-tune it before major data collection commenced (Carson et al., 2001). This ensured that apart from questions that came up from the assessment of organisational documents before interviews, interview protocols were largely standardised for all interviews. In defining codes, some codes were predefined from theory (Barnes, 2001; Fereday and Muir-Cochrane, 2006) while others were developed from inductively analysing the pilot interviews. Notwithstanding, coding of interview transcripts was first approached inductively to facilitate emergent themes from participants' answers before predefined codes were applied to particular parts of the data where appropriate.

A deeper discussion of the coding process is provided in the next section.

3.5.2.2 Coding

High-quality qualitative data analysis is widely agreed to use coding techniques to categorise groups of words within the collected data (Barnes, 2001) thereby allowing for the data to be dissected meaningfully without comprising the relations between the parts (Miles and Huberman, 1994). Coding is the process by which a researcher both differentiates and combines retrieved data and takes notes of the reflections made about this information (Miles and Huberman, 1994). It involves assigning codes – that is, simple words or short phrases – which serve as tags or labels that capture the description and/or meaning of a larger portion of the raw data that can be assessed regarding the phenomenon under study (Boyatzis, 1998; Braun and Clarke, 2006; Miles and Huberman, 1994; Yin, 2014). These codes may be derived from information a researcher expects to find in the study based on the study's conceptual framework (Barnes, 2001), unexpected information from the data or from conceptually interesting or unusual information a researcher may find (Creswell, 2007). It must be noted that coding and recoding is expected as codes may be created at the start while others follow thereafter with the need to even redefine others (Braun and Clarke, 2006; Miles and Huberman, 1994).

Codes can be defined at a descriptive level or at interpretive or inferential level whereby descriptive codes largely focus on describing what is of interest in the collected data while interpretive codes seek to interpret the meaning of respondents' accounts (King et al., 2019; Miles and Huberman, 1994). Prominent among proposed coding techniques for qualitative data include that of Miles and Huberman (1994), Braun and Clarke (2006) and King et al. (2019). King et al.'s (2019) approach was the adopted means for this research since it is significantly

easier to use and it utilises both descriptive and interpretive coding. It draws on guidelines offered by Langdridge (2004) and Braun and Clarke (2006). There are three stages involved with it; starting with descriptive coding, followed by interpretive coding and concluded in the development of overarching themes.

At the first stage, the researcher read through the transcripts and documents, highlighted relevant material and attached brief comments. Descriptive codes were then defined and the process was repeated for each datasheet in the first case while refining the codes as progress was made. This was the stage where the inductive aspect of the adopted abductive approach was most dominant. The second stage involved the clustering of the derived descriptive codes that share common meaning and interpreting the clusters in relation to the study's research question and disciplinary position. Most of the interpretive codes used here were derived from theory, based on the formative elements identified in the literature (see section 2.4.1) and the procurement strategy decision areas in section 2.4.2.1. There was some inductive coding at this level as well as the researcher recognised that some of the descriptive codes indicated a strong influence of governance and accountability on SCR. Thus, another interpretive code was defined in addition to those identified from section 2.4.1 for such descriptive codes. The coding also indicated some role or requirement donors had on a variety of procurement procedures, protocols and decisions. All of the interpretive codes were then applied to each new case and refined as the process continued until a standardised set of codes was applied to the full data set. The final stage was where key themes for the whole data were derived by the consideration of the interpretive themes from the theoretical and practical stance of the research. Once again, the overarching themes of 'Formative Elements' and 'Procurement Strategy' were imposed deductively from literature but the inductive interpretative codes which related to the influence of donors on procurement were coded under the theme 'Donor Influence'. Once this was completed for all 8 cases, all of the codes at all three levels of coding were combined to derive integrated insights from the research. The whole process finished with the construction of diagrams to represent the relationships between levels of coding in the analysis and the writing of the report. The thematic codebook and sample project maps for this research are provided in Appendix A7.

Coding may be performed either manually or by the use of Computer Assisted Qualitative Data Analysis Software (CAQDAS) (Braun and Clarke, 2006; Creswell, 2007; Saunders et al., 2009; Yin, 2014). For this research, NVivo 12 Plus, the latest and most advanced version available was used to assist in the coding and analysis process. It is acknowledged however that, coding decisions with regards to what and how to code, were made entirely by the researcher (Yin, 2014).

3.5.3 Within-case and Cross-case Analysis

The broadly accepted chronology for processes in qualitative case study data analysis is for it to begin with within-case analysis after which cross-case analysis can proceed (Perry, 2001; Wong, 2014). In a multi-case study, the process discussed in the preceding section is carried out for each case to identify themes after which comparison is made across the cases in a cross-case analysis (Creswell, 2007; Harling, 2002; Stake, 1995; Yin, 2014). This would mean looking at patterns of themes across the whole data set to identify similarities and differences (King et al., 2019).

This presents a challenge for a researcher as to how to properly balance within-case and cross-case analysis. One stands the risk of treating themes as abstract notions detached from the particularities of participant accounts if not enough attention is given to the within-case aspect. On the other hand, a poorly developed cross-case analysis will produce a disjointed collection of case studies that do not properly address the research question (King et al., 2019). In order not to risk either of these, each of the 8 cases studied in this research was deeply analysed while not neglecting the cumulative insight garnered as more cases were undertaken. To facilitate this, coding for all 8 organisations was done under the 'Nodes' component in Nvivo12 Plus. Once the iterative coding process and alignment was completed for the overall data set, these codes were then copied into the 'Cases' component of the software package to allow for in-depth analysis of each case while the codes under 'Nodes' were coalesced at the descriptive, interpretive and thematic levels to facilitate integrated insight and cross-case analysis. Explanations for observations and inferences made in the cases were given by citing quotes from participants or relevant documents to justify conclusions about differences as well as similarities (Wong 2014). By these, the cross-case analysis helped to enhance the conceptual generalisability and served to deepen understanding and explanation by aiding the researcher find negative cases to strengthen theory (Miles and Huberman, 1994).

Cross-case analysis may be pursued from three main strategies, which are case-oriented, variable-oriented and mixed strategies (Miles and Huberman, 1994). The case-oriented strategy seeks replication whereby a theoretical framework is used to study a case in depth and successive cases are also examined to see if the pattern found matches that in the previous case(s). With variable-oriented strategies, the researcher underplays case dynamics and rather looks for themes that cut across cases. Thus, cross-case analysis here typically commences after analysis of individual cases

is completed (Rose et al., 2015). It is however desirable to combine or integrate both approaches – mixed strategy (Miles and Huberman, 1994); which is the adopted strategy for this research.

Diagrams or displays are particularly useful when doing cross-case studies to help condense and further examine cognitive maps emanating from the initial analysis. Miles and Huberman (1994) identify partially ordered meta-matrices, time-ordered meta-matrices, conceptually ordered displays and case ordered displays as useful for this purpose. Case-ordered displays were useful in the discussion and explanation of the cross-case themes in the report of this research's findings. These diagrams were derived from the data using the 'Queries' functionality of the Nvivo12 Plus software. Using the 'Matrix coding' query function, matrices were extracted from the data to indicate patterns for the codes and themes across the various cases. These Node matrices are presented as part of the discussions on cross-case analysis in sections 5.1, 5.2 and 5.3 (See Tables 5.1, 5.2, 5.5, 5.6, 5.8, 5.9).

These discussions about the coding process and the development of themes form a requisite part of thematic analysis in order to ensure the auditability and overall quality (King et al., 2019) of this research. A more detailed discussion about the quality criteria for this study is provided below.

3.6 Quality Criteria

Qualitative research has received its fair share of criticisms irrespective of the adopted approach or method when it comes to the assessment of quality. In response to these objections, responses about approaches to qualitative research have varied from proponents of adopting quality criteria similar to those for quantitative research albeit with some modifications to those who suggest a separate set of criteria altogether and then those who insist there should be no general fixed criteria at all (King et al., 2019). As a single researcher, there were inevitable limitations to this research such as researcher bias, limited time and constrained resources. However, it was expedient for measures to be taken to reduce bias, make the best out of available time and resources and to provide an audit trail to ensure auditability, replicability and validity of this research.

The means of assuring and demonstrating the quality of qualitative research design methods has been captured multifariously by different authors. LeCompte and Goetz (1982) suggested internal validity, external validity, reliability and objectivity while Lincoln and Guba (1985) proposed credibility, transferability, dependability and confirmability. Other authors such as

Eisner (1991), Lather (1993) and Golden-Biddle and Locke (1993) have posited similar criteria. Yardley (2008) offers sensitivity to context, commitment and rigour, coherence and transparency, and impact and importance as the four core principles towards quality assurance for qualitative research. This research however adopted the widely used Yin's (2009) approach which indicates that the quality of a case study research design is maximised and can be tested by its construct validity, internal validity, external validity and reliability.

How these four validity constructs are maximised in this research to accentuate its quality is discussed below.

3.6.1 Construct Validity

This is a test used to establish correct operational measures for the concepts being researched (Perry, 2001; Wong, 2014; Yin, 2014). Various means are proposed in literature to enhance the construct validity of a case study research. The first of these is through the use of multiple sources of evidence (Perry, 2001; Yin, 2014) - which predominantly but not exclusively occurs during the data collection stage - and alludes to triangulation (Mays and Pope, 2000), specifically data triangulation (Denzin, 2017). This was achieved for this research through the use of different sources of data, that is, interviews and the different organisational documents relevant to their procurement strategy and engagement of suppliers. The consensus is that evidence from multiple sources is more convincing and the overall research is thus considered more robust (Herriott and Firestone, 1983). To support this, tables presenting the number of data sources for themes and sub-themes are provided under sections 5.1, 5.2 and 5.3. Further, ideas generated before and during interviews were verified and compared with previous research in literature (Wong, 2014; Yin, 2014).

Secondly, the need to establish a chain of evidence is also highlighted in the relevant literature as an essential criterion for quality by various authors (King et al., 2019) and thus pointed out as useful in increasing the construct validity of this type of research (Yin, 2014). This may be achieved by ensuring auditability and providing thick description and audit trails (King et al., 2019). To ensure auditability, a record of all the main stages of themes development and organisation including successive versions of the thematic structure was provided in the case study database. Further, all the requisite key documents illustrating the process are provided in Appendix A7. Thick description bothers on the need for qualitative researchers to provide detailed descriptions and contexts of the phenomena being studied (King et al., 2019). Hence,

beyond the provision of sample documents, a detailed description of processes, the contexts and the uniqueness of each organisation under study have been provided in chapter 4 where case findings are presented.

3.6.2 Internal Validity

This quality criterion primarily seeks to establish causal relationships (as distinguished from spurious relationships) whereby certain conditions are believed to lead to other circumstances (Yin, 2014). For this reason, this criterion is typically critical for explanatory or causal studies and not an exploratory case study like this research (Yin, 2014); particularly as it is also difficult to establish it in the absence of either experimental or statistical controls (Rose et al., 2015). Notwithstanding, qualitative data are utile in understanding whether or not emergent relationships hold and the fundamental theoretical reasons for their existence (Eisenhardt, 1989). Hence, internal validity may be achieved through the adaptations of the experimental and analytical techniques such as pattern matching, explanation building, addressing rival explanations and using logic models (Yin, 2014). When an event cannot be observed directly, a researcher based on the interview and/or documentary evidence gathered during data collection may have to infer causality. To do so in a manner that does not compromise the quality of the research requires that the inference is correct, unambiguous and indisputable and that the available evidence is convergent (Welch et al., 2011; Yin, 2014).

Internal validity for this research is addressed at three stages: the initial theory, during data collection and at the analysis stage (Wong, 2014). A very in-depth literature review was carried out to establish the framework within which this research was to be carried out. Considering that linking of results to literature is particularly crucial for a theory-building research with a limited number of cases (Eisenhardt, 1989) as this is, significant effort was made to define the state of knowledge on supply chain resilience in general as well as specifically the role of procurement in its pursuance, particularly within the humanitarian sector.

At the data collection stage, deeply probing interview questions were accompanied by good in-depth listening skills (Perry, 2001; Wong, 2014). This helped in seeking clarity about statements made by interviewees. During the data analysis, data were systematically examined, linkages within cases established and analysis was carried out to facilitate explanation building (Miles and Huberman, 1994; Yin, 2014). To ensure rigorous interpretation, a researcher must show clearly how the interpretations of data were achieved. This was done by citing numerous quotations

from the data (Rice and Ezzy, 1999) as this enhances this quality criterion (Fereday and Muir-Cochrane, 2006; Patton, 2015). Braun and Clarke's (2006) prescription for extracts to be embedded within the analytic narrative so that, beyond data description, they make an argument in relation to the research question, is followed for the choices of quotes used. Quotes used therefore vividly highlight the nature of the themes being discussed within their appropriate contexts. They are presented in quotation marks and are italicised. Their sources are indicated using the source codes defined in Appendix A8. This was also accompanied by an iterative process of vetting the findings and patterns identified with existing literature to tie the emergent theory with extant theory (Eisenhardt, 1989).

For research involving organisations such as this one, a threat to internal validity is that participants may move jobs within the organisation, leave the organisation completely or lose interest (Easterby-Smith et al., 2015). This threat was not experienced in this research.

3.6.3 External Validity

The third quality criterion is external validity and it seeks to define the scope or domain of generalisability of a research's findings outside of the studied cases to ensure credibility (Lincoln and Guba, 1985; Perry, 2001; Wong, 2014; Yin, 2011, 2014). Though this has been identified as a key challenge for case study research (Yin, 2011), it can be addressed by applying the replication logic (as used in scientific experiments) to test and replicate the findings of the research in multiple contexts (Eisenhardt and Graebner, 2007; Murphy et al., 1998; Yin, 2011, 2014) through theoretical or purposive sampling (Creswell, 2007; Eisenhardt, 1989). Typically, the number of cases or theoretical replications required to establish the external validity of the research will depend on the extent to which external conditions are considered to produce variation in the studied phenomenon. The lesser the likelihood of variations anticipated to be precipitated by external conditions, the fewer the number of cases required (Yin, 2014).

In pursuit of attaining external validity for this research, appropriate cases and participants were carefully selected to ensure that theory-building and analytical generalisation are attained (Creswell, 2007). As was indicated in Section 3.3.6, this research seeks to generalise its results for theory-building rather than to test the applicability of findings to a larger population (Perry, 2001; Wong, 2014; Yin, 2014).

Threats to external validity for this case study research included bias on the part of the researcher in the selection of cases in order to attain predetermined results and/or bias in participating

organisations by the selection of specific individuals who were likely to present the organisation in 'positive light' or be less critical. The settings or context of the research also could pose a threat to this quality criterion whereby the sizes and/or types of organisations studied could compromise generalisability while history, that is, the inapplicability of certain observed patterns and relationships in-between eras also could threaten external validity (Easterby-Smith et al., 2015).

To address these threats, significant effort was made to avoid sources of bias both in the selection of cases and participants. For example, the participants being interviewed for each of the organisations studied were their procurement professionals or programme managers which thus limited the likelihood and options of organisations in selecting their preferred staff to be involved in the research. On the threat of settings, the organisations studied all operate humanitarian supply chains and even though they were all UK-based, they have partners and/or offices across the globe which follow their procurement strategies. The sizes and histories of the companies were inconsequential for this research.

3.6.4 Reliability

The last of Yin's (2009) criterion for case study research quality is reliability. It refers to being able to demonstrate that the operations or procedures of a research process are replicable and that the same results will be obtained (Easterby-Smith et al., 2015; Perry, 2001; Wong, 2014; Yin, 2014). That is to say, if the same case (or groups of cases) is redone by another researcher following the same procedures employed by the initial researcher, will the new researcher get the same results (Murphy et al., 1998)? The goal is to reduce errors and biases in a study (Yin, 2014). Various tactics may be employed to attain reliability in qualitative research (Silverman, 2005). For instance, it can be enhanced by a good and extensive literature review to ensure the phenomenon being researched and methods used for the research are theoretically well-grounded. The use of computer programmes to assist in the data analysis stage is also utile (Creswell, 2007). NVivo 12 Plus was used to assist in the data analysis process as previously indicated.

However, reliability is typically attained through the processes adopted at the data collection phase of a qualitative research. These include the use of a good-quality recorder to obtain relatively detailed fieldnotes and the subsequent transcription of the data, even to indicate the trivial but usually crucial, pauses and overlaps (Creswell, 2007). During interviews, probing is also an extremely beneficial tool to use so that respondents are allowed to clarify interesting and

relevant issues, and also to recall information for questions that involve memory. On the part of the interviewer, it provides for the opportunity to elicit valuable and complete information as well as allow for the exploration and clarification of inconsistencies in the accounts of respondents (Barriball and While, 1994).

Nevertheless, the most credible tactic in achieving reliability for case study research involves the development and use of a case study protocol accompanied by a case study database (Wong, 2014; Yin, 2014). All procedures employed in the research must be well documented to facilitate replication. It also helps to ensure that all respondents are treated identically and that data is also obtained and recorded uniformly (Rose et al., 2015). A discussion on the design and use of this research's case study protocol and the documents in the case database is presented in the next couple of sub-sections.

3.6.4.1 Case Study Protocol

This protocol is a document that captures what a researcher seeks to achieve and the plan on how to do that; it is essentially a project plan for the case study fieldwork. It must provide a clear link between the research questions, the required data to answer those questions and the plan for data collection and analysis (Rose et al., 2015). It thus contains the procedures, instruments and general rules that should be followed for the research (Wong, 2014). This serves to guide the researcher as a standardised agenda for the investigator's line of inquiry (Yin, 2014).

A templet for developing a case study protocol is provided by Yin (2014) and this was adopted to develop the protocol for this research. The protocol has two sections; the first part introduces the case study and the purpose of the protocol while the latter part captures the procedures to be adopted for data collection. Under the first section, an overview sub-section is provided which discusses the background to the research, the case study questions and the objectives of the research. Here, a non-technical explanation of the research (albeit with the requisite theoretical underpinning), its purpose, the type of organisations involved and the rationale for selecting the cases is provided (Yin, 2014). It is from this sub-section that the research background section of the Participant Information Sheet document was extracted and shared with participants. The names of the organisations involved in the research have however been taken out of the protocol for anonymisation. After this, two other sub-sections were provided which addressed the theoretical framework for this research and also clearly stated the role of the protocol in this research. This would have been particularly relevant for studies that involve more than a single

researcher to ensure alignment in the focus of the research among the team of researchers. However, it was necessary to include this for this research so that it would serve as a constant reminder to the researcher during fieldwork on the specific theoretical boundaries within which to operate and gather data.

The second part of the protocol provides details on the field procedures adopted for the field research which included the gaining of access, how data was to be captured and time plan for data collection. Here, a table was created and populated with the names and addresses of organisational sites to be visited, and names and positions of contact persons in each organisation. Again, these details had to be subsequently taken out because of data anonymisation according to the agreements with participants in consent forms and signed non-disclosure agreements. A data collection plan for each organisation that spells out the roles of people to be interviewed per organisation and the documents to be requested and reviewed for each organisation is indicated. This was followed by notes of preparations expected to be made before a site visit. The annual reports and other available documents were retrieved from organisational websites. These, along with documents that had to be requested from the organisations were critically reviewed and questions emerging from the review were noted for the interview.

The protocol then indicates that prospective interview participants are to be provided with consent forms and participant information sheets which will provide them with all the information required for their participation. After this, a detailed field procedure which outlines activities to be undertaken from participant recruitment to data transcription, interview checklist and resources required for data collection (including laptop, recorder, notebook, pen and student identity card) was provided. This was to ensure consistency in dealing with all participants and also to ensure that all necessary resources were ready before contact with each participant was made. The very last component of this section of the protocol was the brief overview for participating organisations which points out the type of information required of their participating staff and how this was to be obtained.

The other critical component for ensuring reliability is the case studies database; this is discussed in the next sub-section.

3.6.4.2 Case Studies Database

If replication of the research is going to be possible, a database is needed. It helps to manage all evidence collected irrespective of the format (electronic or paper) and can serve as a repository

for one's emerging ideas (Rose et al., 2015). It also provides a copy of all important documents and evidence used (Wong, 2014; Yin, 2014). For this research, these include the case study protocol, consent forms, participant information sheet, brief research overview document, interview checklist, interview questions, transcript template, actual transcripts, copies of organisational documents, case analysis and reports.

The contents of the consent forms and participant information sheet are discussed under section 3.4.2 because they bother on ethics. However, they provided prospective participants with all the information they needed to know about the research, their rights as to their participation, the information required of them and the route for mitigation of any issues that could arise from their engagement with the researcher. Apart from these two comprehensive documents, a one-page research overview document (an extract from the participant information sheet) which contained the title of the research, the name and contact of the researcher, a brief description of the purpose of the research, promise of confidentiality, reason for being recruited and focus of the interview was developed. This became the first document to be shared with the prospective participants because the researcher realised that the likelihood of such busy persons reading the participant information sheet and consent forms was very low. Therefore, a one-page document was more likely to be read and feedback likely swifter. It was only after interest in participation had been expressed that the consent forms and participant information sheets were shared with participants.

The interview checklist lists all the activities to be done before, during and immediately after each interview such as making notes on observations about office space, signing of the participant information sheets and consent forms, requesting permission to record interviews and offering participants the opportunity to seek clarification about the research or even to refuse participation. Interview questions were developed through rigorous analysis of the research framework and were designed in such a way as to solicit as much information from participants as possible. They were then tested through pilot interviews and reviewed for the core format. It is however noted that a few modifications had to be made for each organisation based on their procurement strategy documents so that clarity could be sought on portions that were not readily percipient. This was also requisite to explore the imports of some of the measures stipulated in the various documents.

A template for transcripts was also designed to facilitate the transcription process and subsequent analysis of the data collected. The NVivo 12 Plus project and recovery files which had the codes, themes, queries, matrices and maps used in the analysis of cases were also part of the database.

All the relevant documents in the database that do not bother on confidentiality including the case study protocol, interview checklist and generic interview questions are provided in Appendices A1 to A6.

3.7 Summary

A common criticism of the qualitative research approach is its lack of rigour (Yin, 2014). To overcome all such tendencies, a detailed account and description of data collection and analysis have been provided in this chapter. The chapter began with a brief discourse on research philosophy where perspectives on what knowledge and/or reality is and how that knowledge can be obtained in any given field of study were discussed. From this, the ontological and epistemological stance of this research was indicated.

Consequent to this was the indication of the adopted qualitative approach, its need in the field of supply chain management and its appropriateness for this research. Then the next section (Section 3.3) presented a schematic representation of the research design (See Figure 3.1). The remainder of the chapter discussed the subsequent parts of the design starting from the first three of Yin's (2009) five components of case study research. Thus, the processes involved in the formulation of the research questions, research framework development and unit of analysis were discussed. Additionally, the design of the cases, a justification for the adoption of case study research and a discussion of the criticisms of the method were provided within the context of this research under this section.

A section on data collection then followed where various methods for the collection of qualitative data were briefly presented and the adopted methods for this research were discussed. Details of all the preparations made for interviews, pilot interviews, getting access to organisational documents and the ethical issues involved in all these were also discussed. Then, data analysis followed where the two final components of Yin's (2009) research design components were presented. Here, discussions on transcription, the thematic analysis method and the various approaches to it and coding were presented and the section ended with a discussion on within-case and cross-case analysis, adopting great insight from Miles and Huberman (1994) and how these were utilised in the analysis of data for this research.

Recognising the criticality of proving the quality of the research, a discussion of the four quality criteria: construct validity, internal validity, external validity and reliability was provided. Seeing

that the case study protocol and database play a major role in assuring reliability, the steps adopted in preparing them were discussed under that quality criterion.

The next chapter provides a detailed discussion about the data collected from the field for each case and presents findings under the overarching themes from the analysis.

4. Presentation of Cases

4.0. Introduction

In the previous chapter, a discussion of the plan and process of data collection and analysis is presented. In this chapter and the next, a report of the findings of the data analysis of the 60 collected documents (over 1,100 pages) and 8 interview transcripts (90 pages in all) is presented. Typically, there are two ways of doing this, namely, a theme-by-theme presentation of findings - which is the most common, and a case-by-case method within which relevant themes are discussed (King et al., 2019). The latter best works for research that has a relatively small number of cases where significant depth is required. Thus, this is the adopted reporting approach for this research. Here, the results of the data analysis process are discussed for all 8 cases involved under the themes:

- Supply chain resilience formative elements
- Procurement strategy
- Donor influence.

Reporting is done by reference to examples from the data and the use of direct quotes to help characterise themes. Not every constituent descriptive code is referenced but those which strongly illustrate the interpretive codes and themes, and most effectively address this research's question (Braun and Clarke, 2006, 2013; King et al., 2019). Having indicated the uniqueness of the humanitarian supply chains in the Literature Review chapter (See Section 2.2.2), their approaches to attaining the SCR formative elements are first presented. A discussion on procurement strategy under the conceptual framework of this research is also presented and the influence of donors on procurement strategy and decision making is also pointed out.

4.1 Overview of Cases

Following the case selection criteria set out in section 3.3.3, initial contact was made, and access was granted to the respondents within the organisations as discussed under section 3.4.1.1.1. Data collection began on 22nd January 2019 and ended on 24th July 2019. Publicly available documents were collected via the internet while private ones were requested for and received before interviews. All interviewees were procurement professionals or in a top managerial role. All participants willingly agreed to participate in the interview, signed their consent forms and willingly submitted requested documents that were not publicly available. Non-disclosure

agreements were signed by the researcher to ensure confidentiality and anonymity. As a result, limited information about the dealings of organisations involved is presented to avoid risking recognisability. Further, the names of documents collected from the organisations have been standardised to aid anonymity.

Table 4.1 below presents information on the cases, the position of interviewees, dates, modes and location of interviews, documents collected, the location and type of aid.

Case	Position of the contact person	Date of interview	Mode of Interview	Location of interview	Documents collected	Location of aid	Type of aid
ORG_1	Contracts and Procurement Manager	31 January 2019	Face to face	Office	1. Procurement Policy and Procedures 2. Supplier Terms and Conditions 3. Modern Slavery Policy 4. Corruption and Compliance Policy 5. Safeguarding Policy 6. Annual Report	Local International	Emergency relief Development aid
ORG_2	Head of Programmes	02 April 2019	Face to face	Restaurant	The organisation had none	International	Emergency relief Development aid
ORG_3	Head of Procurement	23 May 2019	Face to face	Office	1. Procurement Procedures and Rules 2. Procurement Policy 3. Suppliers Code of Conduct 4. Procurement Implementation Strategy 5. Modern Slavery Policy 6. Safeguarding Policy 7. Values and Positional Statement for suppliers 8. Corporate Strategy 9. Annual Report	Local	Emergency relief Development aid
ORG_4	Chief Executive Officer	04 June 2019	Skype	Online	1. Code of Conduct 2. Fraud, Bribery and Corruption Prevention Policy 3. Policy Handbook	International	Emergency relief Development aid

ORG_5	Head of Procurement	12 July 2019	Skype	Online	<ol style="list-style-type: none"> 1. Procurement Policy 2. Procurement Procedure 3. Procurement Strategy 4. Supplier Code of Conduct 5. Supplier Conduct Policy 6. Supplier Terms and Conditions 7. Modern Slavery Statement 8. Sustainability Policy 9. Supplier Pre-Qualification Guide 10. Pre-Qualification Criteria 11. Statement on the Environment 12. Statement on Ethics and Sustainable Purchasing 13. Annual Report 	Local International	Emergency relief Development aid
ORG_6	Contracts and Procurement Manager	11 July 2019	Skype	Online	<ol style="list-style-type: none"> 1. Procurement Policy 2. Supplier Contractual Agreement 3. Code of Conduct 4. Instructions to Bidders 5. Modern Slavery Act Statement 6. Supplier Terms and Conditions 7. Contract Procedures Guide 8. Pre-Qualification Criteria 9. Request for Proposal/Quote 10. Supplier Questionnaire Form 11. Terms of Tendering 12. Strategic Report 	Local International	Emergency relief Development aid

ORG_7	Sourcing Specialist	12 July 2019	Skype	Online	<ol style="list-style-type: none"> 1. Procurement Policy 2. Suppliers' Code of Conduct 3. Fraud, Bribery and Corruption Prevention Policy 4. Emergency Procurement Strategy 5. Employees' Code of Conduct 6. Modern Slavery Policy 7. Modern Slavery Statement 8. Invitation to Tender 9. Strategic Report 10. Accountability Report 11. Annual Report 	International	Emergency relief Development aid
ORG_8	Head of Procurement	24 July 2019	Face to face	Office	<ol style="list-style-type: none"> 1. Procurement Policy 2. Supplier Code of Conduct 3. Suppliers Terms and Conditions 4. Modern Slavery Policy 5. Guidelines for supply of Goods and Services 6. Annual Report 	Local International	Emergency relief Development aid

Table 4.1 Overview of conducted interviews and documents collected.

4.2 Case 1

4.2.0 Company Overview

The first case is anonymised as Organisation 1 (Org_1). It is a large humanitarian organisation located in London and provides aid to vulnerable people in both emergency relief and development aid situations in the UK as well as internationally. For Org_1, contact was first made with an insider in the organisation through whom requisite approvals were attained for the interview to be arranged with the appropriate interviewee and the initial collection of the company documents that were not available online. Having collected the safeguarding policy, modern slavery policy and annual reports online, approval had to be attained for the procurement policy and procedures, corruption and compliance policy as well as supplier terms and conditions documents to be obtained from the organisation. With these obtained, the documents were quickly analysed for two weeks and interview questions were updated and modified to suit Org_1's context, as well as to seek clarity on some of the policy statements. The interviewee for this organisation was a very experienced procurement professional with over 20 years of experience, the majority of it in the charity sector. The person belonged to a procurement professional's body. The interview was in person at the organisation's office on 31st January 2019. An analysis of the transcribed interview and collected data is presented below. A summary of these can be found in Table 4.2.

4.2.1 Supply Chain Resilience Formative Elements

As was stated in Section 3.5.2.1, an abductive approach to coding was adopted for this research. Thus, in coding for formative elements, the second-order codes and overarching themes were imposed from literature. Formative elements as discussed in Section 2.4.1 were pre-coded while new codes also emerged from the collected data. All of these were identified in Org_1 which adopts a variety of ways to pursue these. For example, to be responsive in its supply chain for resilience purposes, the organisation pursues prompt investigations and has a crisis committee composed of both senior management and employees which swiftly deals with any major disruptions. Through preapproved suppliers who typically have a track record of consistent performance, the organisation also improves its responsiveness by shortcutting its supplier selection process in times of emergencies.

A myriad of approaches is adopted for ensuring risk avoidance. These include enforcement of policy compliance and conformity across the organisation and with its suppliers whereby both

staff and suppliers are made aware of its policy positions through information sharing and training, and where necessary they are enjoined by contractual commitment to follow the policy directives. Similar approaches are adopted through policy provisions and protocols to ensure compliance with relevant legal and regulatory requirements.

A summary of the ways by which Org_1 pursues all SCR formative elements is presented in Table 4.2 below while a more detailed discussion with quotes from the data sources is provided in Table A9.1 in the Appendix.

Org_1's procurement strategy decisions are discussed in the section below.

4.2.2 Procurement Strategy

This overarching theme, along with the second-order themes discussed below were imposed from literature unto the data.

4.2.2.1 Supplier Selection

Supplier selection in Org_1 incorporates criteria, influencing factors, sourcing procedure and monetary value. Consistent with provisions in the literature on selection criteria for suppliers (See section 2.4.2.1.2), Org_1 considers cost, delivery schedule and lead time, service delivery, quality, supplier capabilities (capacity and technical skills) and sustainability (economic ability, ethical and environmental standards). These criteria form the core of supplier evaluation. Org_1's procurement policy states that:

“Evaluation criteria and the relative value of each will vary for each procurement, the common criteria are quality of the goods/services proposed, delivery schedule and lead time, the price including any necessary on-costs such as transportation, insurance, handling or import costs, account management and reporting, ethical and environmental standards.” - O1PPP

However, Org_1 also considers the potential suppliers' risk profile (including their public profile and organisational structure), previous performance and supplier location. The following are quotes from Org_1's procurement policy and the interview to that effect:

“Seek for any scandals on related procurement.” - O1PPP

“Look online for information about tax avoidance/evasion practices” - O1PPP

“Our due diligence is quite intense, we look at different factors, their financial capacity, what are they like in the market, their reputation, their policies; we look at different areas and sometimes we do reference checks; we have a credit checking facility. We look at some of the directors, we look at some media solutions to see, are they reputable? We look at different things.” - O1IT

“...That’s where the programme people will give us a feedback about a particular supplier, whether they were able to perform appreciably, and that will help us to see if that supplier should be re-engaged for subsequent work.” - O1IT

“It plays a very important role. Because that will determine how fast we are going to get them to deliver their product or the service. So as much as possible we will want them to be closer.” - O1IT

“Then secondly, we also want to reduce our carbon footprint because that’s one of the areas we are very active in, climate change. So if it’s something we can get locally we go in for it. Because we believe in impacting the community, our CSR. So we will prefer local, if it’s available locally, as much as possible we want to do that.” - O1IT

Some factors influence the selection criteria of suppliers even though they may not by themselves be criteria by which evaluation is done. These include donor requirements, fairness, monetary value, supplier location, relationship type and base strategy. Certain institutional donors sometimes stipulate how procurement for their funded projects ought to be carried out.

The monetary value of contracts also influences how vigorous the selection criteria may be. Due diligence on potential suppliers heightens for higher value procurements. When procuring goods and services from certain locations classified by Org_1 as high risk, evaluation criteria intensify. Also, when Org_1 seeks to enter into partnership agreements, the closeness of the relationship requires greater scrutiny. When sourcing from Humanitarian Procurement Centres or an Org_1 preapproved list, selection criteria are less stringent. Overall, Org_1 aims at ensuring it treats all bidders equally and fairly and this reflects in its evaluation of selection criteria.

From a resilience perspective, humanitarian organisations are typically encouraged to pursue competitive bidding because it ensures fairness, builds trust and improves collaboration. The sourcing criteria adopted by Org_1 is influenced by the monetary value of the contract. Low-value contracts (£10,000 and below) may be procured through single written quotations when using an approved supplier list while for micro-purchases (£2,000 and below), the same may be adopted except where there are no approved suppliers. In that case, a minimum of three quotes

is required. Contracts valued up to £50,000 may be pursued through a negotiated procedure, also requiring a minimum of three written quotes while anything above this value demands a competitive tender process. Where donors require Org_1 to procure goods and services from their approved suppliers, single quotes are acceptable since it is believed such suppliers have been externally vetted in terms of quality, price and transparency. On the occasion where a donor has rules to be complied with, sourcing procedure is ultimately based on which of the two is more stringent.

The impact of monetary value on supplier selection emerged from the data. This, to the best of the author's knowledge, has not been stated in literature - especially with regards to SCR. Its impact on sourcing procedure and selection criteria have already been alluded to above. However, beyond these, the monetary value of procurements also influences decision making, in that, contracts considered high value and/or high risk require the involvement of Org_1's central procurement team as stated in two of the organisation's policies.

“For all requirements valued over £50k Contracts and Procurement must be consulted. For all other requirements, buyers must consider the risks and what information should be requested to mitigate these.” - O1PPP

“All procurement decisions valued at £50,000 or over require approval from the Contracts and Procurement team at Org_1's head office, who will manage or oversee the selection process. Smaller procurements and supplier relationships may be approved by local teams in accordance with delegated authorities.” - O1MSP

Org_1 also requires all its partners who receive funds of £50,000 value or more in any year to undertake an external audit. Further, higher value spends influence supplier relationships; whereby a closer, collaborative approach with increased information sharing and greater transparency is pursued. This further influences the supplier relationship management where quarterly meetings are recommended in order to manage any arising issues and to ensure that specifications and performance are up to Org_1's requirements. The procurement officer explains:

“...if we are spending a whole lot of money with you, we want to follow our money. We want to keep an eye on it. So it will be a closer, collaborative partnership kind of relationship...There will be more information sharing between the supplier and us...there's a greater transparency in it; in terms of the price, quality and best practice sharing.” - O1IT

Through supplier selection, Org_1 is able to avoid a myriad of risks upstream of its supply chain. The focus on transparency also facilitates collaboration while provisions made for emergency procurements or procurements under exceptional cases helps improve its agility. The insistence on record keeping and documentation of decisions through the use of its SharePoint helps with knowledge management, culture (both learning and reporting), information technology as well as data and decision redundancy. The inclusion of relevant stakeholders in supplier selection helps with internal lateral integration while the clear instructions on responsibilities and governance improve both accountability and decision making. Further, considerations made for supplier selection and the commitments imposed on suppliers through its terms and conditions help improve its sustainability and security. Since supplier selection may be done at various levels within the organisation – albeit with monetary boundaries, there is decision flexibility attained as well.

Thus, through the guidelines provided under supplier selection in Org_1, it is able to pursue almost all formative elements to enhance its resilience.

4.2.2.2 Supply Base Strategy

Apart from sole sourcing when prevailing circumstances such as “*Goods are only obtainable from one source for technical or intellectual copyright reasons*” (O1PPP) make it impractical to use any other strategy, Org_1’s preferred supply base strategy is single sourcing through various sourcing procedures based on the monetary value of the contract. It does not source a particular good or service from multiple suppliers simultaneously. Low-value contracts may be carried out based on a single quotation since Org_1 considers a competitive process for purchases under £2,000 as not cost-effective. For contracts between £2,000 and £50,000 and/or frequently procured items under £10,000 where a formal contract may be considered not cost-effective, Org_1 encourages purchasing from an approved supplier lists, from donor-approved suppliers or by using framework agreements. For high-value contracts, competitive tendering is the required sourcing procedure but ultimately only one supplier is selected. Thus, Org_1 does not explore prescribed methods to ensure resilience, such as dual sourcing or the use of lead and backup suppliers.

Nevertheless, the use of pre-vetted suppliers ensures that in the event of disruptions or failure from the selected supplier, the process of selecting alternative suppliers is relatively fast. The organisation acknowledges this in its procurement procedure document by stating that:

“The aim is to identify one or more suitable/qualified suppliers that will provide good value and enable flexibility as and when the product or service is required.” - O1PPP

Org_1 is therefore able to pursue agility, robustness, redundancy and flexibility through its supplier base strategy.

4.2.2.3 Supplier Relationship Determination

Org_1 exploits a variety of supplier relationships ranging from transactional to partnerships. The decision on the type of relationships to pursue depends on various considerations including project requirements, nature of the project (strategic, one-off, consultancy), the importance of requirement and the value of spend. The procurement manager explains:

“If it’s a strategic project, definitely it will be more collaborative. At the same time, we don’t want to invest in relationship for a requirement that is not very important. So we weigh the importance of the requirement to the organisation and the value of the spend. If it’s a high spend and it’s a strategic requirement, definitely we will go for a more collaborative approach; more like a partnership.” - O1IT

Part of the reasons for closer relationships is to ensure that suppliers are socially sustainable and ethically responsible. This type of relationship also allows for supplier development in terms of making them more sustainable.

“In the event that we work in partnership with a supplier in good faith but subsequently discover unacceptable practices either at the supplier or within the supplier’s supply chain we will engage with the supplier constructively to address identified weaknesses.” - O1PPP, O1STC.

When Org_1 works with suppliers where the relationship is not meant to be close, it clearly states this in its terms and conditions:

“Our relationship is as independent contractors only, not as partners nor as principal and agent.” - O1STC

Nonetheless, supplier performance over time can influence their relationships and move them from transactional to become strategic partners in the supply of particular goods or services as they would have proved themselves more reliable, secure and reputable, thereby presenting less risk.

In determining its relationships with suppliers, Org_1 can be seen to be pursuing sustainability, avoidance and collaboration.

4.2.2.4 Supplier Location

Org_1 puts premium on local procurement because of its delivery module and its hope to directly influence local economies. Value for money considerations, lead time considerations, complexity and vulnerability of relationships with overseas suppliers and environmental sustainability in terms of reducing carbon footprint also favour procuring from the countries within which aid is being delivered. The interviewed procurement official explains:

“...that will determine how fast we are going to get them to deliver their product or the service. So as much as possible we will want them to be closer. Then secondly, we also want to reduce our carbon footprint because that’s one of the areas we are very active in: climate change. So if it’s something we can get locally we go in for it. Because we believe in impacting the community, our CSR. So we will prefer local, if it’s available locally, as much as possible we want to do that.”

- O1IT

Notwithstanding, there are times where global procurement may be the preferred and more reasonable option; for instance, in the case of purchasing vehicles. Under such circumstances, potential suppliers are evaluated for their supply chain management practices and the transparency within their supply chains. Based on donor stipulations on the rule of origin, purchases from certain countries may be restricted.

Overall, decisions on supplier locations in Org_1 cater for supply chain resilience formative elements such as avoidance, agility and sustainability but offers very little in terms of flexibility as it does not pursue a mix for local and overseas suppliers for specific goods or services.

4.2.2.5 Relationships between the Decision Areas

As may be seen from Figure 2.3, decisions in the decision areas are influenced by other decision areas. Supplier selection decisions in Org_1 influence and are influenced by Supplier location and supplier base strategy. Supplier location influences selection criteria and may sometimes even be a selection criterion if a particular location is considered high risk. It also affects lead time and sustainability considerations in terms of carbon emissions as all these have value for money

implications. Because of different cultural, legal and regulatory paradigms in different countries, supplier location also influences how a supplier may be evaluated.

Org_1's supplier base strategy influences supplier selection when it is not cost-effective to have formal contracts. In such cases, the organisation prefers to use approved supplier lists or framework agreements. Supplier location influences supplier base strategy when an organisation decides to have multiple suppliers with a mix of local and overseas to afford flexibility and redundancy. This is not the case in Org_1. However, in terms of determining the type of relationships to have with a customer, it acknowledges that if all other relevant factors are met, a local supplier is preferred as it will be easier to manage such close relationships.

Since Org_1 either single sources or sole sources (if it is the only available option), supplier selection does influence and is influenced by the type of relationship to be had with suppliers as high value/high-risk contracts then necessarily mean closer relationships and if so, then greater scrutiny in terms of evaluation and selection. These identified relationships are presented schematically in Figure 4.1 below.

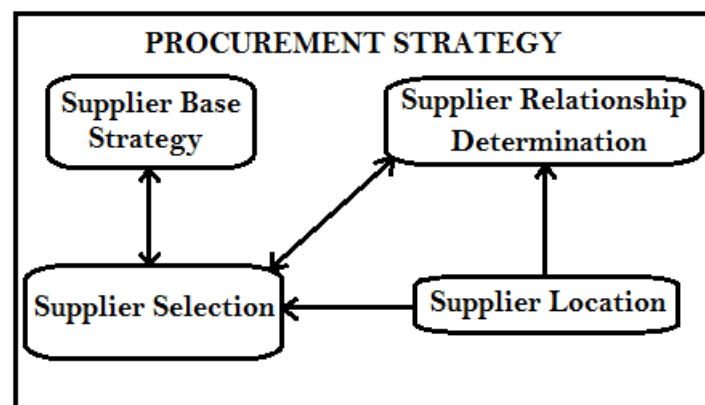


Figure 4.1 Identified relationships between procurement strategy decision areas towards SCR in Organisation 1

4.2.3 Donor Influence

Humanitarian organisations because of their significant dependence on donors are influenced by donor interest and this interest extends also to their procurement decisions. As indicated by Bealt et al. (2016) and Behl and Dutta (2019), it is important to highlight these influences.

The biggest influence on Org_1's procurement processes is accountability to donors, and this thereby requires it to take a variety of actions to sustain donor trust and interest. Org_1

understands that risking a subpar aid delivery quality could adversely affect its donors' trust and thereby lead to loss of future funding. It is therefore accountable to its donors particularly in its dispensing of resources in procurement. Its procurement policy stipulates this:

“Org_1 is accountable to its donors for responsible stewardship of resources.” - O1PPP

To be sufficiently able to account to donors, Org_1 pursues intensive documentation of its procurement processes and the storage of these for up to 7 years from the end of a contract - per current EU regulations. This ensures that both external auditors and donor inspectors have access to all relevant documents. The organisation's policy document and procurement officer explain this respectively:

“Donors may prescribe a specific time period for documentation to be stored so it is important to adhere to this using a filing structure that is understood and accessible to appropriate staff and auditors (e.g. current EU regulations require that procurement documentation be kept for 7 years from the end of the contract).” - O1PPP

“...Sometimes years after the project may have closed, donors will come and ask. So it's to keep the audit trail and to satisfy donor requirement.” - O1IT

Beyond providing an audit trail, certain donors - particularly governmental ones, require compliance with specific procurement rules and regulations. These demands thereby influence the organisation's procurement strategy in diverse ways such as sourcing procedure, considerations of supplier locations, legal and regulatory compliance and so on.

Org_1 is so much influenced by donors such that, it admits its procurement policy is also to meet donor specifications:

“The policy is intended to reflect key donor agency procurement stipulations.” - O1PPP

The procurement manager explains this further:

“...we as a charity are not obliged to go through a procurement process like in the public sector. Rather, it depends on the donor requirement, what is in the FLA, Funding Level Agreement. Because the funder will clearly specify the procurement process that we should follow and that's what we are going to follow.” - O1IT

Indeed, when there appears a conflict between an Org_1's policy position and that of a donor for a particular procurement, the donor's takes precedence except for cases where Org_1 has the stricter requirements. Donors may sometimes require close monitoring of suppliers and

implementing partners and the institution of specific reporting systems in order for risks such as modern slavery to be curtailed. Procurement plans may also require donor approval. In terms of supplier location, Org_1 may be restricted from procuring from specific locations if such countries are considered high-risk by donors.

Seeing the numerous donor requirements on procurement, Org_1 ensures that its local teams and implementing partners are trained to understand these requirements and abide by them accordingly.

Daunting as it may seem, donor influences as indicated here have a positive impact on supply chain resilience as it enhances formative elements such as human resource management (in terms of knowledge management and training), accountability, avoidance, collaboration, sustainability, security, top management commitment, culture and decision making.

However, the significance and/or reliance on donors also mean that, there is the risk that, changes in donor interests resulting in misaligned strategic priorities, as well as economical changes in the UK (from where Org_1 sources much of its public donations), may adversely affect fund availability to Org_1 and hence its purchasing power. Further, donors may restrict Org_1's responsiveness and flexibility in emergencies due to entrenched procedural requirements. There is also the risk of having to modify the organisation's plans and focus (no matter how slightly) to align with the interests of donors (particularly, large governmental ones). Sometimes, these donor interests may not be entirely 'humanitarian'.

A summary of the findings in the organisation is presented in Table 4.2 below.

Themes	Second-order codes	Summary of Findings
Supply Chain Formative Elements	Agility	Approaches adopted to pursue agility include a clearly defined decision-making structure, use of a crisis management committee, framework agreements, prompt investigations, risk alertness training, supplier or partner development, stock pre-positioning, financial resilience
	Avoidance	To ensure risk avoidance, Org_1 ensures awareness within and across its supply chain, clarity on communication, extensive consultation, confidentiality, due diligence of suppliers and partners, legal and regulatory compliance, policy compliance and conformity and provision of support to country teams. It also uses careful staff recruitment and training, milestone payments of suppliers, contractual provisions, fairness and transparency to avoid supplier-related risks

Collaboration	Org_1 collaborates with its suppliers, other charities and governmental agencies to improve its resilience. It also ensures internal collaboration and awareness creation through information sharing with or by staff and suppliers. It also uses legal and regulatory monitoring, staff and partner training, supplier monitoring and working with localised groups.
Culture	Org_1 actively pursues a learning culture and also facilitates whistleblowing and reporting culture
Decision making	Decentralised procurement decision making is pursued here with a central procurement body providing guidance, training, authorisation and high-level support to staff. This central team also pursues global monitoring of procurement activities. There are security and sustainability considerations in decision making and there is effort to ensure supply chain understanding. Decisions are documented and procurement committees are also used in making high-risk and/or high-value decisions.
Flexibility	Org_1 uses decision flexibility and flexible contracting.
Governance and Accountability	There is accountability to donors and demand for accountability from suppliers. Internally, the organisation uses authorisations and approvals, internal auditing, managerial or committee oversight, proportionality and transparency to ensure governance and accountability.
Human Resource Management	This formative element is pursued through disciplinary action, staff training and support, careful recruitment, fair remuneration and policy compliance. Documentation is vigorously pursued to facilitate knowledge management.
Information Technology	IT is used to facilitate data storage, accessibility and reporting.
Integration	The organisation pursues lateral integration through the use of procurement committees.
Redundancy	No pursuit of tangible redundancy. It however pursues intangible redundancy through cross-training of staff, decision redundancy, redundant supplier relationships through framework agreements and offsite data backup.
Robustness	It pursues robustness through its efforts at financial resilience and knowledge backup across the organisation.
Security	This is pursued through the use of data security, insurance provisions, physical security at office premises and security training for staff.
Sustainability	Org_1 uses its policies to ensure economic sustainability and uses contractual demands to ensure supplier compliance with its social and environmental sustainability standards.

	Top management support	The board admits and actively engages in risk management. They have made provisions for committees and have created new roles to deal with some procurement-related risks.
Procurement Strategy	Supplier selection	The supplier selection criteria in Org_1 include cost, quality, service delivery, supplier location, supplier profile and sustainability. Supplier selection decisions are influenced by donor requirements, fairness, monetary value, supplier location, supplier relationship type and the supply base strategy. Adopted sourcing procedures are influenced by donors, monetary value and risk exposure. Single written quotations are used for low-value contracts while high value/risk contracts typically require a variety of competitive bidding procedures. Org_1 is able to pursue all formative elements through decisions here.
	Supplier base strategy	Org_1 predominantly relies on single sourcing but only sole sources when prevailing market conditions dictate it. Org_2 does not multisource. Decisions here help it pursue agility, robustness, redundancy and flexibility.
	Supplier relationship determination	Predominantly transactional relationships with the use of closer relationships including partnerships when necessary. Decisions here depend on project requirements, nature of the project, importance of requirement and monetary value. Formative elements pursued here include sustainability, avoidance and collaboration.
	Supplier location	Major preference for local sourcing. Global sourcing becomes an option for the purchase of vehicles and other similar global requirements, but these decisions are guided by donor stipulations. Decisions here positively impact avoidance, agility and sustainability.
	Identifiable Relationships	Refer to Figure 4.1
Donor influence		Donor influence is manifested through requirements for their approvals, direct project implementation, adherence to their dictates on sourcing procedures, classification of risky countries, and override of its policies and procedures. Org_1 also has accountability to donors in terms of the use of given resources, documentation of decisions and monitoring of partners and suppliers. When donor interests change, this can have a significant impact on the organisation.

Table 4.2 Summary of the research findings on coded themes in Organisation 1

4.3 Case 2

4.3.0 Company Overview

Organisation 2 (Org_2) is a small humanitarian organisation that provides both emergency relief and development aid internationally to vulnerable people in Africa, Asia and Europe. Much of the aid provided is in the form of food. The first contact was made through an introduction to a Board member of the charity, through whom access was gained to the Head of Programmes, who in this case, was the appropriate interviewee. This person has over 7 years' worth of experience in the charity sector and had been in the role for almost a year. For this organisation, there were no documents available for collection as it had no policies or reports. The sole source of data, therefore, was through the interview. The interview was in person and took place on 2nd April 2019. The analysis of the transcribed interview is discussed as follows.

4.3.1 Supply Chain Resilience Formative Elements

7 out of the 15 possible supply chain resilience formative elements were identified in Org_2's supply chains. These were avoidance, human resource management, collaboration, culture, redundancy, governance and accountability, and decision making.

The organisation collaborates with other charities in the UK as part of its mitigative strategies in dealing with financial risks and enforcing financial control. It also works with localised groups to overcome language barriers. Though at a limited rate, Org_2 facilitates a learning culture by modifying its practices as a result of lessons learned from previous supply-related disruptions. There is also an insistence on reporting and whistleblowing to allow for early risk identification and mitigation. Further details of these findings are presented in Table 4.3 below and Table A9.2 in the Appendix.

4.3.2 Procurement Strategy

The insight gathered from Org_2's collected data in the areas of supplier selection, supplier base strategy, supplier relationship determination, supplier location and the relationships between these decision areas are discussed below.

4.3.2.1 Supplier Selection

Because of the nature of the goods procured by Org_2, its criteria for supplier selection includes cost, supplier ethics, service delivery, supplier location and quality of goods.

With cost, the interviewee indicates that:

“So we basically, sums up, so between the two suppliers, some of the products are cheaper in certain places than others. So we do, we just look out for the best prices.” - O2IT

For supplier ethics, it was indicated that:

“We also look for, we keep an eye out for ethical farming as well. So, if a company is linked to exploitative slave labour.” - O2IT

Nevertheless, it is unclear how this is verified considering the very limited resources Org_2 has to do that, as was initially admitted.

“A couple of things that we’ve had is the quality of the product. Some suppliers will say ‘we’ll give you, this is the cheapest rate you’ll get’; but the quality of the food is not right, is not is not to the standard of quality that we want it to be” - O2IT

“...and also the other is reliability of the supplier to supply the goods that we want. Because if they make a commitment and they don’t deliver on the commitment, then, to get that kind of food within short period of time is very difficult in places like anonymised_country1 or even, in places like anonymised_country2” - O2IT

“So again, in anonymised_country2, anonymised_country9, anonymised_country10, anonymised_country1, basically because of the isolated areas that we operate in, we go for the nearest location... We are largely restricted by the most local largest market and we source it from there.” - O2IT

Data collected from Org_2 does not show influencing factors on selection criteria or the role monetary value plays in sourcing procedure, relationship determination or even supplier scrutiny. This may be due to the low value and unsophisticated nature of procurements by its partners.

Indeed, the interviewee admits that, for the organisation’s sourcing procedure, it is difficult to go through a full tender process with its current partners, but the aim is to work on this and improve on sourcing processes with time.

“The experience I’ve had in the industry is that the gold standard is that you have three suppliers at least. You put a tender out, you filter it down to three suppliers and you go with the best three that has the best track record of financial record, reports, no bankruptcy, do some background check on the business owner...those kinds of stuff. It’s difficult to do it in the current partners that we do have because I’ve, I’ve inherited the projects; so it’s almost like I have to work with what I have and I don’t want to be in a position where I say well I don’t want to work with all these partners because something is not right at the moment. I just want to improve it.” - O2IT

4.3.2.2 Supplier Base Strategy

In terms of supplier base strategy, Org_2 does not operate with much of a strategy, though what it currently does may be classified as single sourcing. Depending on the location and available market, it deals with the available suppliers for required goods while looking out for better value out of very limited options or when options are vast, deals are always made based on the best price offering on the market.

“So on the island itself, there are two wholesale traders so there’s not many options there.” - O2IT

“But because of anonymised_country1 markets we are always having to keep an eye out for a better rate somewhere else.” - O2IT

“But the reality is that in places like anonymised_country10 and anonymised_country8, the market is so vast there’s so many different traders out there, we can always kind of jump ship to go to someone else for a better price.” - O2IT

4.3.2.3 Supplier Relationship Determination

Org_2 operates on a transactional basis with all its suppliers irrespective of location. Because cost is the most important criteria - if the good is of reasonable quality, Org_2 is always on the lookout for the supplier with the cheapest prices. This is most obvious in locations where multiple suppliers are in the market; but even in locations where options are limited, relationships are not necessarily closer even though purchases of specific goods are likely to be from particular suppliers. The absence of contracting also reduces the likelihood of close relationships at organisational level; even though at a personal level, that might be the case.

“So, we are always keeping our eyes on the market and going out to find what’s the cheapest rate with the best quality.” - O2IT

4.3.2.4 Supplier Location

Org_2’s procurement is entirely local. Despite recognising that global procurement could offer cheaper but quality goods, Org_2 identifies its limited funds as the major hindrance to exploring this option.

“So we are aware the set of items are far cheaper if bought internationally and then exported into respective fields. We don’t do that largely because we don’t have the financial means to do so, to buy such large amounts where we’d usually stuck a whole container because we know it’ll work out cheaper but we don’t have the financial means to do that.” - O2IT

“Because of the money that we are dealing with, we don’t have the buying power to buy three months or four months in advance. We don’t even have the capital to give the upfront cost; we have to buy from the local suppliers.” - O2IT

Further obstacles include complex licensing regimes to allow importation and exportations in certain countries, embargoes on importations and remoteness or isolation of some of the locations where aid is delivered.

“...and the other thing is that in places like anonymised_country8, it’s a very controlled market and therefore it’s very difficult to do import and export. You will need to have a lot of different licenses; as in if you are an NGO, you happen to need to have another layer of licenses” - O2IT.

“When it comes to anonymised_country10 for example, we are operating in a very remote area in the desert... To get things there, it’s extremely difficult and it has to be sourced from the nearest large city...” - O2IT

“In anonymised_country1, it’s because of the embargo,...it’s impossible to kind of import and export.” - O2IT

“A place like anonymised_country9, ...we operate on a very small island, it’s a very remote island and so it has to be done from the island itself.” - O2IT

“So again, in anonymised_country2, anonymised_country9, anonymised_country10, anonymised_country1...locations basically because of the isolated areas that we operate in, we go for the nearest location” - O2IT

Despite these barriers to global sourcing, Org_2 also points to adverse effects on local economies by the importation of food items from overseas as another reason why local procurement is preferred.

“As a result, what you do is that not only do you give them low-quality food but also you destroy the local market; because any shop owner that was selling anything, would not be able to sell anything now because of the flooding of their food. So it damages the local economy.” - O2IT

Local procurement on the other hand improves the local economy and reduces resentment in the local communities – especially when dealing with refugees in a foreign country.

“So I think there is a massive benefit to buying, procuring locally because it decreases resentment within the local community.” - O2IT

4.3.2.5 Relationships between the Decision Areas

Because of the extremely simplified procurement structure of Org_2, decisions in all four decision areas are almost fixed, that is, local procurement, single sourcing and transactional relationships. Because of expected local procurement, that is a necessary criterion for supplier selection. Thus, there is little dynamism in the impacts of decisions in one decision area over the other. Figure 4.2 shows the only identified relationship.

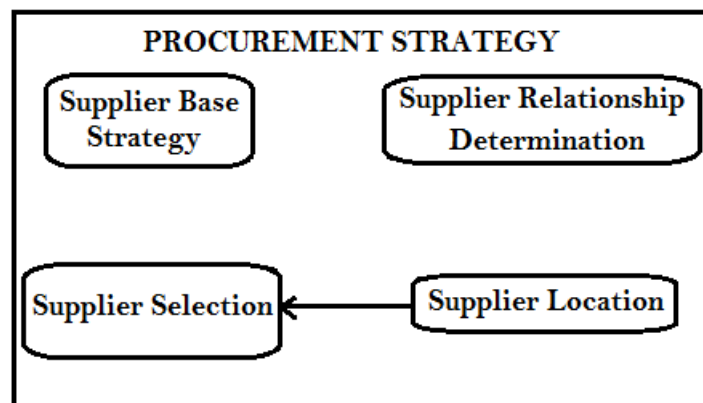


Figure 4.2 Identified relationships between procurement strategy decision areas towards SCR in Organisation 2

4.3.3 Donor Influence

Donor influence on Org_2’s procurement is very minimal, in that, because funding is almost exclusively from the public, there are no rules or guidelines imposed except for the need to stick

to the purposes for which funds were raised. This thereby raises the issue of restricted and unrestricted funding whereby funds raised to address a specific crisis in particular locations are expected to be spent in exactly those locations. The challenge however is that funds raised without ties to specific projects tend to be lower thereby making it difficult to finance less advertised disasters for which little or no direct funding were raised. Thus, the impact on procurement manifests in terms of lower quantities, lesser bargaining power and lower flexibility in purchasing options.

“For us, we have a limited number of pots. So we’ll either have the anonymised appeal - which is a very popular appeal, but then we have another pot where we say ‘where most needed’. So for the “where most needed”, it gives us the flexibility to kind of say, it’s low in anonymised_country1, we will replenish that pot internally. It’s low in anonymised_country9, we will replenish that pot.”
- O2IT

The findings under the three overarching themes in Org_2 are summarised in Table 4.3 below.

Themes	Second-order codes	Summary of Findings
Supply Chain Formative Elements	Avoidance	Org_2’s approach to avoiding risks include making conflict of interest provisions, performing reasonable level of due diligence on suppliers, ensuring quality control and compliance to its directives to suppliers.
	Collaboration	Org_2 creates awareness through staff and partner training, monitoring and working with localised groups. It also collaborates with other charities.
	Culture	Org_2 pursues a learning culture and also facilitates a whistleblowing and reporting culture.
	Decision making	Decision making in Org_2 with regards to procurement decisions is largely decentralised to local teams.
	Governance and Accountability	Through country visits, Org_2 exercises some oversight over its suppliers and partners. Procurement decisions by suppliers and local partners are vetted by the central office.
	Human Resource Management	Provision of training for local teams, strategic recruitment and compliance to managerial requirements are the ways Org_2 pursues HRM as a SCR formative element.
	Redundancy	Org_2 keeps additional stock for fairly durable food items.
Procurement Strategy	Supplier selection	Criteria for supplier selection in Org_2 include cost, quality, service delivery, ethics compliance and supplier location.
	Supplier base strategy	It exclusively single sources by seeking out the most economical supply option.

	Supplier relationship determination	Relationships are largely transactional.
	Supplier location	Sources entirely locally.
	Identifiable Relationships	Refer to Figure 4.2
Donor influence		Minimal influence that manifests in the form of accountability for use of resources, restriction on funds and modified interest or lack of affinity.

Table 4.3 Summary of the research findings on coded themes in Organisation 2

4.4 Case 3

4.4.0 Company Overview

The third case (Org_3) is a large organisation headquartered in London that offers development aid within the UK. Upon gaining access to the contact within the organisation, the research overview sheet was shared, and an introductory meeting was arranged where the research was explained and the prospective participant was invited to participate. Once participation was agreed upon, additional documentation which were not available online, including the procurement policy, procedure and rules, implementation strategy and suppliers' code of conduct were requested. These were shared the following day. The other documents which were available through the organisation's website had already been downloaded. With all documents received, reviewing was done, and interview questions were modified accordingly to suit the context and the interview was arranged. It took place on 23rd May 2019 at the head office and was done in person. The interviewee was the Head of procurement for Org_3 and had been in the procurement sector for over 13 years, working in the public and third sectors and is part of a procurement professionals' body.

An analysis of the interview transcript and collected documents under overarching themes is presented below.

4.4.1 Supply Chain Resilience Formative Elements

All the identified supply chain resilience formative elements in this study, including governance and accountability, were coded for Org_3. To help pursue decision making as a formative element in Org_3, procurement decision making is decentralised across the organisation with

local and departmental teams reasonable for procuring low-value, low-risk materials with the advice, guidance, support and monitoring of a small centralised expert procurement team. This allows for flexible decision making and helps deal with the challenge of limited procurement expertise. Training is provided for non-expert procurement decision makers to improve their decision making and to ensure the organisation's SCR is not compromised.

Besides decision flexibility, the organisation also exploits sourcing flexibility through the use of government-standardised framework agreements and pre-approved supplier lists. By these, varying demand requirements are relatively easily and quickly met. Further insight into Org_3 approaches for SCR formative elements are summarised in Table 4.4 with a more detailed discussion provided in Table A9.3 in the Appendix. Org_3's procurement strategy decisions are presented below.

4.4.2 Procurement Strategy

Org_3's data analysis as regards to their supplier selection, supplier base strategy, supplier relationship determination, supplier location and the relationships between these is presented below.

4.4.2.1 Supplier Selection

Supplier selection in Org_3 includes the selection criteria, influencing factors, monetary value and sourcing procedure. The organisation's selection criteria include cost, supplier capabilities, supplier location, supplier profile and sustainability. Depending on the value of the contract, Org_3 chooses the lowest price or the most economically advantageous offer. This is explained in its procurement rules.

“For most quotations in Bands 1 and 2 (£0 - £25,000) it would normally be expected that the lowest price would be accepted.” - O3PPR

“The main criteria for award for procurements in Band 3 or 4 (£25,001+) may be either Lowest Price or Most Economically Advantageous (a combination of price and quality criteria) Quotation or Tender, as the CO considers appropriate for the contract.” - O3PPR

Org_3 further checks for the capability of the supplier to deliver the requirements of the contract by checking on the firm's financial standing and stability (by verifying at least two year's financial account) and their competence to deliver work, service or supply required.

Further, Org_3 verifies the profile of prospective suppliers in terms of their possession of relevant sector licences or standards and legal and/or regulatory compliance. Thus,

“Firms from public sector purchasing organisation frameworks, or an Org_3's Select List for the requirement, or which have been vetted by Org_3's for a similar requirement and found satisfactory within the previous 3 months are deemed satisfactory.” - O3PPR

Supplier's economic sustainability (financial stability and possession of relevant insurances) also plays a crucial role in supplier selection as well as their social sustainability as evinced in equal opportunities, health and safety of employees and modern slavery. Org_3 further indicates that wherever possible it incorporates environmental sustainability provisions. In line with these, Org_3 requires prospective suppliers to:

“...have provided responses to approved questions including their insurances, compliance with equal opportunities and diversity legislation, modern slavery, and sustainability policy” - O3PPR.

Org_3's approach to supplier selection criteria is influenced by several factors including the value of a contract for the organisation, urgency of the requirement, supplier location, balance of power (supplier market or buyer market) and monetary value. In emergencies, Org_3 is more likely to go with suppliers it is already familiar with so that a supplier's proven record becomes an extremely important criterion under such situations. Org_3's procurement manager explains the influence of location on supplier selection.

“It becomes more stringent when we are buying from abroad. When you are looking for suppliers locally for example, you are assured of certain things because of the regulatory structures within the countries that you are buying it from. Most of the western world have very strong legislative structures and regulatory standards so your supply base strategy will be slightly different. If you are buying from developing countries, some have good regulatory structures, some don't. Some have good regulatory structures but nobody is actually acting on those regulatory structures, but some do. And in that circumstance, you actually have to be very careful where you are sourcing from, why you are sourcing from there. You have to consider how the risk is beneficial to the organisation and to your brand. Because what might be beneficial today may not be beneficial

tomorrow to your brand if something wrong comes out of that supply chain. So you need to be careful.” - O3IT

With regards to monetary value, Org_3 increases the level of scrutiny for higher-value contracts. For instance, its procurement rules state that:

“Where a firm does not have two years accounts, but is otherwise satisfactory, the firm may be accepted, however, they will be subject to a maximum limit of £10,000 for any one contract and may only be awarded one contract at a time.” - O3PPR

The procurement expert explains that:

“So as you go through the bands, obviously the value of those bands also shows at least the financial risks to the organisation in question (which is us), and as you go through those bands (as you have seen from my policy), the scrutiny in which we do that procurement increases quite considerably. Our internal checks and reporting mechanisms increase considerably.” - O3IT

Org_3 also requires that:

“For contracts exceeding £100k we shall ask suppliers whether they support fair trade and when appropriate what actions they are taking to meet the relevant Fair Trade Standards as set out by the Fair Trade Foundation.” - O3PIS

“For all tenders (i.e. procurements over £100,000 in value) a responsible procurement impact assessment is required.” - O3PIS

Overall, monetary value’s impact on supplier selection is evident in its effect on decision making, supplier relationship determination, sourcing procedure and as have already been shown, the intensity of the selection criteria.

Higher-value contracts require the involvement of Org_3’s central procurement team and the requirement for business cases to be presented to the procurement board to guide decision making and a commitment to strategic partnerships.

“The approach to procuring large contracts and framework agreements will be supported by a sound business case, options appraisal and the commitment to establishing strategic partnerships with suppliers” - O3PP.

In terms of sourcing procedure, different levels of financial bands are accorded proportional levels of sourcing requirements, starting from one written quote being acceptable for contracts up to £5,000 up to open competitive tendering for contracts above £100,000.

Org_3's head of procurement explains why these are important from a resilience perspective.

“The higher the level, the stronger, the more robust requirements for relationship and obviously if that relationship fails or if that supplier fails for some reason, that reflects badly on you and on your practice.” - O3IT

Thus, provisions in Org_3's supplier selection ensures avoidance, sustainability, integration, security, top managerial commitment, agility, governance and accountability.

4.4.2.2 Supplier Base Strategy

Like every organisation, there are instances where Org_3 has to sole-source. The head of procurement explains:

“Why would you go for a sole supplier? Because that sole supplier might be the proprietor for that particular item or good that we are trying to buy or that particular service that we are trying to buy. Why would we go for a particular supplier in terms of service? Because that person might have actually been the inventor or a patented proprietor of that particular service module in which case we have to acquire their services.” - O3IT

However, single sourcing is Org_3's preferred supplier base strategy irrespective of the monetary value attached to a particular procurement. Sourcing procedure and stringency in selection criteria changes with value but ultimately one supplier is selected from whichever process is adopted.

Even though Org_3 does not necessarily use Christopher and Peck's (2004) lead and back up supplier approach, its vast use of framework agreements affords it similar benefits in not needing to go through a complete procurement process in case of a disruption or emergency.

4.4.2.3 Supplier Relationship Determination

Strategic partnership in Org_3 is driven by factors such as large (volume and value) contracts and framework agreements, technical requirement for growth and proprietary ownership. In addition to all the targeted benefits of such close relationships, Org_3 also recognises that these kinds of relationships help secure it against risks that they would otherwise face.

“The approach to procuring large contracts and framework agreements will be supported by...the commitment to establishing strategic partnerships with suppliers.” - O3PP

Particularly in cases of high value and/or high-risk contracts, Org_3 recognises that disruptions that result in loss or misappropriation of donor funds pose major risks to it and therefore it determines the most appropriate supplier relationships that will best serve its interest and continuity.

4.4.2.4 Supplier Location

For Org_3, a myriad of factors determines whether a good or service is procured locally or internationally. Local procurement presents the benefits of speed and hence shorter lead times, and for an organisation that operates exclusively locally, its procurement manager explains the preference for local sourcing:

“Most of our sourcing is within the UK. Yes. UK is a strong country with a very good supply chain at this point in time, so we source from within the UK as much as possible.” - O3IT

“When you are looking for suppliers locally for example, you are assured of certain things because of the regulatory structures within the countries that you are buying it from.” - O3IT

Thus, decisions favouring local procurement usually increases risk avoidance and agility.

Notwithstanding, Org_3 also procures internationally as this has its benefits. This however comes with its risks and hence for these decisions to be affirmed, the procurement decision maker is expected to make further checks on environmental, economic and social sustainability and that they have the relevant certifications.

“Some of our supply chain is obviously from China: promotional materials and some of the things that are sold in the shops. All that supply chain is checked for sustainability, environmental standards, use of forced labour, child labour and those types of things so that none of that basically ends up coming to hurt us. We try our best to get certifications from all of our suppliers on a number of all of these things. This is part of the standard International Labour Organisation’s requirements which is stated in the United Nations charter.” - O3IT

When procuring from outside the UK but in Europe, risk exposure to Org_3 is reduced but when sourcing from developing countries, the head of procurement explains the need for greater scrutiny and more informed procurement decision making.

“If you are buying from developing countries, some have good regulatory structures, some don’t. Some have good regulatory structures but nobody is actually acting on those regulatory structures,

but some do. And in that circumstance, you actually have to be very careful where you are sourcing from, why you are sourcing from there. You have to consider how the risk is beneficial to the organisation and to your brand. Because what might be beneficial today may not be beneficial tomorrow to your brand if something wrong comes out of that supply chain. So you need to be careful.” - O3IT

4.4.2.5 Relationships between the Decision Areas

Decisions on supplier selection, in terms of sourcing procedure and criteria, are impacted by a supplier’s location. Due diligence is more rigorous in order to ensure all possible risks are avoided or mitigated. Supplier relationship determination is also influenced by supply base strategy as the organisation acknowledges that when the market dictates that a good or service has to be sole-sourced then a close relationship is necessitated. There is no indication that Org_3’s supplier base strategy is influenced by supplier selection or supplier location. These identified relationships between procurement strategy decisions in Org_3 towards supply chain resilience are presented schematically in Figure 4.3 below.

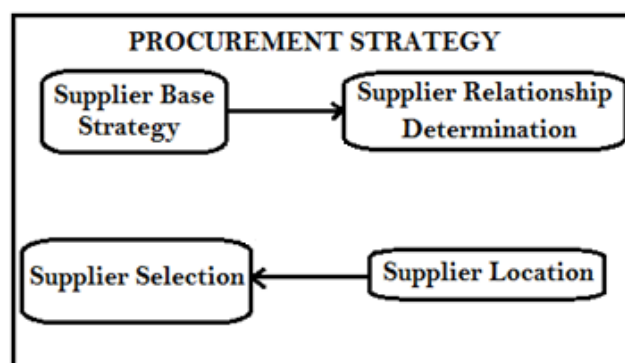


Figure 4.3 Identified relationships between procurement strategy decision areas towards SCR in Organisation 3

4.4.3 Donor Influence

In recognising its exposure to both financial and reputational damage if procurement is mismanaged, Org_3 ensures high accountability to its donors by ensuring that procurement decisions comply with statutory donor requirements and that such decision making is well supported and guided. It indicates as part of the aims of its procurement rules that, it is to:

“...ensure value for money and propriety in the spending of donors’ money” - O3PPR

In Org_3, extra effort is attached to this, as its head of procurement explains:

“Some of the requirements that I have set in are more stringent than most of the other charitable sector that you will find. Simply because we are accountable and answerable for our behaviours to our largest income stream and we need to align ourselves better and dovetail ourselves appropriately to where our largest income stream sits.” - O3IT

Indeed, it is part of the need to ensure this level of accountability that Org_3 insists on electronic procurement as it views it as better for transparency and auditability thereby securing donors’ trust.

There are situations where funders’ conditions of funding override Org_3’s policy position and this reflects in sourcing procedure, legal and regulatory compliance as well as even considerations for supplier location in terms of procuring within the UK or tendering at the European level. Its procurement policy explains this:

“In addition, where Org_3’s is awarding contracts on behalf of other funding bodies, the funder’s conditions of funding will override this policy e.g. an EU funded project, or a local authority may require tendering at European level”. - O3PP

“Where Org_3’s is required by a funder or partner to adhere to the EU Public Procurement Directive 2014 (or the UK Public Procurement Regulations 2015) the Procurement Team will provide advice and guidance for staff members to ensure these rules are observed.” - O3PP

It is thus established, that Org_3’s donors influence its procurement procedures and decisions.

The summary of these findings is presented below in Table 4.4.

Themes	Second-order codes	Summary of Findings
Supply Chain Formative Elements	Agility	The approaches adopted by Org_3 include emergency procurement procedure, financial resilience and use of flexible contracting.
	Avoidance	In ensuring risk avoidance, Org_3 ensures financial controls, a careful communication strategy, extensive consultation, confidentiality, staff disclosure, governmental collaboration, fairness and transparency, legal and regulatory compliance, policy compliance and conformity, improved procurement process and provision of support to country teams. It also uses contractual provisions, due diligence of suppliers and partners and supplier monitoring to avoid supplier-related risks.

Collaboration	Org_3 collaborates with its suppliers, other charities and the government. It also ensures internal collaboration and awareness creation through information sharing with or by staff and suppliers.
Culture	Org_3 actively pursues a learning culture and also facilitates a whistleblowing and reporting culture.
Decision making	Decentralised procurement decision making is pursued here with a central procurement body providing guidance, training, authorisation and high-level support to staff. This central team also pursues global monitoring of procurement activities. Decisions are documented and procurement committees are also used in making high-risk and/or high-value decisions.
Flexibility	Org_3 exploits decision and sourcing flexibility.
Governance and Accountability	There is accountability to donors in Org_3 which typically translates into the use of authorisations and approvals, internal auditing, managerial or committee oversight, appointment of contract officers or managers, documentation, proportionality and transparency to ensure governance and accountability.
Human Resource Management	Pursued through disciplinary action, staff training and support, careful recruitment and policy compliance. Documentation is vigorously pursued to facilitate knowledge management.
Information Technology	IT facilitates data storage, information sharing, e-procurement which thus secures it against corruption risks and allows for easy documentation and tracking.
Integration	Org_3 pursues both external and internal integration (via lateral integration).
Redundancy	Fund reserves, knowledge backup, decision redundancy, redundant supplier relationships and electronic data backup are the used methods towards pursuing redundancy.
Robustness	Org_3 achieves this through its fund reserves, cross-training and flexible contracting.
Security	This is pursued through the use of data security, insurance provisions, fund reserves and security training for staff.
Sustainability	Org_3 uses its policies and contractual demands to ensure economic sustainability and supplier and staff compliance to social and environmental sustainability standards.
Top management support	Org_3's top management implements effective risk management and systems of internal control.

Procurement Strategy	Supplier selection	Selection criteria in Org_3 include cost, supplier capability, supplier location, supplier profile and sustainability. Supplier selection decisions are influenced by monetary value, supplier location, supplier relationship type, the urgency of requirement and value of the purchase for the organisation. Single written quotations are used for low-value contracts while high value/risk contracts typically require a variety of competitive bidding procedures. Contract values influence whether or not central contract and procurement would be involved in the procurement process, the adopted sourcing procedure, supplier relationship and selection criteria. The formative elements facilitated here include avoidance, sustainability, integration, security, top managerial commitment, agility, governance and accountability.
	Supplier base strategy	Predominantly single-sourcing with the use of sole sourcing when market conditions dictate it. Risk is mitigated using flexible contracting.
	Supplier relationship determination	Preponderantly transactional relationships with the use of closer relationships (including strategic partnerships). Decisions here depend on contract size and duration, type of product and prevailing market conditions.
	Supplier location	Sources both locally and globally depending on lead times, sustainability considerations and risk exposure.
	Identifiable Relationships	Refer to Figure 4.3.
Donor influence		Donor influence is relatively minimal but shows in policy and procedural impact or override and restriction of funds. Org_3 also has accountability to donors in terms of the use of given resources.

Table 4.4 Summary of the research findings on coded themes in Organisation 3

4.5 Case 4

4.5.0 Company Overview

The fourth organisation studied for this research, Org_4 is a relatively small firm that delivers emergency relief and development aid internationally. Having gained access to the organisation, relevant documents were requested from the contact person as none of these was available through the organisation's website. The documents shared included its code of conduct, fraud, bribery and corruption prevention policy, as well as its policy handbook which provided sub-policy guidelines on a variety of other issues such as conflict of interest, data protection, risk management, safeguarding and sustainability framework. After the initial review and contextualisation of interview questions, an interview was organised online with the Chief

Executive Officer (CEO) for the organisation on 4th June 2019. Being a small organisation, it did not have a dedicated portfolio for procurement and thus much of the procurement was overseen by the CEO. This person, at the time of the interview, had had up to 26 years' experience working in the charity sector.

The insights derived from the data analysis of the interview transcript and collated documents are presented below in the following themes.

4.5.1 Supply Chain Resilience Formative Elements

The supply chain resilience formative elements as pursued in Org_4 are summarised in Table 4.5 but detailed out in Table A9.4. The organisation's pursuit of human resource management as a formative element involves careful recruitment which includes criminal background checks and hiring of local staff. To deal with employee-related risks such as high staff turnover, the organisation pursues to the best of its abilities fair treatment and compensation (competitive remuneration) proportionate to the complexity of each role. Staff are trained and provided relevant support for improved performance and compliance with relevant organisational policies. They are made aware of clear disciplinary measures that will be enforced when policy positions and protocols are breached. Knowledge management, particularly through documentation allows for accessibility, provision of a chain of evidence for auditing purposes and to facilitate business continuity.

4.5.2 Procurement Strategy

Procurement strategy in Org_4 is presented under the themes: supplier selection, supplier base strategy, supplier relationship determination, supplier location and the relationships between them below.

4.5.2.1 Supplier Selection

The criteria used by Org_4 for supplier evaluation and selection includes cost, lead time, quality, supplier profile and capability and sustainability. With Org_4, quality is an important criterion, particularly because medication is involved. With regards to supplier profile, it is important to ensure that suppliers have no criminal status and that they are ethically compliant as corrupt suppliers could prove very dangerous by selling expired medicine. Owing to this, Org_4 tends to

prefer dealing with suppliers it knows and has worked with before. Even though there was an allusion by the CEO to environmental sustainability in terms of bearing in mind carbon footprint, there is not much indication that this is a major criterion or that sustainability necessarily ranks high in Org_4's selection criteria. Indeed, the interviewee admits this, stating that:

“But you’ve also got to bear in mind your carbon footprint. Ultimately, I have a limited budget and I have a limited time, so it’s balancing that.” - O4IT

Likewise, there is not much indication of due diligence with regards to suppliers' technical and financial capability. Due to this, references from other charities influence supplier selection.

Supplier location also influences supplier selection as lead time is critical in emergencies. Indeed, even locally, Org_4 makes sure that its suppliers are in locations that are not affected by disasters (floods or cyclones) but are close enough to facilitate a quick response. The interviewee explains this as follows:

“Well it is like, if we know that you are in Town A, I know there are five villages around there and they often get flooded. So if I’m going there, then I know that there are likely to be suppliers there that we may be able to get supplies from. I know that there is a hill and so they are likely to be unspoiled by flooding and so I would always go there first, by their location. Whereas Town B which is on the east and is in the middle of the mountains doesn’t have any suppliers or retailers close by so I wouldn’t even think about buying stuff there because I know I can’t. So I buy my supplies in the capital and then get P2 to fly it in and then distribute it from there. So location has a massive massive effect.” - O4IT

In the absence of a codified procurement policy, Org_4's sourcing procedures are not properly defined relative to monetary value. Thus, even though there is an allusion to inviting multiple suppliers to bid, Org_4 indicates the difficulty in having enough suppliers for some of the items in certain locations.

“Well, that’s what I mean by C_1 being a bit different than anywhere else. Because you can try and do an open tender but there aren’t just enough suppliers for some things to get that.” - O4IT

Therefore, direct awards are quite prevalent.

4.5.2.2 Supplier Base Strategy

Supplier base strategy in Org_4 may be summarised as non-existent. The CEO's comment indicates this:

“So we’ve been there for twelve years now and so we have a series of suppliers whom we know to be good. When new people contact us (like we had a supplier just recently in France saying they wanted to supply us with Plumpy’nuts), then we will investigate that and weigh it up against the suppliers that we use. Because we don’t want to use just the same people all the time and assume that they are always going to give us the best value. But because they are so few and far between, I’m afraid it’s managed.” - O4IT

This is unsurprising since there is no procurement expert in the organisation and there is little direction with regards to these types of decisions.

4.5.2.3 Supplier Relationship Determination

“There are some partnerships with suppliers that are ongoing. There are some that are specific to time and also the location.” - O4IT

Besides this claim by Org_4's CEO, there is no clear indication of a well-thought scheme by which relationships with suppliers are determined for the purposes of ensuring resilience. It is noticeable however that many of the organisation's procurement relationships are transactional.

4.5.2.4 Supplier Location

Org_4 procures both locally and globally depending on the material being procured. This is usually dependent on availability and cost and not considerations for the resilience of its supply chain. The interviewed officer explains Org_4's decision making with regards to supplier location:

“...we are so desperate; it’s so difficult to get it. It would be a nice thing to do but from a supplier point of view I don’t care who is selling; whether they are black, white, yellow, whatever they are, if they’ve got the thing there in the right location and the price is good and the quality is right, I’ll buy it. But what needs to be said however is that we buy locally. And so I would rather buy from a local supplier than I would from any other supplier because I want to keep my money within

the local economy. So I would do that. But ultimately that isn't going to be my major priority." - O4IT

4.5.2.5 Relationships between the Decision Areas

The absence of procurement expertise in Org_4 has meant that decisions are less thought-through from a resilience perspective. Though considerations are given to supplier selection to ensure supply quality and the avoidance of corrupt suppliers, there is no adjustment of decisions under other decision areas to augment supplier selection decisions for resilience purposes. This absence of relationships within Org_4 procurement strategy decisions is presented in Figure 4.4 below.

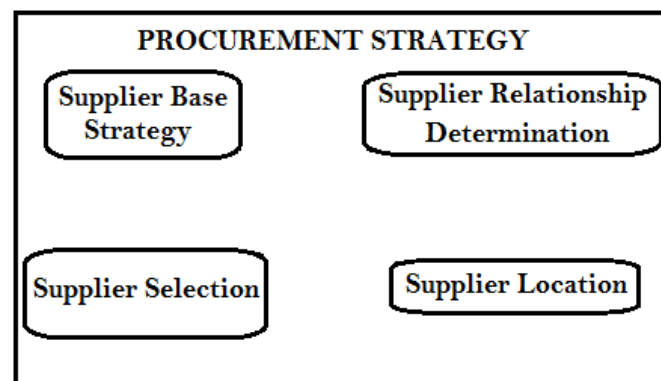


Figure 4.4 Identified relationships between procurement strategy decision areas towards SCR in Organisation 4

4.5.3 Donor Influence

Accountability to donors has meant that Org_4 ought to transparently report on its activities both from a financial and effectiveness perspective. This contributes to resilience as transparency enhances formative elements such as avoidance, collaboration, governance and accountability.

Restricted funds help to ensure that funds raised for specific purposes are used for the exact reasons for which they were raised and that funds are not arbitrarily diverted. Notwithstanding, for an organisation like Org_4 where funding is quite inadequate, these restrictions tend to put a strain on its procurements thereby being counterproductive. The interviewee explains this:

"I mean we have restricted funds, but they are restricted for water or for medication and I apply for those restricted funds. You have to know exactly what you've got. I would like to do a lot more water projects but I don't have funding for them so I can't. And we've got things like that

at the moment. We had money from the cyclone appeal, we didn't have money for the medication. But I can't use that money because it is restricted for cyclones, not for medication."

- O4IT

All of the findings under the relevant themes in Org_4 are summarised in Table 4.5 below.

Themes	Second-order codes	Summary of Findings
Supply Chain Formative Elements	Agility	In Org_4, approaches towards attaining agility include emergency procurement procedure, financial resilience and availability of liquidity.
	Avoidance	To ensure risk avoidance, Org_4 ensures awareness within and across its supply chain, a careful communication strategy, extensive consultation, confidentiality, due diligence of suppliers and partners, legal and regulatory compliance, policy compliance and conformity and dealing with corruption incentives. Careful staff recruitment and training, contractual provisions, fairness and transparency are used to avoid supplier-related risks.
	Collaboration	There is collaboration with other charities, suppliers, governmental agencies and the media to deal with a variety of procurement risks. It also ensures internal collaboration and awareness creation through information sharing with or by staff and suppliers and by working with localised groups.
	Culture	Org_4 pursues a learning culture, risk awareness culture and also facilitates a whistleblowing and reporting culture.
	Decision making	There is decentralisation in decision making and organisational policies and protocols are used to guide decision making.
	Flexibility	Primarily pursued through decision flexibility
	Governance and Accountability	There is accountability to donors in Org_4 which typically translates into the use of authorisations and approvals, internal auditing, managerial or committee oversight and transparency to ensure governance and accountability.
	Human Resource Management	Pursued through disciplinary action, staff training and support, careful recruitment and remuneration. Documentation is vigorously pursued to facilitate knowledge management.
	Information Technology	Org_4 uses IT to ensure data storage.
	Integration	No true evidence of internal integration with regards to dealing with procurement risks.
	Redundancy	Fund reserves, limited safety stock and electronic data backup are the used approaches for pursuing redundancy.

	Robustness	Org_4 ensures robustness through the use of policies and keeping of a reasonable amount of medical stock and funds for operations.
	Security	This is pursued through the use of data security, insurance provisions, fund reserves and the use of money safe.
	Sustainability	Org_4 uses its policies to ensure sustainability requirement compliance.
	Top management support	Senior management reviews the company's risk register, adherence to code of conduct and review of organisational policies.
Procurement Strategy	Supplier selection	Supplier selection criteria include cost, lead time, quality, supplier profile and sustainability and these are influenced by references and supplier location. Sourcing procedure is largely through competitive bidding.
	Supplier base strategy	No identifiable strategy used as a risk mitigation strategy.
	Supplier relationship determination	There are some claims of partnerships with suppliers but no clear indication is provided for resilience decision making.
	Supplier location	Decisions on supplier location are mostly based on the type of product being procured and availability.
	Identifiable Relationships	See Figure 4.4.
Donor influence		Donor influence is seen in accountability to donors in terms of the use of given resources and the restrictions they place on fund usage.

Table 4.5 Summary of the research findings on coded themes in Organisation 4

4.6 Case 5

4.6.0 Company Overview

Org_5 is a large humanitarian organisation headquartered in London. It provides both emergency relief and development aid to its aid recipients both locally and internationally. After access was gained through direct contact with the head of procurement, additional documents which were not available online were obtained through the Head of Procurement. A total of 13 documents were obtained. The interview took place on 12th July 2019 online through Skype as the initial arrangement for an in-person interview fell through. The interviewee is the Head of Procurement who has over 12 years' experience, is part of a professional procurement body and has been in his current position for close to four years.

The presentation and analysis of data collected from Org_5 is presented as follows and are also summarised in Table 4.6.

4.6.1 Supply Chain Resilience Formative Elements

All 15 formative elements were identifiable in Org_5. In pursuing Information Technology as a SCR formative element, for example, Org_5 has invested in an e-procurement platform that allows it to utilise electronic tools and systems to improve on its responsiveness and to mitigate against fraud. It further uses IT to facilitate contract management, electronic data storage, information sharing and accessibility. With this, Org_5 is also able to enhance lateral integration through the improved visibility IT facilitates. Internal integration is also pursued through entrenched stakeholder consultation and participation.

A discussion on all the formative elements towards supply chain resilience as coded for Org_5 is presented in Table A9.5 and summarised in Table 4.6.

4.6.2 Procurement Strategy

The data analysis for Org_5's supplier selection, supplier base strategy, supplier relationship determination, supplier location and the relationships between these is discussed below.

4.6.2.1 Supplier Selection

The defining criteria for supplier selection in Org_5 include cost, lead time, quality, speed and reliability, supplier capability, location and sustainability considerations. Despite price being a useful consideration, its procurement strategy document indicates that “...*procurement will not just consider purchase price*” (O5PS), as the organisation places greater weight on value for money. Even before monetary considerations, Org_5 through due diligence verifies a supplier's ability to deliver a contract in terms of their technical ability and financial health. For the latter, the interviewee explains that:

“...we use a credit checking system to check their financial health and depending on the score or the information that is available, we may ask to see either their publicly available audited company accounts or their own internal unaudited accounts depending on the size of the organisation and what information is available.” - O5IT

In further determining the checks to be made in supplier prequalification, Org_5 verifies if “...*the supplier has operations outside of developed economies (as defined by the UN)*” - O5PQG. In terms of sustainability, significant checks are made to ensure the absence of abusive and/or exploitative labour, ethical, legislative and regulatory compliance, minimal risk of environmental damage and sustainable pricing.

Influencing factors for supplier selection include the contract’s monetary value, customer references from other charities, criticality or urgency of the goods or services, supplier location and supplier base strategy, especially where a supplier seeks exclusivity or a non-compete clause. The selection criteria are further influenced by the level of risk exposure Org_5 will face for procuring that service or goods. These may include reputational risks due to ethical breaches, significant health and safety risk, access to Org_5’s premises or sensitive data, branded merchandise or supplier requests for indemnity. This is also the case when the service or product may have sustainability implications like high environmental impact, housekeeping and security services and high labour content. All of these may trigger a tightening or normalisation of selection criteria.

The sourcing procedures used by Org_5 are 3 written quotations for suppliers for procurements valued up to £10,000, written request for quotation (RFQ) by procurement team for those between £10,000 and £25,000, and written request for proposal (RFP) or request for tender (RFT) issued by Org_5’s procurement team, for contracts above £25,000. The organisation also makes use of government and charity sector framework agreements when it deems it necessary to save time and effort in the procurement process.

4.6.2.2 Supplier Base Strategy

Org_5 explores the use of single and multiple suppliers using framework agreements. Even though procurement activity is not coordinated across the territory, depending on categories of spend, multiple supplier situations may be modified into mandatory single supplier situations to ensure value for money through economies of scale. Depending on urgency or level of risk, Org_5 may have primary and back-up suppliers or multiple sources of the same tier for that supply.

4.6.2.3 Supplier Relationship Determination

The majority of supplier relationships in Org_5 varies between transactional and collaborative long-term relationships. To determine the type of relationship to have with a supplier, Org_5 considers the criticality of goods or services, the monetary value, how long the supply would be required and the availability of alternative sources. The head of procurement explains this:

“Primarily how important the goods or services are to Org_5, both financially and operationally. So the impact of, if something goes wrong or we’re unavailable to get goods or services how that will impact us. So the higher the impact, the closer the relationship that we want...And then the overall level of spend in real terms and whether it’s increasing or decreasing. We are more likely to have a close relationship with somebody who provides us with a critical systems or services, where we spend a lot of money and/or where there’s limited alternative.” - O5IT

4.6.2.4 Supplier Location

Org_5 recognises the role of supplier location in the resilience of its supply chain and thus makes provision in its prequalification criteria to identify suppliers that have operations outside of developed economies as defined by the United Nations. The document notes *“...suppliers answer to this question is also a trigger”* (O5PQC). Generally, Org_5 procures services locally. As the procurement officer explains:

“Services generally are supplied locally anyway because they are people-based and it’s easier to use people locally or reduce transport cost particularly for services provided at our sites.” - O5IT

4.6.2.5 Relationships between the Decision Areas

Supplier selection decisions in Org_5 are influenced by supplier location (and vice versa) even if not at the first-tier level. It is also influenced by the supply base strategy particularly when the supplier seeks exclusivity or a non-compete clause. The reverse is also true for Org_5 where the supply base is influenced by supplier selection as the organisation seeks to optimise monetary value. Supplier relationship determination is also influenced by the supply base strategy, as when there are limited sources, closer relationships are pursued. The identified relationships towards supply chain resilience in Org_5 are presented schematically in Figure 4.5 below.

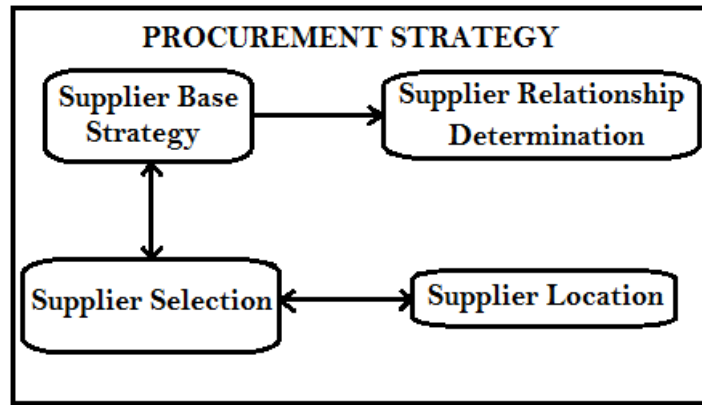


Figure 4.5 Identified relationships between procurement strategy decision areas towards SCR in Organisation 5

4.6.3 Donor Influence

“We have multiple sources of funding. We have public donations, government contracts and trading income. It doesn’t really impact our sourcing. Our sourcing jack is to get the best value for money for every pound spent. It’s all about getting the best value for money regardless of where it’s come from.” - O5IT

Org_5’s head of procurement in the quote above points out that apart from a commitment to value for money, there is little influence of donors on the organisation’s procurement strategy and procedures. There are also restricted funds which thus limit the organisation’s ability to use those funds for procuring materials other than that which the funds were raised for.

All the findings in Org_5 are summarised in Table 4.6 below.

Themes	Second-order codes	Summary of Findings
Supply Chain Formative Elements	Agility	Approaches adopted include a clearly defined decision-making structure, prompt and systematic dispute resolution, framework agreements, proactiveness and responsiveness, emergency procurement procedure and financial resilience.
	Avoidance	Org_5 ensures awareness within and across its supply chain, a careful communication strategy, extensive consultation, confidentiality, due diligence of suppliers and partners, legal and regulatory compliance, policy compliance and conformity and dealing with corruption incentives. It also uses contractual provisions, financial resilience, no inventory holding, quality control, fairness and transparency to avoid supplier-related risks.

	Collaboration	There is collaboration with other charities, suppliers and governmental agencies to deal with a variety of procurement risks. It also ensures internal collaboration and awareness creation through information sharing with or by staff and suppliers.
	Culture	Org_5 pursues a learning culture, risk awareness culture, whistleblowing and reporting culture and compliance culture.
	Decision making	Decentralised procurement decision making is pursued here with a central procurement body providing guidance, training, authorisation and high-level support to staff. This central team also pursues global monitoring of procurement activities.
	Flexibility	Org_5 exploits decision and sourcing flexibility.
	Governance and Accountability	There is accountability to donors in Org_5 which typically translates into the use of authorisations and approvals, internal auditing, clear governance structure, managerial or committee oversight, proportionality and transparency to ensure governance and accountability.
	Human Resource Management	This is pursued through disciplinary action, staff training and support, careful recruitment and fair remuneration. Documentation is vigorously pursued to facilitate knowledge management.
	Information Technology	IT facilitates data storage and sharing, contract management and e-procurement which thus secures it against corruption risks and allows for easy documentation and tracking in Org_5.
	Integration	Lateral integration through internal consultations, stakeholder engagement and enhanced visibility.
	Redundancy	Fund reserves, multiple supplier relationships, limited stock and electronic data backup are the used approaches for pursuing redundancy.
	Robustness	Org_5 achieves this through its fund reserves, multiple funding sources and flexible contracting.
	Security	This is pursued through the use of data security, insurance provisions and fund reserves.
	Sustainability	Org_5 uses its policies and protocols to ensure sustainability requirement compliance.
	Top management support	Org_5's top management shows leadership in risk management and implementing systems of internal control. They participate in relevant training for risk management.
Procurement Strategy	Supplier selection	The supplier selection criteria in Org_5 includes cost, lead time, quality, service delivery, supplier location, supplier capability and sustainability. Supplier selection decisions are influenced by monetary value, supplier location, references, risk exposure, supplier base strategy, type of product or service, the urgency of

		requirement and value to the organisation. Sourcing procedures are largely through competitive bidding.
	Supplier base strategy	Org_5 uses single-sourcing and multi-sourcing. It sometimes explores the use of primary and back-up suppliers.
	Supplier relationship determination	The organisation uses transactional relationships and collaborative long-term relationships.
	Supplier location	Predominantly local sourcing.
	Identifiable Relationships	Refer to Figure 4.5
Donor influence		Donor influence is seen in accountability to donors in terms of the use of given resources and the restrictions they place on fund usage.

Table 4.6 Summary of the research findings on coded themes in Organisation 5

4.7 Case 6

4.7.0 Company Overview

With its head office in London, Org_6 is a fairly large humanitarian organisation that provides both emergency relief and development aid internationally. Having collected the publicly available documents online, access was gained to the contracts and procurement manager and the rest of the relevant documents were shared ahead of the scheduled interview. These documents included Org_6's procurement policy, supplier contractual agreement, code of conduct, supplier terms and conditions, pre-qualification criteria and supplier questionnaire form. Other documents included Modern Slavery Act Statement, Contract Procedures Guide, Strategic Report, and samples of Terms of Tendering, Request for Proposal/Quote and Instructions to Bidders documents. With the documents reviewed and interview questions updated and tailored for the organisation, the interview was conducted on 11th July 2019 on Skype. The interviewee is the contracts and procurement manager of the organisation with over 30 years' experience in procurement and the charity sector.

An analysis of the collected data is presented below and a summary provided in Table 4.7.

4.7.1 Supply Chain Resilience Formative Elements

Org_6 pursues all the identified formative elements which were imposed on the data. Redundancy in this organisation is predominantly pursued intangibly through the use of redundant supplier relationships through framework agreements, decision redundancy, electronic data backup and knowledge backup through cross-training. Seeing that fund availability and procurement expertise are major weak links in the humanitarian supply chain, Org_6 uses these redundancy approaches as well as regular risk reviews to enhance its robustness. Further discussion of the organisation's approach to all formative elements is presented in Table A9.6 and summarised in Table 4.7. A closer look at procurement strategy decisions within Org_6 is presented below.

4.7.2 Procurement Strategy

The procurement strategy data analysis for Org_6 in terms of supplier selection, supplier base strategy, supplier relationship determination, supplier location and the relationships between these is presented below.

4.7.2.1 Supplier Selection

Selection criteria in Org_6 include cost, lead time and quality as evinced in the need for a supplier to have quality management certification, a quality management system and evidence of a track record of quality service delivery. There is also an emphasis on supplier capability in terms of technical skills and competence as well as financial viability over the contractual period. For the latter, several checks are made on suppliers and all bidders are also required to submit a copy of two recent years of audited accounts, a statement of turnover, profit and loss account and cash flow, along with other relevant financial documents. With the former, considerations cover the depth of a supplier's overall experience, historical success rate and expertise. Accordingly, references, legal compliance and compliance to sector requirements form key parts of supplier evaluation. Issues concerning a supplier's previous performance on an Org_6 contract, the fulfilment of tax payment obligations, failure to provide the required information or providing of inaccurate/misleading information when participating in a procurement exercise also form part of the checks that are made on a supplier's track record as part of evaluation criteria. Sustainability considerations around ethical procurement, modern slavery, fair working environment, health

and safety, equality and diversity and environmental protection form part of Org_6's selection criteria. The following questions on the organisation's supplier questionnaire form capture this:

“Have you developed any codes of conduct that you apply to those with whom you do business? For example, if you procure from suppliers would you make efforts to determine the conditions that services have been supplied or products manufactured? Have you thoroughly investigated your labour practices, and those of your direct suppliers, to ensure that there is no forced labour or slavery used anywhere in your business or by any of your direct suppliers? Do you pay the London Living Wage? Have you put in place all necessary processes, procedures, investigations, and compliance systems to ensure that this will continue to be the case at all times?” - O6SQF

In supplier selection, the monetary value of contracts also determines the level of approvals required, whether or not a procurement committee will be required, the closeness of the relationship and even the selection criteria. Sourcing procedure in Org_6, as has been seen in the other organisations, change with increasing monetary value and risk exposure. For contracts up to £4,999, direct quotes or simple quotes are required. 3 written quotes are needed for those between £5,000 - £19,999, while contracts between £20,000 and £49,999 require competitive bids or Request for Proposal (RFP) and external advertisement with the involvement of a procurement committee. When contractual values exceed £50,000, competitive bids or RFP and written strategy which includes risk analysis are required, and the opportunity must be advertised externally, and the involvement of a procurement committee is mandatory.

4.7.2.2 Supplier Base Strategy

Single sourcing is the preferred strategy of Org_6. There is the use of framework agreements and preferred supplier lists who get to bid for contracts as and when specific demand arises. There are occasions where goods or services are sole-sourced because of a monopoly and the absence of any viable alternative supplier or solution. There are a few times that even though there may not be a monopoly, the organisation deems it the preferred approach to sole source. The interviewed manager explains this as follows:

“We never just pick somebody up and say that's the only person. If we do, we usually have to write that up as a contract that has been derogated outside of the procurement policy. There's a couple of situations where something like that may happen. Take for example, Canon. Canon supplies us our printers and copiers. So we will want to engage with someone who can supply us Canon materials rather than another brand that we don't want. And we found out that the best

way to do that is to engage with Canon. So they are not the only supplier but they are the best supplier. They don't hold the monopoly because obviously they have retail suppliers around the country but we chose to deal with them so we will not have to rearrange our equipment. So that was an unusual situation.” - O6IT

Besides these, Org_6 does not multi-source and thus, decision making here towards resilience is only achieved through the supplier pool obtained via framework agreements and preferred supplier lists.

4.7.2.3 Supplier Relationship Determination

The overwhelming majority of Org_6 supplier relationships are transactional. As the interviewee explained, *“The closest I can think of to a good strategic relationship that we have is probably with our printing supplier; because obviously they need to know when jobs are coming in and so we give them a schedule of when they are to expect things from us and what kind of load it's going to be so that they can anticipate that in the future.” - O6IT*

There is no indication from Org_6 that the determination of supplier relationships is affected by supplier base strategy or even contract size and duration. The interviewee purported that the contract value only heightens the scrutiny an organisation may go through and not necessarily the relationship.

“I don't think the amount really affects the relationship we have with a supplier; except that if we are spending significant amounts of money and I'm here referring here to over 50,000, then we generally double, triple vet them and make sure we have a good working relationship with them before we contract. So that usually comes about through negotiations. So I would probably say we negotiate higher level or higher paying contracts more diligently than say under 5,000. But in so far as the relationship, I would say the relationship isn't that different no matter what the threshold is.” - O6IT

This thereby poses a challenge as it suggests the organisation does not yet appreciate the role of supplier relationships in mitigating risks and uncertainties and ensuring supply chain resilience.

4.7.2.4 Supplier Location

Local procurement is preferred albeit when required expertise or supplier market necessitates global sourcing, that is pursued. Seeing the challenges that sourcing from other regions of the

world may pose, particularly in terms of modern slavery, Org_6 puts in extra effort to ensure dealing with overseas suppliers does not expose them to such risks. Indeed, even in dealing with local suppliers, if tier 2 suppliers are overseas, the organisation demands of its tier 1 suppliers to assure it that there are no exploitative practices in their supply chains.

4.7.2.5 Relationships between the Decision Areas

As may be seen from the preceding discussions, supplier selection is impacted by a supplier’s location and vice versa, whereby extra vigilance in due diligence is done to address legal and regulatory compliance issues. Irrespective of monetary value, Org_6 suggests supplier relationship determination and supplier base strategy decisions are unaffected.

Supplier base strategy decisions are also unaffected by supplier selection, supplier location or supplier relationship determination decisions. Thus, even though various decisions are put in place under the various decision areas towards resilience, there is a lack of recognition of the impacts these decisions necessarily have on each other and the need to make complementary decisions in the other decision areas. Figure 4.6 below schematically presents these relationships on procurement strategy decision areas towards supply chain resilience.

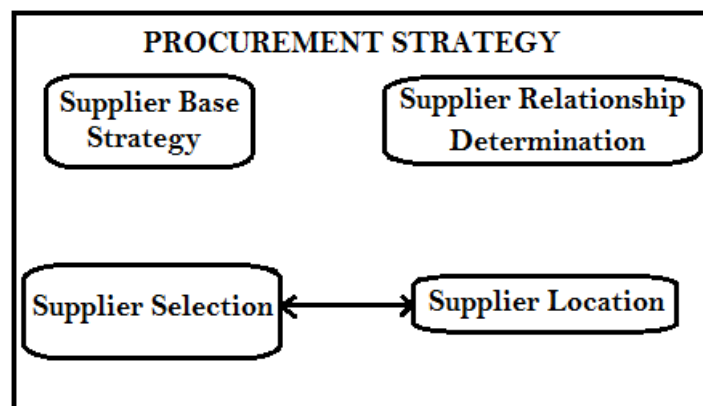


Figure 4.6 Identified relationships between procurement strategy decision areas towards SCR in Organisation 6

4.7.3 Donor Influence

Donors, particularly institutional donors influence Org_6’s procurement policies and procedures. This shows in the form of donor obligations or procurement requirements set out in the grant or contract agreement. These sometimes require a deviation from standard procedures, but these requirements take precedence. Org_6’s procurement policy sets out that:

“Where applicable, we must follow donor procurement rules. ORG_6’s own procurement rules should be followed in addition to donor procurement rules, but only to the extent that these are compatible.” - O6PP

This sometimes shows in the donor insisting on what suppliers to use or providing a supplier list from which suppliers may be chosen from. Org_6 acknowledges that the significant obligations and restrictions, *“...can result in the claw back of funds if not complied with”* (O6PP).

Overall, one of the major benefits of donor influence on Org_6 is that it makes it accountable and hence the organisation makes sure to do all needed checks on suppliers and their compliance with relevant laws. As the interviewee puts it:

“This is one of the reasons why we are very very cognisant that we have to check things like modern slavery, conflict of interest and various things like this to ensure that it doesn’t blow up in our face like it did with another charity organisation a couple of years ago where they weren’t checking some of these things.” - O6IT

Notwithstanding, this can sometimes become quite restrictive and even unbeneficial for the procurement process as better suppliers could be found or better processes could be used, if not for the insistence of certain donors on such decisions.

A summary of Org_6’s findings is provided in Table 4.7 below.

Themes	Second-order codes	Summary of Findings
Supply Chain Formative Elements	Agility	In Org_6, approaches towards attaining agility include emergency procurement procedure, financial resilience and flexible conferencing.
	Avoidance	To ensure risk avoidance, Org_6 ensures awareness within and across its supply chain, a careful communication strategy, extensive consultation and stakeholder participation, demand forecasting, confidentiality, due diligence of suppliers and partners, financial control and resilience, improved procurement processing, quality control, legal and regulatory compliance, policy compliance and conformity and provision of support to country teams. It also uses careful staff recruitment and training, dealing with corruption incentives, contractual provisions, fairness and transparency to avoid supplier-related risks.

Collaboration	There is collaboration with other charities, suppliers and partners to deal with a variety of procurement risks. It also ensures internal collaboration and awareness creation through information sharing with or by staff and suppliers and training of staff and partners.
Culture	Org_6 actively pursues a learning culture and also facilitates a whistleblowing and reporting culture.
Decision making	Decentralised procurement decision making is pursued here with a central procurement body providing guidance, authorisation and high-level support to staff. Decisions are documented and procurement committees are also used in making high-risk and/or high-value decisions. Organisational policies and protocols are used to guide decision making.
Flexibility	Org_6 uses decision flexibility and flexible contracting.
Governance and Accountability	There is accountability to donors. Org_6 conducts external auditing. Internally, the organisation uses authorisations and approvals, internal auditing, clear governance structure, managerial or committee oversight, proportionality and transparency to ensure governance and accountability.
Human Resource Management	This is pursued through staff training and support and careful recruitment. Documentation is pursued to facilitate knowledge management.
Information Technology	Org_6 has digitalised its procurement process using IT. It facilitates data storage, information sharing and supplier evaluation.
Integration	Lateral integration through stakeholder engagement.
Redundancy	Fund reserves, electronic backup, decision redundancy and knowledge backup.
Robustness	Knowledge redundancy, fund reserves, flexible contracting and regular reviews.
Security	This is pursued through the use of fund reserves, insurance and indemnity provisions and security training for staff.
Sustainability	Org_6 uses its policies and protocols to ensure sustainability requirement compliance.
Top management support	Show of responsibility for risk management. There however is no direct commitment to procurement-related risks.

Procurement Strategy	Supplier selection	The supplier selection criteria in Org_6 includes cost, lead time, quality, supplier location, supplier capability, supplier profile and sustainability. Supplier selection decisions are influenced by monetary value, references, supplier location and type of product or service. Single written quotations are used for low-value contracts while high value/risk contracts typically require a variety of competitive bidding procedures. Contract values influence the involvement of a procurement committee, contract extension, approval level, sourcing procedure, supplier relationship, supplier base strategy and selection criteria.
	Supplier base strategy	Predominantly single-sourcing with the use of sole-sourcing when market conditions dictate it. Risk is mitigated using flexible contracting.
	Supplier relationship determination	Overwhelmingly transactional. The determination however may be affected by supplier base strategy, contract size and duration, type and criticality of product or service.
	Supplier location	Local procurement is preferred but global sourcing provides the required expertise or is necessitated by the supplier market. Global sourcing risks are addressed through intensive due diligence.
	Identifiable Relationships	Refer to Figure 4.6.
Donor influence		Donor influence is seen in accountability to donors in terms of the use of given resources, policy and procedural impact or override and the restrictions they place on fund usage.

Table 4.7 Summary of the research findings on coded themes in Organisation 6

4.8 Case 7

4.8.0 Company Overview

Org_7 is a large international humanitarian organisation headquartered in London and delivers both emergency relief and development aid to various communities globally. Access to this organisation was gained through a direct referral to the procurement manager who after agreeing to the interview provided access to the documents that were not publicly available.

The collected documents included the organisation's procurement policy, suppliers' code of conduct, fraud, bribery and corruption prevention policy, emergency procurement strategy, employees' code of conduct, modern slavery policy and statement, an invitation to tender document, its strategic, accountability and annual reports. Having updated the interview protocol

after reviewing these documents, the interview was conducted online on 12th July 2019 through a skype call as the interviewee was not in London at the time. The interview was recorded and transcribed and analysed along with the documents collected. The analysis of these is presented under the themes below.

4.8.1 Supply Chain Resilience Formative Elements

All of the identified formative elements in literature are present in Org_7. As an example, security in Org_7 is pursued as a SCR formative element through ensuring data security, financial security through fund reserves, insurance and indemnities and staff training on safety and security protocols. Indeed, the organisation has a specialised team of safety and security experts who support its staff and help spread best practice. This specialised team also evinces top management's commitment to ensuring the resilience of the organisation's supply chain. Further, they invest in extra staff to help deal with safeguarding and data protection risks. Also, there is evidence of investment specifically into identifying the weaknesses of the organisation's supply chain and means for improvement. Detailed discussion on these with extracts from collected data and how the other formative elements are pursued in the organisation is presented in Table A9.7, with a summary in Table 4.8. A discussion of procurement strategy decisions in Org_7 is presented below.

4.8.2 Procurement Strategy

Org_7's data analysis as regards to their supplier selection, supplier base strategy, supplier relationship determination, supplier location and the relationships between these is presented below.

4.8.2.1 Supplier Selection

Selection criteria in Org_7 include cost, lead time, policy compliance, quality, supplier capability, supplier location, supplier profile and sustainability. Cost is viewed from the perspective of total cost over the lifetime of the contract; considerations are on value for money, rather than absolute numbers.

Lead time is an important criterion for Org_7. It typically works together with supplier location depending on the type of product and how much risk exposure will result from procuring locally. The interviewee explains:

“...If risks were the same across local, regional and international and the risks were relatively low, you would then lean towards other criteria such as shortest lead time, most cost-efficient etc.” - O7IT

Supplier location consideration as a selection criterion is as explained:

“It will differ for various products depending on the supplier market. Sometimes, it would happen at all levels where we have local, regional or international supply bases. For other products, it would be solely international while there are others where it would be solely local. It really depends on the product you’re procuring.” - O7IT

“There are a number of other things such as strengthening the local economy.” - O7IT

A confirmation by a bidder to comply with Org_7’s policies is an important eligibility criterion for the organisation. Besides a supplier’s ability to deliver quality goods and/or services at commendable service levels, Org_7 verifies a supplier’s financial health and its technical skills and competence, including a *“...minimum three (3) years of specific experience for supplying similar types of good.” - O7IT*

Further, a supplier’s profile as shown in its accreditations, quality management systems, appropriate licenses, compliance to sector requirements, that it is not blacklisted by the government and its track record in previous contracts (with Org_7 or other charities). As stated in its procurement policy, *“Procurement will also use historic performance to inform future supply decisions and recommendations” (O7PP).*

Selection criteria are typically influenced by a contracts monetary value, type of product or service and location of a supplier, considering the prevailing legal and regulatory provisions and enforcements in that location.

The contractual monetary value determines the adopted sourcing procedure, starting from cash and receipts and single quotation (with a minimum of one quote) for contracts up to £100 and £1,000 respectively. Contracts with values of between £1,001 and £10,000 require a minimum of simple quotations while above that range to £100,000 require a minimum of 3 formal quotations. Contracts valued between £100,001 to £250,000 would require open national tender and those

above that would need an open international tender. The last three sourcing procedures require a procurement committee.

4.8.2.2 Supplier Base Strategy

Single sourcing is the preferred supplier base strategy for Org_7 even though a minimum of three quotes is required for the majority of its procurements. There is opportunity given to multiple suppliers to bid for service or good but there is always a selection of the single most preferred supplier among the lot. To mitigate the risks of failure of preferred suppliers, Org_7 has backup suppliers for certain key products.

There is the wide use of framework agreements and pre-approved suppliers, but these serve to provide Org_7 with a group of suppliers from which one may be selected when need be. Org_7 does resort to sole sourcing when the situation demands.

4.8.2.3 Supplier Relationship Determination

Decisions on the types of relationships to have with suppliers in Org_7 are influenced by the monetary value of contracts and contract durations. The interviewed procurement officer explains that:

“...if it’s a supplier that you have a framework agreement with for two to three years, there’s a relatively large amount of spend going through that, the type of product and its management is very complex, it’s got a lot of regulations imposed on it; then that would be a bit of a strategic supplier where you would need to maintain close contact with and account management.” - O7IT

The interviewee indicated that the personal preferred means of determining supplier relationship is the Kraljic Matrix approach (Kraljic, 1983):

“Ultimately, you would look at how critical the items are, what is the likelihood of any bottlenecks in the process; those are the sort of things I’d look at.” - O7IT

Notwithstanding, it was admitted that the majority of relationships in the organisation were very transactional and supplier relationship meetings only happened in reaction to disruptions. The interviewee admitted this as a risk identified and that efforts were being put in place to remedy it in order to avoid supply chain disruptions for critical suppliers.

4.8.2.4 Supplier Location

Despite its complex and dispersed supply chain, it indicates that “... *at least 80% of ORG 7’s procurement is sourced in-country*” - O7MSS. Org_7 therefore recognises the risks associated with such situations since many of the locations it provides services in are prone to modern slavery. Thus, even though all suppliers are vetted locally and globally, local teams who understand the local context are allowed to make decisions for each sourcing activity.

Decisions on local sourcing are also influenced by the type of product or service, lead time considerations and donor requirements. There are however products that are entirely sourced internationally, for example, medicines. The sourcing specialist explained this:

“...for some types of products, say medical which is a very very high-risk type of product, literally if we were to supply substandard medicines to our beneficiaries, we would be talking about fatalities or particularly horrible adverse events, reputational damage etc. So because that and other similar types are a very high-risk type of products, we would seek to identify suppliers that are mature and well-equipped, are highly regulated and have a long history of supplying these sorts of products. So that’s about maintaining quality and where their local market is not just as mature and they don’t have the infrastructure and they’re regulated by agencies that are not considered stringent, then there’s a massive risk there and a risk that you just wouldn’t take with those supplier markets.” - O7IT

Other considerations that come into place with regards to supplier location include whether the supplier location is prone to natural disasters, political context, product quality and regulatory enforcement.

4.8.2.5 Relationships between the Decision Areas

Supplier base strategy decisions in Org_7 are not influenced by supplier location, selection or relationship determination decisions as it primarily goes with single-sourcing. Similarly, supplier relationship determination is not influenced by supplier base strategy decisions, but they influence by supplier selection as the decision to pursue closer relationships then imposes the need for stricter selection criteria. Supplier location influences supplier selection decisions through selection criteria, as certain locations require stricter evaluation criteria to overcome potential risks. On the other hand, supplier selection also affects supplier location decisions as the type of products to be purchased necessarily excludes certain locations considered as high

risk. The identified relationships between procurement strategy decision areas towards supply chain resilience are presented in Figure 4.7 below.

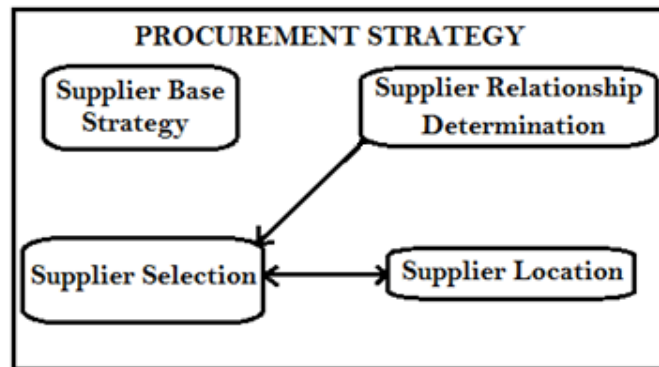


Figure 4.7 Identified relationships between procurement strategy decision areas towards SCR in Organisation 7

4.8.3 Donor Influence

“All employees involved in the procurement process, must adhere to the procurement requirements of specific grant donor(s).” - O7PP

As may be seen from the above quote in Org_7’s procurement policy, donor requirements influence its procurement process. This includes donor instructions to carry out audits on supplier’s operations, donor policies, sourcing procedures as well as donor restrictions on what the organisation can and cannot buy, where to buy from and indeed sometimes products that may impact the political position of the donor on particular issues. There are times where a donor requires Org_7 to procure from the country where the donor is located while other donors may also insist on procuring locally.

Org_7 also points out the potential effects of decisions made by it in a different geographical location having an impact on its collective impartiality and the possibility of that affecting a donor’s willingness to work with it.

Table 4.8 below provides a summary of the findings from Org_7.

Themes	Second-order codes	Summary of Findings
Supply Chain Formative Elements	Agility	In Org_7, approaches towards attaining agility include emergency procurement procedure, contract terms and conditions, policies and procedure, proactiveness and responsiveness and flexible conferencing.

Avoidance	To ensure risk avoidance, Org_7 ensures awareness within and across its supply chain, a careful communication strategy, extensive consultation, confidentiality, due diligence of suppliers and partners, financial control and resilience, no inventory holding, improved procurement processing, quality control and assurance, legal and regulatory compliance, policy compliance and conformity and provision of support to country teams. It also uses careful staff recruitment and training, milestone payments, governmental collaboration, contractual provisions, fairness and transparency to avoid supplier-related risks.
Collaboration	There is collaboration with other charities, suppliers and partners and governmental agencies to deal with a variety of procurement risks. It also ensures internal collaboration and awareness creation through information sharing with localised groups.
Culture	Org_7 actively pursues ethical, learning and risk awareness cultures. It also facilitates a whistleblowing and reporting culture.
Decision making	Decentralised procurement decision making is pursued here with a central procurement body providing guidance and high-level support to staff. Decisions are documented and procurement committees are also used in making high-risk and/or high-value decisions. Organisational policies and protocols are used to guide decision making.
Flexibility	Org_7 uses decision flexibility and sourcing flexibility.
Governance and Accountability	There is accountability to donors. Org_7 conducts external auditing. Internally, the organisation uses authorisations and approvals, internal auditing, clear governance structure, managerial or committee oversight, contract management and transparency to ensure governance and accountability.
Human Resource Management	This is pursued through disciplinary action, staff training and support, careful recruitment and fair remuneration. Documentation is pursued to facilitate knowledge management.
Information Technology	Org_7 has a digital reporting platform. IT facilitates data storage, information sharing and supplier evaluation.
Integration	Lateral integration through stakeholder engagement.
Redundancy	Fund reserves, backup suppliers, decision redundancy, supplier-held prepositioned stock, framework agreements and knowledge backup are used.
Robustness	Knowledge backup, fund reserves, flexible contracting, supplier-held prepositioned stock and supplier monitoring and development.
Security	This is pursued through the use of fund reserves, data security, insurance and indemnity provisions and security training for staff.

	Sustainability	Org_7 uses its policies and protocols to ensure sustainability requirement compliance.
	Top management support	There is the show of responsibility for risk management. They invest in hiring extra staff to deal with identified risks.
Procurement Strategy	Supplier selection	The supplier selection criteria in Org_7 includes cost, lead time, quality, supplier location, supplier capability, supplier profile and sustainability. Supplier selection decisions are influenced by monetary value, risk exposure, supplier location and type of product or service. Single written quotations are used for low-value contracts while high value/risk contracts typically require a variety of competitive bidding procedures. Contract values influence sourcing procedure, supplier relationship, supplier base strategy and selection criteria.
	Supplier base strategy	Predominantly single-sourcing even though a minimum of 3 quotes is required. Risks are mitigated by using flexible contracting, and backup suppliers.
	Supplier relationship determination	The determination is affected by contract value and duration.
	Supplier location	80% local procurement. Sourcing decisions are influenced by the type of product, lead time considerations and donor requirements. Other factors include political context, product quality, regulatory enforcement and proneness to natural disasters.
	Identifiable Relationships	Refer to Figure 4.7.
Donor influence		Donor influence is seen in accountability to donors in terms of the use of given resources, partner or supplier monitoring, policy and procedural impact or override and the restrictions they place on fund usage.

Table 4.8 Summary of the research findings on coded themes in Organisation 7

4.9 Case 8

4.9.0 Company Overview

The last organisation studied for this research, Org_8 is a large humanitarian organisation headquartered in London which delivers both emergency relief and development aid to a specific demography of the society. They work locally and globally. Having obtained access to the procurement manager of the organisation, documents were requested and shared with the researcher. These included Org_8's procurement policy, supplier code of conduct, suppliers'

terms and conditions, modern slavery policy, guidelines for supply of goods and services and annual report. Having reviewed the collected documents to update interview questions, the interview was scheduled and undertaken on 24th July 2019 at the office of the organisation. The interviewee occupies the position of head of procurement and has over 30 years' experience in procurement and supply chain management.

The transcribed interview and collected documents were analysed under the following themes.

4.9.1 Supply Chain Resilience Formative Elements

Org_8 pursues all of the 15 identified formative elements. Sustainability is pursued in Org_8 from all three dimensions of the triple-bottom-line using various organisational policies. Economically, the organisation, as an example, has a reserves policy that helps it maintain the required level of charitable expenditure to cover operations in case of a financial disruption. Environmentally, Org_8 requires suppliers to pursue environmentally friendly initiatives to mitigate their impact on natural resources. They are further required to be responsible in their waste disposal, avoid the use of toxic substances, minimise the use of toxic substances if no alternative is available and to promote the development of environmentally friendly technologies. From the social sustainability perspective, the organisation highlights its zero-tolerance for modern slavery, use of forced, compulsory and trafficked labour in its supply chain. Through its modern slavery policy, the organisation pursues transparency in its supply chain and shows a commitment to deliver its disclosure obligations under the Modern Slavery Act 2015. The policy is further used to demand similar requirements from suppliers and partners.

The approaches towards pursuing the SCR formative elements in Org_8 are summarised below in Table 4.9 but Table A9.8 provides a more detailed discussion with support from the collected data. A closer look at Org_8's procurement strategy decisions is presented below.

4.9.2 Procurement Strategy

The data analysis of Org_8 for procurement strategy under the sub-themes of supplier selection, supplier base strategy, supplier relationship determination, supplier location and the relationships between these, is discussed as follows.

4.9.2.1 Supplier Selection

Criteria for selection of suppliers in Org_8 as indicated in collected data include policy compliance, supplier capability, supplier profile and sustainability. In the organisation's supplier code of conduct, it is stated that "*Compliance with the above principles is part of Org_8's overall assessment of its suppliers*" (O8SCC).

As regards to a supplier's capability, a supplier's financial standing is indicated as a criterion considered for supplier selection. Per the organisation's procurement policy document, goods and services may only to be purchased from suppliers who have been proven to be compliant with all applicable regulations and legislation. Public perception of a supplier is also a consideration for supplier selection as the organisation does not want an affiliation with suppliers that would bring it negative press but would rather partner with those with "*...a very strong corporate social responsibility image*" (O8IT). The considerations on sustainability are largely social, as what is considered are the ethics and social responsibilities of suppliers. Even though these are inexhaustive for supplier selection, adherence to due diligence of suppliers, especially with regards to their economic and environmental sustainability, is very much lacking.

Selection criteria in Org_8 are strongly influenced by donor requirements as donors sometimes require suppliers to be selected from their preferred list of suppliers or as the interviewee explained: "*...suppliers that they agree with or are somewhat associated with and not from direct competitors of theirs*" (O8IT).

Monetary value considerations in Org_8 for supplier selection are quite arbitrary. Apart from a procurement policy requirement that "*all single purchases of £10,000 or more, or any series of related purchase orders that add up to more than £10,000, require a formal contract to be reviewed and expressly approved by Org_8 Legal and signed by an appropriate representative of*" (O8PP) Org_8, the choice of sourcing procedure to pursue for each purchase largely depends on the preference of each procuring department. This has thereby resulted in a variety of sourcing procedures including various forms of competitive bidding and single written quotations adopted by various budget holders in the organisation irrespective of the monetary values involved.

Thus, it can be seen that even though there are a few provisions in policy documents to direct supplier selection decisions towards resilience, the absence of an overarching procurement procedure and oversight renders supplier selection decisions very ineffective, and in some cases, even counter-productive for Org_8's supply chain resilience.

4.9.2.2 Supplier Base Strategy

This may be summarised as non-existent. Decisions on supplier base strategy are arbitrary. The head of procurement's evaluation of this situation captures the situation succinctly.

“Some people will spend a large sum of money - I can think of one particular department that is doing that right now. In our budgetary terms, very large spend, multimillion, and they would want to spend that with one supplier. And they are the ones always coming back with sole supplier. They've found someone they like, they don't want to mess with or even challenge that relationship, they don't want to benchmark them.” - O8IT

“Then you have the opposite side of the spectrum where people will have much smaller spend but they'll go off on a reduced quota. We had an instance where we had a one and half million budget or something and the person's gone out and said I want to do a tender, twenty-four different companies. I advised against it but they insisted that's how they wanted to do it.” - O8IT

4.9.2.3 Supplier Relationship Determination

Supplier relationships in Org_8 are a mixture of transactional relationships and, in the words of the procurement expert “...60% of the way towards strategic” (O8IT). The decision to have such close relationships with its suppliers is not based on the spend but because of the “*high reputational risk attached to it*” (O8IT).

4.9.2.4 Supplier Location

Procurement in Org_8 is “...always local, almost exclusively England” (O8IT). Beyond convenience, the interviewee explained that: “*Since we are not good at handling long supply chains, we prefer the suppliers that are close to us. So essentially, it's proximity. Because relationships are easier to handle if you can just chat; longer relationships are a bit harder. For a good organisation, you would know how to do that anyway, because you can do that over Skype; you can do business over any medium. But when you are not so good at supplier relationship management, they really need them to be close*” (O8IT).

4.9.2.5 Relationships between the Decision Area

Supplier location decisions influence supplier selection decisions as by far, local suppliers are Org_8's preference. Supplier selection also influences supplier relationship determination as decisions on the closeness of relationships are determined by evaluation of the levels of risk exposure presented by that supplier.

Besides these, there are no acknowledgements of the impact of decisions of supplier relationship determination on supply base strategy, supplier location and vice versa. These identified relationships are presented schematically in Figure 4.8 below.

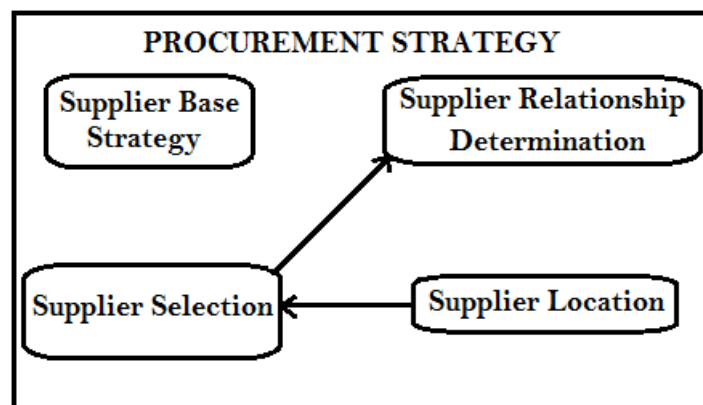


Figure 4.8 Identified relationships between procurement strategy decision areas towards SCR in Organisation 8

4.9.3 Donor Influence

Donors sometimes dictate the suppliers or the type of suppliers Org_8 can procure from. Donor restrictions on fund usage also impact Org_8's procurement. The interviewee explains:

“So if it's a restricted source of funding, then it can force us to use a particular supply chain and so we do the best we can within those restrictions and constraints.” - O8IT

Consequently, accountability to donors influences Org_8's decision making, as failure to do so could affect the organisation's funding. It must however be pointed out that this accountability, particularly to the British public, is addressed by the redoubling of the organisation's *“...efforts to demonstrate the positive impact that our work has on our beneficiaries; in doing so we aim to show that we are excellent stewards of the money our supporters entrust to us and that everything we do is underpinned by strong values and principles”* (O8AR). It does not translate into the less visible changes in the organisation's approaches to procurement which, based on collected data, does not show accountable, efficient and effective usage of donor funds.

A summary of the findings in Org_8 is presented in Table 4.9 below.

Themes	Second-order codes	Summary of Findings
Supply Chain Formative Elements	Agility	In Org_8, approaches towards attaining agility include emergency procurement procedure, dispute resolution and flexible conferencing.
	Avoidance	To ensure risk avoidance, Org_8 ensures awareness within and across its supply chain, a careful communication strategy, extensive consultation, confidentiality, due diligence of suppliers and partners, financial control and resilience, improved procurement processing, quality control and assurance, legal and regulatory compliance, policy compliance and conformity and provision of support to country teams. It also uses careful staff recruitment and training, contractual provisions, fairness and transparency to avoid supplier-related risks.
	Collaboration	There is collaboration with other charities, suppliers and partners and governmental agencies to deal with a variety of procurement risks. It also ensures internal collaboration and awareness creation through information sharing with or by suppliers.
	Culture	Org_8 actively pursues ethical, learning and risk awareness cultures. It also facilitates a whistleblowing and reporting culture.
	Decision making	Decentralised procurement decision making is pursued here with a central procurement body providing guidance, training and high-level support to staff. Decisions are documented and procurement committees are also used in making high-risk and/or high-value decisions. Organisational policies and protocols are used to guide decision making.
	Flexibility	Org_8 only exploits sourcing flexibility.
	Governance and Accountability	There is accountability to donors. Org_8 conducts external auditing and demands accountability from suppliers. Internally, the organisation uses authorisations and approvals, internal auditing, clear governance structure, managerial or committee oversight, proportionality and transparency to ensure governance and accountability.
	Human Resource Management	This is pursued through disciplinary action, policy compliance, staff training and support, careful recruitment and fair remuneration. Documentation is pursued to facilitate knowledge management.
	Information Technology	IT facilitates data storage, information sharing and data security.
	Integration	There are provisions for lateral integration, but its actualisation is wanting.

	Redundancy	Fund reserves, redundant stock with suppliers and electronic data backup.
	Robustness	Decentralised decision making, fund reserves, flexible contracting, supplier-held stock and supplier monitoring and development.
	Security	This is pursued through the use of fund reserves, data security, insurance and indemnity provisions and security training for staff.
	Sustainability	Org_8 uses its policies and protocols to ensure sustainability requirement compliance.
	Top management support	They show their support through the addressing of safeguarding risks but not much else beyond this.
Procurement Strategy	Supplier selection	The supplier selection criteria in Org_8 are supplier capability, supplier profile and sustainability. Supplier selection decisions are influenced by donor requirements. Single written quotations are used for low-value contracts while high value/risk contracts typically require a variety of competitive bidding procedures. Contract values influence sourcing procedure and supplier base strategy.
	Supplier base strategy	This is non-existent in terms of making decisions that deal with supplier-related risks.
	Supplier relationship determination	A mixture of transactional and strategic relationships.
	Supplier location	Procures almost exclusively locally.
	Identifiable Relationships	Refer to Figure 4.8.
Donor influence		Donor influence is seen in accountability to donors in terms of the use of given resources, sourcing procedure override and the restrictions they place on fund usage.

Table 4.9 Summary of the research findings on coded themes in Organisation 8

4.10 Conclusion

This chapter set out to present the analysis of each of the cases studied in this research. Each case began with an overview of the company followed by a discussion of the various approaches adopted towards attaining the formative elements of supply chain resilience from a procurement perspective. Based on the conceptual framework proposed in chapter 2, the procurement strategy decisions which are taken in the four decision areas and how relationships between such decisions

as identified by the organisations to ensure SCR is not compromised were also discussed. Donor influence on procurement decisions in these organisations was presented for each case.

The next chapter presents a cross-case analysis of all 8 cases, discussing their commonalities as well as differences.

5. Cross-case Analysis

5.0 Introduction

Having analysed and presented the unique situations within the various cases with regards to both the deductive and inductive themes of the research in the previous chapter, this chapter presents the cross-case analysis similarities and differences between the various cases are highlighted under the themes supply chain resilience formative elements, procurement strategy and donor influence. This was to help achieve the first two objectives of this research.

5.1 Cross-case Analysis of the Supply Chain Resilience Formative Elements Theme

Tables 5.1 and 5.2, present a comparison of the coding references and the number of data sources for the 15 identified formative elements in each of the 8 cases.

Coding references	ORG_1	ORG_2	ORG_3	ORG_4	ORG_5	ORG_6	ORG_7	ORG_8
1: Agility	21	0	14	7	15	16	28	7
2: Avoidance	218	5	149	109	158	210	225	135
3: Collaboration	81	4	38	32	14	16	26	17
4: Culture	37	2	26	46	15	12	66	20
5: Decision making	57	5	21	6	15	24	18	23
6: Flexibility	8	1	16	3	12	17	22	2
7: Governance and Accountability	93	6	49	19	29	52	37	37
8: Human Resource Management	65	10	82	47	48	55	72	49
9: Information Technology	4	0	20	3	8	23	16	9
10: Integration	5	0	10	3	5	5	8	7
11: Redundancy	6	1	11	4	13	12	13	4
12: Robustness	2	0	7	2	10	12	18	8
13: Security	11	0	16	13	6	6	9	16
14: Sustainability	25	0	64	15	52	34	25	17
15: Top management support	10	0	8	5	4	6	8	8

Table 5.1 Node matrix showing the coding references for the different SCR formative elements for each case

All of the formative elements are identified severally in all organisations except for Org_2 which may be attributable to the limited data sources for it. By far, avoidance was the most highlighted formative element in all organisations except for Org_2. This may be attributed to the fact that policy documents are typically targeted towards avoidance and prevention. This is corroborated by the fact that data sources are highest for all organisations for avoidance (See Table 5.2). Seeing no policy documents were available in Org_2, it is not surprising it was the odd one out here. The unavailability of organisational policies in Org_2 may explain how it alone does not pursue all of the formative elements.

Data sources	ORG_1	ORG_2	ORG_3	ORG_4	ORG_5	ORG_6	ORG_7	ORG_8
1: Agility	5	0	5	2	4	8	5	3
2: Avoidance	7	1	9	4	13	13	10	8
3: Collaboration	7	1	7	4	7	8	7	5
4: Culture	7	1	8	4	6	6	10	5
5: Decision making	4	1	4	2	6	5	5	3
6: Flexibility	3	1	4	1	3	3	6	1
7: Governance and Accountability	7	1	6	4	6	8	7	7
8: Human Resource Management	7	1	8	4	10	10	9	7
9: Information Technology	2	0	6	2	4	5	6	4
10: Integration	2	0	4	3	4	3	3	2
11: Redundancy	3	1	4	2	3	5	5	3
12: Robustness	1	0	4	2	5	7	7	3
13: Security	4	0	4	3	3	4	3	4
14: Sustainability	4	0	8	3	11	8	7	5
15: Top management support	3	0	4	1	2	1	2	3

Table 5.2 Node matrix showing the number of data sources for the different SCR formative elements for each case

The most consistent approach for agility adopted by the organisations is the use of framework agreements and preapproved supplier lists which help shorten the procurement process during emergencies. Org_6 and Org_7 have in place contingency plans for emergencies, but all organisations keep a reasonable level of fund reserve to, among other things, facilitate responsiveness. Org_1 has the most comprehensive approaches towards agility and other organisations could learn from it.

Approaches towards avoidance are consistent across organisations. Similarly, the creation of awareness and visibility internally and across their supply chains is a common effort towards collaboration, as is the exchange of supplier information. Org_1's efforts towards collaboration are the most diversified and provide lessons for other organisations. With regards to culture, all organisations establish some form of learning culture and whistleblowing and reporting culture. Org_5 and 7's approaches towards a resilience-seeking culture are replicable in other humanitarian organisations.

A flexible decision-making structure that allows for local and/or departmental low value/risk decisions with support and oversight from a centralised procurement team is used in almost all organisations. Use of organisational policies and protocols as well as staff training to help guide and improve decision making is common across organisations. Org_3, 6, and 7 insist on mandatory documentation of decisions and this may be recommended for other organisations as it helps facilitate decision redundancy and learning culture. Flexibility is pursued through decision flexibility and sourcing flexibility through the use of framework agreements and preapproved supplier lists. However, only Org_5 and 7 also use backup suppliers, an approach that could prove utile for large humanitarian organisations.

Approaches towards ensuring governance and accountability are consistent across organisations as there is accountability for donor requirements and fund stewardship, proportionality, authorisation or approval requirement, transparency, internal and external auditing. Org_3's appointment of contract managers is helpful to ensure there is accountability for each supplier-signed contract.

Under human resource management, all organisations understand how they can influence their supply chain resilience through their recruitment processes, training and documentation. Besides Org_2 and 6, all other organisations have provisions for some form of disciplinary action to ensure adherence to policy provisions on ethical, legal and regulatory compliance. Org_1, 4, 5, 7 and 8 acknowledge how fair and competitive remuneration can help attract and retain highly skilled personnel.

Outside of Org_2 which has no efforts towards information technology, all other organisations use a SharePoint to provide document accessibility, process monitoring and oversight as well as digitisation of processes and storage of documents. Org_3, 5 and 7 use e-procurement to enhance efficiency, transparency, documentation and accountability. Org_3 exploits IT for training purposes while Org_7 uses a unique software platform for incident reporting and investigations. These can be exploited in other organisations.

Integration is commonly pursued through the use of multifunctional committees and the creation of visibility by information sharing and stakeholder consultation. The common methods used for redundancy include fund reserves and electronic data backup. Org_3, 5, 6, 7 and 8 exploit redundant supplier relationships through framework agreements, Org_3,4 and 7 use decision redundancy, Org_1, 3, 6 and 7 back up knowledge using cross-training and Org_2, 3, 4, 5, 7 and 8 keep limited stock with Org_7 and 8 requiring suppliers to hold stock on their behalf. With humanitarian organisations, likely sources of weakness that threaten robustness are funding, supplier reliability and lack of procurement expertise. To overcome these, organisations keep fund reserves, use framework agreements and ensure knowledge replication through cross-training.

For security, data security and protection, fund reserves and insurance are the common means to achieve it. Org_1, 3, 6, 7 and 8 invest in staff training on security and associated decisions while only Org_4 uses a money safe. Under sustainability, all organisations (except for Org_2) pursue social, economic and environmental sustainability. Top management across all organisations (except Org_2) show their commitment to resilience by acknowledging their overall responsibility

for risk management and the effectiveness of internal control. In line with this, there is the setup of relevant committees to deal with internal control and risk management in Org_1, 4 and 5, while Org_1 and 7 create new roles to bring in the required expertise to deal with high probability and/or high impact risks. In Org_3, top management leads, challenges and monitors the implementation of ethical and sustainable procurement while in Org_5 they participate in relevant training at least once a year. In Org_8, there are deliberate investment efforts to ensure financial resilience.

Tables 5.3 and 5.4 provide a summary of the various approaches each organisation uses to pursue the formative elements. Organisations can find useful insights from the different approaches different organisations use in pursuing after the various formative elements.

	Cases 1 to 4			
Formative Elements	ORG_1	ORG_2	ORG_3	ORG_4
1: Agility	<p>Clear delegation of roles, authority and responsibility to enable quick decisions.</p> <p>Use of a crisis management team and a dispute resolution repertoire to quickly respond to any major incidents.</p> <p>Financial resilience to absorb shocks and respond accordingly.</p> <p>Use of framework agreements and preferred supplier lists to shorten the procurement process in times of emergencies.</p> <p>Established protocol and training to identify and respond to security breaches.</p> <p>Contractual enabling and development of suppliers and (local) partners to act as</p>	None identified.	<p>Financial resilience to absorb shocks and respond accordingly.</p> <p>Use of framework agreements and preapproved supplier lists to shorten the procurement process in times of emergencies.</p>	<p>Financial resilience (including the availability of liquidity) to absorb shocks and respond accordingly.</p> <p>Use of preapproved suppliers to shorten the procurement process in times of emergencies.</p>

	<p>necessary and reasonably to quickly address disruptions.</p> <p>The intentional selection of suppliers and partners who are capable of responding quickly and sustainably to changing circumstances.</p>			
2: Avoidance	<p>Avoidance of risks by creating visibility through information sharing, clarity in communication, governmental collaboration and stakeholder participation and ensuring fairness and transparency in procurement processes.</p> <p>Extensive due diligence of prospective suppliers and ongoing supplier assessment and monitoring to ensure that the organisation is not unnecessarily exposed to externally sourced legal and regulatory compliance risks and that contracted suppliers are capable of delivering</p>	<p>Enforcement of conflict-of-interest provisions across the organisation.</p> <p>Quality control checks through monitoring and evaluation trips to aid delivery locations to ensure that goods being delivered by suppliers and local partners to recipients are of standard quality.</p>	<p>Use of an effective communication strategy to ensure clarity of communication (especially in expressing supply requirements) and that unauthorised staff or suppliers are not allowed to make pronouncements on behalf of the organisation.</p> <p>Extensive due diligence of prospective suppliers and ongoing supplier assessment and monitoring to ensure that the organisation is not unnecessarily exposed to externally sourced legal and regulatory compliance risks and that contracted suppliers</p>	<p>Avoidance of risks by creating visibility through information sharing, clarity in communication, governmental collaboration and stakeholder participation and ensuring fairness and transparency in procurement processes.</p> <p>Use of an effective communication strategy to ensure clarity of communication (especially in expressing supply requirements) and that unauthorised staff or suppliers are not allowed to make pronouncements on behalf of the organisation</p>

	<p>required goods and/or services.</p> <p>Use of contracts (including contract duration, terms and conditions) to delimit level of exposure to risks that may arise as a result of contractual relationships with suppliers.</p> <p>Development and support of suppliers and partners to improve their abilities and reduce the likelihood of disruptions due to incompetence.</p> <p>Scrutiny of prospective employees to ensure that recruited staff and volunteers do not pose (ethical, safeguarding) risks to the organisation.</p> <p>Ensuring legal and regulatory compliance by staying updated with laws and regulations, staff training,</p>		<p>are capable of delivering required goods and/or services.</p> <p>Enforcement of conflict of interest provisions across the organisation.</p> <p>Use of contracts (including contract duration, terms and conditions) to delimit level of exposure to risks that may arise as a result of contractual relationships with suppliers.</p> <p>Use of standard procurement category methodology to ensure procuring officers have the requisite expertise in their peculiar procurement dealings.</p> <p>Ensuring legal and regulatory compliance by staying updated with laws and regulations, staff training, enforcement of organisational policies across the supply</p>	<p>Enforcement of conflict of interest provisions across the organisation.</p> <p>Extensive due diligence of prospective suppliers and ongoing supplier assessment and monitoring to ensure that the organisation is not unnecessarily exposed to externally sourced legal and regulatory compliance risks and that contracted suppliers are capable of delivering required goods and/or services.</p> <p>Use of contracts (including contract duration, terms and conditions) to delimit level of exposure to risks that may arise as a result of contractual relationships with suppliers.</p> <p>Ensuring legal and regulatory compliance by staying updated with laws and</p>
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	<p>enforcement of organisational policies across the supply chain and participation with relevant sector groups to ensure development and implementation of sector best practice.</p> <p>Continuous review of organisational policies to ensure they are aligned with prevailing laws and regulations. The organisation also ensures suppliers' policies are aligned with its own and that both staff and suppliers are both aware of the provisions and their obligations accordingly.</p> <p>Use of milestone payment system to ensure that a supplier does not bolt off with the organisation's money without completely executing contracts.</p>		<p>chain and participation with relevant sector groups to ensure development and implementation of sector best practice.</p> <p>Continuous review of organisational policies to ensure they are aligned with prevailing laws and regulations. The organisation also ensures suppliers' policies are aligned with its own and that both staff and suppliers are both aware of the provisions and their obligations accordingly.</p> <p>Development and support of suppliers and partners to improve their abilities and reduce the likelihood of disruptions due to incompetence.</p> <p>Application of strong financial controls in the procurement process to avoid</p>	<p>regulations, staff training, enforcement of organisational policies across the supply chain and participation with relevant sector groups to ensure development and implementation of sector best practice.</p> <p>Continuous review of organisational policies to ensure they are aligned with prevailing laws and regulations. The organisation also ensures suppliers' policies are aligned with its own and that both staff and suppliers are both aware of the provisions and their obligations accordingly.</p> <p>Investing time and effort to visit supplier sites to inspect the quality of products as well as on-the-spot examination of medications to ensure they are of the right quantities and quality.</p>
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			<p>fund misappropriation and wastage.</p> <p>Improvement of internal procurement processes to reduce the frequency of change orders, inefficient scheduling, emergency shipments and multiple deliveries to sites.</p> <p>The use of public sector purchasing organisation framework agreements as suppliers there are usually less risky.</p>	
3: Collaboration	<p>Creation of awareness and visibility internally and in the supply chain through information sharing with staff, volunteers, suppliers and localised groups.</p> <p>Exchange of supplier information with other charities and receiving relevant expert support from charities with specialised skills</p>	<p>Training of staff and partners on better procedures for efficient procurement.</p> <p>Working with other charities to monitor suppliers in mutual aid delivery locations.</p> <p>Working with partners and localised groups to overcome the language barriers.</p>	<p>Creation of awareness and visibility internally and in the supply chain through information sharing with staff, volunteers and suppliers.</p> <p>Exchange of expertise and supplier information with other charities and exploring possibilities for joint procurement with other charities to exploit economies</p>	<p>Creation of awareness and visibility internally and in the supply chain through information sharing with staff, volunteers, suppliers and localised groups.</p> <p>Exchange of supplier information with other charities and receiving relevant expert support from charities with specialised skills</p>

	<p>in dealing with particular types of risks.</p> <p>Working with suppliers in review meetings for continuous performance evaluation and improvement.</p> <p>Teaming up with suppliers to ensure legal and regulatory compliance across the supply chain.</p> <p>Provision of relevant access, support and information required to facilitate supplier services.</p> <p>Contractually required obligation of suppliers to collaborate for addressing disruptions.</p> <p>Working with potential suppliers to finetune requirements for Request for Proposals (RFP), especially in goods and services that it is</p>		<p>of scale.</p> <p>Working with other charities to develop innovative ways of working.</p> <p>An amalgamation of internal expertise to undertake various procurement tasks such as contract award, supplier evaluation and auditing.</p> <p>Use of public sector purchasing organisation framework agreements to procure high-quality products and services at the best possible prices.</p> <p>Reporting of suspected serious organised crimes to the police.</p>	<p>in dealing with particular types of risks.</p> <p>Working with suppliers to prevent and deal swiftly with fraudulent, corrupt and collusive practices.</p> <p>Reporting of suspected incidents of crime and abuse to the relevant governmental agencies.</p> <p>Collaborative work with local governments to secure medication.</p> <p>Cooperation with media to enhance public response to disasters.</p> <p>An amalgamation of internal expertise to undertake various procurement tasks such as due diligence and fraud prevention.</p>
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	<p>not well-vexed in.</p> <p>Working with governmental agencies to facilitate work in high-risk, sanctioned environments, report suspected breaches to relevant agencies and improve governmental funding.</p>			
4: Culture	<p>Establishing a learning culture through the monitoring of near misses, an institution of a research, evidence and learning hub, insistence on full investigation into all incidents of abuse, taking into consideration past performance issues and weaknesses of the supply process and implementing a reporting system to inform risk management strategies, policy reform and application of lessons learnt.</p> <p>Facilitating a whistleblowing and reporting culture by</p>	<p>Establishing a learning culture through the monitoring of supplier and partner actions and modify procedures accordingly.</p> <p>Facilitating a reporting culture by demanding regular and consistent reporting by local partners to head office on bottlenecks and urgent needs.</p>	<p>Establishing a learning culture through investment in organisation-wide training programmes, continuous effort to improve operations by a learning committee, application of lessons learnt from both internal and external reviews and making the organisation a learning organisation.</p> <p>Facilitating a whistleblowing and reporting culture by maintaining clear and transparent processes in place for reporting breaches, abuses and suspected crimes to</p>	<p>Establishing a learning culture through the review of relevant policies, procedures and internal controls, revising and implementing necessary corrective measures after any proven incident of fraud or corruption, annual review of policies and good practice, insistence on organisational learning and review of interactions with suppliers based on previous engagements.</p> <p>Developing a risk-aware culture by insisting on staff and management's</p>

	<p>stipulating reporting procedures for breaches, abuses and suspected crimes, creating awareness of policy provisions and staff obligation in reporting prohibited transactions or suspected breaches, and by creating reporting mechanisms and channels clearly indicating when and who to report to (both within the organisation and to donors, governmental agencies or oversight bodies) depending on the type of incident.</p>		<p>relevant offices, agencies and authorities, and creating awareness of policy provisions and staff obligation in reporting prohibited transactions or suspected breaches.</p>	<p>responsibility for the effective identification, management, reporting and control of risks within their areas of responsibility.</p> <p>Facilitating a whistleblowing and reporting culture by maintaining clear and transparent processes in place for reporting breaches, abuses and suspected crimes to relevant offices, agencies and authorities, and creating awareness of policy provisions and staff obligation in reporting prohibited practices and suspected breaches and the institution of appropriate disciplinary actions on staff who fail to report on incidents they are enjoined through policy or contract to do.</p>
5: Decision making	<p>Use of a flexible decision-making structure to allow for better and more informed localised/departmental</p>	<p>Localised procurement decision making due to the absence of a central procurement team.</p>	<p>The institution of a framework of delegated authority, with detailed procedures setting out the</p>	<p>Use of a decentralised procurement decision-making structure to empower local teams who are best</p>

	<p>procurement decision making while requiring referral of more complex, high risk/value decisions to the central procurement team.</p> <p>Mandated documentation of decisions made.</p> <p>Use of procurement committees, composed of members from different functions to help make informed decisions and prevent an individual from having complete control over high value/risk procurement decisions.</p> <p>Support and oversight from a central procurement team to monitor, guide and authorise/approve decisions at local and departmental levels, where necessary.</p> <p>Training of staff and suppliers to improve their supply chain</p>		<p>governance and decision-making process for key decisions.</p> <p>Support and oversight from a central procurement team to monitor, guide and authorise/approve decisions at local and departmental levels, where necessary.</p> <p>Use of a decentralised procurement decision-making structure to reduce pressure on the central procurement team while empowering local/departmental teams to procure relatively low value and/or low-risk items</p> <p>Mandated documentation of procurement decisions made.</p> <p>Training of staff and suppliers to improve their supply chain understanding and to make relevant security and sustainability considerations</p>	<p>positioned to make the most informed decisions, to make them.</p> <p>Decision-making guidance through organisational policies and protocols.</p>
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	understanding and to make relevant security and sustainability considerations for improved procurement decision making		for improved procurement decision making.	
6: Flexibility	<p>Sourcing flexibility through the use of procurement lots and approved suppliers.</p> <p>Decision flexibility through the cross-training of employees to allow for local procurements for small value and low-risk contracts.</p>	None identified.	<p>Decision flexibility through the cross-training of employees to allow for local procurements for small value and low-risk contracts while the central procurement team deals with large and/or high-risk contracts.</p> <p>Sourcing flexibility through the use of framework agreements, approved supplier lists and collaborative procurement</p>	Decision flexibility by allowing for localised and expert decision making.
7: Governance and Accountability	<p>Accountability to donors for their required directives and responsible stewardship of resources.</p> <p>A requirement for authorisation or approval of critical actions (such as procurement plan, payments,</p>	<p>Monitoring and evaluation trips through random site visits by the programme manager.</p> <p>Cross-referencing with other humanitarian organisations in aid delivery location to ascertain price quotes.</p>	<p>Accountability to donors for their required directives and responsible stewardship of resources.</p> <p>Ensuring auditability through the use of e-procurement.</p> <p>Appointment of contract</p>	<p>Accountability to relevant stakeholders including donors, personnel, beneficiaries, cooperating partners, contractors and suppliers.</p> <p>Delegation of authorities and segregation of duties.</p>

	<p>purchases, signing documents, data processing) by a higher office both within the organisation and in the supply chain where applicable.</p> <p>Oversight and monitoring by various committees or managers.</p> <p>Contact information for potential bidders to contact head office in case of unsatisfactory procurement processes in local offices.</p> <p>Proportionality: applying a corresponding risk-based approach commensurate with the level of risk exposure.</p> <p>Contractual provisions detailing consequences for supplier misconduct or unauthorised actions.</p> <p>Transparency of financial,</p>		<p>managers.</p> <p>A requirement for authorisation or approval of critical actions (such as procurement procedure, payments, purchases, signing documents, data processing) by a higher office both within the organisation and in the supply chain where applicable.</p> <p>An established framework of delegated authority setting out the governance and decision-making process</p> <p>Oversight and monitoring by various committees or managers.</p> <p>Documentation of procurement process decisions for accountability.</p> <p>Proportionality: applying a corresponding risk-based</p>	<p>A requirement for authorisation or approval of critical actions (such as fund usage) by a higher office both within the organisation and in the supply chain where applicable.</p> <p>External auditing.</p> <p>Oversight and monitoring by senior management, committees and managers.</p> <p>Transparency of financial, operational, procurement and associated decision-making processes to show accountability to the general public, donors and potential bidders.</p>
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	operational, procurement and associated decision-making processes to show accountability to the general public, donors and potential bidders.		<p>approach commensurate with the level of risk exposure and contract value.</p> <p>Transparency of financial and procurement decision making processes to show accountability to potential bidders and management.</p>	
8: Human Resource Management	<p>Rigorous recruitment process designed to select competent and low-risk employees.</p> <p>Provision of competitive remuneration to attract and retain the best available human resources.</p> <p>Provision of training and support for staff to raise awareness of policy, procedural, legal and regulatory provisions and obligations relevant to their jobs, improve their risk awareness and mitigation skills, enhance their decision-making abilities and provide</p>	<p>Putting in place policies, protocols and procedures to guide and regulate staff behaviour and decision making.</p> <p>Recognising the need to have competent procurement officers to handle procurement and supply chain-related decisions.</p> <p>Recruitment of staff from different ethnic and/or regional background to head local units to reduce the propensity of collusion and corruption.</p>	<p>Provision of training and support for staff to raise awareness of policy, procedural, legal and regulatory provisions and obligations relevant to their jobs, improve their risk awareness and mitigation skills, enhance their decision-making abilities and provide knowledge back up or skills redundancy.</p> <p>Rigorous recruitment process designed to select competent and low-risk employees.</p> <p>Use of policies, protocols and procedures to guide and</p>	<p>Rigorous recruitment and screening processes designed to select competent and low-risk employees as well as employ local staff where possible to improve responsiveness.</p> <p>Competitive remuneration proportionate to the complexity of each role, to attract and retain people with the leadership, experience, knowledge and skills the organisation needs.</p> <p>Use of disciplinary action to ensure adherence to policy provisions on ethical, legal</p>

	<p>knowledge back up or skills redundancy.</p> <p>Contractual obligation of suppliers to provide relevant staff training.</p> <p>Use of policies, protocols and procedures to guide and regulate staff behaviour and decision making.</p> <p>Use of disciplinary action to ensure adherence to policy provisions on ethical, legal and regulatory compliance.</p> <p>Insistence on documentation (both physical and digital) to enhance accessibility, ensure business continuity, provide clarity, provide information, provide a chain of evidence for auditing purposes and to enhance transparency.</p>	<p>On-the-job training for local teams to improve their procurement and supplier management skills.</p>	<p>regulate staff behaviour and decision making.</p> <p>Use of disciplinary action to ensure adherence to policy provisions on ethical, legal and regulatory compliance.</p> <p>Insistence on documentation (both physical and digital) to enhance accessibility, ensure business continuity, provide clarity, provide information, provide a chain of evidence for auditing purposes and to enhance transparency.</p>	<p>and regulatory compliance.</p> <p>Staff (and volunteer) training and support to raise awareness of policy, procedural, legal and regulatory provisions and obligations relevant to their jobs, improve their risk awareness and mitigation skills, enhance their decision-making abilities and provide knowledge back up or skills redundancy.</p> <p>Insistence on documentation (both physical and digital) to enhance accessibility, ensure business continuity, and provide a chain of evidence for auditing purposes.</p>
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<p>9: Information Technology</p>	<p>Use of an intranet system to facilitate reporting and lessons learnt.</p> <p>Use of a SharePoint to provide document accessibility, process monitoring and oversight.</p> <p>Digitisation and storage of documents.</p>	<p>None identified.</p>	<p>Use of an intranet system to facilitate reporting and lessons learnt.</p> <p>Use of a SharePoint to provide document accessibility, information sharing, process monitoring and oversight.</p> <p>Use of an e-procurement platform to enhance efficiency, transparency, documentation, and accountability.</p> <p>E-learning and webinars for training.</p>	<p>Digitisation of processes and storage of documents to enhance efficiency.</p> <p>Use of a SharePoint to provide document accessibility, information sharing, process monitoring and oversight.</p>
<p>10: Integration</p>	<p>Lateral integration through the use of multifunctional committees (such as the procurement committee) that facilitate more reliable decision making.</p> <p>Internal integration through the creation of visibility by</p>	<p>None identified.</p>	<p>External integration through the establishment of strategic partnerships with suppliers.</p> <p>Internal integration through the creation of visibility by information sharing and stakeholder consultation.</p>	<p>Lateral integration through the use of multifunctional committees (such as the procurement committee) that facilitate more reliable decision making.</p> <p>Internal integration through the creation of visibility by</p>

	information sharing and stakeholder consultation.			information sharing and stakeholder consultation.
11: Redundancy	<p>Knowledge backup through cross-training of relevant staff.</p> <p>Off-site data backup.</p> <p>Fund reserves.</p>	Limited stock of non-perishable goods.	<p>Fund reserves.</p> <p>Electronic data backup.</p> <p>Knowledge backup through cross-training of relevant staff.</p> <p>Multiple relationships with suppliers through the use of framework agreements.</p> <p>Limited stock of relevant inventory.</p> <p>Decision redundancy through the documentation of decisions made.</p>	<p>Electronic data backup.</p> <p>Fund reserves.</p>

<p>12: Robustness</p>	<p>To ensure an ability to continue a reasonable level of operations in case of disruptions, the organisation works on its financial resilience by grounding its institutional funding base across a range of donors.</p> <p>Knowledge back up through cross-training and the consequent decentralised procurement decision making helps the organisation overcome the challenge of having limited procurement experts and hence helps the organisation to deal with the associated human resource risk of not having enough competent procurement decision makers.</p>	<p>None identified.</p>	<p>The establishment of a robust fund reserve ensures that operations can continue despite a major (economic) disruption.</p> <p>Knowledge back up through cross-training and the consequent decentralised procurement decision making helps the organisation overcome the challenge of having limited procurement experts and hence helps the organisation to deal with the associated human resource risk of not having enough competent procurement decision makers.</p> <p>Use of framework agreements to provide access to multiple suppliers in an emergency responsively, even though the organisation does not multi-source or use backup suppliers.</p>	<p>Stocking on all medications (anaesthetics in particular) that may be in short supply during a disruption.</p>
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<p>13: Security</p>	<p>Ensuring data security through encryption of data.</p> <p>Contractual obligation of suppliers to maintain all relevant and applicable insurances (such as professional indemnity, product liability insurance, public liability insurance) with a reputable insurance company to cover liabilities and claims arising during the term of contractual agreement.</p> <p>Compulsory security training for staff to ensure staff can detect and respond to security breaches, identify specific security risks relevant to their roles and also, that decisions made incorporate security considerations.</p>	<p>None identified.</p>	<p>Ensuring data security through routine external testing of IT systems to identify possible security weaknesses, as well as regular reviews of external organisation cyber-attacks and applying lessons learnt.</p> <p>Retention of all signed or sealed contracts, or copies (when originals are not available), along with variation agreements in a fireproof safe.</p> <p>Maintenance of a fund reserve to provide financial security in case of unexpected volatility.</p> <p>Contractual obligation of suppliers to maintain all relevant and applicable insurances (such as professional indemnity insurance, employers' indemnity, product liability</p>	<p>Ensuring data security through restricted access, refusal to transfer data outside of European Economic Area unless there is evidence of equivalent levels of personal data protection, and consultation of both internal and external experts with regards to the handling of electronic data.</p> <p>Maintenance of a fund reserve to provide financial security in case of unexpected volatility.</p> <p>The holding of insurance for employees, offices, equipment and public liability.</p> <p>Securing money in a safe.</p>
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			<p>insurance, public liability insurance etc) with a reputable insurance company to cover liabilities and claims arising during the term of contractual agreement.</p> <p>Securing an organisational insurance.</p> <p>Mandatory training on data protection act, which is monitored and reported on quarterly.</p>	
14: Sustainability	<p>Ensuring economic sustainability by diversifying funding portfolio, maintaining a reasonable level of fund reserves, keeping abreast of changes to fundraising regulation and ensure compliance, invest in deepening relationships with donors and supporters and mitigating identified financial risks that could affect donor support.</p>	<p>None identified.</p>	<p>Ensuring economic sustainability by growing voluntary income base as compared to statutory funding, maintaining sufficient reserves, maximising resources through efficient stock purchase and improved cost management, keeping abreast of changes to fundraising regulation and ensure compliance, invest in deepening relationships with donors and supporters and</p>	<p>Ensuring economic sustainability by avoiding dependence on a single funding source and maintaining a reasonable level of fund reserves.</p> <p>Contributing to environmental sustainability by paying particular attention to environmental concerns and taking into consideration carbon footprint when making procurement</p>

	<p>Contributing to environmental sustainability through its procurement activities by questioning (through extensive due diligence) and influencing (including by contractual obligations) suppliers' environmental standards, sourcing goods, services and work which have the least negative impact on the environment, use recycled materials whenever possible and that all production and delivery processes in supplier operations including the use of heating, lighting, Information Technology systems, ventilation and transportation are based on the need to maximise efficient energy use and to minimise harmful emissions.</p> <p>Ensure social sustainability by questioning (through extensive due diligence) and</p>		<p>mitigating identified financial risks that could affect donor support.</p> <p>Contributing to environmental sustainability by using 'green' electricity where possible and installing smart electricity meters in all premises, using fuel-efficient vehicles for almost all its fleet, recycling unsold or damaged donations, procuring environmentally-friendly stationery, educating staff and volunteers on environmental sustainability, procuring from sustainable sources and ensuring suppliers have appropriate environmental protection measures, and make environmentally sustainable considerations throughout the procurement process.</p> <p>Ensure social sustainability by questioning (through</p>	<p>decisions.</p> <p>Ensure social sustainability by employing local staff and procuring locally where possible and eliminating unlawful discrimination.</p> <p>Ensuring the attainment of the above-mentioned measures through the enforcement of policies across the organisation and with suppliers.</p>
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	<p>influencing (including by contractual obligations) suppliers' ethical standards and that there is no unlawful discrimination or worker exploitation by suppliers or their contractors and agents.</p>		<p>extensive due diligence) and influencing (including by contractual obligations) suppliers' ethical standards and that there is no unlawful discrimination or worker exploitation by suppliers or their contractors and agents. There is a commitment to ensure that ethical behaviour by staff underpins all procurement activities.</p> <p>Ensuring the attainment of the above-mentioned measures through the enforcement of policies across the organisation and with suppliers.</p>	
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<p>15: Top management support</p>	<p>Trustees acknowledging their role in resilience and making it a priority by taking responsibility for risk management and the effectiveness of internal control.</p> <p>Top management showing commitment by creating new roles to deal with specific types of risks (such as safeguarding manager).</p> <p>Set up of relevant committees to deal with internal control and risk management.</p>	<p>None identified.</p>	<p>Trustees acknowledging their role in resilience and making it a priority by taking responsibility for risk management and the effectiveness of internal control.</p> <p>Directors and senior management leading, challenging and monitoring the implementation of ethical and sustainable procurement.</p>	<p>Trustees acknowledging their role in resilience and making it a priority by taking responsibility for risk management and the effectiveness of internal control.</p> <p>Set up of relevant committees to deal with internal control and risk management.</p>
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Table 5.3 Summary of the varying approaches adopted in pursuing SCR formative elements in cases 1 to 4

	Cases 5 to 8			
Formative Elements	ORG_5	ORG_6	ORG_7	ORG_8
1: Agility	<p>Clear delegation of roles, authority and responsibility to enable quick procurement decisions.</p> <p>Use of contractual dispute resolution provisions to quickly respond to any disruptive disputes.</p> <p>Financial resilience (achieved through a highly diversified funding portfolio) to absorb shocks and respond accordingly.</p> <p>Use of framework agreements to shorten procurement process in times of emergencies.</p>	<p>Permitted procedural exceptions provided for in policies to guide emergency procurement.</p> <p>Financial resilience (through reserve funds, committed long-term giving, exploration of new sources of income) to absorb shocks and respond accordingly.</p> <p>Use of framework agreements to shorten procurement process in times of emergencies.</p>	<p>Procedural exceptions and guidelines provided for in policies and development of contingency plans to direct emergency procurement.</p> <p>Contractual enabling of suppliers to act as necessary and reasonably to quickly address disruptions.</p> <p>Use of framework agreements and pre-qualified supplier lists to shorten procurement process in times of emergencies.</p> <p>Development of regional procurement capacity to act as necessary and reasonably to quickly address disruptions.</p> <p>Established goods or service-specific ordering procedures to improve response times.</p>	<p>Use of contractual dispute resolution provisions to quickly respond to any disruptive disputes.</p> <p>Use of framework agreements to shorten procurement process in times of emergencies.</p>

<p>2: Avoidance</p>	<p>Avoidance of risks by creating visibility through information sharing, clarity in communication, governmental collaboration and stakeholder participation and ensuring fairness and transparency in procurement processes.</p> <p>Use of an effective communication strategy to ensure clarity of communication (especially in expressing supply requirements) and that unauthorised staff or suppliers are not allowed to make pronouncements on behalf of the organisation.</p> <p>Enforcement of conflict of interest provisions across the organisation.</p> <p>Extensive due diligence of prospective suppliers and ongoing supplier assessment</p>	<p>Avoidance of risks by creating visibility through information sharing, clarity in communication, governmental collaboration and stakeholder participation and ensuring fairness and transparency in procurement processes.</p> <p>Use of an effective communication strategy to ensure clarity of communication (especially in expressing supply requirements) and that unauthorised staff or suppliers are not allowed to make pronouncements on behalf of the organisation.</p> <p>Enforcement of conflict of interest provisions across the organisation.</p> <p>Extensive due diligence of prospective suppliers and ongoing supplier assessment</p>	<p>Avoidance of risks by creating visibility through information sharing, clarity in communication, governmental collaboration and stakeholder participation and ensuring fairness and transparency in procurement processes.</p> <p>Use of standard procurement category methodology to ensure procuring officers have the requisite expertise in their peculiar procurement dealings.</p> <p>Enforcement of conflict of interest provisions across the organisation.</p> <p>Extensive due diligence of prospective suppliers and ongoing supplier assessment and monitoring to ensure that the organisation is not unnecessarily exposed to externally sourced legal and</p>	<p>Avoidance of risks by creating visibility through information sharing, clarity in communication, governmental collaboration and stakeholder participation and ensuring fairness and transparency in procurement processes.</p> <p>Use of an effective communication strategy to ensure clarity of communication (especially in expressing supply requirements) and that unauthorised staff or suppliers are not allowed to make pronouncements on behalf of the organisation.</p> <p>Enforcement of conflict of interest provisions across the organisation.</p> <p>Extensive due diligence of prospective suppliers and ongoing supplier assessment</p>
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	<p>and monitoring to ensure that the organisation is not unnecessarily exposed to externally sourced legal and regulatory compliance risks and that contracted suppliers are capable of delivering required goods and/or services.</p> <p>Use of contracts (including contract duration, terms and conditions) to delimit level of exposure to risks that may arise as a result of contractual relationships with suppliers.</p> <p>Demand forecasting to reduce the likelihood of sporadic demand patterns.</p> <p>Inspection and/or testing of goods before delivery to ensure compliance with contractual provisions.</p>	<p>and monitoring to ensure that the organisation is not unnecessarily exposed to externally sourced legal and regulatory compliance risks and that contracted suppliers are capable of delivering required goods and/or services.</p> <p>Use of contracts (including contract duration, terms and conditions) to delimit level of exposure to risks that may arise as a result of contractual relationships with suppliers.</p> <p>Development and support of suppliers and partners to improve their abilities and reduce the likelihood of disruptions due to incompetence.</p> <p>Scrutiny of prospective employees to ensure that recruited staff and volunteers do not pose (ethical,</p>	<p>regulatory compliance risks and that contracted suppliers are capable of delivering required goods and/or services.</p> <p>Use of contracts (including contract duration, terms and conditions) to delimit level of exposure to risks that may arise as a result of contractual relationships with suppliers.</p> <p>Development and support of suppliers and partners to improve their abilities and reduce the likelihood of disruptions due to incompetence.</p> <p>Scrutiny of prospective employees to ensure that recruited staff and volunteers do not pose (ethical, safeguarding) risks to the organisation.</p> <p>Ensuring legal and regulatory</p>	<p>and monitoring to ensure that the organisation is not unnecessarily exposed to externally sourced legal and regulatory compliance risks and that contracted suppliers are capable of delivering required goods and/or services.</p> <p>Use of contracts (including contract duration, terms and conditions) to delimit level of exposure to risks that may arise as a result of contractual relationships with suppliers.</p> <p>Development and support of local partners to improve their abilities and reduce the likelihood of disruptions due to incompetence.</p> <p>Scrutiny of prospective employees to ensure that recruited staff and volunteers do not pose (ethical, safeguarding) risks to the</p>
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		<p>safeguarding) risks to the organisation.</p> <p>Ensuring legal and regulatory compliance by staying updated with laws and regulations, staff training, enforcement of organisational policies across the supply chain and participation with relevant sector groups to ensure development and implementation of sector best practice.</p> <p>Continuous review of organisational policies to ensure they are aligned with prevailing laws and regulations. The organisation also ensures suppliers' policies are aligned with its own and that both staff and suppliers are both aware of the provisions and their obligations accordingly.</p> <p>Quality control by ensuring</p>	<p>compliance by staying updated with laws and regulations, staff training, enforcement of organisational policies across the supply chain and participation with relevant sector groups to ensure development and implementation of sector best practice.</p> <p>Continuous review of organisational policies to ensure they are aligned with prevailing laws and regulations. The organisation also ensures suppliers' policies are aligned with its own and that both staff and suppliers are both aware of the provisions and their obligations accordingly.</p> <p>Use of milestone payment system as a submitted performance security scheme for suppliers.</p>	<p>organisation.</p> <p>Ensuring legal and regulatory compliance by staying updated with laws and regulations, staff training, enforcement of organisational policies across the supply chain and participation with relevant sector groups to ensure development and implementation of sector best practice.</p> <p>Continuous review of organisational policies to ensure they are aligned with prevailing laws and regulations. The organisation also ensures suppliers' policies are aligned with its own and that both staff and suppliers are both aware of the provisions and their obligations accordingly.</p> <p>Application of strong financial controls in the</p>
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		suppliers hold a recognised quality management certification and/or have a quality management system in place. There is also the inspection of received goods to ensure they match contractual requirements.	<p>Scrutiny of prospective employees to ensure that recruited staff and volunteers do not pose (ethical, safeguarding) risks to the organisation.</p> <p>Quality control by ensuring suppliers have a quality management system in place and that suppliers have the appropriate licenses to handle and store goods (especially pharmaceuticals). There is also the inspection of received goods to ensure they match contractual requirements.</p>	<p>procurement process to avoid fund misappropriation and wastage.</p> <p>Improvement of internal procurement processes to reduce the frequency of change orders, inefficient scheduling, emergency shipments, multiple deliveries to sites and multiple contracts by different departments with the same contractor.</p> <p>Inspection of received goods, services and personnel to ensure they match contractual requirements.</p>
3: Collaboration	<p>Creation of awareness and visibility internally and in the supply chain through information sharing with staff, volunteers, suppliers and localised groups.</p> <p>Exchange of supplier information and expertise with other charities.</p>	<p>Creation of awareness and visibility internally and in the supply chain through information sharing with staff, volunteers, suppliers and localised groups.</p> <p>Training of staff and partners on relevant policies and procedures.</p>	<p>Creation of awareness and visibility internally and in the supply chain through information sharing with staff, volunteers, suppliers and localised groups.</p> <p>Participation in an inter-agency logistics coordination meeting with other charities,</p>	<p>Creation of awareness and visibility internally and in the supply chain through information sharing with staff, volunteers, suppliers and localised groups.</p> <p>Exchange of supplier information with other charities and receiving</p>

	<p>Monitoring of suppliers to ensure ethical and legal compliance as well as supplier development.</p> <p>Use of government framework agreements.</p> <p>An amalgamation of internal expertise to undertake various procurement tasks such as contract award, supplier evaluation and auditing.</p>	<p>Exchange of supplier information with other charities.</p> <p>Working with suppliers to ensure legal and regulatory compliance across the supply chain.</p> <p>Provision of expert support for partners and suppliers.</p> <p>An amalgamation of internal expertise to undertake various procurement tasks such as contract award, supplier evaluation and auditing.</p>	<p>joint storage options as well as working with them to address various kinds of disruption.</p> <p>Teaming up with suppliers to ensure legal and regulatory compliance and risk management across the supply chain.</p> <p>Suppliers holding on to purchased inventory on behalf of the organisation.</p>	<p>relevant expert support from charities with specialised skills in dealing with particular types of risks.</p> <p>Supplier and Partner development.</p> <p>Contractually required obligation of suppliers to collaborate for addressing disruptions.</p> <p>Working with governmental agencies to facilitate legal and regulatory compliance and reporting of suspected breaches to relevant agencies.</p> <p>Use of internal expertise to mitigate potential risks identified.</p>
4: Culture	<p>Establishing a resilience-seeking culture by the insistence on policy and procedural compliance, deployment of an effective organisation-wide</p>	<p>Establishing a learning culture by instituting a robust policy review and renewal schedule and the effective monitoring and revision of policies based on recorded incidents.</p>	<p>Establishing a resilience-seeking culture by insisting on ethical behaviour from employees or representatives, and creation of awareness within the organisation and</p>	<p>Establishing a learning culture by recognising the need for continuous learning and improvement, and the review of existing policies to incorporate mitigation for</p>

	<p>procurement culture, creation of an ethical culture for supplier management by ensuring ethical and lawful supplier behaviour through the communication of expected standards and close compliance monitoring, and ensuring the early involvement of subject matter experts in relevant decision making.</p> <p>Pursuing a learning culture through objectives and targets setting, performance measurement and regular review to enable continual improvement, the establishment of teams to drive ongoing improvements to digital systems, and the updating of relevant policies and procedures to incorporate lessons learnt from previous incidents.</p> <p>Facilitating a whistleblowing</p>	<p>Facilitating a whistleblowing and reporting culture by maintaining clear and transparent processes in place for reporting breaches, abuses and suspected crimes to relevant offices, agencies and authorities, and creating awareness of policy provisions and staff obligation in reporting prohibited practices and suspected breaches.</p>	<p>with partners on early risk identification and mitigation.</p> <p>The pursuit of a learning culture through the recording of lessons learned at the end of each investigation, identification of improvable operational areas, swift investigation of reported incidents by using root cause analysis and incorporating lessons learned into awareness training, and the use of historic supplier performance to inform future supply decisions and recommendations.</p> <p>Facilitating a whistleblowing and reporting culture by maintaining clear and transparent processes in place for reporting breaches, abuses and suspected crimes to relevant offices, agencies and authorities, and creating awareness through mandatory</p>	<p>extant lapses within the organisation's procurement processes.</p> <p>Facilitating a whistleblowing and reporting culture by maintaining clear and transparent processes in place for reporting breaches, abuses and suspected crimes to relevant offices, agencies and authorities, and creating staff and supplier awareness of policy provisions and obligation in reporting prohibited practices and suspected breaches.</p>
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	and reporting culture by maintaining clear and transparent processes in place for report monitoring, implementing contractual supplier obligation in ensuring whistle-blower complaint mechanism and grievances reporting in their organisations and the establishment of a team to be responsible for procurement reporting.		training of staff (and suppliers) on policy provisions and their obligations in reporting prohibited practices and suspected breaches. There is also an investment into a digital reporting system to help manage incident reporting.	
5: Decision making	<p>Support and oversight from a central procurement team to monitor, guide and authorise/approve decisions at local and departmental levels, where necessary and to refer high-value/risk decisions to the central procurement team.</p> <p>Use of a decentralised procurement decision-making structure to reduce pressure on the central procurement team while empowering</p>	<p>Use of a flexible decision-making structure to allow for better and more informed localised/departmental procurement decision making while requiring referral of more complex, high-risk/value decisions to the central procurement team.</p> <p>Support and oversight from a central procurement team to monitor, guide and authorise/approve decisions at local and departmental</p>	<p>Use of a flexible decision-making structure to allow for better and more informed localised/departmental procurement decision making while requiring referral of more complex, high-risk/value decisions to the central procurement team.</p> <p>Support and oversight from a central procurement team to monitor, guide and authorise/approve decisions at local and departmental</p>	<p>Use of a flexible decision-making structure to allow for localised/departmental procurement decision making.</p> <p>Mandatory training of staff to enhance their supply chain understanding for improved procurement decision making.</p> <p>Decision-making guidance through organisational policies and protocols.</p>

	<p>local/departmental teams to procure relatively low-value and/or low-risk items.</p> <p>Decision-making guidance through organisational policies and protocols.</p>	<p>levels, where necessary.</p> <p>Mandated documentation of decisions made.</p> <p>Decision-making guidance through organisational policies and protocols.</p> <p>Use of procurement committees, composed of members from different functions to help make informed decisions and prevent an individual from having complete control over high value/risk procurement decisions.</p>	<p>levels, where necessary.</p> <p>Mandated documentation of decisions made.</p> <p>Use of procurement committees, composed of members from different functions to help make informed decisions and prevent an individual from having complete control over high value/risk procurement decisions.</p>	
6: Flexibility	<p>Sourcing flexibility through the use of framework agreements, approved suppliers, collaborative procurement and backup suppliers.</p> <p>Decision flexibility by allowing for localised and expert low-value, low-risk</p>	<p>Sourcing flexibility through the use of framework agreements and approved suppliers.</p> <p>Decision flexibility by allowing for localised and expert low-value, low-risk procurement decision making.</p>	<p>Decision flexibility through the cross-training of employees to allow for departmental and local procurements for small value and low-risk contracts.</p> <p>Sourcing flexibility through the use of framework agreements, approved</p>	<p>Sourcing flexibility through the use of framework agreements.</p>

	procurement decision making.		supplier list, back up suppliers and provisions for a modified procurement procedure under emergency conditions.	
7: Governance and Accountability	<p>A requirement for authorisation or approval of critical actions (such as procurement waivers, payments, purchases, signing documents, data processing) by a higher office both within the organisation and in the supply chain where applicable.</p> <p>Oversight and monitoring by various committees or managers.</p> <p>Proportionality: applying a corresponding risk-based approach commensurate with the level of risk exposure.</p> <p>Transparency of business practices and procurement decision making processes to</p>	<p>Accountability to donors as shown in compliance with relevant legislation and regulation.</p> <p>A requirement for authorisation or approval of critical actions (such as contract extension, payments, purchases, signing documents, process exclusion) by a higher office both within the organisation and in the supply chain where applicable.</p> <p>Oversight and monitoring by various committees or managers.</p> <p>Internal and external auditing.</p>	<p>Accountability to win the trust and confidence of supporters, media, donors and employees.</p> <p>Assignment of specific risks ownership and joint accountability where appropriate.</p> <p>A requirement for authorisation or approval of critical actions (such as contracts, process exclusion, purchases) by a higher office in the organisation.</p> <p>Internal and external auditing.</p> <p>Oversight and monitoring by various committees or managers.</p>	<p>A requirement for authorisation or approval of critical actions (such as policies) by a higher office both within the organisation.</p> <p>External auditing.</p> <p>Clearly defined responsibilities.</p> <p>Oversight and monitoring by various committees or managers.</p> <p>Contractual provisions detailing consequences for supplier misconduct, unauthorised actions or negligence.</p> <p>Transparency of operational processes to show</p>

	<p>show accountability to potential bidders and management.</p>	<p>A governance structure that facilitates segregation of duties and prevents control of all stages of a procurement process by a single person.</p> <p>A robust governance structure and systems that clearly define responsibilities, have clear decision-making processes and facilitate transparency and accurate record keeping.</p> <p>Proportionality: ensuring that the costs of carrying out a procurement exercise do not outweigh benefits to be achieved, and that commensurate effort is attached to the level of risk.</p> <p>Transparency of operational, financial and procurement decision making processes to show accountability to potential bidders and management.</p>	<p>Transparency of financial, operational, procurement and associated decision-making processes to show accountability to potential bidders, donors, partners, supporters and the general public.</p>	<p>accountability to the potential bidders and the general public.</p>
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<p>8: Human Resource Management</p>	<p>Use and regular review of a rigorous recruitment process designed to select competent and low-risk employees; with a particular interest in building a high-performance in-house procurement team.</p> <p>Ensuring a proper balance between competitive salaries able to attract and retain the appropriate calibre of staff require while maintaining careful stewardship of donor funds.</p> <p>Staff (and volunteer) training and support to raise awareness of policy, procedural, legal and regulatory provisions and obligations relevant to their jobs, improve their risk awareness and mitigation skills, enhance their decision-making abilities and provide knowledge back up or skills redundancy.</p>	<p>Ensuring social sustainability through fair recruitment practices.</p> <p>Staff (and volunteer) training and support to raise awareness of policy, procedural, legal and regulatory provisions and obligations relevant to their jobs, improve their risk awareness and mitigation skills, enhance their decision-making abilities and provide knowledge back up or skills redundancy.</p> <p>Insistence on documentation (both physical and digital) to enhance accessibility, for approval purposes, ensure business continuity, provide clarity, provide information, provide a chain of evidence for auditing purposes and to enhance transparency.</p>	<p>Rigorous recruitment process designed to select competent and low-risk employees, including direct hiring, hiring of the local workforce and a commitment to employ specialists to deal with particular risks (in relevant regions) that the organisation has identified as high probability and high impact.</p> <p>Regular salary reviews to ensure the organisation remains competitive in the sector.</p> <p>Use of policies, protocols and procedures to guide and regulate staff behaviour and decision making.</p> <p>Disciplinary action to ensure adherence to policy provisions on ethical, legal and regulatory compliance.</p> <p>Staff (and volunteer) training</p>	<p>Competitive remuneration proportionate to the complexity of each role, to attract, retain and motivate employees as they are identified as critical to the organisation’s sustainability and success.</p> <p>Use of policies, protocols and procedures as a mandatory guide to regulate staff behaviour and decision making.</p> <p>Disciplinary action to ensure adherence to policy provisions on ethical, legal and regulatory compliance and to mitigate staff misconduct.</p> <p>Staff (and volunteer) training and support to raise awareness of policy, procedural, legal and regulatory provisions and obligations relevant to their</p>
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	<p>Disciplinary action to ensure adherence to policy provisions on ethical, legal and regulatory compliance.</p> <p>Insistence on documentation (both physical and digital) to enhance accessibility, ensure business continuity, provide clarity, provide relevant information, provide a chain of evidence for auditing purposes and to enhance transparency.</p>		<p>and support to raise awareness of policy, procedural, legal and regulatory provisions and obligations relevant to their jobs, improve their risk awareness and mitigation skills, enhance their decision-making abilities and provide knowledge back up or skills redundancy.</p> <p>Insistence on documentation (both physical and digital) to enhance accessibility, ensure business continuity, provide clarity, provide information, help manage risks, provide a chain of evidence for auditing purposes and to enhance transparency.</p>	<p>jobs, improve their risk awareness and mitigation skills, enhance their decision-making abilities and provide knowledge back up or skills redundancy.</p> <p>Insistence on documentation (both physical and digital) both within the organisation and by suppliers, to enhance accessibility and provide a chain of evidence for auditing purposes.</p>
9: Information Technology	<p>Use of a SharePoint to provide document accessibility, information sharing, process monitoring and oversight.</p> <p>Digitisation of processes and</p>	<p>Use of an intranet system to facilitate reporting, administration, due diligence and investigations.</p> <p>Use of a SharePoint to provide document</p>	<p>Use of an intranet system to facilitate reporting, administration and investigations.</p> <p>Use of a SharePoint to provide document</p>	<p>Use of a SharePoint to provide document accessibility, information sharing, process monitoring, oversight and auditability.</p> <p>Digitisation of processes and</p>

	<p>storage of documents to enhance efficiency.</p> <p>Use of an e-procurement platform to enhance efficiency, transparency, documentation, and accountability.</p>	<p>accessibility, information sharing, process monitoring, oversight and auditability.</p> <p>Digitisation of processes and storage of documents to enhance efficiency.</p>	<p>accessibility, information sharing, process monitoring, oversight and auditability.</p> <p>Use of an e-procurement platform to enhance efficiency, transparency, documentation, and accountability.</p> <p>Analysis of software data outcomes to robustly conduct trend analyses and future incident prevention.</p> <p>Digitisation of processes and storage of documents to enhance efficiency.</p>	<p>storage of documents to enhance efficiency.</p>
10: Integration	<p>Internal integration through the creation of visibility by information sharing and stakeholder consultation.</p>	<p>Lateral integration through the use of multifunctional committees (such as the procurement committee) that facilitate more reliable decision making.</p> <p>Internal integration through the creation of visibility by</p>	<p>Internal integration through the creation of visibility by information sharing and stakeholder consultation.</p> <p>Lateral integration through the use of multifunctional committees (such as the procurement committees or tender evaluation</p>	<p>Internal integration through the creation of visibility by information sharing and stakeholder consultation.</p>

		information sharing and stakeholder consultation.	committees) that facilitate more reliable decision making.	
11: Redundancy	<p>Multiple sources of funding.</p> <p>Fund reserves.</p> <p>Multiple relationships with suppliers through the use of framework agreements.</p> <p>Electronic data backup.</p> <p>Limited stock of relevant inventory at local sites.</p>	<p>Decision redundancy through the documentation of decisions made.</p> <p>Multiple relationships with suppliers through the use of framework agreements.</p> <p>Knowledge backup through cross-training of relevant staff</p> <p>Fund reserves.</p>	<p>Use of back up suppliers</p> <p>Decision redundancy through the documentation of decisions made.</p> <p>Multiple relationships with suppliers through the use of framework agreements.</p> <p>Fund reserves.</p> <p>Knowledge back up through cross-training of relevant staff.</p> <p>Supplier-held prepositioned stock.</p>	<p>Multiple relationships with suppliers through the use of framework agreements.</p> <p>Fund reserves.</p> <p>Supplier-held stocks.</p>
12: Robustness	<p>A diversified income stream and use of fund reserves help to ensure continuity in operations in spite of major disruption(s).</p> <p>Contractual provisions for</p>	<p>Knowledge back up through cross-training and the consequent decentralised procurement decision making helps the organisation overcome the challenge of having limited procurement experts and hence helps the</p>	<p>Use of framework agreements to provide access to multiple suppliers in an emergency responsively, even though the organisation does not multi-source or use back up suppliers.</p>	<p>Use of framework agreements to provide access to multiple suppliers in an emergency responsively, even though the organisation does not multi-source or use back up suppliers.</p>

	<p>obligatory mitigative actions in case of a disruption.</p>	<p>organisation to deal with the associated human resource risk of not having enough competent procurement decision makers.</p> <p>Use of framework agreements to provide access to multiple suppliers in an emergency responsively, even though the organisation does not multi-source or use back up suppliers.</p> <p>Supplier relationship management to identify and address bottlenecks and potential sources of risks.</p>	<p>Knowledge back up through cross-training and the consequent decentralised procurement decision making helps the organisation overcome the challenge of having limited procurement experts and hence helps the organisation to deal with the associated human resource risk of not having enough competent procurement decision makers.</p> <p>The establishment of a robust fund reserve ensures that operations can continue despite a major (economic) disruption.</p> <p>Use of supplier held prepositioned stock to help maintain a reasonable level of response during a disruption.</p> <p>Contractual provisions for obligatory mitigative actions in case of a disruption</p>	<p>Knowledge back up through cross-training and the consequent decentralised procurement decision making helps the organisation overcome the challenge of having limited procurement experts and hence helps the organisation to deal with the associated human resource risk of not having enough competent procurement decision makers.</p> <p>The establishment of a robust fund reserve ensures that operations can continue despite a major (economic) disruption.</p> <p>Use of supplier held prepositioned stock to help maintain a reasonable level of response during a disruption.</p> <p>Contractual provisions for obligatory mitigative actions in case of a disruption.</p>
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			Monitoring of suppliers (including supplier site visits) to identify weaknesses in the supply chain and developing suppliers to mitigate against likely sources of disruptions.	
13: Security	<p>Ensuring data security through the implementation and regular review of cyber and information security controls.</p> <p>Maintenance of a fund reserve to provide financial security in case of unexpected volatility.</p> <p>Contractual obligation of suppliers to maintain all relevant and applicable insurances (such as professional indemnity insurance, employers' indemnity, product liability insurance, public liability insurance etc) with a reputable insurance company</p>	<p>Maintenance of a fund reserve to provide financial security in case of unexpected volatility.</p> <p>Contractual obligation of suppliers to maintain all relevant and applicable insurances (such as professional indemnity insurance, employers' indemnity, product liability insurance, public liability insurance etc) with a reputable insurance company to cover liabilities and claims arising during the term of contractual agreement.</p> <p>Provision for security training</p>	<p>Ensuring data security through the upgrade of IT procedures to identify, manage and report risks, staff training and the recruitment of specialist staff to support security initiatives and embed best practice.</p> <p>Maintenance of a fund reserve to provide financial security in case of unexpected volatility.</p> <p>Contractual obligation of suppliers to maintain all relevant and applicable insurances (such as professional indemnity insurance, employers' indemnity, product liability</p>	<p>Ensuring data security through risk identification, management and reporting, frequent and mandatory staff training, investment to strengthen information security controls, third party reviews and supplier obligations with regards to data protection.</p> <p>Maintenance of a fund reserve to provide financial security in case of unexpected volatility.</p> <p>Contractual obligation of suppliers to maintain all relevant and applicable insurances (such as professional indemnity</p>

	<p>to cover liabilities and claims arising during the term of contractual agreement.</p> <p>Maintenance of an organisational insurance.</p>	<p>for all staff and volunteers who travel overseas.</p>	<p>insurance, public liability insurance etc) with a reputable insurance company to cover liabilities and claims arising during the term of contractual agreement.</p>	<p>insurance, employers' indemnity, product liability insurance, public liability insurance etc) with a reputable insurance company to cover liabilities and claims arising during the term of contractual agreement.</p>
14: Sustainability	<p>The pursuit of economic sustainability by monitoring the organisation's funding situation and adjusting financial planning and commitments accordingly, and also by ensuring that suppliers have good financial standing to be able to deliver long term commitments.</p> <p>Contributing to environmental sustainability through its procurement activities by questioning (through extensive due diligence) and influencing (including by contractual obligations) suppliers' environmental standards,</p>	<p>Ensuring economic sustainability by increased fundraising investment, exploring new sources of income, maintaining a reasonable level of fund reserves, contracting highly skilled professional consultants to support programme funding, and insisting on documentation (invoices, purchase order) to process payments.</p> <p>Contributing to environmental sustainability through its procurement activities by questioning (through extensive due diligence) and influencing</p>	<p>Ensuring economic sustainability by implementing a range of policies to ensure sustainable and transparent financial management, growing its unrestricted income, diversifying and growing income and evaluating the financial standing of prospective suppliers.</p> <p>Contributing to environmental sustainability through its procurement activities by questioning (through extensive due diligence) and influencing (including by contractual obligations) suppliers'</p>	<p>Ensuring economic sustainability by maintaining a reasonable level of fund reserves.</p> <p>Contributing to environmental sustainability through its procurement activities by questioning (through extensive due diligence) and influencing (including by contractual obligations) suppliers' environmental standards, taking action to reduce as far as practicable any potentially adverse environmental impacts as well as ensure effective and expedient incident control, investigation</p>

	<p>sourcing goods, services and work which have the least negative impact on climate change and the environment, use recycled materials whenever possible and that energy supply is moved away from brown fossil fuels to green renewable and nuclear tariffs.</p> <p>Ensure social sustainability by questioning (through extensive due diligence) and influencing (including by contractual obligations) suppliers' ethical standards and that there is no unlawful discrimination or worker exploitation by suppliers or their contractors and agents.</p> <p>Ensuring the attainment of the above-mentioned measures through the enforcement of policies across the organisation and with suppliers.</p>	<p>(including by contractual obligations) suppliers' environmental standards, sourcing goods and services that have the least negative impact on the environment.</p> <p>Ensure social sustainability by questioning (through extensive due diligence) and influencing (including by contractual obligations) suppliers' ethical standards and that there is no unlawful discrimination or worker exploitation by suppliers or their contractors and agents.</p> <p>Ensuring the attainment of the above-mentioned measures through the enforcement of policies across the organisation and with suppliers.</p>	<p>environmental standards.</p> <p>Ensure social sustainability by questioning (through extensive due diligence) and influencing (including by contractual obligations) partners, agents, contractors and suppliers' ethical standards and that there is no unlawful discrimination or worker exploitation by suppliers or their contractors and agents.</p> <p>Ensuring the attainment of the above-mentioned measures through the enforcement of policies and sourcing procedures across the organisation and with suppliers.</p>	<p>and reporting.</p> <p>Ensure social sustainability by questioning (through extensive due diligence) and influencing (including by contractual obligations) suppliers' ethical standards and that there is no unlawful discrimination or worker exploitation by itself, its suppliers or their contractors and agents.</p> <p>Ensuring the attainment of the above-mentioned measures through the enforcement of policies across the organisation and with suppliers.</p>
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<p>15: Top management support</p>	<p>The Board acknowledging their role in resilience and making it a priority by taking responsibility for risk management and the effectiveness of internal control.</p> <p>Set up of relevant committees to deal with internal control and risk management.</p> <p>Participation of directors in relevant training, at least once a year.</p>	<p>Trustees acknowledging their role in resilience and making it a priority by taking responsibility for risk management and the effectiveness of internal control.</p>	<p>Investments to ensure resilience, by engaging consultants to evaluate the weaknesses of its supply chains and proffer solutions.</p> <p>Senior leadership team and trustees acknowledging their role in resilience and making it a priority by taking responsibility for risk management and the effectiveness of internal control.</p> <p>Creation of new roles to deal with specific types of risks (such as safeguarding risks).</p>	<p>Trustees acknowledging their role in resilience and making it a priority by taking responsibility for risk management and the effectiveness of internal control.</p> <p>Investments to ensure financial resilience.</p>
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Table 5.4 Summary of the varying approaches adopted in pursuing SCR formative elements in cases 5 to 8.

5.2 Cross-case Analysis of the Procurement Strategy Theme

A comparison of the coding references and the number of data sources for the four procurement strategy decision areas in the 8 cases are presented below.

Quite significantly, coding references related to supplier selection had the widest coverage in collected data for all 8 cases except for Org_2. Under this case, it is inferable from the absence of procurement policies which are usually the sources for data on supplier selection. Emphasis on supplier location here is because many of the procurement strategy decisions in the organisation are closely related to the local contexts within which the organisation operates. The wide coverage of supplier selection is due to sub-themes that are captured under it, which include supplier selection criteria, sourcing procedure and influencing factors, especially monetary value. Organisational procurement policies typically provide decision-making guides on these sub-themes which hence explains the observed pattern.

Coding references	ORG_1	ORG_2	ORG_3	ORG_4	ORG_5	ORG_6	ORG_7	ORG_8
1: Supplier base strategy	11	4	10	2	4	14	5	4
2: Supplier location	13	17	8	16	10	7	13	4
3: Supplier relationship determination	8	3	8	2	10	4	6	2
4: Supplier selection	70	7	43	30	90	117	52	17

Table 5.5 Node matrix showing the coding references for the procurement strategy decision areas for each case

Table 5.6 attests to the multiple sources of data that support the insights derived from this study.

Data sources	ORG_1	ORG_2	ORG_3	ORG_4	ORG_5	ORG_6	ORG_7	ORG_8
1: Supplier base strategy	2	1	2	1	3	5	1	1
2: Supplier location	5	1	1	2	5	1	2	2
3: Supplier relationship determination	3	1	2	1	1	1	1	1
4: Supplier selection	5	1	4	2	6	9	6	3

Table 5.6 Node matrix showing the number of data sources for the procurement strategy decision areas for each case

From Table 5.7, it can be observed that the preferred supplier base strategy for Org_1, 3, 5, 6 and 7 is single sourcing using a variety of sourcing procedures. Org_2 and 4 have no procurement policy while Org_8, at the time of data collection had a very disorganised procurement process that did not follow any policy provisions. Org_2's resort to single sourcing is entirely based on cost considerations, Org_4's is based on availability and cost. In the case of Org_8, the problem had been identified and the head of procurement had tabled a new procurement policy for approval. For the rest of the organisations that have the relevant policies in place, the opportunity for multiple suppliers to either provide quotes or bid for contracts is given, even when framework agreements and preapproved supplier lists are used. Notwithstanding, apart from Org_5 and

Org_7 who sometimes use multi-sourcing (either through same tier suppliers or backup suppliers), the others exclusively single source. Quite understandably, the organisations sole source when prevailing circumstances (such as monopolies, technical or intellectual copyright, patented proprietary, absence of viable alternatives and preferred brands) dictate that as the only or most reasonable option. It can thus be seen that, from a resilience perspective, Org_5 and Org_7 sometimes adopt Christopher and Peck's (2004) lead supplier with a backup supplier and together with Org_1, Org_3 and Org_8 use framework agreements and pre-approved supplier lists to provide a pool of alternative suppliers who could be quickly contracted in case of the failure of the preferred supplier.

Under supplier location decisions, local sourcing is highly favoured across all organisations due to benefits such as convenience, monetary value, lead time, reduction of complexities, less vulnerable supplier relationships and sustainability considerations (Thun and Hoenig, 2011). In the case of Org_2, global sourcing is not pursued at all due to financial constraints, complex licensing regimes, embargoes on importation and remoteness or isolation of some aid delivery locations, even though it admits its utility in terms of economic efficiency and sustainability. Org_4's supplier location decisions are largely based on availability and cost with some sustainability considerations when possible. Org_8 admits the lack of procurement expertise that is required in managing long and complex supply chains for which reason local sourcing is preferred to avoid all associated risks of global sourcing. Org_1, 3, 5, 6 and 8 use global sourcing when it presents the more reasonable option in terms of availability and value for money. In this case, extra effort is committed to ensuring the organisations are not unnecessarily exposed to reputational, legal and regulatory risks (especially modern slavery). Global sourcing also sometimes presents less risk in terms of quality of goods (especially medication) and legal and/or regulatory compliance in certain geographical regions. Org_8 also indicates the considerations about a location's proneness to natural disasters and political contexts when considering global sourcing.

Since a majority of organisational procurements are not critical, the predominant relationships the studied organisations have with suppliers are transactional. When requirements are critical, monetary values and risk exposure are high, and/or contractual durations are longer, Org_1, 3, 5, 6, 7 and 8 pursue closer relationships. In the case of Org_1, the need to ensure sustainability in its supply chain as well as a proven track record of reliability by a supplier may warrant a preference for closer relationships. Org_2's exclusive use of transactional relationships is very much cost-driven while there is little indication in Org_4 as to the considerations made in

determining supplier relationship type. This may be attributable to the limited procurement expertise in the organisation.

The criteria for supplier selection for Org_6 and 7 included cost, lead time, quality (of goods and/or services), supplier capability (financial capability and technical competence), supplier location, supplier profile (including accreditations or professional affiliations, public approval, compliance to policies and sector requirements, criminal status and legal issues, performance track record and references) and sustainability considerations. That of Org_1, 2, 3, 4, 5 and 8 are a combination of some of these. Surprisingly, the most consistent criterion across all organisations was sustainability, followed by cost. All organisations made some considerations of the environment, ethical and social, and/or economic sustainability in their supplier evaluation. This may be attributable to the heightened reputational risks associated with a humanitarian organisation engaging with suppliers that breach the widely publicised sustainability positions of these organisations. Cost is not a stated criterion in Org_8 and this is attributable to the arbitrariness of its procurement processes as well as the inadequacy of its procurement policy at the time.

Selection criteria decisions in all organisations are influenced by a variety of factors including donor requirements, monetary value, provided references, level of the type of product or service and the associated risk exposure, supplier location, supplier relationship type, supply base strategy, the urgency of requirement and the value of the procurement to the organisation. Supplier location is considered in Org_1, 3, 4, 5, 6 and 7 as this influences the level of due diligence to be done. This is not the case in Org_2 and 8 as both organisations source entirely locally. Overall, it can be seen that selection criteria in all studied organisations are influenced by the need for resilience.

Monetary value also influences supplier evaluation in Org_1, 3, 5, 6 and 7 since organisations are more stringent when contract values are high. This is especially important for humanitarian organisations where they need to show good stewardship of the funds they receive from donors. This is not observed in Org_2 and 4 as provisions on decisions to take based on monetary values are typically provided in procurement policies and neither of these organisations has one. For Org_1, 3 and 5, the involvement of the central procurement team may be required in the supplier evaluation process based on the value of spend, while in Org_7 it may necessitate the involvement of a procurement committee or determine the level of approval required. It affects the supplier base strategy decision in Org_5, 6, 7 and 8, supplier relationship determination in Org_1, 3, 5, 6 and 7 and supplier location decisions in Org_1. Besides Org_2 and 4, monetary value determines

the sourcing procedure adopted to procure a good or service. Even though the classification of contractual values differs from organisation to organisation, it is observable that low-tier spends (below £5,000 or £10,000 depending on the organisation) require direct purchases or up to 3 simple written quotes. Mid-tier spends (of up to £50,000) require multiple written quotes, competitive bids or request for proposals while high-tier spends (above £50,000) typically require competitive tender either at a national or international level.

As to how choices in decision areas impact those in others, supplier base strategy decisions in Org_3 and 5 influence supplier relationship determination. Supplier selection decisions are influenced by supplier location in all cases except Org_4. Supplier selection also influences supplier relationship determination in Org_1, 3, 5 and 8. Further details of these relationships and a summary of the comparison between the procurement strategy decision areas are provided in Table 5.7 below.

Procurement strategy decision area					
Cases	Supplier base strategy	Supplier location	Supplier relationship determination	Supplier selection	Relationship between decision areas
ORG_1	<p>The predominant use of single sourcing via various sourcing procedures based on spend.</p> <p>Sole sourcing under special conditions (monopolies, technical or intellectual copyright reasons).</p>	<p>Preference for sourcing locally due to monetary value, lead time, complexity, the vulnerability of relationships with overseas suppliers and sustainability considerations.</p> <p>Use of global sourcing when it is the more reasonable option (in terms of quality, value for money, less risk etc) or due to donor stipulations.</p>	<p>A variety of relationships ranging from transactional to partnerships depending on project requirements and nature, the importance of requirement and monetary value.</p> <p>Use of closer relationships to ensure sustainability in its supply chain.</p> <p>Supplier performance and track record can result in relationships becoming closer.</p>	<p>Criteria for supplier selection include cost, delivery schedule and lead time, quality (including service delivery), supplier capabilities (capacity and technical skills), risk profile, previous performance, location and sustainability.</p> <p>Selection criteria are influenced by donor requirements, monetary value, supplier location, type of relationship, supplier base strategy and fairness.</p> <p>Monetary value influences the involvement of the central procurement team, requiring an external audit of partners, the type of supplier relationship and</p>	<p>Supplier base strategy decisions influence and are influenced by supplier selection.</p> <p>Supplier selection decisions influence and are influenced by supplier relationship determination.</p> <p>Supplier location decisions influence both supplier selection and supplier relationship determination.</p>

				<p>its management, the criteria for supplier selection and also sourcing procedure.</p> <p>Sourcing procedures according to monetary value is:</p> <ul style="list-style-type: none"> - below £10,000.00: 3 written quotes. 1 quote if using an approved supplier list - between £10,000.00 and £50,000.00: negotiated procedure requiring at least 3 written quotes. - above £50,000.00: competitive tender 	
ORG_2	Almost an exclusive use of single-sourcing.	Sourcing is entirely done locally. Global procurement is not pursued as the organisation cites financial constraints, complex licensing regimes, embargoes on importation and remoteness or isolation of some aid	Predominantly transactional relationships largely due to cost benefits.	Criteria for supplier selection include cost, quality (including service delivery), supplier ethics, and supplier location.	Supplier selection decisions are influenced by supplier location decisions.

		delivery locations as hindrances.			
ORG_3	<p>The predominant use of single-sourcing via various sourcing procedures based on spend.</p> <p>Sole-sourcing under special conditions (monopolies, technical or intellectual copyright reasons, patented proprietor).</p>	<p>Local procurement for benefits of shorter lead time, reliable supply chains, and regulatory compliance.</p> <p>Use of global sourcing when it is the more reasonable option (value for money, etc) while considering mitigation of associated risks (such as legal and regulatory compliance, reputational).</p>	<p>A variety of relationships ranging from transactional to partnerships depending on project requirements and nature (such as a technical requirement for growth), level of risk exposure and monetary value.</p>	<p>Criteria for supplier selection include cost, supplier capabilities (capacity and technical skills), supplier profile (public approval, compliance to sector requirements, criminal status), location and sustainability.</p> <p>Selection criteria are influenced by monetary value, supplier location, type of relationship, the urgency of requirement and the value of the contract for the organisation.</p> <p>Monetary value influences the involvement of the central procurement team, the type of supplier relationship, the criteria for supplier selection and</p>	<p>Supplier base strategy decisions influence supplier relationship determination.</p> <p>Supplier location decisions influence supplier selection.</p>

				<p>also sourcing procedure.</p> <p>Sourcing procedures according to monetary value is:</p> <ul style="list-style-type: none"> - up to £5,000.00: 1 written quote. - between £5,000.00 and £25,000.00: at least 2 written quotes - between £25,000.00 and £100,000.00: at least 3 written quotes - above £100,000.00: open competitive tender 	
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<p>ORG_4</p>	<p>No discernible supply base strategy even though their approach may be described as sole sourcing.</p>	<p>It sources both locally and globally depending on availability and cost.</p>	<p>There are transactional and partnership relationships but little indication of the influence of resilience in making these determinations.</p>	<p>Criteria for supplier selection include cost, lead time, quality, supplier profile (criminal status, ethics and related policy compliance), previous performance and sustainability.</p> <p>Selection criteria are influenced by references and supplier location.</p> <p>Competitive tendering is used when the requirement dictates it. Otherwise, goods and services are procured by direct contact with relevant suppliers in the given location.</p>	<p>No discernible influence of decisions under the various decision areas aimed towards SCR.</p>
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<p>ORG_5</p>	<p>The predominant use of single sourcing via various sourcing procedures based on spend.</p> <p>Use of a variety of multi-sourcing approaches depending on the level of risk exposure (multiple suppliers of the same tier or primary supplier with a backup supplier).</p>	<p>Preference for sourcing locally due to monetary value, lead time, and convenience.</p> <p>Use of global sourcing for high-value corporate-level procurements.</p>	<p>A variety of relationships ranging from transactional to collaborative long-term relationships depending on the criticality of goods or services, the monetary value, duration of supply requirement and availability of alternative sources.</p>	<p>Criteria for supplier selection include cost, lead time, quality (including service delivery), supplier capabilities (financial capacity and technical skills), supplier location and sustainability.</p> <p>Selection criteria are influenced by monetary value, references, level of risk exposure, supplier location, type of goods or services, the urgency of requirement and the value of the contract for the organisation.</p> <p>Monetary value influences the involvement of the central procurement team, supplier base strategy, the type of supplier relationship, the criteria for supplier selection and also sourcing procedure.</p>	<p>Supplier Base strategy decisions influence and are influenced by Supplier selection decisions.</p> <p>Supplier Base strategy decisions also influence supplier relationship determination.</p> <p>Supplier selection decisions influence and are influenced by supplier location decisions.</p>
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				<p>Sourcing procedures according to monetary value is:</p> <ul style="list-style-type: none"> - up to £10,000.00: at least 3 written quotes - between £10,000.00 and £25,000.00: a written request for quotation. - above £25,000.00: a written request for proposal. 	
ORG_6	<p>The predominant use of single sourcing via various sourcing procedures based on spend.</p> <p>Sole sourcing under special conditions (monopolies, absence of viable alternatives, preferred brand).</p>	<p>Preference for sourcing locally due to lead time and convenience of relationship management.</p> <p>Use of global sourcing when it is the more reasonable option (in terms of quality, availability etc).</p>	<p>A variety of relationships ranging from transactional (overwhelmingly) to partnerships (quite rare) depending on the type of requirement.</p>	<p>Criteria for supplier selection include cost, lead time, quality (including service delivery), supplier capabilities (financial capacity and technical skills), supplier profile (accreditation or professional affiliation, compliance to sector requirements, criminal status and legal issues, previous performance, references), supplier location and sustainability (including insurance and ethics and related policy</p>	<p>Supplier selection decisions influence and are influenced by supplier location decisions.</p>

				<p>compliance).</p> <p>Selection criteria are influenced by monetary value, references, type of product or service and supplier location.</p> <p>Monetary value influences the involvement of a procurement committee, level of approval required, contract extension, supplier base strategy, the type of supplier relationship, the criteria for supplier selection (including sub-contractors) and also sourcing procedure.</p> <p>Sourcing procedures according to monetary value is:</p> <ul style="list-style-type: none"> - below £5,000.00: direct purchase/simple quotes - between £5,000.00 and £20,000.00: at least 3 	
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				<p>written quotes.</p> <ul style="list-style-type: none"> - between £20,000.00 and £50,000.00: competitive bid or request for proposal (including the use of a procurement committee with agreed terms of reference and external advertisement) - above £50,000.00: competitive bid or request for the proposal along with a written strategy which includes risk analysis (including the use of a procurement committee with agreed terms of reference and external advertisement). 	
ORG_7	<p>The predominant use of single sourcing via various sourcing procedures based on spend.</p> <p>Occasional use of backup suppliers for certain key products</p>	<p>Preference for sourcing locally (at least 80%) depending on type of product or service, lead time and donor requirement considerations.</p> <p>Exclusive use of global</p>	<p>A variety of relationships ranging from transactional (predominantly) to partnerships depending on contract duration and monetary value.</p>	<p>Criteria for supplier selection include cost, lead time, quality (including service delivery), supplier capabilities (financial capacity and technical skills), supplier profile (accreditation or professional affiliation,</p>	<p>Supplier selection decisions are influenced by supplier relationship determination decisions.</p> <p>Supplier selection decisions also influence and are influenced by</p>

		<p>sourcing for particular goods due to risk exposure.</p> <p>Considerations about a location's proneness to natural disasters, political context, product quality and regulatory enforcement also influence these decisions.</p>		<p>compliance to policies and sector requirements, criminal status and legal issues, previous performance, references), supplier location and sustainability.</p> <p>Selection criteria are influenced by monetary value, supplier location, type of product or service, and level of risk exposure.</p> <p>Monetary value influences the supplier base strategy, the type of supplier relationship, the criteria for supplier selection and also sourcing procedure.</p> <p>Sourcing procedures according to monetary value is:</p> <ul style="list-style-type: none"> - up to £100.00: cash and receipt - between £100.00 and £1,000.00: single quotation 	<p>supplier location decisions.</p>
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				<ul style="list-style-type: none"> - between £1000.00 and £10,000.00: at least 3 simple quotations - between £10,000.00 and £100,000.00: at least 3 formal quotations - between £100,000 and 250,000.00: open national tender - above 250,000.00: open international tender 	
ORG_8	A mix of single-sourcing and sole-sourcing depending on the department which is procuring and the supplier(s) involved.	Almost exclusively local due to convenience and limited procurement expertise.	A variety of relationships ranging from transactional to strategic partnerships depending on the level of risk (particularly reputational risk) exposure.	<p>Criteria for supplier selection include supplier capabilities (financial capacity), supplier profile (accreditation or professional affiliation, compliance to policies and sector requirements, criminal status and legal issues, public approval) and sustainability.</p> <p>Selection criteria are influenced by donor requirements.</p> <p>Monetary value influences</p>	<p>Supplier selection decisions influence supplier relationship determination.</p> <p>Supplier location decisions influence supplier selection decisions.</p>

				supplier base strategy and also sourcing procedure as all purchases (single or cumulative) of £10,000.00 or more require a formal contract which must be reviewed and approved by the legal team. Besides this, sourcing procedure is quite arbitrary.	
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Table 5.7 Summary of guides to decisions as identified under the procurement strategy decision areas in each organisation

5.3 Cross-case Analysis of the Theme ‘Donor Influence’

The influence of donors on procurement in humanitarian supply chains cannot be overlooked. Tables 5.8 and 5.9 both show the sub-themes and also the coding references and the data sources respectively, for each of the 8 studied cases.

Coding references	ORG_1	ORG_2	ORG_3	ORG_4	ORG_5	ORG_6	ORG_7	ORG_8
1: Accountability to donors	5	1	6	3	1	5	5	2
2: Donors' modified or lack of interest	2	1	0	0	0	0	0	0
3: Policy and procedure impact or override	24	0	8	0	0	7	9	2
4: Restricted funds	4	1	3	3	1	2	1	2

Table 5.8 Node matrix showing the coding references for donor influence in each case

Consistent across all cases were the recognition of the effect of accountability to donors and the restriction donors place on certain funds for procurements in these organisations. Apart from Org_1 which identified accountability to donors, modified or lack of interest by donors, the policy and procedural impact of donors and restricted funds as influences by donors on procurement, Org_3, 6, 7 and 8 did not acknowledge donor’s modified or lack of interest as influential on their procurement. Org_2 did not do same for policy and procedural impact, clearly because these are non-existent. Org_4 and 5 only identified accountability to donors and restricted funds as the factors that influence their procurement under this theme. Table 5.9 below evinces that the sub-themes identified are multiply attested to.

Data sources	ORG_1	ORG_2	ORG_3	ORG_4	ORG_5	ORG_6	ORG_7	ORG_8
1: Accountability to donors	3	1	2	2	1	2	2	1
2: Donors' modified or lack of interest	1	1	0	0	0	0	0	0
3: Policy and procedure impact or override	5	0	2	0	0	2	3	1
4: Restricted funds	2	1	2	1	1	1	1	2

Table 5.9 Node matrix showing the number of data sources for donor influence in each case

As may be observed from Table 5.10 below, all organisations identified the need to deliver projects and use donor resources in a fair, transparent and efficient manner so as not lose their trust and hence, their funding. Org_1, 3, 5, 6 and 7 also identified the need to be compliant with donor obligations, noting adverse consequences in failure to do so. All organisations also acknowledged that restrictions placed on funds by donors obstruct their procurement procedures and do not afford them the needed flexibility.

While Org_3, 4, 5, 6, 7 and 8 did not acknowledge this, Org_1 and 2 identified that donors’ unwillingness or inability to support them due to changes in economy or changes in their funding priorities could limit their fund availability and ability to make the needed procurements for their programmes. This is an influence that all organisations ought to acknowledge. In the case of

Org_2, it identifies the fact that its donors are sometimes not as interested in donating for programmes in certain geographical locations, thereby seriously inhibiting their procurement abilities and hence programme delivery in these places.

The sub-theme under which the most influence by donors was observed was their impact on organisational policy and procedures. However, Org_2, 4 and 5 do not acknowledge this. For Org_2 and 4, this may be explained by the absence of procurement policies and procurement expertise. For Org_5, the organisation has to acknowledge this, as it receives funding from the general public, as well as from the government, albeit this is less than 20% of their source of income (O5AR). In Org_1, donor influence here was noted in the impact it has on the design and implementation of organisational policies to reflect donors' procurement rules even to the extent of risk classification of supplier locations. Donor procurement policy positions also take precedence over the organisation's in case of conflict between the two. There is global compliance with donors' procurement rules and regulations both across the organisation and with implementation partners as well. There are instances where donor approval is required for procurement plans while there are times insistence on supplier monitoring and auditing are attached to funding packages. Org_1 is also keen on record keeping and storing of all relevant procurement decisions and documentations to provide an audit trail and to have a chain of evidence when donors come asking. Of all cases, Org_1 has the most extensive identification of donor influence on their procurement.

Org_3, 6 and 7 also admit that priority is given to donor procurement policy positions in case of conflict with their own except that for Org_7, it points out that the more stringent position would take precedence. Org_3 and 7 admit donors' influence on the design and implementation of their policies while Org_6, 7 and 8 highlight donor influence on the suppliers to work with and even procurement methods to use (in the case of Org_6). Table 5.10 below presents a summary of all of these in the studied organisations.

Cases	Accountability to donors	Donors' modified or lack of interest	Policy and procedure impact or override	Restricted funds
ORG_1	<p>Accountable project delivery and use of donor resources, failure of which could result in loss of trust and consequently, funding.</p> <p>Compliance with donor obligations.</p>	<p>Donors' unwillingness to support the organisation due to changes in economy or funding priorities thereby limiting fund availability.</p>	<p>Design and implementation of organisational policies to reflect donors' procurement stipulations (including donor classification of high-risk countries).</p> <p>In case of conflict between organisational policy position and that of donors, donors' take precedence.</p> <p>Compliance (by the organisation, local teams and implementing partners) to specific procurement rules and regulations by donors.</p> <p>Donor approval for procurement plan.</p> <p>Donor insistence on the implementation of specific reporting systems in relation to the use of provided funding.</p> <p>Record keeping and storing of relevant documentation to keep an audit trail and to satisfy donor requirement.</p>	<p>Restrictions on received funds obstructing procurement procedures and inhibiting flexibility.</p>

ORG_2	Accountable project delivery and use of donor resources, failure of which could result in loss of trust and consequently, funding.	Donors' unwillingness to support the organisation due to lack of interest in certain programmes or locations.	Not identified.	Restrictions on received funds obstructing procurement procedures and inhibiting flexibility.
ORG_3	Accountable project delivery and use of donor resources, failure of which could result in loss of trust and consequently, funding. Compliance with donor obligations.	Not identified.	In case of conflict between organisational policy position and that of donors, donors' take precedence. Procurement teams providing advice and guidance to ensure rules are observed when donors require adherence to specific procurement regulations. Design and implementation of organisational policies to reflect donors' procurement stipulations (including ensuring competitiveness, fairness and transparency).	Restrictions on received funds obstructing procurement procedures and inhibiting flexibility.
ORG_4	Accountable project delivery and use of donor resources, failure of which could result in loss of trust and consequently, funding.	Not identified.	Not identified.	Restrictions on received funds obstructing procurement procedures and inhibiting flexibility.
ORG_5	Accountable project delivery and use of donor resources, failure of which could result in loss of trust and consequently, funding.	Not identified.	Not identified.	Restrictions on received funds obstructing procurement procedures and inhibiting flexibility.

	Compliance with donor obligations.			
ORG_6	<p>Accountable project delivery and use of donor resources, failure of which could result in loss of trust and consequently, funding.</p> <p>Compliance with donor obligations.</p>	Not identified.	<p>Compliance with specific procurement rules and regulations by donors in addition to the organisation's.</p> <p>In case of conflict between organisational policy position and that of donors, donors' take precedence.</p> <p>The insistence by donors on the suppliers (or supplier lists) to use or the methods to adopt for procurements under their funding regime.</p>	Restrictions on received funds obstructing procurement procedures and inhibiting flexibility.
ORG_7	<p>Accountable project delivery and use of donor resources, failure of which could result in loss of trust and consequently, funding.</p> <p>Compliance with donor obligations.</p>	Not identified.	<p>Compliance (by the organisation, local teams and implementing partners) to specific procurement rules and regulations by donors.</p> <p>Design and implementation of organisational policies to reflect donors' procurement stipulations (including auditing of suppliers' operations and sourcing procedures and thresholds as part of donor requirement).</p> <p>In case of conflict between organisational policy position and that of donors, the more</p>	Restrictions on received funds obstructing procurement procedures and inhibiting flexibility.

			stringent rules take precedence. The insistence by donors on the supplier location.	
ORG_8	Accountable project delivery and use of donor resources, failure of which could result in loss of trust and consequently, funding.	Not identified.	The insistence by donors on the suppliers to use (e.g. not sourcing from a competitor if the grant is from a corporation).	Restrictions on received funds obstructing procurement procedures and inhibiting flexibility.

Table 5.10 Summary of donor influence on procurement in each organisation

5.4 Conclusion

This chapter presented the cross-case analysis for this study. A closer look at how SCR formative elements are pursued in all 8 cases was first undertaken. This was followed by an analysis of procurement strategy and donor influence. For all these themes, nodes matrix queries were undertaken to present useful perspectives on coding references and data sources. The latter helped to accentuate that the insights shared from the analysis were corroborated from multiple data sources. Coding references on the other hand helped to estimate the extent of coverage themes and sub-themes featured in the collected data of the various organisations. At least three tables were presented for each theme with the first two tables under each theme showing the node matrices for coding references and data sources while a summary table shows the varying perspectives and/or approaches each organisation adopted to pursue the various themes of interest. This helped compare the similarities and differences across the organisations, explanations for observed patterns were posited and useful lessons that could be learnt by other organisations were discussed.

The next chapter discusses the findings from this research as regards the objectives of this research.

6. Discussion of Findings and Presentation of Procurement Strategy Decision-making Framework

6.0 Introduction

The findings of this research are presented in this chapter and are discussed in light of the three objectives of this research. Insights from the within-case and cross-case analysis are used to determine the supply chain resilience formative elements that influence procurement decisions in humanitarian supply chains, the decision areas in humanitarian procurement strategy aimed at supply chain resilience, the relationships between them and whether these are consistent with the provisions in extant literature.

Additional findings that emerged from this research are also discussed after a procurement strategy decision-making framework aimed at incorporating resilience-building for humanitarian supply chains is presented.

6.1 Findings on Objective 1 (the SCR Formative Elements that Influence Procurement Decisions in Humanitarian Supply Chains)

Per the first objective of this research, which was “*to determine which supply chain resilience formative elements influence procurement decisions in humanitarian supply chains*”, collected data were analysed to find this out and to see how the implementation is pursued within a humanitarian context. All 14 formative elements discussed in section 2.4.1 were identified in the studied humanitarian supply chains. A new formative element – governance and accountability, emerged from the data analysis and it is noted that this plays a particularly strong role in the pursuit of supply chain resilience in these humanitarian supply chains. The details for this are presented below, followed by a discussion of the formative elements already present in extant literature and how the implementation is similar or dissimilar to those of commercial supply chains.

6.1.1 Governance and Accountability as a Formative Element in Humanitarian Supply Chains

Governance and Accountability has emerged to be a particularly important factor in influencing the supply chain resilience of humanitarian organisations especially as these organisations are largely dependent on donor funding. These organisations are accountable to numerous stakeholders including donors, supporters, employees, beneficiaries, cooperating partners, media, contractors and suppliers. This is seen in the provision of evidence for the responsible stewardship of resources, compliance with donor directives and relevant legislation and regulation to win and/or maintain their trust and confidence. Organisations facilitate this by instituting some internal measures and also ensuring it with their partners and suppliers.

Internally, a robust governance structure and systems are established to provide an established framework of delegated authority, clearly define responsibilities, have clear decision-making processes and facilitate transparency and accurate record keeping. This facilitates the segregation of duties and prevents control of all stages of a procurement process by a single person. Consequently, there is the assignment of specific risks' ownership and joint accountability where appropriate. This is done through the appointment of contract managers and the assignment of oversight and monitoring responsibilities to senior management, committees (such as audit and risk committees, anti-diversion committees, health, safety and security committees and so on) and managers (including new roles such as safeguarding managers). There is therefore the requirement for authorisation or approval of critical actions (such as contracts and extensions, payments, purchases, signing documents, process exclusion and waivers, fund usage, policies, procurement plan, data processing, media interaction) by a relevant higher office or committee both within the organisation and in the supply chain where applicable.

Transparency of financial, operational, procurement and associated decision-making processes to show accountability to relevant stakeholders is also crucial. To do this, some organisations insist on the documentation of procurement process decisions while others account for this through the use of e-procurement. The organisations further insist on internal control and the appointment of reputable external auditors to review financial performance and practices annually. Further, there is what some organisations refer to as 'proportionality'. It involves ensuring that the costs of carrying out a procurement exercise do not outweigh the benefits to be achieved and that there is the application of a corresponding risk-based approach that is commensurate with the level of risk exposure and contract value.

To ensure accountability with local partners, some of these organisations ensure that contact information for their head office is made available to all potential bidders so that they can report cases of unsatisfactory procurement processes with local teams. Random monitoring and evaluation trips to local offices also help in this regard.

For suppliers, contractual provisions detail the consequences for supplier misconduct, unauthorised actions or negligence. There is also cross-referencing with other humanitarian organisations (especially those operating in mutual aid delivery locations) that helps to ascertain supplier price quotes and similar claims.

In conclusion, even though hints to accountability have been made by authors such as Lengnick et al (2011) and Pettit et al. (2013) under human resource management, the criticality of governance and accountability is particularly pronounced in the humanitarian organisations researched. This is because of their dependence on donor funds which hence means more pronounced consequences in case breaches of any form are found within the organisations or their supply chains. The 2018 reports of safeguarding issues that arose from Oxfam's involvement in the 2010 Haiti earthquake and the impact it had on the UK humanitarian sector (Sandvik, 2019) accentuate this. This thereby justifies it to be considered on its own as a formative element within humanitarian supply chains.

6.1.2 Implementation of Extant Formative Elements in Humanitarian Supply Chains

6.1.2.1 Agility

The pursuit of agility in the 8 UK-based humanitarian organisations involves a significant dedication to the setting up of emergency procurement procedures which stipulate permitted procedural exceptions, guidelines and contingency plans (Jahre, 2017; Scholten et al., 2014). The use of framework agreements and preapproved supplier lists (Balcik and Ak, 2014; Torabi et al., 2018; Zhang et al., 2019) to shorten the procurement process during emergencies is also common. Other approaches towards agility include the use of clear delegation of roles, authority and responsibilities to enable quick procurement decisions, contractually enabling and developing suppliers and partners to act as necessary and reasonably in reaction to disruptions (Krause et al., 2007; Lentz et al., 2013; Nair et al., 2015). There is also the use of crisis management teams and contractual dispute resolution provisions (Braunscheidel and Suresh, 2009; Hohenstein et al., 2015), the deliberate selection of suppliers and partners capable of

responding quickly and sustainably to changes and using established protocols and the training of staff to identify and respond promptly to security breaches.

Considering that humanitarian organisations are reliant on funding to operate, there is also a commitment to ensure financial resilience through the use of reserve funds, diversified funding portfolio and committed long-term giving to allow for absorption of shocks and swift response in the face of disruptions. Apart from this, all the other mentioned approaches towards agility are not unique to humanitarian organisations. Due to the limited use of extra stock in the researched humanitarian organisations, this does not serve as one of the approaches to enhance responsiveness.

It is worth noting that organisations identified regulatory pressure and some donor requirements (such as restricted funds and dictated suppliers or supplier locations) as restrictive of their ability to respond quickly.

6.1.2.2 Avoidance

Consistent with extant literature, there is significant commitment to the due diligence of both employees and suppliers to ensure that risky prospective staff and suppliers are avoided (Oloruntoba and Gray, 2006; Wild and Zhou, 2011). This is done through the scrutiny of prospective employees and suppliers as well as ongoing supplier assessment and monitoring to ensure financial and technical competence and also policy, legal and regulatory compliance. Compliance is a major approach towards ensuring the avoidance of multiple risks. To this end, the case study organisations ensure legal and regulatory compliance by staying updated with legal and regulatory changes and consequent policy alignment, enforcement of organisational policies across the supply chain and participation with relevant sector groups to ensure development and implementation of sector best practice.

Creation of visibility through information sharing, clarity in communication, governmental collaboration and stakeholder participation and ensuring fairness and transparency in procurement processes also contribute to risk avoidance.

Other efforts at risk avoidance include the application of strong financial controls, quality control (by goods and service inspection, supplier site visits and that suppliers have relevant quality management systems in place), use of effective communication strategy (to ensure clear communication and avoid media gaffes), milestone payments of suppliers, use of public sector

organisation framework agreements and standard procurement category methodology. Demand forecasting, development and support of suppliers and partners and the enforcement of conflict-of-interest provisions are also used. Organisations also indicate the need for improvement in their internal procurement processes to reduce the frequency of change orders, inefficient scheduling, emergency shipments, multiple deliveries to sites and multiple contracts by different departments with the same contractor.

Finally, the organisations avoid risks through the use of contractual terms and conditions as well as contract durations to reduce their vulnerabilities as a result of supplier relationships.

Overall, there is no approach used that is unique to these humanitarian supply chains even though it is worth mentioning that efforts towards compliance are particularly heightened here due to the massive impact on reputation and hence funding should non-compliance be identified and made public.

6.1.2.3 Collaboration

Internal collaboration in the studied humanitarian organisations involves the creation of awareness and visibility through information sharing and the amalgamation of internal expertise to undertake various procurement tasks such as contract awarding, supplier evaluation, mitigation of identified risks, fraud prevention and auditing. There is collaboration with governments to secure scarce medication, facilitate legal and regulatory compliance, work in high-risk or sanctioned environments and use of government framework agreements. There is also the reporting of suspected incidents of crime and abuse to relevant governmental organisations. These organisations also work with the media to enhance public response to disasters. Collaboration with suppliers and partners include the provision of training and expert support, supplier and partner development, information sharing, legal and regulatory compliance and supplier-held inventories. They also work with potential suppliers to finetune requirements for Request for Proposals (RFPs) and also with existing suppliers for continuous performance evaluation and improvement.

Collaboration between humanitarian organisations involves the exchange of expertise and supplier information, supplier monitoring in mutual-aid-delivery locations, development of innovative ways of working, participation in inter-agency logistics coordination meetings, joint storage options and working together to address disruptions (Balcik et al., 2010; Maghsoudi and Pazirandeh, 2016; Majewski et al., 2010; Nikkhoo et al., 2018; Walker and Maxwell, 2009).

Even though there are some indications of willingness to procure together in large quantities to exploit economies of scale, findings show this does not happen.

6.1.2.4 Culture

Humanitarian organisations in this research pursue a resilience-seeking culture through the creation of a combination of risk awareness, learning and whistleblowing and reporting cultures (Ali et al., 2017; Braunscheidel and Suresh, 2009; Christopher and Peck, 2004; Datta, 2017; Hohenstein et al., 2015; Kamalahmadi and Parast, 2016; Lengnick-Hall et al., 2011; Pettit et al., 2010; Sawyerr and Harrison, 2019; Schulz and Blecken, 2010; Tukamuhabwa et al., 2015; Urciuoli et al., 2014).

There are significant commitments towards ensuring ethical behaviour from employees or representatives, awareness creation within the organisation and with partners on early and effective identification, management, reporting and control of risks. The organisations also pursue a learning culture through a myriad of ways, including the recognition of the need for continuous learning and improvement, the institution of robust policy review and renewal schedule, effective policy monitoring and revision based on recorded incidents (both internally and externally), investments in organisation-wide training, use of learning committees, the institution of research, evidence and learning hubs and monitoring of supplier and partner actions to modify procedures if need be. This requires an insistence on the recording of lessons learned at the end of each investigation, identification of improvable operational areas, incorporating lessons learned into training and using previous supplier performance to inform future decisions.

The last aspect of culture as a formative element in these UK-based humanitarian organisations is the facilitation of a whistleblowing and reporting culture by maintaining clear and transparent processes for the reporting of breaches, abuses and suspect crimes to relevant offices, agencies and authorities. This is deemed so important that some organisations have invested in digital reporting systems which collate reports of incidents and allow for investigations and associated administration of reports. Disciplinary actions are even instituted in some organisations to ensure staff do not fail to report on incidents of suspected abuse or crime. The heightened attention to whistleblowing and reporting culture in these organisations are a direct result of the 2018 safeguarding crisis.

6.1.2.5 Flexibility

Decision flexibility and sourcing flexibility are pursued in the case-study humanitarian organisations to improve their procurement decisions towards resilience. Decision flexibility is attained through the use of a flexible decision-making framework which allows for localised or expert decision making depending on contract value and level of risk exposure. Cross-training of employees also helps raise the procurement decision-making competence of local and departmental teams. When contract values and/or risks are high, the expertise of the central procurement teams is called upon. This approach is consistent with provisions in literature (Manders et al., 2017; Sawyerr and Harrison, 2019; Sheffi, 2005b; Vecchi and Vallisi, 2016) even though it must be noted that this approach is particularly important with these organisations as they typically have very small teams of procurement experts.

Sourcing flexibility is pursued through the use of framework agreements (Datta, 2017; Nikkhoo et al., 2018; Pettit et al., 2010, 2013; Tang, 2006b; Tukamuhabwa et al., 2015), preapproved supplier lists, backup suppliers (Hohenstein et al., 2015) and provisions for alternative procurement procedures under emergency conditions. Though consistent with provisions within commercial supply chains, the last-mentioned approach is particularly useful for humanitarian organisations that deal with sudden-onset disasters. The use of multiple sourcing is scarce in these organisations and there is no indication of sourcing a product or service using suppliers at different locations (either simultaneously or with one as a backup) to ensure resilience.

6.1.2.6 Information Technology

IT as a formative element in the organisations in this study involves the use of a SharePoint to provide document accessibility, information sharing, process monitoring, oversight and auditability (Christopher, 2000; Datta et al., 2007; Pereira, 2009; Pereira et al., 2014; Rashman et al., 2009). There is also the digitisation of processes and document storage to enhance efficiency (Sheffi, 2001). Furthermore, there is the use of an intranet system to facilitate reporting, administration, due diligence, investigations and lessons learnt, and the use of IT for training through e-learning and webinars. IT also facilitates the use of e-procurement platforms to enhance efficiency, transparency, documentation and accountability (Giunipero and Aly Eltantawy, 2004; Tukamuhabwa et al., 2015). It further allows for the analysis of data outcomes to facilitate trend analysis and future incident prevention. Of all these, the use of SharePoint and

digitisation of document storage are fairly common. The use of IT for e-procurement, training and data analysis can be adopted by more organisations.

6.1.2.7 Integration

There is the pursuit of internal integration through the creation of visibility via information sharing and stakeholder consultation (Pereira et al., 2014; Szwejczewski et al., 2005) while lateral integration is pursued through multi-functional committees (such as the procurement committees or tender evaluation committees) for more reliable decision making (Flynn et al., 2010; Foerstl et al., 2013; Germain and Iyer, 2006; Koufteros et al., 2005). External integration is not common even though the organisations do establish strategic partnerships with some suppliers.

6.1.2.8 Redundancy

Tangible redundancy is pursued in these organisations through the use of off-site data backup, supplier-held (prepositioned) stock (Jahre, 2017; van Wassenhove and Pedraza Martinez, 2012) and keeping limited stock of relevant inventory (usually at local sites, very close to point of need). It was not unnoticeable that the studied UK-based humanitarian organisations did not keep much inventory except in exceptional cases. The reason for this was cost-efficiency (Christopher and Peck, 2004; Sheffi and Rice Jr., 2005).

There is significant reliance on intangible redundancy in the humanitarian organisations studied. Approaches to this end include electronic data backup and knowledge backup through cross-training of relevant staff on procurement (Sheffi, 2001; Zsidisin and Wagner, 2010), decision redundancy (Sawyer and Harrison, 2019), multiple supplier relationships through framework agreements and/or backup suppliers (Jüttner and Maklan, 2011; Namdar et al., 2018; Zsidisin and Wagner, 2010), having fund reserves and multiple sustainable sources of funding.

Since there is limited procurement expertise in these organisations, cross-training of local and departmental staff to understand and undertake procurement is particularly crucial for these organisations. It is also noted that multi-sourcing is not common, but this is offset through the use of framework agreements and preapproved suppliers which provide these organisations alternate suppliers to fall on in case the lead supplier fails. The unique approach here that is not present in most commercial organisations is the use of fund reserves and multiple sustainable

sources of funding. This is important for the financial resilience of these organisations as they are donor-funded.

6.1.2.9 Robustness

This formative element relates to the ability of a supply chain to maintain an acceptable level of performance during a disruption (Kouvelis et al., 2006; Meepetchdee and Shah, 2007) and is to be determined by the weakest link in the chain (Kleindorfer and Saad, 2005). Hence, improving on this requires the identification of these weak links and improving their ability to resist or avoid disruptive change.

In UK-based humanitarian organisations studied, these points of increased vulnerabilities include funding and procurement expertise and their consequent risks. Approaches to dealing with these include having diversified income streams and reasonable levels of fund reserves and cross-training of employees. There is also monitoring of suppliers (including site visits) and relationship management to identify weaknesses in the supply chain and mitigating against likely sources of disruptions. Framework agreements and supplier held prepositioned stocks also provide organisations with fallback options during disruptions.

6.1.2.10 Security

Common approaches used to ensure security as a resilience formative element in humanitarian organisations studied include security training, insurance, data security and fund reserves (Bakshi and Kleindorfer, 2009; Dittmann, 2014; Kamalahmadi and Parast, 2016; Kleindorfer and Saad, 2005; Pettit et al., 2010, 2013; Sheffi, 2001; Tang, 2006b; Urciuoli et al., 2014). The organisations conduct mandatory security training for staff to enhance their abilities to detect and respond to security breaches, identify specific security risks relevant to their roles and to incorporate security considerations in their decisions. Security training is also provided for all staff and volunteers who travel overseas. Data security is ensured through data encryption, restricted access to sensitive data, routine external testing of IT systems, contractual provisions for supplier security measures and compliance, regular review of external organisational cyber-attacks and applying lessons learnt and the recruitment of specialist staff to support security initiatives and embed best practice.

Fund reserves provide financial security in case of unexpected economical volatility. With insurance, organisations hold insurance for their employees, offices, equipment and public

liability. Suppliers are also contractually required to maintain all relevant and applicable insurances (such as professional indemnity insurance, employers' indemnity, product liability insurance, public liability insurance etc) with a reputable insurance company to cover liabilities and claims arising during the term of the agreement.

Less common approaches include retention of all signed or sealed contracts (copies and variation agreements) in fireproof safes and also use of money safes.

6.1.2.11 Sustainability

Socially, these organisations pursue sustainability by employing local staff and procuring locally where possible. There is an effort at ensuring that ethical staff behaviour underpins all procurement activities. Organisations also show commitment to eliminating unlawful discrimination and exploitative practices (such as unfair wages and modern slavery) through extensive due diligence of both prospective and existing suppliers' activities and influencing (including by contractual obligations) partners, agents, contractors and suppliers' ethical standards.

The studied humanitarian organisations ensure economic sustainability by improving on their financial resilience. To do this, organisations diversify their funding portfolio, maintain reasonable fund reserves, stay abreast with changes in fundraising regulations and ensure compliance. They also invest in deepening donor and supporter relationships and the mitigation of identified financial risks (especially those that could affect donor support). Improved cost management, efficient stock purchase, ensuring sustainable and transparent financial management, growing unrestricted income, contracting consultants to support programme funding and evaluating suppliers' financial capabilities over contract duration are other means to this end.

Environmentally, organisations incorporate environmental concerns and carbon footprint in procurement decisions. Therefore, there is an effort towards the use of 'green' electricity where possible, use of smart electricity meters, increase use of fuel-efficient vehicles and recycling of unsold or damaged donations. On the part of suppliers, organisations also recognise their ability to influence environmental sustainability through their procurement. Hence, prospective suppliers are taken through extensive due diligence and are influenced (including by contractual obligations) to ensure their environmental standards, sourcing of goods and services, delivery

processes, use of heating, lighting, IT systems, ventilation and transportation have minimal negative environmental effects.

Organisations use policies, contractual obligations and supplier selection criteria to enforce sustainability measures. Despite these efforts towards sustainability, true evidence of commitment towards sustainability is wanting as there is a lack of Global Reporting Initiative (GRI) reporting in the sector. This is consistent with Haavisto and Kovács' (2013) findings.

6.1.2.12 Top Management Support

Commitment from top management in the studied humanitarian organisations towards resilience creation is shown first in their acknowledgement of their role in resilience and making it a priority by taking responsibility for risk management and the effectiveness of internal control (Christopher and Peck, 2004; Sawyerr and Harrison, 2019; Tukamuhabwa et al., 2015). There is the participation of directors in relevant training in some organisations at least once a year. Others either create new roles or committees to deal with specific types of risks or they engage consultants to improve their SCR by evaluating the weaknesses of their supply chains and proffering solutions. Further, some organisations invest in improving their financial resilience while the directors and senior management of others lead, challenge and monitor the implementation of ethical and sustainable procurement.

These efforts notwithstanding, it is apparent that there is significant commitment from top management to deal with the more obvious risks like safeguarding risks (especially in the light of recent developments in the sector), while similar efforts at improving procurement processes and other aspects of SCR are lacking. Not many organisations even acknowledge the need to invest in these.

6.1.2.13 Human Resource Management

As a SCR formative element, human resource management in the humanitarian organisations studied, is pursued through recruitment, remuneration, training, disciplinary action, documentation, and policies, protocols and procedures. Organisations use rigorous recruitment and screening processes (Walker and Maxwell, 2009) to select competent and low-risk employees. There is direct hiring and hiring of local workforce to improve responsiveness. Specialists are also recruited to deal with particular risks (in relevant regions) that organisations

have identified as high-probability and high-impact. Recruitment is also used as a means to improve social sustainability through fair recruitment practices within organisations and in their supply chains. Recruiting staff from different ethnic and/or regional backgrounds to head local units is used as a tool to reduce the propensity of collusion and corruption. Even though not as widespread as it ought to be, some organisations recognise the need to have competent procurement officers to handle their procurement and supply chain-related decisions.

In terms of remuneration, the organisations acknowledge the need to have competitive remuneration (including regular salary reviews) proportionate to the complexity of each role to attract, retain and motivate skilful, experienced and knowledgeable employees. Organisations put in place policies, protocols and procedures to guide and regulate staff behaviour and decision making.

With regards to knowledge management, there is insistence on documentation (both physical and digital) to enhance accessibility, for approval purposes, ensure business continuity, provide clarity, provide information, provide a chain of evidence for auditing purposes and to enhance transparency (Sheffi, 2001). Staff training and support are also used to raise awareness of the policy, procedural, legal and regulatory provisions and obligations relevant to their jobs. They also improve employees' risk awareness and mitigation skills, enhance their decision-making abilities and provide knowledge or skills backup – particularly for procurement functions (Ali et al., 2017; Hohenstein et al., 2015; Jüttner and Maklan, 2011; Sheffi, 2001). Suppliers are sometimes contractually enjoined to provide relevant training for their staff.

Finally, organisations use disciplinary action to ensure adherence to policy provisions on ethical, legal and regulatory compliance and to mitigate staff misconduct.

6.1.2.14 Decision Making

Humanitarian organisations in this research exploit a decentralised and flexible decision-making structure (Sawyer and Harrison, 2019; Sheffi, 2005b; Vecchi and Vallisi, 2016) to allow for better and more informed localised/departmental decision making while requiring referral of more complex, high risk/value decisions to a small-sized central procurement team. This team supports and oversees local and departmental decisions to monitor, guide, authorise, approve or redress them without being actively involved at the micro-level. They also train staff and suppliers to improve their supply chain understanding, understand decision-making guidance in organisational policies and protocols, and to make relevant security and sustainability

considerations, for improved procurement decision making. Due to the limited procurement expertise in the sector, this approach is critical.

There is also the use of procurement committees composed of members from different functions to help make informed decisions and prevent an individual from having complete control over high value/risk procurement decisions. Documentation of procurement decisions is also mandated to allow for decision redundancy and lessons learnt.

It must be pointed out that the centralised procurement team must also have enough power to intervene in local and/or departmental decisions when high-level risks are noted. Findings from this research show that in some organisations, even when procurement experts identify risky situations, they do not have the power to intervene. Procurement rules and policies can set contractual value boundaries at which procurement committees are mandatory as is the case in some organisations.

To conclude, findings indicate that cross-training, use of framework agreements (and preapproved supplier lists) and ensuring financial resilience are the most critical techniques humanitarian organisations need to pursue at the least to improve their resilience. This is because, cross-training influences agility, avoidance, decision making, flexibility, human resource management and sustainability. Framework agreements and preapproved supplier lists also enhance agility, avoidance, collaboration, flexibility, redundancy and robustness while pursuing financial resilience through strong fund reserves and sustainable income streams helps to enhance agility, avoidance, redundancy, robustness, security and sustainability.

6.2 Findings on Objective 2 (Procurement Strategy Decision Areas and Identified Relationships between Them)

The second objective of this research is “*to determine the decision areas in humanitarian procurement aimed at creating supply chain resilience, the relationships between them and empirically ascertain whether they align with what is provided in extant literature*”. The decision areas identified align with what is provided in extant literature. The findings on these and the relationships between them are presented as follows.

6.2.1 Supplier Base Strategy

Humanitarian organisations in this research predominantly single-source their products and services using various sourcing procedures that are determined based primarily on the value of spend. Organisations also sole-source under special conditions such as in the case of monopolies, technical or intellectual copyright reasons, absence of viable alternatives or if a supplier is a preferred brand.

Due to the overreliance on single sourcing, the primary means by which organisations ensure resilience is through the use of framework agreements and preapproved supplier lists so that established relationships with suppliers can be exploited in case of failure of contracted suppliers (Jahre, 2017; Namdar et al., 2018; Yu et al., 2009).

A few organisations occasionally multisource by dual-sourcing from suppliers of the same tier (Ho et al., 2015) or by having backup suppliers for items they deem critical (Christopher and Peck, 2004). There are a few organisations that have no discernible supply base strategy approach so that decisions taken here are without resilience in mind.

Formative elements that may be affected by supply base strategy decisions include redundancy, flexibility, robustness and avoidance. Choosing to have multiple suppliers, backup suppliers or a flexible supply base translate into avoiding risks that could arise from relying on a single source. These afford redundant relationships which hence allows for flexible supply and the ability to maintain reasonable levels of operations even when a disruption occurs.

6.2.2 Supplier Location

Decisions on where to source from are based on the type of product or service or donor requirements. Preference for local sourcing is predominant due to the obvious benefits of shorter lead times, supply chain reliability, regulatory compliance, the convenience of relationship management and monetary value. Other factors such as complexity and vulnerability of relationships with overseas suppliers (Thun and Hoenig, 2011), financial constraints, complex licensing regimes, embargoes on importation, remoteness or isolation of some aid delivery locations and sustainability considerations also influence the preference for local sourcing. However, there are organisations that source locally, not only because it is convenient, but also because they admit not having the required procurement expertise to manage long supply chains.

Notwithstanding, there is the use of global sourcing for high-value corporate-level procurements and/or when it is the more reasonable option (in terms of quality, availability, value for money, less risk etc). It may also be due to donor stipulations while considering the mitigation of associated risks (such as legal and regulatory compliance, reputational). Indeed, when risk exposure is deemed too high to source sensitive materials such as medication at delivery locations, some organisations source exclusively global.

Considerations about a location's proneness to natural disasters, political context, product quality and regulatory enforcement also influence these decisions. Therefore, even though local sourcing is preferred, risk exposure strongly determines the location where products are sourced from as organisations do not only look at cost.

None of the organisations studied adopted a mixture of both local and overseas suppliers for the same product or service as prescribed by Sheffi (2001). As a result, flexibility and redundancy are formative elements organisations are currently not enhancing through their supplier location decisions. Organisations must explore this option and could do this by having both local and overseas suppliers on framework agreements. However, risk avoidance, agility, security, sustainability and integration are pursued. Suppliers which are close to points of need increase responsiveness, help avoid risks associated with long relationships, help reduce organisations' carbon emissions and can facilitate external integration. Similarly, the selection of less risky locations also helps organisations avoid a myriad of risks (such as financial, reputation, legal or regulatory risks) as discussed above.

6.2.3 Supplier Relationship Determination

A variety of relationships ranging from transactional (which is the commonest) to collaborative long-term relationships and partnerships are used in humanitarian organisations. The factors that influence which option to go with include type and nature of the requirement, monetary value, criticality or importance of goods or services, duration of supply requirement, availability of alternative sources (Sheffi, 2001, 2005b), level of risk (particularly reputational risk) exposure. One organisation also indicated the need to ensure sustainability across the supply chain as a reason for pursuing closer relationships while another indicated that a supplier's performance and track record could influence its relationship from moving on from transactional to a closer type of relationship.

From these, it can be seen that most of these organisations understand how closer relationships could be used to mitigate risks and improve upon SCR. Nevertheless, a few organisations even though they indicated the presence of various types of relationships within their supply chains could not show the need for resilience as an influencing factor in making those determinations.

Supplier relationship decisions have implications for integration (externally), avoidance (e.g. using close relationships to mitigate risks associated with single or sole sourcing), collaboration and decision making (as it influences how much information sharing and visibility may be required), culture and human resource management (through training and replication of resilience-seeking culture across the supply chain). Top management support however may be required here to facilitate some supplier relationship decisions as their buy-in is required if very close relationships with certain suppliers is identified as a necessary SCR requirement.

6.2.4 Supplier Selection

Supplier selection decisions may be classified under supplier selection criteria or sourcing procedure. Findings from this research indicate that selection criteria in humanitarian organisations include cost, delivery schedule and lead time, quality (including service delivery), supplier capabilities (financial capacity and technical skills), supplier location, sustainability (including insurance and ethics and related policy compliance) and supplier profile (including accreditation or professional affiliation, compliance to policies and sector requirements, criminal status and legal issues, risk profile, previous performance, references).

These are consistent with provisions in literature (Aissaoui et al., 2007; Balcik and Ak, 2014; Barroso et al., 2008; Blome and Schoenherr, 2011; Gaziulusoy, 2015; Giunipero and Aly Eltantawy, 2004; Govindan et al., 2013, 2016; Grimm et al., 2014; Hosseini and Barker, 2016; Hu and Dong, 2019; Luthra et al., 2017; Sawyerr and Harrison, 2019; Schultz and Søreide, 2008). Each of these allows the organisations to critically evaluate suppliers and ensure that they are not unnecessarily exposed to risks because of their contractual relationships with them.

As sustainability is a common criterion in supplier selection in these organisations, supplier selection decisions influence it as a formative element. They also influence an organisation's agility, robustness, flexibility, avoidance, decision making (in the use of procurement committees) and collaboration (when supplier selection is done in fairness and transparency). On the other hand, to facilitate better supply selection decisions, formative elements such as Information Technology (use of e-procurement), human resource management (through training,

documentation, disciplinary action) and governance and accountability (by requiring approvals and authorisation, ensuring accountability to donors, internal control etc.) are required.

Sourcing procedures used in these organisations include single bids, written quotes, negotiated procedures, open (national or international) tender and restricted tender (Tikkanen and Kaleva, 2011). Findings indicate that these decisions are primarily influenced by the monetary value of contracts and sometimes also dictated by donors. Besides low-value contracts where single bids are accepted, most organisations use a competitive bidding process to select suppliers, with open international tenders being the preferred method for high-value and/or high-risk contracts. This proves to be the best sourcing procedure as it ensures compliance to donor requirements, legal and regulatory provisions, and facilitates the selection of the most competent, least risky and best value suppliers. Competitive bidding also ensures transparency and fairness which increase trust with prospective suppliers and facilitates collaboration towards resilience (Beamon and Balcik, 2008; Pazirandeh and Herlin, 2014).

It was also found that several factors though they may not necessarily be evaluation criteria for suppliers, do influence selection criteria in humanitarian organisations studied. These include donor requirements, monetary value, supplier location, type of relationship determined for supply requirement, supplier base strategy decisions, need for fairness, level of risk exposure, type of goods or services, the urgency of requirement and how valuable the contract is for the organisation.

In the case of monetary value and donor requirements, they do not only influence supplier selection but also the other decision areas. A discussion on these is presented below.

6.2.5 Monetary Value

Findings from this research indicate that the monetary value of contracts influences multiple decisions in humanitarian supply chains. To cater for the right levels of security, accountability and stewardship of donor funds, the level of spend influences the type of supplier relationship and its management, sourcing procedure, supplier base strategy and the criteria for supplier selection (including for sub-contractors). It also influences the level of approval required for purchases or contract extensions and the involvement of central procurement teams or procurement committees in decision making. In some cases, high-level expenditures with local partners mandate them to be externally audited.

In terms of supplier relationship determination, some organisations recognise the need for closer relationships to facilitate monitoring, evaluation and support when budgetary allocations are high. For requirements where economies of scale may be advantageous, organisations choose to source from a single supplier to provide them with the required product or service across all their operations. Supplier scrutiny and due diligence also become more intense with increasing levels of spend.

Even though many of these seem manifestly apparent, the impact of these on the SCR of humanitarian supply chains is quite high because they are primarily funded by donor funds. Ineffective management of donor resources and/or financial misappropriation carry higher stakes here than in commercial supply chains.

6.2.6 Donor Requirements

Donor requirements also influence supplier selection and supplier location decisions. Organisations may modify their supplier selection criteria based on the specifications of a donor funding agreement. Under such circumstances, organisations seen as direct competition to donors or organisations from certain geographical locations classified as high risk or organisations with particular political stance may be excluded from bidding for contracts. In certain cases, donors even stipulate the list of organisations or geographical locations from which procurements may be done under their funding agreements.

6.2.7 Relationships between Decision Areas

The most commonly identified relationship was the impact of supplier location decisions on supplier selection. This is the case as many of these organisations prefer local sourcing. Further, because a supplier's location impacts lead time and sustainability considerations (in terms of carbon emissions and enhancing local economies) and both of these form part of supplier selection criteria, this influence is inevitable. Further, a supplier's location may influence supplier selection if a first or second-tier supplier is considered to be in a location classified by the organisation or its donors as high risk. Under such circumstances, there may be exemptions or a more rigorous due diligence process. Different cultural, legal and regulatory paradigms in different countries may also affect how suppliers are evaluated.

On the other hand, supplier selection criteria and the type of service or product being purchased (e.g. pharmaceuticals or medication) may exclude certain locations due to the level of risk exposure in there. Donor requirements also affect supplier selection criteria which then, in turn, results in the exclusion or imposition of certain locations where a supply may be sourced from.

Supplier selection decisions also impact supply base strategy decisions when an organisation in its supplier selection criteria insists on sourcing from a supplier capable of global delivery of the required goods or services thereby resulting in the need to single source for monetary value optimisation. The reverse influence may also be observed when some suppliers seek exclusivity or non-compete clause or when it is not cost-effective to have formal contracts with suppliers.

The impact of supply base strategy on supplier relationship determination is revealed when prevailing market conditions dictate sole-sourcing. Under such circumstances, having close relationships is a must if resilience is not going to be compromised.

When a supply need is critical or of high value to an organisation, having a closer relationship with the supplier may be predetermined before the selection of a supplier. In such cases, the selection criteria are made more strict and robust to select the most competent but least risky supplier. Because single sourcing is by far the most predominant supply base strategy in humanitarian organisations, supplier selection decisions influence supplier relationship determination when supplier selection processes reveal unavoidable high-risk exposure. At other times, it may be that monetary value is high. Under such cases, closer relationships are necessitated as organisations would want to work closely with suppliers to monitor and mitigate risks or develop suppliers' capability.

Multi-sourcing (including simultaneously sourcing from suppliers from different locations) could be an option to mitigate high-risk procurements but since the studied humanitarian organisations rely quite heavily on single sourcing, this identified relationship between supplier selection and supplier relationship determination is required.

Seeing that some of the relationships identified from this research are absent in the conceptual framework developed from literature (See Figure 2.5) while others there are absent here, a revised framework reflecting the identified relationships from this research is presented in the next section.

6.2.8 Revised Framework for Procurement Strategy Decision Areas Aimed at Supply Chain Resilience

Newly identified relationships from this research were the influence of supplier relationship determination and supplier selection on each other as well as supplier selection on supplier location. See Figure 6.1 below. Further, the above discussions show the impact of monetary value on supply selection, relationship determination and supply base strategy as well as the impact of donor requirements on supplier selection and supplier location. These are relevant in determining procurement strategy in humanitarian supply chains when SCR is desired.

It is noted that supplier location decisions have not been identified to influence supply base strategy decisions in humanitarian organisations as organisations do not exploit Sheffi's (2001) simultaneous use of a mix of local and overseas suppliers.

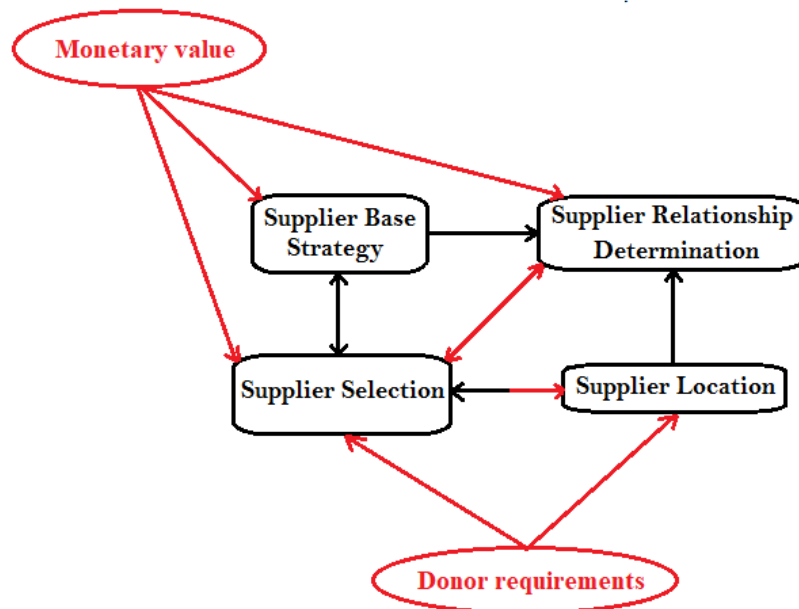


Figure 6.1 Conceptual framework showing procurement strategy decision areas, the relationships between them and the impact of donor requirements and monetary value on these in humanitarian supply chains

The next section presents a decision-making framework based on insights from the framework in Figure 6.1.

6.3 Research Output on Objective 3 (Decision-making Framework)

Findings of this research indicate that these humanitarian organisations generally do not recognise that decisions under one area in their procurement strategy need to be accompanied by

corresponding decisions in another area in order not to compromise the resilience of their supply chains. As an example, even though sole-sourcing under supply base strategy decisions necessitates close relationships with that supplier under supplier relationship determination, only Org_3 and Org_5 acknowledged this. Other organisations (e.g., Org_4) were unaware of these relationships and so decisions made under each decision area were arbitrary, with no consideration for resilience whatsoever.

Thus, to help make these relationships more obvious and to aid procuring officers in humanitarian organisations to make decisions that will not unnecessarily expose their supply chains, the following framework (Figure 6.2) is presented. The framework is presented in a matrix based on the relationships identified in Figure 6.1.

As has been indicated in the discussions above, humanitarian organisations may be required to make certain decisions based on multiple influences including donor requirements, monetary value, convenience, organisational-value (or reputational) expediency or brand preference. The rows in the matrix indicate these types of decisions under supplier base strategy, supplier location, supplier selection criteria and monetary value. The columns present the corresponding decisions in other decision areas that may be taken in addition to the initial decisions. Proposed decision options that will not adversely affect SCR are indicated in green. Decisions that may be taken once the proper context and justification are given are in yellow while those which will compromise SCR are indicated in red. Inapplicable portions were left blank.

An example of how the framework can be applied is explained as follows. Under supplier relationship determination, if an organisation decides to have a transactional relationship with a supplier as a predetermined decision, single-sourcing is the prescribed supplier base strategy. Thus, this is indicated as green in the framework. Multi-sourcing is indicated as yellow because it can be considered if justifiable reasons are provided but this approach requires extra resources to make and maintain and thus may not be the most efficient option. Sole-sourcing is not preferable here and is therefore in red. In terms of supplier location, local sourcing is best (green) unless goods or services are not available locally or donors require procurement to be done overseas (yellow). Supplier selection can proceed through standard due diligence processes (green) unless the transaction is identified as posing enough risks to require a stricter procedure (yellow) and the use of a procurement committee (yellow). Investment in super strict due diligence which may involve multiple site visits, a closer review of supplier's policies, levels of approval required, supporting business case and so on, may not be cost-efficient here (red). Direct quotes and multiple written quotes should suffice for sourcing procedure (red).

With this understanding, it can be seen that when using preferred suppliers, sole-sourcing is not proposed while overseas sourcing or a combination of local and overseas sourcing when multi-sourcing will require some justification. Super strict due diligence and use of open tender may not be resource-efficient. When an organisation decides to pursue a close relationship with suppliers, supplier base strategy and supplier location decisions do not threaten SCR if adequate justification is given for multi-sourcing and overseas sourcing. Super strict due diligence and use of procurement committees should be mandated and the prescribed sourcing procedures are open national or international tenders. Negotiated procedures and restricted tenders may be permitted only under exceptional conditions.

Irrespective of the mandated supplier base strategy, supplier location decisions do not expose the supply chain even though local sourcing is preferred over overseas sourcing due to obvious benefits. Overseas sourcing may be pursued based on donor requirements, local risk exposures and availability. When sole sourcing, very strict due diligence and the use of inter-functional teams is required to ensure risks are adequately mitigated. The use of preferred suppliers is suggested for multi-sourcing even though justifications may be made for transactional and close relationships. Direct quotes and standard due diligence procedures are not prescribed for multi-sourcing, but all other supplier selection decisions may be pursued based on context, monetary value or donor requirements.

Supplier relationship determination and supplier base strategy decisions do not necessarily expose a humanitarian supply chain to risks when supplier location decisions are mandated. It must be said however, that decisions to multi-source may require some justification for either local or overseas sourcing but the latter may require a closer relationship to offset the risk exposure due to the distances involved. When sourcing overseas, standard due diligence and direct quotes are not prescribed, and the use of multiple written quotes will require some justification. Supplier selection decisions for local sourcing will depend on monetary value, donor requirement and level of risk exposure based on the type of product or service being procured.

When low to medium risk, non-critical products or services are being procured, or when low to moderately risky suppliers are mandated, close relationships, sole sourcing, heightened due diligence and open tenders are not prescribed as they are not resource-efficient decisions. Multi-sourcing (including using a combination of local and overseas suppliers), overseas sourcing (only in the absence of a local supplier), use of procurement committees, negotiated procedure and restricted tender will all require justification. Critical or high-risk products or services and/or high-risk suppliers require close supplier relationships. No other type of relationship is prescribed as

they will compromise SCR. Sole-sourcing when market dynamics dictate it, single-sourcing with framework agreements and multi-sourcing (including using primary and backup suppliers) may be used. When local sources are available, they should be the preferred option, but overseas suppliers may be used in case of local unavailability or in a location-mix multi-sourcing approach. Prescribed supplier selection decisions include super strict due diligence, use of procurement committees, open tenders, negotiated procedure (for complex or highly specialised supply requirement such as IT services) and restricted tender (with justification). When a humanitarian organisation decides to source from a supplier with global delivery capability (for cost-efficiency reasons, convenience or preference), close relationships are the best option while single sourcing will be necessitated by the selection criteria. Sourcing may be done locally or overseas based on availability while prescribed supplier selection decisions include super strict due diligence, use of procurement committees, negotiation procedures (under exceptional conditions) and open tenders. Use of relatively less strict due diligence and restricted tender may only be used with sufficient justification.

There may be situations where multiple predetermined options may exist, for example, donor requirements demand overseas supplier and the monetary value involved is high. Here, the stricter decision between the two takes precedence for the various corresponding decisions. Thus, in the given example, the only prescribed supplier relationship will be a close one. For a medium value procurement, it can be seen that a close relationship may only be necessitated with some justification, as this is resource-intensive. A preferred supplier would be the better option in that case.

Having explained the decision-making framework and how to use it to guide procurement decision making towards resilience, the third objective of this research has been attained. This decision framework is simple and easy to understand and can be used even by persons with limited procurement expertise to make decisions that do not compromise the resilience of their supply chains. This is particularly important as procurement expertise is limited in the humanitarian sector.

Additional insights were gleaned in the course of this research and this is presented in the section below.

Predetermined option		Corresponding decisions in other decision areas																	
		Supplier relationship determination			Supplier base strategy			Supplier location			Supplier selection								
		Trans- actional	Prefer- red suppliers	Close	Sole sourcing	Single sourcing	Multi sourcing	Local	Over- seas	Local and over- seas	Selection criteria				Sourcing procedure				
											Standard due diligence	Strict due diligence	Super strict due diligence	Use of procure- ment commit- tee	Direct quotes	Multi- ple written quotes	Negoti- ated proce- dure	Restrict- ed tender	Open national tender
Supplier relationship determination	Transactional																		
	Preferred suppliers																		
	Close																		
Supplier base strategy	Sole sourcing																		
	Single sourcing																		
	Multi sourcing																		
Supplier location	Local																		
	Overseas																		
Supplier selection criteria	Low to medium risk, non-critical products or services or moderately risky suppliers																		
	Critical or high risk product or service and/or high risk suppliers																		
	Supplier with global delivery capability																		
Monetary value	Low (£0-10,000)																		
	Medium (£10- 50,000)																		
	High (above £50,000)																		

Figure 6.2 Procurement strategy decision-making framework aimed at incorporating resilience-building for humanitarian supply chains

Key to Figure 6.2	
	Supply chain resilience will not be compromised
	May be an acceptable option in a given context or with some justification
	Selected option will increase vulnerability of supply chain
	Not applicable

6.4 Additional Findings (Donor Influence on Procurement and SCR in Humanitarian Organisations)

Emergent from the analysis of collected data in this research was the finding of the influence of donors on humanitarian procurement and the effects this may have on the resilience of their supply chains. This influence may be seen in terms of accountability to donors, donor restriction on fund usage, their modified or lack of interest and their impact on or override of existing organisational policies or procedures.

Since significant portions of the incomes of humanitarian organisations are from donors (whether general public, statutory bodies, agencies or private corporations), organisations recognise and acknowledge the need for accountable project delivery and use of donor resources. Understanding that failure to do this could result in loss of trust and consequently funding, these UK-based humanitarian organisations typically show great effort in putting in measures to ensure accountability and compliance to donor obligations. This hence translates into measures such as staggered payment of suppliers through milestone payments to ensure supplier performance and completion of contracts, enhanced transparency through the reporting of activities not only from a financial perspective but an effectiveness perspective as well, and obligatory monitoring and conducting of regular impact assessments of activities.

Accountability to donors also drives commitment to high ethical standards within the organisations' procurement as well as across their supply chains through the robust due diligence of prospective suppliers to ensure compliance to relevant legal and regulatory provisions and donor requirements. To this end, some organisations invest in the digitisation of their processes and facilitating global internet access across the organisation. These efforts are necessary not only due to the need for compliance or reducing the supply chain vulnerability of the humanitarian organisations but also to ensure that donors are not exposed to reputational damage by association due to incompetent supplier due diligence by aid organisations.

Donors' influence on humanitarian procurement also shows in the external effects on funding which though may be outside of aid organisations' control would still affect their ability to procure and deliver aid. Economic downturns in the UK and elsewhere (for organisations that receive funding from outside the UK) can affect procurement adversely. When donors funding priorities that align with aid organisations change or they modify the way they disburse their funds, these have implications for procurement. The same can be said especially with regards to public fundraising when donors are just not as interested in crisis in certain geographical locations. All of these affect an organisation's financial resilience and hence adversely impact formative elements such as agility, security, redundancy, robustness, sustainability and avoidance.

Another impact of donors on procurement in humanitarian supply chains is through restrictions placed on funds. When funds are raised for specific projects, humanitarian organisations are obliged to using such funds exclusively for those projects. Consequently, when an urgent procurement for another project with limited funding is required, organisations are unable to use available funds from other projects to facilitate responsiveness in such emergencies.

Donor requirements quite heavily influence the policies and procedures of humanitarian organisations. Some donors require humanitarian organisations to seek their approval for procurement plans. There sometimes is the insistence on the implementation of specific reporting systems for monitoring suppliers in relation to the use of provided funds. Further, organisations, along with their local teams and implementing partners, are required to comply with specific procurement rules and regulations by donors. In case of conflict between policy positions, donors' usually take precedence. To help with adherence to specific procurement regulations, teams are advised to solicit the guidance of procurement experts in their organisations. Indeed, some humanitarian organisations design and implement their policies to reflect donors' procurement stipulations which may include donors' classification of high-risk countries and auditing of suppliers' operations.

As was explained in Section 6.2, some donors insist on the sourcing procedures to use per monetary value thresholds while others just require organisations to ensure competitiveness, fairness and transparency. Others insist on supplier locations and the suppliers or supplier lists to use. Some require not sourcing from competitors (if the grant is from a corporation) or from organisations with political positions that may be contrary to that of the donating agency or government. Humanitarian organisations also insist on record keeping and documentation of relevant procurement decisions to keep an audit trail and satisfy donor inquiries when they come

asking. Some have implemented e-procurement because it helps satisfy many of these donor requirements.

From the above, it can be seen that donor influence does not only influence procurement in general but also SCR from a procurement perspective as donor requirements positively influence human resource management (documentation), decision redundancy, governance and accountability, risk avoidance, sustainability, culture, decision making, top managerial commitment and information technology. On the other hand, organisations indeed acknowledge how donor restrictions inhibit their flexibility and agility as they are limited in the options they can exploit due to the obligations donors tie to their funds.

6.5 Conclusion

This chapter has presented the findings of the research in relation to the three objectives that were stated in section 1.2. It was indicated that all the 14 formative elements that have been discussed in literature for SCR are present in humanitarian supply chains. However, in addition to these, it was noted that governance and accountability is a new formative element that is particularly critical in humanitarian supply chains as opposed to commercial supply chains due to the former's reliance on donor funds. Details of how these 15 formative elements are pursued were then presented. This was followed by a discussion of the conceptual framework (Figure 2.5) for this research and how findings indicate the need for its revision. This was done and a revised framework (Figure 6.1) that best suits humanitarian supply chains and their uniqueness is presented. Based on this, a decision-making framework (Figure 6.2), in fulfilling the third and last objective of this research is presented to help guide procurement strategy decisions in humanitarian supply chains to maintain or improve on SCR. The chapter ends with a discussion of additional findings on how donor influence affects procurement and SCR in humanitarian organisations.

The last chapter of this study presents a summary of the work, highlights contributions to knowledge, points out the limitations of the research and directions for future research based on these.

7. Conclusion

7.0 Introduction

The concluding chapter of this thesis recaps the research objectives stated in the introductory chapter and provides a summary of the research approach adopted for this study. The key findings of the research are presented, and this is followed by a discussion of the contribution to knowledge of these on research and practice. The chapter ends with a discussion of the limitations of the research, recommendations for future research and the concluding remarks for this thesis.

7.1 Recap of Research Objectives

In recent years, particularly in 2020, the need for resilient supply chains is not in much dispute, not only because it allows for organisations to avoid, prepare for, respond to and recover from disruptions, but also for competitive advantage. The vulnerability of supply chains to all forms of disasters became accentuated by the spread of the novel coronavirus, COVID-19 (Queiroz et al., 2020) as its effects on global supply chains have been unprecedented, with supply availability in particular, drastically reducing (Ivanov and Dolgui, 2020). This is true not only for commercial supply chains but also for humanitarian ones as the success of the latter is hinged on its ability to overcome a myriad of risks, particularly those originating from the supply side, which have adverse implications for the overall resilience of the supply chain (Wagner and Bode, 2006; Zsidisin and Wagner, 2010).

Not being producers of the materials and some of the services they provide, humanitarian organisations rely heavily on their suppliers and this shows in the estimated 65% of the overall expenditure of these organisations going into procurement activities (Blecken and Hellingrath, 2008; Iakovou et al., 2014). This, along with the uniqueness of humanitarian supply chains, especially their reliance on donations from multiple stakeholders with diverse motives and demands make the need to investigate procurement's role in creating supply chain resilience in humanitarian organisations critical. Not only do upstream disruptions result in resource wastage - which in itself is particularly risky for humanitarian organisations, but sometimes in the loss of human lives (Tatham and Kovács, 2010).

Thus, to address this issue, an extensive literature review was conducted to identify the gaps in literature in this area. Multiple gaps were identified. These included, among others, the need for

more research, particularly empirical research on the role of procurement in creating SCR (Pereira et al., 2014, 2020) and how procurement decisions are informed from a SCR creation perspective (Jahre, 2017). It was also identified that empirical papers that show how SCR formative elements inform procurement decision making are lacking. Very little research has been done on procurement management (Torabi et al., 2018) and procurement decisions (Balcik and Ak, 2014; Hu and Dong, 2019) in humanitarian supply chain management. The role of donors and their impact on decision making in humanitarian supply chains has also been identified by Bealt et al. (2016) and Behl and Dutta (2019) as needed.

To address these gaps in humanitarian logistics and supply chain management studies, this research started by asking the question:

How does the need for resilience impact procurement decision making in humanitarian supply chains?

It also set out the following objectives towards answering this question and filling some of the gaps identified in the literature.

1. To determine which supply chain resilience formative elements influence procurement decisions in humanitarian supply chains.
2. To determine the decision areas in humanitarian procurement aimed at creating supply chain resilience, the relationships between them and empirically ascertain whether they align with what is provided in extant literature.
3. To provide an appropriate procurement strategy decision-making framework aimed at incorporating resilience-building for humanitarian supply chains.

The next section summarises the research approach adopted to achieve these objectives and answer the research question.

7.2 Summary of Research Approach

Having established the research question and objectives, an extensive literature review process was embarked on, part of which was an integrative literature review process to formulate the conceptual framework presented in Figure 2.5. Having identified gaps through the literature review, data collection could commence.

A qualitative multiple case study approach was adopted for this research. Using purposive and snowballing sampling, data was collected from a variety of humanitarian organisations based in the UK using semi-structured interviews and document analysis. Before commencing the interviews, 2 pilot interviews with procurement professionals from the private and public sectors were conducted to test the validity, clarity and appropriateness of the interview questions. Having used the feedback to refine the interview protocol, 8 interviews (one in each organisation) which culminated into 90 pages of transcribed data and over 1,100 pages of 60 documents collected from the organisations were analysed using thematic coding with the help of NVivo 12 Plus. Data collection ended when the researcher observed theoretical saturation, as sufficient data had been collected to answer the research question, achieve the research objectives and make significant contribution to knowledge. As no new themes were emerging from the iterative coding process, this decision was justified (Manuj and Pohlen, 2012; Tukamuhabwa et al., 2017).

An abductive data analysis approach was used in this study to benefit from existing theory while allowing for the development of new and useful theory. The imposed themes were SCR Formative Elements and Procurement Strategy Decisions. An emergent theme was Donor Influence, but other sub-themes also emerged under these three overarching themes. King et al.'s (2019) approach to coding, which adopts guidelines from Langdrige (2004) and Braun and Clarke (2006), was used to code the data.

7.3 Key Findings

This research present findings both from the analysis of the relevant literature and from the analysis of the empirical data collected. The findings from literature culminated into the proposition of a conceptual framework (Figure 2.5) while those from the empirical data provides useful insight into humanitarian organisations' approach towards resilience from a procurement standpoint. A summary of these is presented below.

7.3.1 Findings from Literature

Taking a closer look at pre-contract procurement decisions discussed in extant literature, this research found that resilience-related decisions could be grouped under four different types of decisions. These were supplier selection, supplier base strategy, supplier relationship determination and supplier location. Supplier location decisions were found to influence supplier

relationship determination decisions, supplier base strategy decisions and supplier selection decisions to mitigate supplier change exposure. Similarly, Supplier base strategy decisions influence supplier selection and supplier relationship determination decisions as the use of either sole-sourcing or single-sourcing typically necessitate more stringent evaluation criteria, a more robust sourcing procedure and closer relationships. Finally, the literature also showed that supplier selection decisions influence supplier base strategy decisions. See section 2.4.2.1.

7.3.2 Findings from Empirical Data

From the empirical data collected and analysed from the 8 studied cases, findings were derived on how humanitarian organisations implement supply chain resilience formative elements, the identification of a new formative element, the decisions that are made under procurement strategy and the relationships between these for SCR, and finally, a decision-making framework to guide procurement strategy decisions for enhanced SCR. A summary of these is presented as follows.

7.3.2.1 Implementation of Supply Chain Resilience Formative Elements in Humanitarian Organisations in the UK

This research has shown that all 14 SCR formative elements discussed in literature are pursued in humanitarian organisations. Findings however indicate that there is a formative element that is very dominant in humanitarian organisations but has not yet been stated in literature. That is governance and accountability. It was found that, due to the heavy dependence of humanitarian organisations on donor funding, the impact of certain risks (such as reputational risks) that commercial supply chains are also exposed to, are exponentially higher and more detrimental to humanitarian supply chains. Due to the uniqueness of these supply chains and the involvement of various players therein, humanitarian organisations are accountable to donors, supporters, employees, beneficiaries, cooperating partners, media, contractors and suppliers. Failing in their dealings with any of these could heavily compromise their supply chain. To address this, there is the establishment of clear and robust governance structures detailing responsibilities and facilitating decision making, transparency and accountability. In addition, there is the establishment of various committees and new roles (such as safeguarding managers) to ensure risks are sufficiently dealt with before they spin out of control. There is effort to ensure proportionality by committing corresponding effort and resources to levels of supply chain

vulnerability. Both local partners and suppliers are held accountable as their failures heavily impact these organisations. The 2018 Oxfam safeguarding scandal heightened this carefulness in UK-based humanitarian organisations.

Evidence from this research shows a limited reliance of these UK-based humanitarian organisations on the use of extra stock. Regulatory pressure and donor requirements were also identified as curtailing their responsiveness. Significant effort is put into donor requirement, legal and regulatory compliance as major means to avoid risks. This is very telling in organisational policies. Collaborative procurement is largely on the exchange of expertise, supplier information, joint storage options and working together to address mutual disruptions. However, there was no evidence of organisations procuring goods or services jointly with reasons ranging from a preference for independent procurement to the difficulty in managing the complex relationships that would result from it.

Of all approaches towards ensuring a resilience-seeking culture, whistleblowing and reporting is the most emphasised across all organisations. This also was identified as directly resultant from the heightened attention to accountability. Flexibility is pursued by the use of flexible decision-making structures and sourcing flexibility. Information technology is primarily used for document storage, increased information sharing and accessibility and process monitoring. Findings indicate there is room for improvement in the use of IT for e-procurement, training and data analysis. Integration is largely lateral while redundancy is typically intangible through the use of knowledge backup, decision redundancy, multiple supplier relationships and the use of fund reserves and multiple sources of funding – the last two approaches being quite exclusive to humanitarian supply chains. These approaches are critical in the pursuit of robustness as well.

Data security measures, fund reserves, insurance, use of safes and mandatory staff training help towards enhancing security. Commitment to sustainability is revealed through the extensive coverage of sustainability requirements in numerous organisational policies and procedures. Notwithstanding, there is a lack of sustainability reporting in the sector. Top managerial commitment in dealing with safeguarding risks is evident but a similar commitment to improving procurement processes and other aspects of SCR is lacking. Staff training and support, robust recruitment, fair but competitive remuneration, documentation and enforced policy compliance are some of the approaches adopted to pursue human resource management.

Flexibility in decision making is prevalent due to limited procurement expertise so that local and departmental teams manage significant portions of the procurements in these organisations.

Procurement expertise and high-level approvals are necessitated only with increased risk and/or monetary value. The use of inter-functional teams to improve decision making is not uncommon. Overall, findings from this research indicate that approaches such as cross-training, use of framework agreements (and preapproved supplier lists) and ensuring financial resilience are extremely critical as they enhance 10 out of the 15 formative elements discussed.

These findings helped achieve the first objective of this research.

7.3.2.2 Revealing Relationships between Procurement Strategy Decisions, their Influencing Factors and SCR Formative Elements

With regards to objective 2 of this research, decision areas under procurement strategy aligned with those in literature but new relationships and influences were identified. Even though heavy reliance on single-sourcing was expected, some organisations rarely multi-source even for risky procurements. Notwithstanding, the extensive use of framework agreements helps mitigate some of the risks. Resilience-informed decisions here auspiciously influence redundancy, flexibility, robustness and risk avoidance. With the obvious benefits of local sourcing, organisations predominantly source locally but they also source overseas for cost-efficiency and/or resilience. The use of a mix of local and overseas suppliers in multi-sourcing is non-existent thereby not allowing flexibility and redundancy to be enhanced. Risk avoidance, agility, security, sustainability and integration may be enhanced with competent supplier location decisions. Organisations largely understand using supplier relationships to mitigate supplier risks but some organisations - despite having procurement expertise, did not acknowledge this in their decisions here. Formative elements such as integration, avoidance, collaboration, decision making, culture and human resource management are impacted by decisions here, but top management support is required to facilitate some decisions.

Findings show that supplier selection criteria include cost, delivery schedule and lead time, quality, supplier capabilities, supplier location, supplier profile and sustainability, all of which are consistent with provisions in literature. Of all these, sustainability was identified as being a very important criterion for these organisations. Decisions here may improve organisations' agility, robustness, flexibility, avoidance, decision making and collaboration. Required formative elements to facilitate supplier selection decisions include information technology, human resource management and governance and accountability.

A variety of competitive bidding sourcing procedures are used for most procurements thereby ensuring transparency and fairness and facilitates collaboration. A number of influencing factors were identified to influence supplier selection decisions with the most significant being donor requirements and monetary value. Indeed, these two were identified to influence other procurement strategy decisions with monetary value impacting supplier base strategy, supplier selection and supplier relationship determination decisions while donor requirements influence supplier selection and supplier location. Apart from a supplier location's impact on supplier base strategy decisions, all other relationships identified in literature were identified in the humanitarian supply chains.

Additional relationships were also identified, and these were the mutual impacts of supplier selection and supplier relationship determination decisions on each other and the impact of supplier selection on supplier location decisions. These findings resulted in a revised procurement strategy for humanitarian supply chains (see Figure 6.1).

Finally, findings from this research reveal the impact of donor influence on procurement in humanitarian organisations. These may be seen through their accountability to donors, donor restriction on fund usage, donors' modified or lack of interest in certain organisational programmes and their impact or override of existing organisational policies or procedures. Some donors insist on supplier location decisions, sourcing procedures and even supplier selection criteria. The positive aspects of these influences show in their impact on knowledge management, decision redundancy, governance and accountability, avoidance, sustainability, culture, decision making, top managerial commitment and information technology. Adversely, donor influence sometimes inhibits the flexibility and agility of humanitarian supply chains.

These findings thereby formed the basis for the proposition of a decision-making framework that can ensure that procurement strategy decisions do not compromise the resilience of humanitarian supply chains.

7.3.2.3 Development of a Framework for Resilience-Informed Procurement Strategy Decision Making

Having identified that types of decisions made in the studied humanitarian organisations and how these decisions are made, it became apparent that there is a general lack of understanding of the impact of decisions made in an aspect of an organisation's procurement strategy on the resilience of its supply chain. Several organisations did not readily recognise or acknowledge the need for

complimentary decisions in other procurement strategy decision areas to mitigate risk exposures that other decisions introduced. Indeed, due primarily to donor influence, certain procurement strategy decisions are predetermined. These thereby mandate a requirement for appropriate accompanying decisions to mitigate any resultant vulnerabilities. This accentuated the need for the attainment of the third objective of this research, which is to provide an appropriate procurement strategy decision-making framework aimed at incorporating resilience-building for humanitarian supply chains.

Considering that procurement expertise is generally in short supply among these organisations, the framework needed to be simple and easy to understand without compromising efficaciousness. It needed to be in a format that the average programmes manager or departmental officer who procures can understand and implement. A matrix format was thus adopted where decisions identified from the research to be likely predetermined were put into rows while corresponding decision options were in the columns. Desirable accompanying decisions were indicated in green, acceptable in yellow while risky options were indicated in red. Inapplicable slots were left blank.

7.3.3 Research Quality

Yin's (2009) validity constructs, namely, construct validity, internal validity, external validity and reliability, were used to establish the quality of this research. The two methods used to achieve construct validity were the use of multiple data sources and the provision of a chain of evidence. To achieve data triangulation, data was collected from interviews, organisational annual reports, procurement procedure and policy documents, modern slavery statements and policies, supplier terms and conditions documents, supplier code of conduct and supplier pre-qualification criteria documents. Hence, inferences drawn from this research were largely drawn from multiple data sources within and across cases. Using NVivo 12 Plus' Node Matrix Query function, evidence of data sources and coded references are presented in Tables 5.1, 5.2, 5.5, 5.6, 5.8 and 5.9 under chapter 5. The chain of evidence to facilitate auditability is shown in the provision of all relevant documentation in the appendices (see Appendix A1-A9), accompanied by the detailed description of processes and unique contexts of each of the discussed cases in chapter 4.

Internal validity was attained through an integrative literature review process, probing interviews, systematic data examination and rigorous data interpretation. Numerous extracts from the data were provided in chapter 4 and Appendix A9, to support the discussion of the overarching

themes and interpretive codes of the research. Quotations were selected so that beyond data description, they argue out the research question and appropriately and contextually represent the nature of the themes discussed.

External validity delimitates the scope of a research's generalisability. Organisations that participated in this research had to be humanitarian aid organisations, be located in the UK and deliver both emergency relief and development aid. Besides these, there was significant variation in terms of size (employees and turnover), demography served, ethos (religious or irreligious), aid location (local, international or both) and sources of funding (institutional donors and agencies, governments, the general public, religious groups, grants, trading, legacies, investments etc). Notwithstanding, findings across organisations were not predicated on any of their unique characteristics. The major source for discrepancies identified depended on the presence of procurement expertise and how well-resourced and empowered the team was. This typically translated into relevant policies and procedural guidelines to govern procurement decision making and associated risks. It is thus argued that the findings of this research are generalisable to all humanitarian aid organisations in the UK, irrespective of size, location of aid delivery, source of funding, the demography of aid recipients and ethos. With regards to its generalisability to non-UK based humanitarian aid organisations, it is argued that considering significant policy positions for the organisations involved in this research are informed by UK legislation (such as the General Data Protection Regulation 2016, Modern Slavery Act 2015, Bribery Act 2010, Terrorism Act 2000, UK Public Procurement Regulations 2015, Equality Act 2010 and Care Act 2014), Charity Commission regulations, Core Humanitarian Standard and other UK-based regulatory bodies, findings may not be applicable outside of the UK except for jurisdictions with similar legal and regulatory requirements.

Finally, to ensure the reliability of this research, a firm theoretical grounding was provided through the extensive literature review while the use of NVivo 12 Plus ensured a systematic and traceable data analysis process. Further, a detailed case study protocol and sample documents from the case study database are supplied in the Appendix. The case study protocol provides an overview of the research, its theoretical framework, the role of the protocol in guiding the researcher, data collection and field procedures and the scope of the research. Due to ethical requirements for anonymisation, original interview transcripts and organisational documents could not be supplied. However, the interview checklist and questions, participant information sheet research overview sheets and consent forms shared with research participants have been provided in appendices A2 to A6.

7.4 Contribution to Knowledge

This research has made theoretical, empirical, methodological and practical contributions to knowledge. These are explained below.

7.4.1 Theoretical Contributions

Having established through the literature review that empirical research is required into the role of procurement in creating supply chain resilience, this research critically analysed extant literature to present a conceptual framework that provides insight into the various types of decisions that an organisation seeking to maintain or improve its SCR, takes when dealing with suppliers. It has shown that procurement strategy decisions, which are decisions taken before contracts are awarded to suppliers, may be on supplier base strategy, supplier selection criteria, supplier relationship determination and considerations for supplier locations. Further, it has also shown the types of relationships captured in literature with regards to the decisions that need to be made and how some decisions must necessarily have accompanying decisions in other areas in order not to compromise resilience.

These contributions thereby provide the basis for structured empirical research into the role of procurement in SCR as is proven in this research where the conceptual framework was tested in humanitarian organisations to prove its utility and for further improvement. From here, further theoretical contribution is made as this research has presented a modified procurement strategy framework which incorporates the uniqueness of humanitarian supply chains, emphasising the differences in decisions here from commercial supply chains and pointing out other influences such as monetary value and donor requirements that have hitherto not been captured in extant literature.

Furthermore, this research has provided insight into how SCR formative elements are pursued in humanitarian organisations and proposes a new formative element that is prevalent in these organisations. Lastly, insight into how donors influence procurement decision making and SCR in humanitarian organisations is presented in this study.

7.4.2 Empirical Contributions

Some of the theoretical contributions discussed above were made possible by the empirical contribution to knowledge attained through this research. Pereira et al. (2014) and Pereira et al. (2020) emphasised the need for empirical research into the role of procurement in creating SCR. This research has contributed to filling this gap in the humanitarian sector. Jahre (2017) indicated the need for more research into how decisions in the procurement function are informed from a resilience creation perspective. This gap has been made a little smaller by this research. Kamalahmadi and Parast (2016) pointed out the need for research to examine and validate the theoretical foundations of SCR, seeing that empirical papers which show which resilience formative elements inform procurement managerial decisions were limited. This research has provided some useful insight into this for UK-based humanitarian organisations. All of these help provide more insight into procurement management and decision making in humanitarian logistics which Torabi et al (2018), Balcik and Ak (2014) and Hu and Dong (2019) have highlighted as lacking.

Finally, this research has provided original, previously uncollected data on the role and impact of donors on procurement and SCR decisions in humanitarian organisations in the UK. To the best of the author's knowledge, no previous research has provided all of these empirical insights into the role of procurement strategy decisions and donors in the SCR of UK-based humanitarian organisations.

7.4.3 Methodological Contributions

Methodological contribution may be made through innovative method or research design, synthesis of methods, resolution of old question or innovative for discipline (Guetzkow et al., 2004). The methodology used in this thesis is not innovative of itself, rather it makes an original methodological contribution through its application of an existing methodology to a topic where this method has not been used before, enabling it to “*manifest its strengths in giving new knowledge and theoretical insights*” (Phillips and Pugh, 2005: 53).

By far, the majority of research into decision making in humanitarian supply chains have been done from a quantitative paradigm. This research looked at decision making from a qualitative perspective using semi-structured interviews to collect data from procurement managers and other procurement decision makers in the humanitarian sector and supporting this with documentary analysis of relevant policy documents and reports in a multiple case study approach.

Novel insight, using an interpretivist viewpoint, has therefore been gleaned in this area of study which was not previously available.

7.4.4 Practical Contributions

This research has presented useful insight that can help managers improve on the SCR of their supply chains in the humanitarian aid sector. Firstly, insight into how different organisations pursue the SCR formative elements are presented, thereby affording managers to compare approaches and learn new ways of improving the resilience of their supply chains. The less utilised but useful approaches both in the within-case and cross-case analysis are indeed highlighted to help managerial decisions. Further, bad practices are also pointed out within this study so that needed modifications can be made. This research has shown that the use of flexible supplier contracting, through the use of framework agreements and preapproved supplier lists, cross-training of staff on procurement procedures, practices and decision making and the creation of financial resilience, through having sufficient fund reserves and a diversified portfolio of sustainable income streams are approaches that organisations can adopt to significantly improve their SCR. Indeed, this study has shown that these three approaches can positively influence 10 out of the 15 SCR formative elements.

Furthermore, a simple, easy to understand decision-making framework has been proposed in this research, highlighting to managers the accompanying decisions they need to take when other options in supplier base strategy, location, relationship determination and supplier selection have been predetermined whether by donor requirements, contractual monetary value, urgency of the requirement, market dynamics, organisational strategic direction or even convenience. Seeing that not all procurement decisions are made by procurement experts in the humanitarian sector, the framework is designed in a matrix format to make understanding and implementation easy.

7.5 Limitations of Research

There are some limitations of this research. The first is the acknowledgement that there may have been some extra documents some organisations were unwilling to share with the researcher which thus hindered an exhaustive evaluation of their SCR in comparison to other organisations and possibly limiting access to some useful additional insight. Further, in the absence of a standardised set of documents organisations need to have with regards to procurement decision

making, the set of documents that needed to be collected slightly varied from organisation to organisation depending on how rules and regulations were captured. As an example, besides annual reports, different organisations had different set of documents that captured their procurement rules and procedures. Some had all of them in their procurement policy document while others had them in multiple sets of documents. This resulted in significant variation in the number of documents collected from different organisations.

Having had to legally commit to anonymisation by signing Non-Disclosure Agreements with some organisations, there was the need to exclude certain quotes and details from data sources because they could compromise this commitment even though they could have provided stronger support for the claims made in the analysis.

Another limitation of this research was the interviewing of one expert in each case. Even though interviewees were sufficiently knowledgeable and very highly placed in most organisations, they could be biased. The research could have benefitted from multiple interviewees but limited expertise in the sector did not make this feasible.

As a single researcher, analysis of data and consequent inferences are admittedly subjective. Furthermore, coding could have been inexhaustive with some codes, themes or analysis opportunities being missed or overlooked due to the time-consuming nature of qualitative research. Additionally, it has to be admitted that the framework derived from the literature is only one of several possible views. The focus of the research also meant that attention was primarily on the upstream of the supply chains. Insights from the downstream should be interesting, thereby. Therefore, some of these limitations provide interesting opportunities for further research.

7.6 Recommendations for Future Research

Research into SCR in humanitarian logistics and SCM is still quite new and there is the need for more empirical research here. Quantitative research to the generalisability of the findings of this research outside of the UK is needed. Having focused on the decisions made before contract awarding, research into post-contract award decisions holds good promise for useful insight into how well humanitarian organisations manage supplier relationship and performance and how extensive supplier development is used in the sector to mitigate upstream risks. Research collecting in-depth data that focuses on specific decision areas is needed. As an example, it will be interesting to study how humanitarian organisations make supplier relationship management

decisions and how these impact SCR. Similar research specifically into supplier performance management or supplier development programming decisions and how these are implemented for SCR will help provide much-needed insights in this sector.

Research testing the various parts of the conceptual framework (Figure 2.5) in a variety of industries such as the manufacturing and service sectors would provide some useful insight. Furthermore, research to explore the possibilities of putting together a framework of downstream decisions that facilitate SCR can help in expanding theoretical insight, particularly in the humanitarian sector.

Focused research into specific parts of supply chains (like this research) is important to help understand the various dynamics and influences on SCR that are unique to these parts of the supply chain. Notwithstanding, in agreement with Pereira et al. (2020), this study proposes the combining of upstream and downstream perspectives on SCR into a holistic framework for improving resilience. Insight from this research revealed the strong role compliance with legal and regulatory requirements play in the pursuit of risk avoidance. This was from a western perspective. Exploring this and similar insights from a non-western perspective and comparing these with regards to SCR in the humanitarian sector will be useful.

This research provided valuable insight into the influence of donors on procurement decisions and SCR from a procurement perspective. Research into other ways by which donors and their requirements affect decisions in other parts of the humanitarian supply chain and the effects these have on SCR is needed.

7.7 Conclusion

This final chapter started with a recap of the objective of the research and the question it sought to answer. Having clarified these, a recollection of how the question was to be answered was presented, followed by the key findings both from literature and the empirical data. The quality of the research was accentuated and the study's contributions to knowledge were then provided. The chapter finishes off with the presentation of limitations of the study and the opportunities for future research were laid out.

Appendix

A1. Case Study Protocol

A. Introduction to the Case Study and Purpose of Protocol

1. Overview of the Case Study

Background

Many formative elements and prescriptive measures in extant literature have been suggested towards creating and/or enhancing supply chain resilience. Looking at the upstream of the supply chain, a generic decision-phase framework consisting of procurement strategy and supplier management can be identified. Under procurement strategy, the decision-areas therein are common in both commercial and humanitarian supply chain resilience research. They are supplier-base strategy, supplier relationship determination, supplier selection criteria and supplier location. Using semi-structured interviews, this research carries out case studies of 8 UK-based humanitarian organisations to determine how prescribed supply chain resilience formative elements influence decisions under these four decision-areas. This will provide the first empirical study exploring the role of procurement in creating humanitarian supply chain resilience. It is expected that a framework to guide procurement strategy decisions for resilient humanitarian supply chains will be developed from insights from this study.

8 organisations may be enough to attain the goals of the research but considering access issues, these are the organisations from which to select. In case there is time and access, I may consider doing all the organisations to make the research richer.

Case study questions

- How does the need for resilience impact procurement decision making in the humanitarian supply chains of these organisations?
- In considerations for their supplier-base, supplier relationships, supplier selection criteria and the locations of suppliers do they consider resilience (as in, anticipation for disruptions, robustness to operate despite ongoing disruptions, recovery of the supply chain from the disruption and adaptation of the supply chain)?
- How do choices in the various decision areas impact decisions in the other areas for resilience? Do they affirm the research framework or show something different?

Case study objectives

1. To determine the decision areas in humanitarian procurement aimed at creating supply chain resilience and empirically ascertain whether they align with what is provided in extant literature.
2. To determine if any, which resilience formative elements influence procurement decisions in humanitarian supply chains.
3. To provide an appropriate procurement strategy decision-making framework aimed at incorporating resilience-building for humanitarian supply chains.

2. Theoretical framework for the case study

See Figure 2.6 Research Conceptual framework

An analysis of these through a supply chain resilience lens.

3. Role of the protocol in guiding the case study investigator

This protocol is meant to guide the investigation in all organisations to be studied to ensure consistency and reliability.

B. Data Collection Procedures

1. Names of sites to be visited, including contact persons

Data anonymised

2. Data collection plan

Roles of people to be interviewed:

- Procurement Officers
- Ask for the person/office that engages suppliers

- Ask for the person in charge of putting together or enforcing the procurement policy and similar documents

Documents to be reviewed:

- Procurement/Purchasing policy
- Purchasing terms and conditions
- Suppliers' code of conduct

3. Expected preparation before site visits

1. Read extensively on the organisations to be visited including the following documents:
2. Annual report
3. Strategy documents
4. Procurement/Purchasing policy and similar documents
5. Request for possible documents to be reviewed and read them
6. Send consent documents and the participant information sheets to the prospective respondents

4. Field Procedures

1. Call or e-mail initial contact in the organisation requesting for contact with relevant respondents
2. Share research overview document with the prospective respondent, consent documents and request for relevant documents
3. Agree on a date for the interview
4. Visit the location for the interview with:
 - Laptop
 - Student ID
 - Notebook and pen
5. Explain the purpose of the research, read out the participant information form and share the interview consent document with the respondent (reassuring anonymity) to be filled and signed.
6. Collect Participant Information Data

7. Request permission to record the interview
8. Commence interview
9. At end of the interview ask for clarifications if needed and pledge sharing transcripts if requested
10. Repeat the process for the next respondent if any
11. Begin interview transcription the following day

5. Interview Questions

In a separate document.

6. Research Scope to be shared with participating organisations

Overview for respondents

This research is about resilience in humanitarian strategy with particular focus on procurement strategy decisions. It seeks to explore the reasoning behind the decisions made in the procurement strategy (both written and unwritten) for your organisation. Humanitarian organisations are exposed to various risks and uncertainties in relation to their suppliers. Uncertainties about the quantities of inventory that will be required and the location for the demands, prices and quality of the needed materials present challenges in settling on the right suppliers, the number of suppliers to deal with and the kind of relationships to have with them. This research hence seeks to engage the procurement officer(s) in your organisation to find out how they settle on a procurement strategy in terms of supplier base strategy (single or multiple sourcing), supplier relationship determination (close or one-off), supplier selection criteria and supplier location consideration (local or overseas). From the results of this research, a decision-making framework will be designed to facilitate procurement decisions that help improve the resilience of humanitarian supply chains.

Research plan

To gather the needed data for analysis, semi-structured interviews will be conducted with your procurement officers and/or top management members who decide the organisation's approach to procurement. Questions will touch on your organisation's approach towards procurement, decisions made for your supplier base, supplier relationship determination, supplier selection

criteria and supplier location considerations as well as mitigative decisions aimed at addressing procurement and supplier risks for your organisation.

A2. Participant Information Sheet

**UNIVERSITY OF
WESTMINSTER** 

Participant Information Sheet

Research Title: Resilience in Humanitarian supply chains: a focus on procurement decisions

You are being invited to partake in a research study as part of a PhD project that seeks to investigate how the need for resilience influences procurement strategy decisions in humanitarian supply chains. Before you decide whether to take part, it is important for you to understand why the research is being conducted and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for taking the time to read this.

Who will conduct the research?

DOCTORAL RESEARCHER: Emmanuel Sawyerr
DEPARTMENT: Business Information Management and Operations
FACULTY: Westminster Business School, University of Westminster
ADDRESS: 35 Marylebone Road, NW1 5LS, London.

What is the purpose of the research?

This research is about resilience in humanitarian supply chains with particular focus on procurement strategy decisions. It seeks to explore the reasoning behind the decisions made in the procurement strategy (both written and unwritten) for your organisation. Humanitarian organisations are exposed to various risks and uncertainties in relation to their suppliers. Uncertainties about the quantities of inventory that will be required and the location for the demands, prices and quality of the needed materials present challenges in settling on the right suppliers, the number of suppliers to deal with and the kind of relationships to have with them. This research hence seeks to engage the procurement officer(s) and other persons in your organisation with the required insight to find out how they settle on a procurement strategy in terms of supplier base strategy (single or multiple sourcing), supplier relationship determination (strategic partnerships or adversarial), supplier selection criteria and supplier location consideration (local or overseas). From the results of this research, a decision-making framework will be designed to facilitate procurement decisions that help improve the resilience of humanitarian supply chains.

Why have I been chosen?

You have been chosen to partake in this research because your role/position in your organisation suggests you have the requisite knowledge and competence about the procurement strategy of your organisation and the reasons for the guidelines therein set.

What would I be asked to do if I took part?

You will be interviewed for about an hour about your organisation's procurement and supplier policies.

What will happen to my personal information?

In order to undertake the research project we will need to collect the following personal information/data about you:

- Name
- Position
- Qualification (Educational background/Professional)
- Career and Work experience (Commercial/Not-for-profit)
- Role and brief Job description

Further, the interview will be audio-recorded during the interview session and this is only to help capture all the information that will be shared during the interview. Only the researcher will have access to this information and the transcribed version will be shared with you.

This personal information are been collected and stored in accordance with the General Data Protection Regulation (GDPR) and Data Protection Act 2018 which legislate to protect your personal information. The legal basis upon which your personal information is being used is “public interest task” and “for research purposes” if sensitive information is collected. You have a number of rights under data protection law regarding your personal information. For example you can request a copy of the information we hold about you, including the audio recordings of the interview. This is known as a Subject Access Request.

Will my participation in the study be confidential?

Your participation in the study will be kept confidential and access to your personal information will be restricted to only the researcher.

For the audio recordings of the interview:

- Transcripts will be created from it and this will be performed by the researcher
- Your personal information will be removed in the final transcript after you have had the opportunity to take a look. Through the use of de-identification and data will be coded to prevent traceability to you or your organisation.
- The audio file of recorded interview will be stored on an encrypted memory stick to prevent access even if lost.
- At the end of the research, the storage media for the audio recorded file will be degaussed to render it unusable.

What happens if I do not want to take part or if I change my mind?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time without giving a reason and without any detriment to yourself. However, it will not be possible to remove your data from the project once it has been anonymised and forms part of the dataset as we will not be able to identify your specific data. This however does not affect your data protection rights. You have the right to decline recording of the interview even though that will present major challenges for the research; your participation may have to be declined. You should be comfortable with the recording process at all times and can request a stopping of the recording at any stage or time of the interview.

Will my data be used for future research?

Your personally identifiable information will neither be used for this research or any future one. However, any other data may be used for future research on resilience and procurement in humanitarian supply chain management.

What is the duration of the research?

Interviews are expected to be about an hour long. From giving your consent to this research till the time that you get a transcript of interview should be about two (2) weeks. Follow-up interviews are not envisaged at this stage but in case one is required, that would extend the duration by another week.

Where will the research be conducted?

Interviews will be conducted on the premises of your organisation unless you request otherwise.

Will the outcomes of the research be published?

An appropriate procurement strategy decision-making framework aimed at incorporating resilience building for humanitarian supply chains is expected come out of this research. This along with other findings may be published in a journal. The findings will be shared with you if you so request.

Who has reviewed the research project?

This project has been reviewed by the Research Ethics Committee of the University of Westminster. The Ethics Reference number for this research is ETH1718-1606.

What do I do next?

If you have a minor complaint, require further information or willing to partake in this research, then you need to contact the researcher:

Emmanuel Sawyerr
Department of Business Information Management and Operations
Westminster Business School, University of Westminster
35 Marylebone Road, NW1 5LS, London
Tel: 07914948861
Email: E.Sawyerr@my.westminster.ac.uk

In case of formal complaints or you are not satisfied with the response you have received from the researcher in the first instance, kindly contact:

Dr David Barnes
Head of Department
Westminster Business School, University of Westminster
Tel: 02079115000 ext 66531
Email: D.Barnes@westminster.ac.uk
35 Marylebone Road, NW1 5LS, London

A3. Research Overview Sheet

UNIVERSITY OF
WESTMINSTER

Research Overview

Research Title: Resilience in Humanitarian (and development aid) supply chains: a focus on procurement decisions

This is an invitation to partake in a research study as part of a PhD project that seeks to investigate how the need for resilience influences procurement strategy decisions in humanitarian supply chains. This document is to give you a brief overview of the research and the type of information required.

Who will conduct the research?

DOCTORAL RESEARCHER: Emmanuel Sawyerr
SCHOOL: School of Applied Management
COLLEGE: Westminster Business School, University of Westminster
ADDRESS: 35 Marylebone Road, NW1 5LS, London.

What is the purpose of the research?

This research is about resilience in the supply chains of charity organisations with particular focus on supplier engagements and procurement strategy decisions. It seeks to explore the reasoning behind the decisions made in the procurement strategy (both written and unwritten) for your organisation. Organisations like yours are exposed to various risks and uncertainties in relation to their suppliers. Uncertainties about the quantities of inventory that will be required and the location for the demands, prices and quality of the needed materials present challenges in settling on the right suppliers, the number of suppliers to deal with and the kind of relationships to have with them. This research hence seeks to analyse procurement strategy/policy documents (and similar documents) as well as engage the procurement officer(s) and other persons in your organisation with the required insight to find out how they settle on a procurement strategy in terms of supplier base strategy (single or multiple sourcing), supplier relationship determination (strategic partnerships or adversarial), supplier selection criteria and supplier location consideration (local or overseas). From the results of this research, a decision-making framework will be designed to facilitate procurement decisions that help improve the resilience of humanitarian supply chains.

Will participation in the study be confidential?

Participation in the study will be kept confidential and access to personal information will be restricted to only the researcher. Transcripts from interviews will be shared with you if requested, and then upon approval **all data will be anonymised.**

Whose participation is required?

Any person whose role/position in the organisation suggests that they have the requisite knowledge and competence about supplier engagements and procurement strategy of your organisation and the reasons for the guidelines therein set.

What would be required of the participant?

The person will be interviewed for about an hour about your organisation's procurement and supplier policies at a venue of their choosing.

A4. Interview Questions

INTRODUCTORY:

1. Do you have a procurement (purchasing) strategy and/or policy document or a guideline by which procurement decisions/supplier engagements are guided? If yes, How was it developed? If no, how then are procurement decisions made?
2. What would you say are the broad themes addressed in this strategy document?

SUPPLIER BASE STRATEGY:

3. How are suppliers engaged in your organisation? (Open tender, restricted tender, sole sourcing guided by public procurement laws/regulations, donor guidelines or by your organisation's guidelines). Is there a default supplier engagement method (under conditions of no pressure etc)?
 - a. How do factors such as the product, monetary value of the contract, location of supplier or demand, situation (emergency or not) etc. impact this engagement process?
4. What is the supplier base strategy approach of your organisation? [Multiple sourcing, sole sourcing, single sourcing, combination, product-dependent, situation-dependent (emergency or not), a pool of suppliers]
 - a. Why this selected approach?

SUPPLIER SELECTION CRITERIA:

5. What are the considerations made in selecting suppliers for your organisation? (Apart from cost-quality ratio considerations, do these considerations include avoidance of risks, flexibility (willingness and ability to adjust to different situations and contexts, shocks etc), agility [responsiveness of these suppliers], redundancy [suppliers' ability to hold on to stock for the organisation, VMI], willingness/ability to insure goods-in-transit etc., experience in the sector)

SUPPLIER RELATIONSHIP DETERMINATION:

6. What types of relationships do your organisation have with its suppliers and why? (e.g. strategic partnership, preferred suppliers, arms-length)
 - a. What are the influencing factors in determining these relationships? (product, company profile, payment flexibility etc)

7. How does your supplier base strategy (sole, single or multiple sourcing) influence the type of relationship with the supplier? [Hand over the decision areas sheet and ask 'What about the other factors on the sheet?']
8. How are changes or variations in contractual agreements catered for? (flexible contracts, change requests)

SUPPLIER LOCATION:

9. Where does your organisation source its goods and services? (locally [location of demand] or overseas or both) Why?
10. What factors influence where a product or service is sourced? (availability, skills, quality, cost, speed, context-dependent, size of demand etc)
11. What role does the location of a supplier play in supplier selection criteria?
12. Does the location of a supplier influence your organisation's supplier base strategy or the type of relationship you have with the supplier? How and why?

GENERAL:

13. What are some of the risks, uncertainties or disruptions that your organisation are exposed to from suppliers, their location and your relationship with them?
 - a. How are these addressed in your procurement strategy (in terms of avoidance, response, recovery and adaptation)?
14. What are some of the risks, uncertainties or disruptions that your organisation seeks to address with your Procurement Strategy document?
15. Are procurement decisions centralised or they are left to regional managers and/or local partners? Why?
 - a. In cases where it's a combination of both what kinds of decisions are left for local partners and which ones are taken at headquarters? Why?
16. How does your organisation's procurement strategy (particularly in the 4 decision areas) evolve during the phases of the Disaster Management Cycle?
17. Do the suppliers engaged change over the disaster management cycle?
 - a. Do relationships evolve even if the same suppliers are maintained over the management cycle?
 - b. How and why?

18. Do the source of funding (e.g. DFID funding, public funding etc) to your organisation by any means inform or influence your procurement strategy? [in terms of the suppliers you deal with, their location, the kind of relationships]. How?
19. How does the kind of people you offer aid to (children, aged, girls, women etc) influence your procurement strategy?
20. Has there been a need to modify, update or improve on your current procurement strategy as a result of lessons learnt from previous disruptions (to just the supply chain or a major disaster)?
 - a. What was it and how did it influence the modification of the procurement strategy?

OTHER QUESTIONS BASED ON THEIR PROCUREMENT (PURCHASING) STRATEGY/POLICY

CONCLUDING QUESTIONS

21. Are you familiar with the concept of supply chain resilience? If you are, what is it and what part of your organisation's procurement strategy is geared towards ensuring the resilience of your supply chain?

A5. Interview Checklist

1. Call or e-mail initial contact in the organisation requesting for contact with relevant respondents
2. Share research overview document with the prospective respondent, consent documents and request for relevant documents (Procurement/Purchasing policy and similar documents, annual reports, strategy documents etc)
3. Agree on a date for the interview
4. Visit the location for the interview with:
 - a. Laptop
 - b. Student ID
 - c. Notebook and pen
5. Make quick notes about observations in the offices (the type of office, how professional the place looks like, charity or corporate settings, etc)
6. Establish the time available for the interview with the respondent
7. Explain the purpose of the research, read out the participant information form and share the interview consent document with the respondent (reassuring anonymity) to be filled and signed.
8. Fill in Participant Information Data
9. Request permission to record the interview
10. Commence interview (Hand over the decision area sheet to the respondent)
11. At end of the interview ask for clarifications if needed and pledge sharing transcripts if requested
12. Ask if they can get me other contacts within the organisation or in other organisations
13. Repeat the process for the next respondent if any
14. Begin interview transcription the following day

A6. Consent Form

Research Title: Resilience in Humanitarian supply chains: a focus on procurement decisions

	YES	NO
1. I have been given the Participation information Sheet and/or had its contents explained to me.	<input type="checkbox"/>	<input type="checkbox"/>
2. I have had an opportunity to ask any questions and I am satisfied with the answers given.	<input type="checkbox"/>	<input type="checkbox"/>
3. I understand I have a right to withdraw from the research at any time without providing any reason(s).	<input type="checkbox"/>	<input type="checkbox"/>
4. I understand that if I withdraw from the research during the interview, any data included in the results will be removed.	<input type="checkbox"/>	<input type="checkbox"/>
5. I understand that once data is anonymised and has been collated into other datasets, withdrawal at this stage may mean it may not be possible to remove data.	<input type="checkbox"/>	<input type="checkbox"/>
6. I confirm I am willing to have the interview tape-recorded.	<input type="checkbox"/>	<input type="checkbox"/>
7. I would like to receive information relating to the results of this study.	<input type="checkbox"/>	<input type="checkbox"/>
8. I wish to receive a copy of this Consent Form.	<input type="checkbox"/>	<input type="checkbox"/>
9. I confirm I am willing to be a participant in the above research study.	<input type="checkbox"/>	<input type="checkbox"/>
10. I understand the data provided will be fully anonymised and that my confidentiality as a respondent will remain secure.	<input type="checkbox"/>	<input type="checkbox"/>
11. I note that subsequent uses of the data will be subject to standard data usage policies which protect the anonymity of individuals and organisations.	<input type="checkbox"/>	<input type="checkbox"/>
12. In case any additional information or clarification is required within the period of the research I don't mind being contacted	<input type="checkbox"/>	<input type="checkbox"/>

Participant's Name: _____

Signature: _____

Date: _____

This consent form will be stored separately from any data you provide so that your responses remain anonymous.

I confirm I have provided a copy of the Participant Information Sheet approved by the Research Ethics Committee to the participant and fully explained its contents. I have given the participant an opportunity to ask questions, which have been answered.

Researcher's Signature: _____

Researcher's Name: _____

For Additional Information, kindly contact the researcher:

Emmanuel Sawyerr

E.Sawyerr@my.westminster.ac.uk

+44 791 494 8861

A7. Theme Development and Thematic Structure

A7.1 Thematic Codebook

Name	Files	References
Donor influence	24	80
Accountability to donors	14	21
Donors' modified or lack of interest	2	3
Policy and procedure impact or override	13	45
Country risk classification	1	1
Direct project implementation	1	2
Documentation	2	2
Donor Approval	1	1
Localised compliance to donor requirements	1	1
Partner or supplier monitoring	2	2
Sourcing procedure	7	13
Restricted funds	9	11
Formative elements	69	3269
Agility	32	102
Availability of liquidity	2	3
Clearly defined structure	2	3
Contract terms and conditions	1	1
Crisis management committee	1	1
Dispute resolution	5	9
Emergency procurement procedure	11	18
Financial resilience	11	22
Framework agreements and preferred supplier lists	15	26
Policy and procedure	2	2
Prepositioning	1	1
Proactiveness and responsiveness	3	5
Prompt investigation	1	1
Regulatory pressure	1	1
Risk alertness training	1	1
Supplier action authorisation	1	2
Supplier or partner development	2	2
Supplier or partner selection	2	3
Working with localised groups	1	1
Avoidance	65	1290
Avoiding competition for Media coverage	0	0
Awareness	36	123
Collaboration with the public	1	1
Information sharing with or by staff	23	44
Information sharing with or by suppliers	23	53
Information sharing with police and similar governmental bodies	4	4
Information sharing with programme participants	3	3
Legal and regulatory monitoring	2	3
Staff and Partner training	8	12
Supplier or partner monitoring	2	2

Working with localised groups	1	1
Category management	2	2
Communication strategy	31	55
Avoiding competition for Media coverage	1	1
Clarity on communication	23	37
Confidentiality	14	25
Conflict of interest	14	25
Consultation	9	14
Governmental collaboration	5	7
Stakeholder participation	12	21
Contracts	40	188
Contract duration	8	10
Contract management	3	3
Contract termination	17	34
Contract terms and conditions	21	63
Framework Agreements	12	20
General	7	10
Indemnities	6	10
Supplier contractual obligation	17	38
Demand forecasting	3	3
Due Diligence	35	102
Supplier assessment and monitoring	17	30
Fairness	25	61
Financial controls	10	21
Financial resilience	11	28
Honour contractual obligations	1	1
Improved procurement processes	9	16
Legal and Regulatory compliance	52	249
Donor requirement	3	4
Goods or service-specific laws and regulations	1	1
Local legal or regulatory requirements	28	40
Organisational policies	33	84
Participation with relevant sector groups	23	36
Staff training	7	8
Staying updated with changes	8	8
Supplier contractual obligations	21	66
Supplier selection	2	2
Milestone payments	2	2
No inventory holding	6	7
Policy Compliance and Conformity	52	209
Consultation with experts	3	3
Continuous Policy review, update and compliance	18	29
Localised compliance	7	7
Policy alignment (both global and suppliers)	28	51
Staff and volunteer obligation	22	43
Ethical behaviour by staff	7	11
Refusal of gifts and hospitality	8	8
Staff disclosure	2	4
Staff training and support	10	13

Supplier awareness	7	7
Supplier obligation	26	56
Quality control and assurance	13	45
Removing perceived opportunity	3	5
Risk identification, assessment and prevention	18	28
Staff recruitment and training	12	21
Supplier or partner development	8	10
Support to country teams	5	6
Transparency	19	44
Collaboration	46	219
Awareness	30	95
Information sharing with or by staff and volunteers	18	37
Information sharing with or by suppliers	18	43
Legal and regulatory monitoring	2	3
Staff and Partner training	4	4
Supplier or partner monitoring	3	3
Working with localised groups	4	4
Collaboration with other charities	19	32
Collaboration with suppliers and partners	19	41
Collaboration with the government and donors	13	17
Collaboration with the media	1	1
Internal Collaboration	17	33
Culture	46	183
Compliance culture	1	1
Ethical culture	5	6
Learning culture	29	65
Risk awareness culture	5	5
Whistleblowing and reporting	33	106
Decision making	30	171
Authorisation and Governance	5	9
Central PM Support and Oversight	16	78
Advice and Guidance	12	28
Authorisation and approvals	5	10
Centralisation	6	6
High-Level Support	10	24
Project monitoring	5	7
Staff training	2	3
Decentralisation	12	30
Documentation	7	15
Guidance from Contracts and Procurement	3	4
Influencers	4	4
Organisational policy and protocols	8	9
Procurement committee	9	13
Security considerations	1	1
Supply chain understanding	2	3
Sustainability	2	3
Training	2	2
Flexibility	22	62
Decision flexibility	13	34

Operational flexibility	1	1
Sourcing flexibility	16	27
Governance and Accountability	46	300
Accountability to Donors	12	16
Appointment of Contract officers or managers	2	3
Authorisation and Approvals	20	49
Clear governance structure and responsibilities	12	16
Documentation	4	9
External auditing	5	12
Internal control (Checks and balances)	18	31
Managerial or committee Oversight	31	89
Proportionality	10	18
Supplier accountability	2	8
Transparency	23	49
Human Resource Management	55	420
Disciplinary action	15	29
Documentation	37	183
Accessibility	18	27
Approvals	3	4
Business continuity	6	8
Chain of Evidence and Auditing	23	59
Clarity	6	10
Legal formality, contracting or tendering process	9	22
Market information	1	1
Review of contract and tender documents	6	9
Risk management	1	2
Supplier auditing	7	8
Supplier management	8	17
Transparency	9	16
Personnel knowledge and experience	14	30
Policy compliance	14	29
Recruitment	17	34
Remuneration	6	8
Staff support	15	22
Training	31	85
Information Technology	28	66
Integration	21	40
Redundancy	26	65
Backup suppliers	2	2
Contingency planning	1	1
Data back up	7	9
Decision redundancy	3	4
Framework Agreements	10	15
Fund reserves	5	8
Knowledge backup	8	11
Limited stock holding	4	6
Prepositioned stock	1	1
Supplier held stocks	5	8
Robustness	28	54

Decentralised decision making	2	3
Framework Agreements	8	12
Fund reserves	5	9
General	8	9
Knowledge backup	4	5
Supplier held stocks	5	8
Supplier monitoring and development	6	8
Security	25	73
Data Security	13	24
Fund reserves	7	12
Indemnities	5	9
Insurance	12	17
Security hub	1	1
Staff training	7	9
Use of money safe	1	1
Sustainability	46	185
Economic	22	38
Environmental	23	48
General	11	15
Policy	14	15
Social	32	69
Top management support	16	39
Procurement strategy	40	694
Monetary value	23	105
Approval level	3	6
Central Contract and procurement team involvement	6	14
High risk spend	2	4
High Value spend	5	10
Contract extension	1	1
Partner external audit	1	1
Procurement committee	3	3
Sourcing procedure	14	50
Supplier base strategy	5	6
Supplier location	1	1
Supplier relationship	5	6
Supplier relationship management	1	1
Supplier selection criteria	11	16
Tier 1 due diligence	7	12
Tier 2 due diligence	1	1
Supplier base strategy	16	47
Backup suppliers	1	1
Framework agreements	7	11
Relationship with SRD	2	2
Single sourcing	5	7
Sole sourcing	5	7
Supplier location	19	77
Global	6	14
Barriers	1	3
Disadvantage	1	1

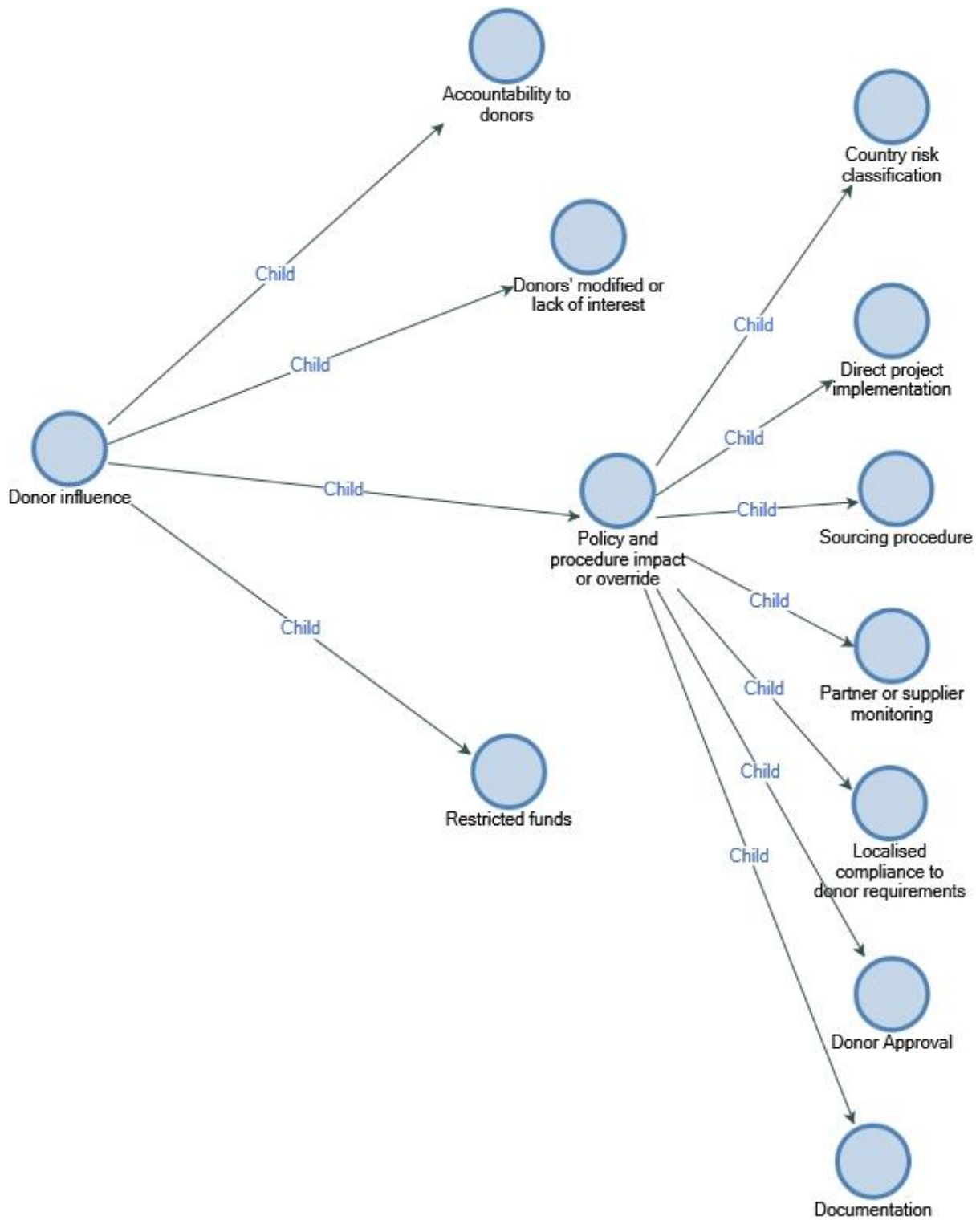
Local	15	42
Benefits	6	7
Considerations and influencers	10	15
Risks	5	6
Supplier relationship determination	11	45
Contract size and duration	6	6
Frequency of procurement	2	2
Number of suppliers in the sector	1	2
Size of supplier	1	2
Supplier base strategy	2	2
Supplier location	3	4
Supplier track record	1	1
Type of relationship	5	9
Type, criticality of and risks with product or service	7	13
Supplier selection	35	420
Criteria	32	220
Cost	11	18
Lead time	6	7
Quality	8	17
Service delivery	5	7
Supplier capability	16	46
Financial status	12	28
Technical skills and competence	10	18
Supplier location	7	12
Supplier profile	18	58
Accreditation or professional affiliation	1	2
Company profile (incl. accreditation, professional bodies)	5	6
Compliance with sector requirements	5	5
Criminal status and legal issues	10	13
Existing contracts	1	1
Policy compliance	3	4
Previous contract (Track record)	7	12
Public sector approval	3	4
References	5	11
Sustainability	22	62
Environmental Sustainability	6	8
Ethics and related policy compliance	7	14
Financial status	1	2
Insurance	2	2
Influencing factors	19	97
Donor requirements	2	4
Fairness	1	1
Monetary value	11	19
References	4	7
Risk exposure due to goods or service	3	17
Supplier location	7	14
Supplier relationship type	2	2
Supply base strategy	3	4

Type of product or service	5	23
Urgency of requirement	3	4
Value for the organisation	2	2
Sourcing procedure	27	103
Competitive bidding	15	40
Donor influence	1	1
Single written quotation	8	14

A7.2 NVivo 12 Plus Data Sources and Reference by Cases

Name	Files	References	Modified On	Modified By	Classification
ORG_1	7	830	30/09/2020 17:34	EAS	Organisation
ORG_2	1	63	30/09/2020 17:35	EAS	Organisation
ORG_3	10	632	30/09/2020 17:35	EAS	Organisation
ORG_4	4	398	30/09/2020 17:35	EAS	Organisation
ORG_5	13	500	30/09/2020 17:35	EAS	Organisation
ORG_6	14	754	30/09/2020 17:35	EAS	Organisation
ORG_7	12	676	30/09/2020 17:35	EAS	Organisation
ORG_8	8	476	30/09/2020 17:36	EAS	Organisation

A7.3 Project Map Showing the Coding Hierarchy for Donor Influence



A7.4 Project Map Showing Coding for Governance and Accountability



A8. Codes for Coded Data Sources

Case	Coded data source	Code for data source
ORG_1	1. Procurement Policy and Procedures	O1PPP
	2. Supplier Terms and Conditions	O1STC
	3. Modern Slavery Policy	O1MSP
	4. Corruption and Compliance Policy	O1CCP
	5. Safeguarding Policy	O1SP
	6. Annual Report	O1AR
	7. Interview Transcript	O1IT
ORG_2	1. Interview Transcript	O2IT
ORG_3	1. Procurement Procedures and Rules	O3PPR
	2. Procurement Policy	O3PP
	3. Suppliers Code of Conduct	O3SCC
	4. Procurement Implementation Strategy	O3PIS
	5. Modern Slavery Policy	O3MSP
	6. Safeguarding Policy	O3SP
	7. Values and Positional Statement for suppliers	O3VPS
	8. Corporate Strategy	O3CS
	9. Annual Report	O3AR
	10. Interview Transcript	O3IT
ORG_4	1. Code of Conduct	O4CC
	2. Fraud, Bribery and Corruption Prevention Policy	O4FBCP
	3. Policy Handbook	O4PH
	4. Interview Transcript	O4IT
ORG_5	1. Procurement Policy	O5PP1
	2. Procurement Procedure	O5PP2
	3. Procurement Strategy	O5PS
	4. Supplier Code of Conduct	O5SCC
	5. Supplier Conduct Policy	O5SCP
	6. Supplier Terms and Conditions	O5STC
	7. Modern Slavery Statement	O5MSS
	8. Sustainability Policy	O5SP
	9. Supplier Pre-Qualification Guide	O5PQG
	10. Pre-Qualification Criteria	O5PQC
	11. Statement on the Environment	O5SE
	12. Statement on Ethics and Sustainable Purchasing	O5SESP
	13. Annual Report	O5AR
	14. Interview Transcript	O5IT
ORG_6	1. Procurement Policy	O6PP
	2. Supplier Contractual Agreement	O6SCA
	3. Code of Conduct	O6CC
	4. Instructions to Bidders	O6IB

	5. Modern Slavery Act Statement	O6MSAS
	6. Supplier Terms and Conditions	O6STC
	7. Contract Procedures Guide	O6CPG
	8. Pre-Qualification Criteria	O6PQC
	9. Request for Proposal/Quote	O6RFP/Q
	10. Supplier Questionnaire Form	O6SQF
	11. Terms of Tendering	O6TT
	12. Strategic Report	O6SR
	13. Interview Transcript	O6IT
ORG_7	1. Procurement Policy	O7PP
	2. Suppliers' Code of Conduct	O7SCC
	3. Fraud, Bribery and Corruption Prevention Policy	O7FBCPP
	4. Emergency Procurement Strategy	O7EPS
	5. Employees' Code of Conduct	O7ECC
	6. Modern Slavery Policy	O7MSP
	7. Modern Slavery Statement	O7MSS
	8. Invitation to Tender	O7ItT
	9. Strategic Report	O7SR
	10. Accountability Report	O7AR1
	11. Annual Report	O7AR2
	12. Interview Transcript	O7IT
ORG_8	1. Procurement Policy	O8PP
	2. Supplier Code of Conduct	O8SCC
	3. Suppliers Terms and Conditions	O8STC
	4. Modern Slavery Policy	O8SMP
	5. Guidelines for supply of Goods and Services	O8GGS
	6. Annual Report	O8AR
	7. Interview Transcript	O8IT

A9. Tables Showing a Detailed Discussion How Supply Chain Resilience Formative Elements are Pursued in Each Case

A9.1 Discussion of How SCR Formative Elements are Pursued in Org_1

Formative element	Application
Avoidance	This formative element enjoyed the most coverage in all data collected on Org_1 as a significant portion of the codes on formative elements were on avoidance. Unsurprisingly, the majority of this organisation's effort to be resilient is invested in avoiding as many risks and uncertainties as is reasonably possible. It does this

through a myriad of ways including awareness creation, its contract with suppliers, legal and regulatory compliance, policy compliance and conformity, due diligence, supplier assessment and monitoring. It further involves ensuring transparency and fairness, consultation, staff recruitment and training as well as supplier or partner development.

Keeping relevant stakeholders aware through information sharing and monitoring is requisite for avoiding risks. Staying up to date with modifications on national and international level legislations and regulations helps to ensure compliance across the organisation worldwide. Org_1 makes policies accessible to its staff, trustees, volunteers, suppliers and partners. Indeed, staff are required to sign codes of conduct to ensure they are aware of the requirements. Staff engaged in the procurement process are made to sign a Conflict of Interest declaration form and suppliers are enjoined to ensure there is no conflict of interest on their side lest they risk losing the contract. Org_1 also communicates with its suppliers to keep them informed of its current and anticipated requirements as well as to be aware of market conditions. The interviewee from Org_1 said, *“Communication with existing and potential suppliers enables us to manage supplier performance effectively and to keep abreast of market developments, innovations and opportunities.”* - O1IT

Suppliers are also contractually required to share information with Org_1 so that it is aware of their activities that may pose risks.

Another means Org_1 pursues avoidance is through its contracts by the supplier terms and conditions, supplier contractual obligations and contract duration.

Beyond ensuring suppliers comply with relevant laws and regulations, Org_1 itself and its partners have to comply with these laws to avoid any risks non-compliance may expose them to. This includes laws that are specific to particular goods or services as well as consideration for compliance that acknowledges different cultural contexts and frameworks. The interviewee from Org_1 explains:

“When it comes to modern slavery, we look at the country’s context; it depends on the location. Because what we may define as modern slavery in the UK may not necessarily be in another location. It has to be context-based, we look at the laws of that country and see how we can align, how it aligns with UK modern slavery act. So we are not unmindful of the local context.” - O1IT

To help with regulatory compliance, Org_1 participates with relevant sector groups to ensure they are audited regularly and that standards are maintained. Staying updated with legal and regulatory changes ensures that Org_1 does not inadvertently fall foul of new and/or modified laws and regulations.

Furthermore, legal and regulatory compliance is pursued via its organisational policies. Org_1 ensures global policy alignment and compliance for both suppliers and partners.

To avoid working with suppliers who present high risks to Org_1, it undertakes due diligence to ensure that suppliers and partners are not only technically and financially able to deliver goods and/or services, but that they are also compliant with relevant laws and regulations. This it does through online credit check facilities, researching supplier operations, tax status and public profile, interrogating suppliers and assessing potential sustainability risks or conflicts with its code of conduct. The interviewed Procurement officer said:

“Our due diligence is quite intense, we look at different factors, their financial capacity, what are they like in the market, their reputation, their policies; we look at different areas and sometimes we do reference checks; we have a credit checking facility. We look at some of the directors, we look at some media solutions to see, are they reputable? We look at different things.” - O1IT

Further, the interviewee stated that:

“Because we are involved in a lot of advocacy work as well, our due diligence is very in-depth. We don’t want to be seen to be doing business with suppliers who defy what we advocate for. For instance, we are advocating for climate change, we wouldn’t want to deal with a supplier that is not environmentally conscious and so one of our requirements is to ask for a supplier’s sustainability policy. We also advocate against modern slavery, so we would want to be seen to be working with companies that are not involved in slave labour or forced labour. So we check all through, to be sure that our partners, or if we are working through an implementing partner, that they are paying their workers, and that they are not involved in anything shady.” - O1IT

After potential suppliers or partners have been reviewed and brought on-board, continuous assessment and monitoring continue to ensure that any risks that may arise are identified early and mitigated accordingly.

To avoid a reputation of poor and shabby procurement practices, Org_1 insists on fairness and transparency in its procurement process. For instance, results of publicly-advertised tenders are also public advertised and failed bidders are provided with a debriefing. This helps build trust between Org_1 and its suppliers - which is helpful for collaboration and visibility. The organisation has therefore made it part of its policy:

“...to treat all bidders equally and fairly. This includes ensuring that suitable people are involved in the evaluation - in number and seniority in proportion to the requirements and qualified to judge technical responses.” - O1PPP

Org_1 further ensures transparency of procurement decision making through accurate and concise documentation and record-keeping. This ensures that their established principles are adhered to and that all procurements are auditable.

	<p>Including consultative processes and requirements in its procurement processes ensures that Org_1 can avoid certain types of risks that could arise from ignorance or lack of technical competence. Thus, both internal and external stakeholder participation is encouraged. Through the use of procurement committees, relevant departmental participation is ensured - right from the onset of the procurement process, for high valued contracts. The organisation further requires that:</p> <p><i>“For all requirements valued over £50,000, Contracts and Procurement must be consulted.” - O1PPP</i></p> <p>Through its staff recruitment, Org_1 ensures that it does not recruit anyone who poses any known risk to the organisation. Staff training ensures awareness of policies and regulations; that they are capable of identifying, assessing and managing risks and are in a position to make informed decisions. Similarly, Org_1 invests in supplier and partner development to ensure they have compliance training and support and that partners are provided with networking opportunities and capacity building.</p>
<p>Human Resource Management</p>	<p>Org_1 addresses a range of risks to its supply chain through the management of its human resources. The first is through its robust recruitment processes where through structured interviews, taking of references and checking right to work, Org_1 ensures staff present no major risks to them. New staff are further made to sign its code of conduct and inducted in a variety of its policies. Further, extensive training and support for staff are used to improve staff competence and skillfulness, to create awareness which helps improve decision making and the ability to identify and avoid risks. In Org_1, procurement is decentralised; for this reason, staff training is paramount. As the interviewee puts it:</p> <p><i>“...as I'd mentioned, I mentioned that our procurement is devolved. We are not everywhere. We are a small team. What we can do is to provide the training to empower the different teams so they have a clear understanding of the process, these key steps. So they have to think when you are engaging a supplier, what are the questions? And they are very appreciative of it now. So we train.” - O1IT</i></p> <p>Org_1 further demands its suppliers to organise relevant training for its staff to ensure legal and regulatory compliance.</p> <p>The staff of Org_1 are obliged to conform to the organisation's policies and this is enforced through the signing of its code of conduct on appointment. In case of a breach, further training, counselling, increased supervision, transfer to other duties or disciplinary action may be explored as provisioned in its disciplinary policy.</p> <p>Part of human resource management towards supply chain resilience is knowledge management which consists of training and documentation. Org_1 insists on documentation of purchasing decisions and awards of contracts to</p>

	<p>ensure a chain of evidence and reasons for decisions. Its procurement procedure requires that:</p> <p><i>“Procurement documentation must be saved as evidence to demonstrate that fair and transparent processes have been followed, and appropriate due diligence carried out on potential suppliers. This is particularly necessary for all material decisions regarding competitive tendering and to provide a valuable record of market information.” - O1PPP</i></p> <p>Benefits include ensuring business continuity, transparency, accessibility for all relevant stakeholders and to provide the opportunity for future lessons.</p> <p>The interviewed expert showed an understanding of supply chain resilience and indeed indicates it as the reason for some of their actions as a procurement department.</p> <p><i>“That’s why we are doing all this training; empowering our teams as a procurement department...But at the same time, we have to protect the organisation in terms of our risk exposure. But we also want to be a preferred organisation for our suppliers. We want to be attractive to our suppliers, so we must be seen to be doing what we are supposed to do. Because a contract is a two-way thing, it involves two parties. We’re not going to hold the stick over our suppliers while we are not doing our part. We have to do what we have to do to enable them to deliver what we are asking them to deliver.” - O1IT</i></p>
<p>Collaboration</p>	<p>Org_1 pursues collaboration through several means. Paramount is the creation of awareness along the supply chain through information sharing with or by the supplier and relevant staff. This helps clarify Org_1’s expectation of both potential and existing suppliers and keeps it updated on market developments, innovations and opportunities. It ensures that its procurement bidding and awarding process is transparent and fair. This helps build trust for collaboration with existing and prospective suppliers. Org_1 also shares its policies with suppliers and partners where this is deemed as useful for guiding procurement decisions. Similarly, suppliers and partners share their policies, processes and practices with Org_1 which aids in its understanding of the impact and risks to be expected.</p> <p>Further, Org_1 collaborates with local communities to improve upon its awareness, sustainability in the face of changing circumstances and to enhance its supply chains’ responsiveness. It collaborates with governments as well, to enhance legal compliance and also to mitigate potential political risks that may arise from governments’ decisions.</p> <p>Humanitarian organisations usually pursue collaborative procurement to procure from suppliers as a unit and enjoy the attendant benefits from this. This is not the case for Org_1. Even though Org_1 does not procure together with other charities, there is the sharing of relevant information on suppliers as well as on the sector’s procurement best practices. As Org_1’s procurement officer puts it:</p>

	<p><i>“When it comes to the humanitarian sector, we also network with other INGOs. Sometimes we don’t know who the reputable suppliers in the market are. So we have a lot of networks through which we collaborate with other NGOs. We are also members of the Charity Sector Procurement Group. So we talk to our professional colleagues.” - O1IT</i></p> <p>In times of delivering emergency relief to affected communities, Org_1 sometimes collaborates with bigger charities that own regional warehouses, to stock their inventory temporarily while they are being distributed.</p> <p>Internal collaboration is also pursued through the sharing of information with all relevant stakeholders, combined procurement by multiple departments with similar requirement and consultation with subject matter experts when so required.</p>
<p>Sustainability</p>	<p>Economically, Org_1 has a reserves policy that considers its principal risks. It also puts in significant effort to ensure financial efficiency and performance. A number of committees are in place to oversee different finance-related activities and associated risk management. There is an effort to improve the organisation’s financial resilience so that any shocks may be mitigated, and the organisation’s delivery impact can be maximised. This resilience among other things is pursued through the diversification of Org_1’s institutional funding base across a range of donors. Due diligence on suppliers to avoid financially risky suppliers as well as the organisation’s use of milestone payments, helps its economic sustainability.</p> <p>In terms of communities within which Org_1 operates, the organisation prioritises local procurement as much as is practicable. It dictates in its procurement policy, that:</p> <p><i>“...where possible, procurement decisions promote local economic development in accordance with Sustainable Development Goals (SDGs), and human rights standards” - O1PPP</i></p> <p>Through its procurement, Org_1 recognises its ability to mitigate the risk of dealing with suppliers who are not socially and environmentally sustainable by avoiding them. It makes this clear to all persons who procure within it that:</p> <p><i>“We strive to purchase and source goods, services and works which are produced and delivered under conditions that do not involve the abuse or exploitation of any persons.” - O1PPP</i></p> <p>However, it also admits that <i>“...procurement provides opportunity to use our commercial value to question and influence the ethical and environmental standards of suppliers.” - O1PPP</i></p> <p>Thus, it states these positions and demands commitments from suppliers in its terms and conditions document that suppliers are to sign as part of their contractual agreement. Suppliers are further required to show their</p>

	<p>environmental policies and standards and their compliance with relevant sector legislation and regulations.</p> <p>Sustainability, therefore, plays a significant role in procurement decision making.</p>
Flexibility	<p>Flexibility in Org_1 procurement is pursued through decision flexibility and flexible contracting. Procurement decision making in Org_1 is decentralised, for which reason the procurement department embarks on extensive training of staff from other departments and in-country teams to equip them in understanding the principles and processes of procurement and to ensure a robust decision-making protocol. These trainings are also extended to other departments who may not directly procure but may be involved in the procurement process, such as the finance team, so that they would not unnecessarily hinder procurement processes. The programme teams which may not do their own procurements are also trained so that they would not wait until very close to the time for project delivery to kickstart the procurement process.</p> <p><i>“So we train different teams; not just the procurement people, but also programme people so they can have an understanding of what procurement is about, what the process entails, what are the principles and why we are doing what we do; we are facilitators.” - O1IT</i></p> <p>Org_1 also explores the use of lots to break down a total requirement into smaller elements which can be managed as a single procurement process with the option to make multiple awards.</p> <p>There is also the use of approved suppliers with whom simple terms such as delivery lead-time, price and invoicing may be agreed upon ahead of time. This list is subject to review every two to three years.</p> <p>There however is no indication from collected data sources that Org_1 explores quantity flexible contracts, option contracts, backup suppliers, multiple sourcing (including the use of a mix of local and overseas suppliers) and a service/product mix. Further, there is no indication that a supplier’s ability to respond to variations in supply requirements is considered in Org_1’s supplier selection criteria.</p>
Agility	<p>Org_1 works majorly through carefully selected partners that are based in the communities within which they work and this improves the responsiveness of its supply chains to disruptions. Under emergencies, Org_1’s preapproved suppliers’ lists help it choose reliable suppliers who have already gone through the needed due diligence to provide the required goods and/or services. This helps it save time and avoid delays, even when donor requirements demand a competitive process nonetheless.</p> <p>Org_1’s investment into its financial resilience ensures that it does not have to go to donors to request funds before responding to emergencies. Org_1 also requires procuring departments – particularly in times of emergencies – to:</p>

	<p><i>“Have clear delegation of roles, authority and responsibility to enable decisions to be made quickly and transparently.” - O1PPP</i></p> <p>In its Supplier Terms and conditions, Org_1 enjoins its suppliers to institute processes and procedures that help with early detection and mitigation of disruptions. There are also clear provisions for the processes to follow for dispute resolution with suppliers in case there is a need to do so. This is important as it ensures that possible sources of disruption are identified and dealt with in time so that suppliers’ reliability can remain unquestioned.</p> <p>Org_1 also invests in the development of its suppliers and partners to enhance their competence and ability to respond quickly. It empowers them to take every needed action as is reasonably and legally required to quickly respond to major risks such as security breaches.</p> <p>Besides these practices which are well established in literature to help improve the agility of all supply chains, humanitarian organisations also use prepositioned stock to improve their supply chains’ responsiveness. However, Org_1 indicates that it does not hold stock. The interviewed manager explains: <i>“We don’t hold stock. We order as and when required. As they are coming, we are distributing to the IDPs (Internally displaced persons) and to the affected communities. So we don’t have warehouses.” - O1IT</i></p> <p>Org_1 instead orders and distributes goods-in-kind to affected communities while working in collaboration with other charities to temporarily hold their stock in their regional warehouses when needed.</p>
<p>Information Technology</p>	<p>As a formative element, information technology facilitates several other formative elements, particularly through the use of procurement software applications and data servers where all relevant documents are saved. Within Org_1, there is no indication of the use of the former, but it does have a SharePoint where documentation of all procurement processes, decisions, evidence and authorisations are kept. This thereby facilitates visibility, transparency, accessibility, improved decision making and accountability. It aids in maintaining business continuity and ensures that there is a chain of evidence to provide for both internal and external auditing or when donors so require. This also serves to help the oversight responsibilities of the central procurement office, to query and evaluate the decisions of their procurement officers and procuring departments around the globe. Org_1’s interviewee explains: <i>“...we have an online SharePoint where I can always have access to what they’ve done. And if it’s a high-value procurement they are doing before it’s sent out, I have to look at how they arrived at it, their potential, the list of suppliers they are inviting and what due diligence has been done.” - O1IT</i></p>

	<p>Org_1 staff have access to a restricted network by which reporting of risks and concerns can be done to facilitate investigations and learning. Thus, it uses information technology to facilitate a resilience-seeking culture.</p>
<p>Redundancy</p>	<p>Org_1 does not hold any inventory as emergency stock or any other means of tangible redundancy such as additional employees, backup equipment or even the concurrent use of multiple suppliers for the same good/service. It explores redundancy through intangible means such as knowledge back through cross-training of employees from departments whose primary role is not procurement. <i>“And we provide training to the different departments so that they know what to do. For instance, last week, we did a training with the individual giving teams in fundraising, to bring them up to date on the procurement process.”</i> - O1IT</p> <p>There is also decision redundancy, where decisions and reasons for them are documented to ensure consistency and that decisions can be evaluated for appropriateness, impact and effectiveness. Further, Org_1’s use of approved supplier lists and framework agreements for specific goods and services provides it with some redundancy in supplies for those goods and services.</p> <p>Beyond its efforts at redundancy, Org_1 expects of its suppliers to: <i>“...put in place and maintain such disaster recovery plans as may be required by law and Good Industry Practice to protect Our business and operational continuity, including but not limited to the appropriate off-site back up of data.”</i> - O1STC</p> <p>Sometimes, organisations through their relationships with suppliers are able to come to agreements with some of them, to serve as backup suppliers in case the lead supplier fails to deliver as expected. Org_1 does not explore this form of relationship redundancy.</p>
<p>Robustness</p>	<p>Ensuring robustness is contingent on identifying the weakest link in a supply chain and improving its ability to resist disruption. For a humanitarian organisation like Org_1, funding may be identified as such a weak link as it relies largely on donor funding for its procurements. To address this, Org_1 has ensured it has a range of donors it works with to secure its institutional funding base. It reports that: <i>“During the year we have successfully ground our institutional funding base across a range of donors.”</i> - O1AR</p> <p>Further, proactive measures aimed at improving its supply chain’s ability to cope with vulnerabilities such as its efforts at redundancy, avoidance and flexibility targeted at weak points in its supply chain helps improve its robustness. For instance, being a humanitarian organisation, it cannot employ as many procurement professionals as it should, due to challenges with funding and remuneration. Therefore, efforts at knowledge redundancy help reduce its exposure to risks due to inadequate personnel. Another example is how Org_1 deals with the challenge of the unpredictability of demand in emergencies. The use of preapproved suppliers ensures the supply chain continues to operate satisfactorily irrespective of disruptions.</p>

<p>Security</p>	<p>Org_1 acknowledges the possibility of attacks on its information systems which could lead to loss of service and/or data and possibly put people at risk. The organisation therefore has instituted information technology measures that are tested regularly. It also has a committee responsible for overseeing its cybersecurity. Org_1 requires its procuring staff to evaluate the exposure of the organisation in terms of the security of data while dealing with suppliers. It requires that the:</p> <p><i>“IT security of these suppliers may be assessed and audited for further assurance.” - O1PPP</i></p> <p>It contractually demands data encryption from suppliers and requires them to implement security measures including training of their staff. Suppliers are to:</p> <p><i>“...implement and maintain policies and procedures to detect and respond to Security Breaches and You shall train all personnel processing Relevant Data to recognise a Security Breach.” - O1STC</i></p> <p>In its agreement with suppliers, they are also required to ensure adequate professional indemnity insurance and other forms of liability insurances to cover any liabilities or claims that may arise during the contract term.</p> <p>Further, staff training on security issues are done right from induction, and this continues to ensure that security considerations are key in all major programme decisions – particularly procurement. Org_1 also provides security for its staff at its office premises.</p>
<p>Top Managerial Commitment</p>	<p>Org_1 ensures appreciable commitment from its top management. It indicates in its modern slavery policy that:</p> <p><i>“Governance structures are in place to ensure the early identification and management of key risks and support the delivery of our strategy. The board of trustees is ultimately responsible for risk management and the effectiveness of Org_1’s internal control systems.” - O1MSP</i></p> <p>This commitment is also shown through the board’s review and approval of the organisation’s risk appetite and risk management policy. It has further sanctioned some committees to have oversight over several areas of vulnerability that the organisation may be exposed to. These committees ensure in-depth reviews of Org_1’s processes, receive reports on incidents and also approve onward reporting for regulatory compliance where necessary. Top managerial support is further seen in the creation of new roles to deal with specific areas of risk exposure.</p>
<p>Culture</p>	<p>A resilience seeking culture is seen in an organisation’s focus on establishing reporting channels, continuous learning and relentless risk management. This is to ensure that risks are identified and reported early so that appropriate actions in terms of avoidance or mitigation may be pursued. Then lessons from the efficacy of applied methods and decisions taken are introduced into existing systems to ensure an even better response in future events. Org_1 establishes clear reporting channels which makes it easy for employees to know who to report</p>

	<p>what to. To address potential cases of corruption, Org_1 ensures awareness of its policy and expects staff to:</p> <p><i>“...understand their obligation to report any suspicions of prohibited transactions or suspected breaches to the Senior Reporting Officer.” - O1CCP</i></p> <p>There is a provision for confidential reporting through a dedicated email via which sensitive issues may be reported to the appropriate quarters. Policy guidelines on this are available to staff.</p> <p>Beyond reporting within the organisation, Org_1 ensures reporting to relevant statutory agencies and regulatory bodies when issues bother on crime. There is also reporting of incidents to relevant donors when so required. For potential bidders, Org_1’s address and contact details are provided so that any issues with local procurement teams from around the world may be reported to the head office for investigations in case bidders were unsatisfied with the transparency and fairness of the procurement process.</p> <p>The organisation also prioritises a learning culture. It reports that:</p> <p><i>“Serious incidents and near misses are monitored and inform the ongoing development of risk management strategies.” - O1AR</i></p> <p>Indeed, there is a team responsible for investigating various forms of incidents and ensuring lessons are learnt. There is a review of supplier terms and conditions and organisational policies to consider lessons from past incidents as well as legal and regulatory changes. Departments that procure from suppliers are required to provide feedback about supplier performance once delivery is made. This record of past performances and the weaknesses of the supply process - be it on the side of Org_1 or the supplier, are considered in the procurement procedure. Org_1’s interviewed procurement officer indicates that:</p> <p><i>“When it’s finished, we expect them to give us a feedback about the performance. That’s where the programme people will give us a feedback about a particular supplier, whether they were able to perform appreciably, and that will help us to see if that supplier should be re-engaged for subsequent work” - O1IT</i></p> <p>and also</p> <p><i>“The monitoring and the feedback we get will help determine whether we can entrust them with more.” - O1IT</i></p>
Integration	<p>Org_1 pursues internal integration primarily through lateral integration. There is an obvious commitment towards ensuring integration of stakeholders, processes and data as well as the use of cross-functional teams. For example, the organisation forms internal procurement committees (IPC) with representation from all relevant stakeholders. Its procurement procedural guideline states that:</p> <p><i>“The IPC will have cross functional representation and be responsible for planning and leading all procurements on behalf of that office/programme.” - O1PPP</i></p>

	<p>Even in cases where procurement is not done through the IPC, procuring officers are required to:</p> <p><i>“Ensure all the relevant stakeholders are aware of the procurement and involved as appropriate”</i>. - O1PPP</p> <p>The interviewed manager, affirms this by having indicated that:</p> <p><i>“...there are different areas and different department representatives that are involved in that committee who oversee this process; right from the definition of the requirements, we make sure that every relevant department has made inputs into the statement of requirement.”</i> - O1IT</p> <p>Beyond lateral integration, there is however no indication of strategic or external integration so far as procurement is concerned. Org_1 does not integrate technologically or logistically with its suppliers even though there is appreciable collaboration and information sharing.</p>
<p>Governance and Accountability</p>	<p>This theme emerged inductively from the data. From analysing Org_1’s data, it becomes apparent that establishing accountability and a governance structure that spells out roles and channels of reporting helps to improve the supply chain’s resilience.</p> <p>Accountability to donors is paramount in Org_1. Significant effort is invested into adhering to donor requirements on procurement and responding to donor queries with regards to the use of resources and regulatory compliance. Org_1’s procurement policy indicates:</p> <p><i>“Government donors such as the anonymised_donorA, anonymised_donorB, anonymised_donorC and anonymised_donorD require compliance to specific procurement rules and regulations”</i> (O1PPP)</p> <p>while interviewed manager explains how accountability to donors influences their payment schedules with suppliers:</p> <p><i>“Because these are donor funds. You don’t want to give them to one supplier and the man bolts off. How are you going to report back to your donor:?”</i> - O1IT</p> <p>Commitment to documentation and record-keeping is partly also due to auditing requirements by both internal and external auditors as well as donors.</p> <p>Org_1 also ensures that there is transparency in their procurement processes, particular for high-value contracts to ensure funds are properly spent.</p> <p><i>“For items valued £50,000 or more, quotations should be sought by competitive tender to obtain best value through fair competition and transparency of process, including due diligence checks.”</i> - O1PPP</p> <p>Furthermore, clear levels of accountability and responsibility are codified. There is established oversight of certain functional activities by particular managers or committees and their approval or authorisations are required before decisions that bother on such matters can proceed. Procuring departments are required to:</p> <p><i>“Have clear delegation of roles, authority and responsibility to enable decisions to be made quickly and transparently”</i> . - O1PPP</p>

	<p>Decisions that are considered critical either because of monetary value or because they may have contractual, legal or regulatory implications require approval from the Contracts and Procurement team, the Finance department or the appropriate oversight committee (including committees in charge of security, data protection, IT, risk management etc).</p> <p>Org_1 also institutes checks and balances within its processes to ensure that decisions are monitored and reviewed by multiple parties. For instance, the organisation’s procedure document requires that: <i>“As far as reasonably practical, staff involved in the procurement process (the selection) should not also authorise the resulting purchases or payments.”</i> - O1PPP</p> <p>Org_1 clearly stipulates proportionality in multiple of its policy documents, requiring that procurement processes employed for particular purchases, match the attendant value and risks. The following are quotes from Org_1’s policies on corruption, modern slavery and procurement. <i>“Apply a risk-based approach which is proportionate...”</i> - O1CCP <i>“By identifying and assessing the potential threats relating to diversion of funds, the organisation can focus efforts and resources on addressing the most significant risks.”</i> - O1CCP <i>“Good governance ensures that decisions relating to expenditure on goods and services to meet the needs of the organisation are subject to a proportionate process and authorised at the right level to deliver value for money.”</i> - O1PPP <i>“Procurement processes should be proportional to the value and risk of the requirement.”</i> - O1PPP <i>“All procurement decisions valued at £50,000 or over require approval from the Contracts and Procurement team at Org_1’s head office, who will manage or oversee the selection process. Smaller procurements and supplier relationships may be approved by local teams in accordance with delegated authorities.”</i> - O1MSP</p> <p>Finally, Org_1 demands accountability from its suppliers through its contractual agreements with them. Among the various requirements, suppliers must ensure that: <i>“All Relevant Data is strictly confidential and may not be copied, disclosed or processed in any way without Our express authority.”</i> - O1STC</p>
<p>Decision making</p>	<p>Fundamental to informed decision making towards supply chain resilience is supply chain understanding. Org_1 recognises this and requires procurement officers to: <i>“... understand the extent of your options and limitations, e.g. number of potential suppliers, approximate cost, quality, recent innovations, and any applicable rules and regulations.”</i> - O1PPP</p>

	<p>Recognising that decision making is largely decentralised, its subject matter experts on procurement – the central contracts and procurement team in the head office – have oversight over procurement processes and provide support and guidance on departmental procurements.</p> <p><i>“But like I told you, it’s not a centralised procurement system. Procurement is devolved to the individual country programmes. But we have an oversight.” - O1IT</i></p> <p>The support and guidance extend to in-country partners as affirmed in Org_1’s modern slavery policy and from the interview.</p> <p><i>“Central procurement can provide guidance and oversight to partner procurement, and encourage structured procurement plans.” - O1MSP</i></p> <p><i>“...all these local procurements, we leave it to the country offices. But if they are not sure about something, they come back to us and we support them.” - O1IT</i></p> <p>Org_1 further ensures proper governance structures facilitate transparent and quick decision making. Training for staff at head office departments as well as of country partners by the central procurement department ensures that supply chain understanding is enhanced, awareness is improved and that better procurement decisions that incorporate sustainability and security are taken.</p> <p>The inclusion of relevant stakeholders and the use of procurement committees further help to remove unnecessary complexity. Org_1 also insists on the documentation of procedures, evidence and justifications for decisions to ensure transparency, fairness, equity, accountability and to facilitate future lessons.</p> <p><i>“Procurement documentation must be saved as evidence to demonstrate that fair and transparent processes have been followed, and appropriate due diligence carried out on potential suppliers. This is particularly necessary for all material decisions regarding competitive tendering and to provide a valuable record of market information.” - O1PPP</i></p>
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A9.2 Discussion of How SCR Formative Elements are Pursued in Org_2

Formative element	Application
Avoidance	<p>Org_2 avoids risks in a variety of ways. Firstly, it avoids hiring heads of localised teams from the same country. Being a small organisation, the head of its field offices is responsible for reviewing procurement practices. Hence, to prevent collusion and conflict of interest, it employs different nationals to head its programmes in different countries.</p> <p><i>“And I think the gold standard is, never to employ someone as head of country or head of programmes from their respective countries they are operating in. So you know, if you are working in anonymised_country1, you will get someone from</i></p>

anonymised_country12, if you are working from anonymised_country10, you will get someone from anonymised_country13. That way there's no connections at all where conflicts of interest in mitigated. So in anonymised_country2, we've done that; in anonymised_country9, we employed someone that is known to us from other projects that has no local connections to the island that we're operating in. We've done something very similar too in anonymised_country8, we have a British national operating in there." - O2IT

Even though this strategy has its benefits, it is not always that Org_2 is able to get this done and so in such cases, persons who are less likely to be prone to corruption (fairly rich people) are employed in the role.

"Also the other way we've done it is that, for example, the country director in anonymised_country10,...it's been very hard to find a person from the UK to go into anonymised_country10, so with the person that we've employed, it's a person from a very affluent background and it doesn't kind of mitigate the risks completely but to an extent well, you know that these pennies that they will be making from procurement won't be worth their time because they are so rich." - O2IT

There are also quality assurance trips by the organisation's head of programmes where monitoring and evaluation are carried out personally by interacting with the local market to 'sense check' if quoted prices align with those on the ground. This helps to deal with the risk of local partners inflating prices or sometimes just to help them find better ways of doing things by exploring other suppliers.

"So when I go on my monitoring and evaluation trips, I would go to the market and I'd say look I want to purchase; I want to do a sense check of why it is that you are telling me that you are buying and so I can check that whether you're giving me a good price or a good quality product; and I will do that sense check myself. But then also, sometimes mainly, it's because it's, they are just stuck in a bubble and they are working in a day-to-day pattern not realising there is a better way of doing things." - O2IT

Despite these efforts, Org_2 engages suppliers who do not have proven financial records because that would mean an increase in expenditure and being a small organisation, they see that as a threat to their financial resilience and so, they choose to deal with risky small-scale suppliers to avoid straining their operations while exposing themselves to multiples of other risks such as unreliable supply, random price fluctuations, corruption, fund diversion and so on.

"So there is this...yes we can get to a point where we say we only work with tenderers that have bank statements and bank accounts, that we only do bank transfers but the problem is that the moment you do that, the cost of the products will increase and for a small outfit like us, it becomes very expensive to run and I guess we are aware of the fact that we need to get to that point, once we are, our fundraising gets better. Then hopefully we would be in a position to be able to

	<p><i>procure more items from a more reliable or more kind of a registered source.” - O2IT</i></p> <p>It is quite obvious that dealing with registered suppliers through proper contracts may be the less risky option for Org_2 even in terms of economic sustainability since that would secure it against the rather erratic pricing it experiences in many of the locations it operates in. Such suppliers can easily be checked for their financial status, their practices against modern slavery, safeguarding, terrorist financing and all other relevant checks in due diligence to ensure that no bad press can adversely affect their public donations.</p>
<p>Human Resource Management</p>	<p>There are significant challenges with how effectively this formative element is exploited in Org_2’s operations. Documentation is not vigorously pursued, and so business continuity is challenged, and supplier/partner monitoring is inefficient. The absence of a procurement team has also meant no understanding of what supply chain resilience is as evinced for instance, in the very little to no due diligence that is carried out on suppliers.</p> <p><i>“... we don’t have a procuring team that is dedicated to kind of doing a background check or...on the individuals or companies” - O2IT.</i></p> <p>Similarly, progress on the crafting of procedures, policies, documents and training that will help Org_2 meet the Core Humanitarian Standards is significantly impaired due to the limited human resources.</p> <p><i>“So we are in the process of working towards the Core Humanitarian Standards where, you know, we have a checklist of various things that we need to have in place, you know, procedures and policies and documents and training, all those kind of things and we are trying to get through that process, where we are putting in policies and procedures where we are mitigating these risks. At the point in time, it’s high on the agenda, in terms of, we need to address this as an issue, but there are far more crucial factors that we need to address.” - O2IT</i></p> <p>These issues notwithstanding, Org_2 through its cross-country recruitment, is able to mitigate propensities for conflicts of interest and corruption. Further, the head of programmes takes the opportunity on his visits to their operations to provide unofficial training to local partners and field officers on more effective and efficient ways of carrying out procurements.</p> <p><i>“So as an outsider you come in you realise ok guys you are not doing this right. You should negotiate like this, you should say this, you should say that you should go to this tenderer, go to the top supplier I go to our MP (Member of Parliament) contacts and speak to ministers. So we try to enforce those or we guide them, but it’s only guidance that we can do.” - O2IT</i></p> <p><i>“So I forced them to actually combine the order and go to tenderers and to kind of negotiate on that basis. Because you’ve got double the amount of food that you’re buying now and that gives us, gave us more negotiating powers. So it’s definitely worked.” - O2IT</i></p>

<p>Collaboration</p>	<p>Org_2 collaborates with its partners, suppliers, government officials and all relevant stakeholders to facilitate smoother delivery of aid. When on country visits, personnel from Org_2's head office shares useful information with partners to help improve the quality of goods and negotiation skills.</p> <p><i>"...sometimes mainly, it's because they are just stuck in a bubble, and they are working in a day-to-day pattern not realising there is a better way of doing things. So as an outsider you come in, you realise, ok guys you are not doing this right. You should negotiate like this, you should say this, you should say that..." - O2IT</i></p> <p>There is also collaboration with other charities whereby there is sharing of information with other charities to help with quality assurance, market survey and partner activity monitoring.</p> <p><i>"The only issue we have at the moment is anonymised_country1..., we are trying to work through our partner in the UK, to do a sense check and I think we invest a lot of energy in anonymised_country1 as well by monitoring more regularly." - O2IT</i></p>
<p>Redundancy</p>	<p>Since some of the goods that Org_2 procures are perishable, those goods are supplied on daily basis. However, more durable food items are purchased and stored in reasonably large quantities that can last for a month or two.</p> <p><i>"We can only buy a set of items, so some items are perishable, so for example, bread, it gets supplied daily. when it comes to milk, for example, we will buy in large quantities and it's milk powder, so we will store that. When it comes to tomato paste we'll buy in large quantities. Onion for example is, we don't buy in large quantities because it will go off but we do buy in large quantities as well. So we'll try and strike a balance; so we realise it's gonna supply a month's supply of onions and that will be enough, otherwise, it's gonna start going off. So we do have storage facilities in most kitchens." - O2IT</i></p> <p>This is the only form of redundancy that Org_2 employs in its supply chain.</p>
<p>Culture</p>	<p>There are hints of learning and reporting culture within Org_2's supply chains but there is a lot of room for improvement. On the occasion where the organisation discovered that one of its country heads was colluding with local suppliers to overstate prices, the organisation immediately moved in to not only replace the person but hire an entirely different national.</p> <p><i>"So, the conflict of interest issue in anonymised_country2 was kind of one thing that alarmed us. So therefore, as a result, we are, we've employed a person from the UK to work in anonymised_country2." - O2IT</i></p> <p>This then became the basis upon which Org_2 continued to replicate this situation in its other operations.</p> <p>Reporting of incidents, uncertainties and risks from local teams to the headquarters is not as efficient as would be expected and so there are times whereby by the time a report has been made, there is very little time to mitigate or avoid risks.</p> <p><i>"So I mean, recently there's an issue which really annoyed me. It's that, so I told them if the prices are starting to increase, go and bulk-buy, you let me know and I</i></p>

	<p><i>will make sure the transfer takes place and that you are credited. So these guys have gone to bulk-buy, not informed me, and then paid the suppliers and then said, well we paid the suppliers but we've got no money for the cook salaries. I said you do not do that at the expense of salaries of staff, alright? I have told you, that if you want to do that you inform me and I will replenish your account. So it's those kinds of things; like you would think most logical things to tell...ok these guys has said x, y, z, let me just follow that procedure. But like they decided to tell us, Oh, we don't have money to pay the cooks. And I don't want to be in a position where we are not paying someone's salary right? And the problem with anonymised_country1 is that it takes sometimes 14 days, even three weeks to get money across from the UK to anonymised_country1." - O2IT</i></p>
<p>Governance and Accountability</p>	<p>Org_2 exploits the usefulness of Governance and Accountability, to address wastages in its supply chains and to help avoid predictable disruptions. With its very limited use of Information Technology, Org_2 relies on monitoring visits to locations where aid is delivered to ensure that practices align with best practice.</p> <p><i>"Once I went on a visit to anonymised country1, I realised this is nonsense where you are both buying the same product, and the only difference is that you are supplying food to two different schools. So I forced them to actually combine the order and go to tenders and to kind of negotiate on that basis. Because you've got double the amount of food that you're buying now and that gives us, gave us more negotiating powers." - O2IT</i></p> <p>The organisation acknowledges the advantage of having field offices in the countries where aid is delivered, as that gives them better control relative to working with partners.</p> <p><i>"...by having its own offices, it means that you can have better control on how your staff negotiates with suppliers. So in places like anonymised country8, anonymised country10 and anonymised country2, we have our own field offices and staff members, so we can dictate to them, these are the conditions we want, this is the relationship we want. But in places like anonymised country11 and anonymised country1, it's very difficult. Because we are working with partners, you have a lot of control over it, but you still don't. So the relationship is almost a third party relationship; it's not easier, it's not as easy." - O2IT</i></p> <p>To ensure accountability and reduce wastage, Org_2 also independently checks the records of aid recipients (e.g. school registers) or crosschecks prices of goods with other charities in mutual locations to ensure that funds given to partners and suppliers are not misappropriated or diverted.</p>
<p>Decision making</p>	<p>Decision making in Org_2's procurement is decentralised, because it is the most reasonable means to go about it, considering local expertise and language skills, but also because of poor internet connection and communication difficulties.</p> <p><i>"So they are left to our local partners. The issue is, in places like anonymised_country1 for example, we don't speak Arabic, so therefore it's very</i></p>

	<i>difficult to negotiate ourselves. Secondly, it's very difficult to speak...the tenderers there do not have the internet connection, that we want.” - O2IT</i>
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A9.3 Discussion of How SCR Formative Elements are Pursued in Org_3

Formative element	Application
Avoidance	<p>Similar to Org_1, there are numerous directives, guidelines, procedures and processes put in place in Org_3 to ensure as many risks as possible are avoided. There are numerous approaches to this, and these include due diligence, supplier assessment and monitoring, legal and regulatory compliance, policy compliance and conformity across its supply chain, contracts with suppliers, fairness and transparency. There is further commitment to its communication strategy, staff obligations and supplier development.</p> <p>Org_3 has a robust due diligence process used to ensure that partners and prospective suppliers can deliver and do not pose any significant risks to it. Due diligence is expected of every procuring staff as indicated in the organisation’s procurement rules as well as its modern slavery policy:</p> <p><i>“Ensure due diligence checks are carried out to confirm that the proposed supplier is bona fide and has the skills, knowledge and ability necessary to supply the goods, works or services;” - O3PPR</i></p> <p><i>“We carry out due diligence with all partner organisations and expect our partners to have the relevant statements, policies and procedures in place and in line with the Modern Slavery Act. These partners include other charities with whom we deliver services.” - O3MSP</i></p> <p>The organisation lays out for its staff all the checks that are required to be done including evidence of financial health, sustainability, competence, and appropriate licensing before a supplier may be contracted. A list of business areas that are identified as prone to serious and organised crime activities are provided for procuring staff so that they are extra careful when engaging suppliers from such a background.</p> <p><i>“As an organisation we have to be aware of the possibility that our contracts could be bid for by companies involved with serious and organised crime, such as money laundering, or employing “gang-masters” to get cheap labour to work in caring positions, or just unthinkingly using car washes that employ cheap, probably slave, labour to clean company cars. A list of business areas identified by the Scottish Police as vulnerable to SOC activities is set out in Appendix 2” - O3PIS</i></p> <p>To ensure that its supplier evaluation is robust enough, Org_3 adopts a derivation of the government’s prequalification criteria albeit with a few modifications to reflect its social values. The procurement expert explains:</p>

“The supplier selection criteria basically comes from a derivative of government prequalification criteria which is now a part of the Crown Commercial Services supplier questionnaire. And we use a derivative of that within Org_3 in order to ensure that all the supplier selection methodology that government uses is reflected on here as well. We obviously change it about a little bit in order to make sure that the social values that we have are also reflected through that; because we are a social organisation and we are very keen basically on ensuring that our values are reflected in our supply chain as well.” - O3IT

To ensure that after suppliers have been contracted, risk exposure is kept to the minimum, monitoring of suppliers continue through the organisation’s contract management activities. Having realised that some of its existing suppliers may not have been vetted extensively with regards to modern slavery, Org_3 is carrying out an extensive evaluation of all its supply chains. Its modern slavery policy and procurement implementation strategy explain:

“In order to assess the risk of modern slavery in our existing supply chains and to understand the operating context of the charity, Org_3’s has in place a plan to enable us to conduct a detailed audit and risk assessment of our current suppliers, which is a long-term project given the size of the organisation.” - O3MSP

“As part of meeting this level, we will question potential suppliers to ensure that the appointed firm does not support modern slavery activities and has in place processes and checks to ensure that its supply chain does not support modern slavery activities. This will continue once a supplier has been appointed via contract management activities.” - O3PIS

To ensure legal and regulatory compliance thereby avoiding breaches of law, potential suits or infraction of regulatory requirements for the third sector, Org_3 has clear stipulations in several of its organisational policies. In its modern slavery policy, Org_3 explains:

“To complement the MS policy, we have updated a number of policies impacted by modern slavery, including recruitment, procurement, safeguarding and the employee code of conduct, as well as ensuring that our whistleblowing policy is clear on process and procedures for reporting any concerns about modern slavery.” - O3MSP

The interviewed manager further clarifies the purpose of the organisation’s procurement policy:

“The broad themes discussed or addressed in the document is the need for competition within the sector, the need to stay transparent, the compliance requirements of the general charitable sector and charities’ commission and the United Kingdom government and the European regulations commissions etc; all the key regulations that govern us. As we are a charitable organisation, we need to

be able to show our compliance with the ethical practices that govern the sector – those making the fundamental considerations behind that.” - O3IT

Org_3 also engages in staff training and stays updated with changes in regulations to stay ahead and not be caught off guard.

“As part of our contract management activities we can review the supply chain to create a “heatmap” that shows where the concentrations of commodity and energy usage are. We can then look at the external factors such as changes to Government regulations, the direct effect of climate change and resource scarcity to predict future costs and the risk profile to our business.” - O3PIS

The due diligence carried out on suppliers is also to ensure that Org_3 is not exposed to legal and regulatory non-compliance in its supply chain. There are also times where Org_3’s compliance with regulations are due to donor requirements and this helps to avert possible loss of funding in case of breaches.

“Where Org_3’s is required by a funder or partner to adhere to the EU Public Procurement Directive 2014 (or the UK Public Procurement Regulations 2015) the Procurement Team will provide advice and guidance for staff members to ensure these rules are observed.” - O3PP

In line with staying updated with legal and regulatory changes, Org_3 also ensures that its policies are reviewed and updated accordingly.

“We have produced amended procurement documents including a new procurement policy. The policy and strategy set out new due diligence, invitation to tender documents, supplier questionnaires, and a supplier risk assessment questionnaire. These will inform and underpin our other activities designed to address the risk of modern slavery.” - O3MSP

To ensure conformity and compliance across all offices nationwide, Org_3 demands that:

“Every works, service or supplies contract terms and conditions must be a standard Org_3’s contract without amendment or be agreed by Legal Counsel.” - O3PPR

Org_3 provides training and support to its staff and obliges commitment to ensure that staff are aware and comply with its policies. Clear directives on permissible and impermissible actions with regards to safeguarding, gifts and hospitality, data protection, online and media communications and all other procurement activities. For example, with regards to its safeguarding policy, Org_3 indicates unequivocally that:

“As a member of staff, this Safeguarding Code of Conduct forms part of your contract of employment. As a volunteer, agency or other worker it forms part of the agreement for your role. Everyone working at Org_3, whether in a paid or unpaid role is expected to adhere to this Code and you will be asked to sign and return it as acceptance of your commitment to it.” - O3SP

Seeing it deals with vulnerable people, staff and volunteers alike, are required to: *“...disclose any criminal record, caution, reprimand or warning...whether received prior to or during the course of your work or volunteering for Org_3.”* - O3SP

In the same manner, Org_3’s procurement rules require procuring staff to declare: *“...any personal interest which may affect or be seen by others to affect a member’s impartiality in any matter relevant to his or her duties should be declared.”* - O3PPR

They are also required to hold in confidence information received in the course of carrying out their procurement activities. In sum, Org_3’s expectations of its employees is that:

“Underpinning all procurement activities is the premise that staff must act honestly, diligently and in good faith, placing the interests of Org_3’s at the forefront of their minds.” - O3PIS

Similarly, suppliers are made aware of Org_3’s policy positions, their obligations and the requirement for an alignment with its policies. It reports:

“Wherever possible we try to procure from sustainable sources by ensuring that any suppliers we engage with have appropriate environmental protection measures, and that these are applied throughout their engagement with Org_3.” - O3AR

Org_3 requires of its procuring staff to use contracts to avoid risks that are associated with procurement beyond certain monetary values.

“For goods, services or works falling within Band 3 (between £25,000 and £100,000)...A signed contract is necessary.” - O3PPR

“For goods, services or works falling within Band 4 (above £100,000)...A signed or sealed contract is required.” - O3PPR

For the sake of clarity, its procurement rules state that:

“A contract document shall, as a minimum, consist of the specification for the goods, works or supplies and terms and conditions of contract.” - O3PPR

Org_3 also uses framework agreements as the more secured option in case of supply chain disruption. The Head of Procurement explains:

“With regards to supply chain disruption, as you may have seen from our policy documents, our preferred method is frameworks. Why (you’ve asked me this question before) have we chosen frameworks to be the preferred method: because usually frameworks will be with multiple suppliers of a same kind of thing for a period of time, where the suppliers are large enough to be able to deliver that kind of thing.” - O3IT

Org_3 deems it important to ensure fairness and transparency in its procurement activities to avoid accusations of collusion and in accordance with its basis and values.

	<p><i>“It is imperative that staff inviting quotations and tenders do not inform other bidders of the contents of a bid and to that end shall take steps to avoid seeing the bids (where there is more than one expected) until after the date and time appointed for their receipt. This is to avoid any accusations that such a member of staff has colluded with a bidding firm.” - O3PP</i></p> <p><i>“Org_3 shall carry out its procurement in an open, transparent and competitive manner that supports its Basis and Values.” - O3PP</i></p> <p>Org_3 strives to ensure clarity of communication and to avoid misrepresentation. Without equivocation, the organisation requires none of its members of staff to engage with media requests or contacts in any manner whatsoever unless given prior approval.</p> <p><i>“No response should be made by any member of staff on behalf of Org_3 without authorisation by the national media team or a regional Media and Communications Manager (MCM). If a member of staff wishes to contribute to the press in a private capacity, Org_3 name may not be used. Under no circumstances may a member of staff make a press response to any article or printed letter on a Org_3 matter by way of explanation, protest or in answer to criticism, without the prior consent of the national media team or a regional Media and Communications Manager (MCM).” - O3VPS</i></p> <p>Finally, Org_3 also attempts to avoid having to deal with very few suppliers for certain of its required services by offering training to relevant communities to introduce competition. The interviewee explains:</p> <p><i>“At times we work with our supplier base essentially to train other people of those communities so that the market becomes competitive within those areas. So it’s a different kind of relationship. It’s basically a proactive relationship where you look at your supply chain and you look at the development of your supply chain.” - O3IT</i></p>
<p>Human Resource Management</p>	<p>Org_3 employs multiple of the human resource management practices that engender supply chain resilience including its approach to human resource development, policy compliance and discipline and knowledge management. The organisation prioritises training and uses it as a means to develop competence in their roles, create awareness about relevant policies and to ensure staff understand what is required of them and that they can comply. It reports:</p> <p><i>“We are investing in our workforce, with more than 89% of staff completing three or more days of learning in the past year.” - O3AR</i></p> <p><i>“Org_3 has in place a range of resources and mechanisms to give staff and volunteers up-to-date and easily available training and information about environmental issues.” - O3AR</i></p> <p>Procuring staff are provided with training by the procurement team. There is mandatory training on matters that bother on data protection, safeguarding and</p>

modern slavery for staff whose work bother on these. The procurement, safeguarding and modern slavery policies point these out:

“Training to support this policy will be carried out by the Head of Procurement or his team.” - O3PP

“Mandatory safeguarding training for all employees working directly with the community we serve and additional learning requirements for those outside of these roles.” - O3SP

“We have ensured that all our managers understand modern slavery as a human rights issue. Our managers are responsible for ensuring our workforce understand their responsibilities and that our policies are implemented and appropriately discharged.” - O3MSP

Staff are assured of needed support on procurement from the central procurement team and from their managers in meeting their obligations with regards to safeguarding and whistleblowing.

Compliance with company policies is enforced through signing or codes of conduct, monitoring and reporting.

“All employees and volunteers are required to sign the Org_3 safeguarding code of conduct.” - O3AR

“DPA training as part of mandatory training/induction, with compliance monitored and reported quarterly.” - O3AR

Failure to comply with relevant policies and guidelines come with disciplinary consequences within the organisation.

“A failure to report will be considered a serious disciplinary matter and addressed through Org_3 Disciplinary Procedure.” - O3VPS

“The disciplinary procedure will be used where this requirement is breached.” - O3VPS

“The Rules must be read in conjunction with all current Finance requirements and similar to a failure to follow financial requirements, failure to follow these Rules may result in disciplinary proceedings.” - O3PPR

Staff are also made aware that breaches that bother on law and/or regulations will be reported to the relevant authorities.

“In certain circumstances, if following investigation breaches of the Code are found, such action will also result in reports to Regulatory bodies, relevant Local Authorities and/or the police, as appropriate.” - O3SP

With regards to knowledge management, Org_3 ensures a secure database of relevant documents which are accessible to relevant staff. This promotes clarity and transparency, ensures business continuity, and provides a chain of evidence to assist in both internal and external auditing. Org_3's procurement rules state that:

“All procurement documents must be retained” - O3PPR

	<p><i>“All signed or sealed contracts, or copies of contracts where Org_3’s does not hold the original, should be retained in a safe, preferably fireproof, place for future reference.” - O3PPR</i></p> <p>The interviewee further explains: <i>“As one of the main things, you must document your decisions for audit purpose, for clarity purpose, for accountability purpose for lessons-learned purpose and for benefit-realisation purpose.” - O3IT</i></p> <p>Finally, Org_3’s procurement manager shows familiarity with the concept of supply chain resilience. This is shown below: <i>“In fact, one of the things that we tend to do within procurement bodies is to try and build the supply chain resilience...And the way to go about with the supply chain resilience within our sector is to basically take it through all of these checks and balances as I have outlined in my policy whether it is to do with the supplier checks, insurance checks, looking at the scenarios and doing scenario planning with those particular suppliers and supply areas. It’s considering and basically doing risk registers around those supply base and your analysis essentially. And keeping on top of all of your major supplier base through contract management mechanisms so that that risk is mitigated as much as possible for most of the time as possible, hence making your supply chain resilient to any form of tension or problem or awkward scenarios.” - O3IT</i></p>
<p>Collaboration</p>	<p>Org_3’s collaborative approach begins with the creation of awareness with staff through information sharing and accessibility to relevant information through the company’s common data-sharing platform. Employees are expected to share any information that can help the organisation to deal with any risks it may be exposed to. There is internal collaboration whereby the procurement team: <i>“In conjunction with the Audit team, carry out an audit of incumbent suppliers as a long-term project, for their MSA statements and action plans, especially suppliers of promotional items and social services where we believe there is a bigger risk.” - O3MSP</i></p> <p>Awareness creation also extends to both prospective and existing suppliers so that they know the rules and evaluation criteria of tenders and that they better understand Org_3’s procurement ethos and its expectation of them. This enhances transparency, and hence trust in the supply chain.</p> <p>Org_3 also collaborates quite extensively with other charities by working together to develop innovative ways of working and collaborative procurement. <i>“We are working collaboratively with other charities to develop innovative ways of working.” - O3AR</i></p> <p><i>“Wherever possible Org_3’s shall seek to collaborate with other charities with a view to maximising procurement power to put in place joint contracts.” - O3PPR</i></p>

	<p>Org_3's collaborative procurement includes both joint procurement and sharing of relevant information for policy development and improvement in procurement processes. The Head of Procurement explains:</p> <p><i>“It was therefore developed after having a few conversations with the other Heads of Procurement in the other charities and also some universities.” - O3IT</i></p> <p>Collaborative procurement benefits Org_3, not only financially (through economies of scale) but also mitigation of risks.</p> <p><i>“Financial plus mitigation of risks are the two major areas that we cover from a collaborative approach. Plus it is usually good for charitable sectors to understand each other's problems and resolve those problems especially when it comes to supply chains.” - O3IT</i></p> <p>There is collaboration with the government as well in Org_3 as it uses firms from the public sector purchasing organisation frameworks and shares critical information with the police and liaises with them when a prospective supplier is suspected of serious organised crime.</p> <p>The organisation chooses to build some of its supply base from government-approved suppliers as it believes that comes with lesser risks.</p> <p><i>“We know that there might disruption in the supply chain, we want to mitigate against that? We will go with the supply base where it's assured as much as possible. Where can it be more assured than our government in United Kingdom? And that is the route we have taken to do that.” - O3IT</i></p>
<p>Sustainability</p>	<p>Org_3 pursues economic sustainability by growing its voluntary income base, maintaining sufficient reserves and maximising of their resources through efficient purchasing of stock and improved cost management. The organisation has a committee that:</p> <p><i>“...oversees and monitors the financial position of the charity and its subsidiaries to ensure long- and short-term viability. It oversees the budgeting process and recommends the investment policy, including the charity's stance on ethical investment.” - O3AR</i></p> <p>While seeking to increase the percentage of public funding it raises, Org_3 is intent on building the public's trust in its brand to increase their propensity to donate.</p> <p>The organisation ensures cost-efficiency by stating in its procurement rules that:</p> <p><i>“The staff tendering and awarding contracts...have major responsibilities for achieving value for money” - O3PPR</i></p> <p>and also, by keeping inventory levels in their retailing to as low as possible. The procurement manager explains:</p> <p><i>“We tend not to have inventory except for our retail area whereby we basically have warehousing contracts with large fulfilment companies who basically supply to our several hundred plus shops across the UK. So we only hold inventory against those goods that we intend to sell in that particular season generally speaking, and</i></p>

	<p><i>it's usually sitting somewhere centrally in the UK and it's usually distributed through the district channels. But it's generally kept to minimum both for the reason of logistics; it's not sustainable to keep on doing that and also from the point of your just-in-time because we don't have tonnes and tonnes of money to keep inventory. It's in nobody's interest to keep large inventories."</i> - O3IT</p> <p>Org_3 ensures it is socially sustainable in its procurement by ensuring a fair representation of ethnic minorities and people with disabilities in its service providers and also procure all goods, services and works ethically. In its procurement implementation strategy, Org_3 emphasises its interest in fair trade, particularly <i>"...when a supplier is directly sourcing goods or commodities from the producer. For contracts exceeding £100k we shall ask suppliers whether they support fair trade and when appropriate what actions they are taking to meet the relevant Fair Trade Standards as set out by the Fair Trade Foundation."</i> - O3PIS</p> <p>The procurement team further trains: <i>"the organisation in the benefits of fair trade, in the realisation that our sustainable thinking will reflect on the organisation and its future tomorrow. So with training and capturing what is being done and trying to curtail any bad practice are the efforts that we are making in order to get towards a fair trade scenario."</i> - O3IT</p> <p>Per its supplier code of conduct, suppliers are expected to treat their employees with respect, fairness and dignity and that they work in a healthy and safe environment.</p> <p>Environmentally, Org_3 reports that it: <i>"...continues to work hard to reduce the impact it has on the environment and to reduce its carbon footprint".</i> - O3AR</p> <p>This is reflected in its use of 'green' electricity, environmentally sustainable fleet, recycling, and procuring: <i>"...from sustainable sources by ensuring that any suppliers we engage with have appropriate environmental protection measures, and that these are applied throughout their engagement with Org_3".</i> - O3AR</p> <p>Suppliers are expected to: <i>"...acknowledge the interdependency between business and the communities in which they operate" and take "action to minimise the negative impact of their business activities".</i> - O3SCC</p>
Flexibility	<p>Flexibility towards supply chain resilience in Org_3 from a procurement perspective is pursued through decision flexibility and sourcing flexibility. Being a large organisation with a small procurement team, Org_3 pursues flexibility in its procurement decisions by cross-training managers from various departments that procure goods or services, in procurement principles, fair trade, modern slavery and similar relevant topics. This ensures that less risky and/or lower value procurement decisions can be managed at the departmental level and only be</p>

escalated to the experts when necessary. Below are some quotes from Org_3's implementation strategy document and interviewee:

“Each of the aspects set out in this policy are intended to provide best practice guidance and points of reference for procuring staff across Org_3's. All Org_3's staff with responsibilities for procurement activity can contact the Head of Procurement for additional support and advice on any aspect of this strategy.” - O3PIS

“So we have a hybrid module at this point in time. We have a small central procurement department and we have roughly 400 people plus people responsible for buying small and big things across Org_3...All the big decisions happen centrally, generally speaking with the central procurement team and more with other finance members of staff and the subject matter experts from within those areas who are trying to buy...All the smaller decisions are devolved to local line managers because they have budgets. But they have central control from the point of view that we can see what they are doing from the central finance systems.” - O3IT

“But as our supply chains are still developing, the only effort that we can do within our small centralised procurement department is that we train the organisation in the benefits of fair trade, in the realisation that our sustainable thinking will reflect on the organisation and its future tomorrow. So with training and capturing what is being done and trying to curtail any bad practice are the efforts that we are making in order to get towards a fair trade scenario.” - O3IT

“The more the staff is trained on how to make appropriate, apt commercial decisions, the better it is for Org_3. We become a more savvy organisation as a whole. Our decision making becomes more savvy. And that's where we want to get to, through this training of ours.” - O3IT

With regards to sourcing flexibility, Org_3 primarily does this through the use of flexible supplier contracts, but it also uses term contracts and approved supplier lists. Its procurement rules indicate that:

“The traditional way to demonstrate fairness and value for money is by competitive tendering. However, it is not practical to organise a public competition every time goods, services or works are required. Alternative methods such as framework arrangements, term contracts and Approved Lists, procured in a manner consistent with the principle of fair competition have been developed.” - O3PPR

“Where there is a framework contract that Org_3's may access then that is preferred for all procurements.” -

Org_3 therefore enjoys the benefits of having backup suppliers without having to be bound to any contractual commitments.

<p>Agility</p>	<p>Org_3's use of framework agreements also proves very useful when it comes to responsiveness in emergencies. The procurement expert explains: <i>"In an emergency situation, you might want to go with the supplier that you know already that can provide that thing immediately because you do not have time to do the competition. We take that quite seriously. Within Org_3 we don't normally do that; we like to do things with competition as much as possible, whenever possible. But there are emergencies, there are issues where you simply can't do that. We tend to rely on frameworks for running such situations where those things are predetermined."</i> - O3IT</p> <p>Org_3 also shows an understanding of the need for financial resilience by its pursuit of increased unrestricted voluntary funding and the strengthening of its fund reserve, so that it will be able to respond quickly and appropriately under changing circumstances. It reports: <i>"The level of our reserves is determined by balancing two objectives: maintaining sufficient reserves to enable us to carry on our work when faced with difficult circumstances, and ensuring we maximise the resources used for charitable purposes. Our reserves level therefore needs to be adequate to allow us to address potential losses that might arise from our charitable activities, investments, trading and other activities."</i> - O3AR</p> <p><i>"Unrestricted voluntary funding lets us work towards our own priorities."</i> - O3CS</p>
<p>Information Technology</p>	<p>There is a recognition of the utility of new technologies in Org_3. It reports: <i>"We are embracing new technologies to help us work "smarter", make efficiency savings, and reach young people in the way that works best for them."</i> - O3AR</p> <p>In line with this, the organisation has an intranet platform that provides its staff with all its organisationally relevant information. It also has an e-procurement system from which all quotations and tenders are issued unless otherwise authorised. Its policy is to: <i>"...use the e-procurement system to invite quotations and tenders whenever possible... Unless otherwise authorised by the Director of Finance or his representative (the Head of Procurement) all public quotation or tender invitations must be issued on the eProcurement system."</i> - O3PP</p> <p>The organisation shows further commitment to: <i>"...the use and development of electronic procurement solutions, including the use of a secure online tendering system, contract document library and contract register".</i>- O3PP</p> <p>Org_3 indicates some of the benefits of this when it states in its procurement rules that: <i>"Directors must make auditable arrangements for the receipt, custody, opening and witnessing of all competitive tenders to give confidence to all parties that the</i></p>

	<p><i>opportunities for malpractice are minimised. Use of an e-procurement system meets this requirement.” - O3PPR</i></p> <p>The interviewee further explains some more benefits: <i>“The pursuit of doing these things in an electronic fashion in a secure world environment basically gives you the audit trails to show, not just to assure people that we have done it correctly but to show people right up front that you’ve done it correctly. The emails can be deleted or can be overridden; the telephone calls, nobody would know about. But if you are doing it through an e-procurement method where all the communication is happening through the e-procurement portal, essentially the whole tender process, right from the inception to close has happened through that particular channel, then basically it keeps that audit trail.” - O3IT</i></p> <p>Outside the use of information technology for electronic procurement and document repository, Org_3 also uses IT for procurement training purposes. <i>“Training to support this policy will be carried out by the Head of Procurement or his team. A variety of methods will be used webinar, e-learning and bite-size or procurement surgery sessions. See the intranet site for further details.” - O3PP</i></p>
Redundancy	<p>Org_3’s approach to redundancy is predominantly intangible with relatively limited attention to tangible redundancy. Its tangible redundancy may be seen in its fund reserve which affords it a cushion to fall upon in emergencies and also limited use of stock in its retail sector during particular sales seasons.</p> <p>With regards to intangible redundancy, Org_3 pursues this through knowledge backup, which is attained through cross-training of various departments on procurement and associated issues, as well as decision redundancy through the documentation of procurement decisions through its e-procurement platform.</p> <p><i>“As one of the main things, you must document your decisions for audit purpose, for clarity purpose, for accountability purpose for lessons-learnt purpose and for benefit-realisation purpose. You need to understand what was done, when it was done, why it was done, how it was done, who signed it off, in order to make sure that if that thing was good then it gets done again. And if that thing wasn’t good, then we know what went wrong, why it went wrong, how it went wrong and what can we do to actually not do that again; lessons-learnt environment essentially. So yeah, that’s the fundamental reason around that and that’s why most of the commercial organisations basically document their decisions as well.” - O3IT</i></p> <p>Further, Org_3 ensures data is backed up electronically. It also exploits redundancy in supplier relationships through the use of framework agreements. The procurement manager explains this: <i>“...the best practice is you will need to have those where the relationships is strong with the government-centre providing body and use those frameworks and actually build those relationships yourself with those people who are on those frameworks for years or so in order to basically get that kind of deals in place essentially.</i></p>

	<p><i>Frameworks allow you in a competitive environment to have a pre-competed item at the best possible price to the organisation in question, provided the supply chain is relatively stable and secure. And with frameworks, because the bulk of things which are being bought through frameworks are so large, the supply base is generally very secure.” - O3IT</i></p> <p><i>“ With regards to supply chain disruption, as you may have seen from our policy documents, our preferred method is frameworks. Why (you’ve asked me this question before) have we chosen frameworks to be the preferred method: because usually frameworks will be with multiple suppliers of a same kind of thing for a period of time, where the suppliers are large enough to be able to deliver that kind of thing.” - O3IT</i></p>
Robustness	<p>As it is with all humanitarian organisations, inadequate funding could be a major weakness in its supply chain. Org_3 clearly understands this and reports that it is: <i>“Holding of a significant value of reserves and a regular review of charity reserves to ensure these remain within the target range set by the Finance Committee” (O3AR),</i> and also, that: <i>“Free reserves remain healthy and can also be used to absorb the impact of any unexpected volatility.” - O3AR</i></p> <p>Being a large organisation with a small procurement team, the use of cross-training to ensure that competent procurement decision making is devolved to departmental levels across the country ensures that the central procurement team is not overwhelmed and hence, not a weak link.</p> <p>Lastly, the use of framework agreements also ensures that the failure of some suppliers does not disrupt the entire supplier chain.</p>
Security	<p>For information systems security, Org_3 reports that it carries out: <i>“Routine external penetration testing of IT systems to identify any security weaknesses”</i> and <i>“Regular review of external organisation cyber-attacks and applying lessons learn to Org_3 systems.”</i></p> <p>Staff are routinely trained on the data protection act to ensure compliance and security of Org_3 and its suppliers’ data.</p> <p>Further, its procurement rules dictate that: <i>“All signed or sealed contracts, or copies of contracts where Org_3’s does not hold the original, should be retained in a safe, preferably fireproof, place for future reference. Any Variation Agreements or letters must be kept with the original contract.” - O3PPR</i></p> <p>In terms of insurance, Org_3 makes it clear to every new supplier that it: <i>“...arranges insurance to protect its own interests” - O3VPS</i> and thereby requires of procuring staff to:</p>

	<p><i>“...ensure that the relevant insurances, memberships, qualifications, etc. of the contractor are up-to-date throughout the term of the contract on Org_3’s contract management system.” - O3PPR</i></p> <p>Furthermore, all service or works contractors are expected to have: <i>“Employers’ Liability insurance at a minimum cover level of £5 million” (O3PPR), “Public Liability insurance at a minimum cover level of £10 million, Professional Indemnity insurance at an appropriate level for the contract under consideration which must be agreed in advance by the Head of Procurement and Insurance Officer...” (O3PPR)</i> in consultation with professional advisors and relevant departmental heads.</p> <p>In the case of a supplier of goods: <i>“...instead of Professional Indemnity insurance, shall have Product Liability insurance.” - O3PPR</i></p> <p>Procuring staff and to ensure that Org_3’s Insurance Officer is consulted under circumstances where other insurances may be required depending on the contract being procured.</p> <p>Lastly, Org_3’s fund reserves serve as financial security for its operations.</p>
<p>Top Managerial Commitment</p>	<p>Top management of Org_3 shows commitment to resilience by: <i>“...ensuring that there are effective risk management and systems of internal control in place to manage Org_3 major risks and support the achievement of our strategic objectives. This responsibility is discharged through an annual review of the effectiveness of Org_3 risk management and internal control framework.” - O3AR</i></p> <p>The Corporate Leadership Team’s support is further indicated in their endorsement of Org_3’s procurement policy wherein is stated that: <i>“The Org_3’s Corporate Leadership Team have endorsed these fundamental principles which it considers are applicable to all procurement to achieve the maximum economy, efficiency, effectiveness and sustainability (social, environmental and economic) in the performance of the procurement function supporting our vision and particularly, our stewardship responsibilities.” - O3PP</i></p> <p>Indeed, it clearly states in its procurement implementation strategy that: <i>“This Policy and Strategy is intended for...directors, senior management, to lead, challenge and monitor the way ethical and sustainable procurement is implemented” - O3PIS.</i></p> <p>This explicit and strong backing ensures that compliance is taken seriously by all staff and that procurement rules are not flouted with impudence.</p> <p>Org_3’s leadership recognises that, the organisation’s: <i>“...procurement decisions also provide us the opportunity to secure benefits which will help us to achieve our corporate strategy outcomes.” - O3PIS</i></p>

	<p>Therefore, for procurements over £100,000.00, business case and reward reports are required from procuring staff. These are then reviewed at board meetings as the interviewee explains below:</p> <p><i>“So it’s value-driven at the moment but the framework that I have, generally speaking looks at value, criticality and vulnerability of the environment, of the context of the supply chain as a whole in order to make that decision making. And when we go to our board scenario, we will look at or scrutinise our business cases and all our reward reports. We basically discuss all of these elements.”</i> - O3IT</p>
<p>Culture</p>	<p>A culture for continuous learning is evident across Org_3’s operations. In its corporate strategy, it describes itself as <i>“a learning organisation”</i>. The organisation is intent on ensuring that lessons from its previous endeavours as well as educational institutes and other charities are incorporated in its procurement decision making for the benefit of improving the resilience of its supply chain.</p> <p>The head of procurement indicated:</p> <p><i>“...I’ve not only taken lessons from us here in Org_3 but lessons from several other charities and universities. Other such bodies worked on this Org_3’s new policy and the rule book that goes around procurement.”</i> - O3IT</p> <p>Org_3 also embarks on strong whistleblowing and reporting culture to ensure that matters bothering on safeguarding, modern slavery and corruption within the organisation as well as complaints against its contractors are not kept concealed. It has instituted a whistleblowing policy and a complaint procedure to facilitate these.</p> <p>The procurement rules prescribe:</p> <p><i>“All complaints from third parties against contractors by members of the public shall be dealt with in accordance with Org_3’s’ complaints procedure.”</i> - O3PPR</p> <p>Members of staff are also expected to inform police when a prospective supplier is suspected of serious organised crime activity.</p>
<p>Integration</p>	<p>Org_3 pursues external integration under conditions whereby it seeks to maintain certain prices over long periods, where technical requirements dictate so and when procurements are very high in value and volume. It also pursues external integration when specific expertise can be provided by only a particular supplier or when there is an opportunity for co-branding whereby Org_3 and the partner can help each other’s brand grow. The interviewed manager explains some of these:</p> <p><i>“...we want to be seen with that supplier and that supplier can be integrated as part of our supply chain so that we can grow as well.”</i> - O3IT</p> <p><i>“Usually you will find that partnerships are either driven by the technical requirement of growth of the organisation which is based on that supplier basically providing a lot of support hand-in-hand.”</i> - O3IT</p> <p><i>“Usually very large in its volume and value, you will find the partnership type arrangements”</i> - O3IT.</p> <p><i>“The other partnerships arrangements that an organisation such as ourselves will have is an intellectual partnership arrangement...In those kinds of circumstances,</i></p>

	<p><i>you will need partnerships with those people because these are intellectuals who don't have any second one that's available in the market. They are not your preferred suppliers, essentially they are your partners in developing whatever good work that you are developing" - O3IT.</i></p> <p>Internally, Org_3 pursues lateral integration through internal collaboration whereby subject matter experts are consulted and visibility is created for procurement officers to facilitate quality decision making. Large contracts that demand high scrutiny require the procuring department to prepare a business case, reward report and evidence of risk management. These are then reviewed by the Procurement board.</p>
<p>Governance and Accountability</p>	<p>Like Org_1, Governance and Accountability structure was evident in Org_3's supply chain resilience pursuit. Accountability to donors is shown in demand for value for money and propriety in the use of donor funds as well as the need to abide by donor requirements in terms of compliance with specific laws or regulations. Org_3's procurement rules state that:</p> <p><i>"Any contract which a funder requires be let under The Public Contracts Regulations 2015 (EU Regulations) or the equivalent in Scotland must be procured with the assistance of the Head of Procurement as the consequences of making an error can result in both financial and reputational damage." - O3PPR</i></p> <p>The head of procurement explains this in further detail:</p> <p><i>"Some of the requirements that I have set in are more stringent than most of the other charitable sector that you will find. Simply because we are accountable and answerable for our behaviours to our largest income stream and we need to align ourselves better and dovetail ourselves appropriately to where our largest income stream sits. And I think generally the accountable behaviours are better anyway. The more accountable you are, the better you are seen elsewhere within the sector" - O3IT.</i></p> <p>Org_3 insists on proportionality in its procurement. That is, the type of procurement process and contract adopted for a particular procurement is appropriate and proportional to the value of the contract to the procured and the attendant risks. To this end, various levels of authorisations and approvals are required in the case laid out procedures pertaining to different contract values are to be deviated from. The organisation's procurement policy states that:</p> <p><i>"In exceptional circumstances a waiver to this policy or a compulsory element of the Procurement Rules may be required. These may be granted by the Procurement Board. The circumstances in which a waiver may be granted are set out in the Procurement Rules." - O3PP</i></p> <p>To clearly stipulate responsibility and that contracts are not left without oversight, contract officers and contract managers are required to be appointed to ensure</p>

	<p>compliance to procurement policy and rules as well as to manage the contract by ensuring that:</p> <p><i>“...a contract management plan is put in place to get continuous performance improvement, deliver more innovative and sustainable services and supplies which anticipate future needs as well as reacting to situations that arise and that the goods or service provision or works are monitored against the specification.” - O3PPR</i></p> <p>Furthermore, responsibility for diverse aspects of compliance and governance for Org_3’s procurement rules and associated policies have been allocated to different committees and managers including senior management, finance committee, audit and risk committee and the procurement board. This ensures clarity on responsibilities and authorisations and that procuring staff know where to go to when approvals are needed.</p> <p>The institution of checks and balances through the scrutiny and review of the activities of the various managers and committees ensure that person or group of persons act autonomously without accountability. For this reason, documentation and retention of decisions and important records are required. For example, the head of procurement is required to:</p> <p><i>“... retain a record of all waiver requests, the reasons for them and the period for which the waiver is valid. To ensure transparency and accountability the waiver record will be reviewed bi-annually by the Finance subcommittee.” - O3PP</i></p>
<p>Decision making</p>	<p>Being a large organisation,</p> <p><i>“...all the smaller decisions are devolved to local line managers because they have budgets. But they have central control from the point of view that we can see what they are doing from the central finance systems. So that’s how we are playing it at this moment of time.” - O3IT</i></p> <p><i>“All the big decisions happen centrally, generally speaking with the central procurement team and more with other finance members of staff and the subject matter experts from within those areas who are trying to buy. So that will be, for example, band four scenarios, large cleaning contracts and other large supply contracts such as that. They happen at the central level with the senior members of staff along with the subject matter experts of those areas wherever they are in the UK.” - O3IT</i></p> <p>The central procurement team provides guidance, support and oversight (using its central finance systems) on decisions that are considered sensitive or that require expert knowledge and compliance. Notwithstanding, Org_3 is pursuing the centralisation of some of its contracts to avoid duplication of differently priced contracts from the same suppliers by different departments. The interviewee explains this:</p> <p><i>“We do have a central team and we are moving towards developing a lot of central contracts at this moment of time where a lot of those needs can be met, so we can address some of the spend tail essentially where a lot of the people in different</i></p>

	<p><i>services are buying furniture from the same supplier at a different price. We are addressing that.” O3IT</i></p> <p>Further to this, training is provided for staff to ensure decision making is improved. Documentation of decisions is aided by the use of Org_3’s electronic procurement platform to facilitate clarity, auditing, transparency, accountability, business continuity, lessons learnt and benefit realisation purposes. The head of procurement expounds further:</p> <p><i>“You need to understand what was done, when it was done, why it was done, how it was done, who signed it off, in order to make sure that if that thing was good then it gets done again. And if that thing wasn’t good, then we know what went wrong, why it went wrong, how it went wrong and what can we do to actually not do that again; lessons-learnt environment essentially.” O3IT</i></p>
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A9.4 Discussion of How SCR Formative Elements are Pursued in Org_4

Formative element	Application
Avoidance	<p>Due diligence of suppliers is crucial if a good number of risks and uncertainties are to be avoided. Hence, Org_4 obtains and verifies the business profile of its contractors and suppliers. This is especially important because it delivers medical aid as part of its emergency relief and development aid activities. In certain of the locations where Org_4 works, sudden-onset disasters such as floods and cyclones are seasonal and so it takes advantage of the ‘quieter’ months to visit and evaluate suppliers and potential suppliers so that decision making during emergencies can be quicker.</p> <p>To ensure legal and regulatory compliance, Org_4 trains its staff, keeps records, uses its supervisory and managerial structure and liaises with relevant bodies in that regard. It further stays updated with changes in the law and ensures that its suppliers are contractually obliged in adhering to legal and regulatory requirements. For instance, in its fraud, bribery and corruption policy, suppliers are:</p> <p><i>“...required through contractual instruments to...allow access to specified records concerning Org_4; and to represent that it has not, and shall not, engage in, any fraudulent or corrupt practices.” - O4FBCP</i></p> <p>It further pursues legal and regulatory compliance through its organisational policies, some of which are specifically designed to ensure compliance with such laws and regulations. These policies are regularly updated through annual reviews to ensure they align with current laws and that they maintain contemporary usefulness. When necessary, Org_4 consults with other charities who are experts on relevant policy subjects to help improve their policies. To ensure policy</p>

	<p>compliance within the organisation, staff and volunteers are made aware of what is expected of them and where necessary made to sign documents as evidence of their commitment. Staff are required to declare any situation of conflict of interest and to be ethically responsible. Similarly, Org_4 ensures that suppliers are aware of its policies, that supplier policies are aligned with its own and that there is compliance both to its policy requirements and their own as well.</p> <p>Through its contracting terms, Org_4 ensures there are remedial and/or appropriate recovery measures in place in case of supplier non-compliance which results in losses. This along with the clear indication of contract cancellation in case of breach serve as deterrents to supplier non-compliance.</p> <p>Org_4 understands that fairness and transparency to its employees, suppliers and aid recipients can ensure risk avoidance. This is made sufficiently clear in its Code of Conduct, fraud, bribery and corruption prevention policy, policy handbook and in the interview with the CEO.</p> <p>Another means by which Org_4 ensures avoidance is through clarity in communication whereby it provides clear definitions of relevant terms in its policy documents so that adherents know exactly what is meant and the scope of application. It also indicates an intentional avoidance of media coverage in situations where it deems:</p> <p><i>“such coverage may be to the detriment of the service provided to the beneficiaries or to the security of our staff or the beneficiaries.” - O4CC</i></p> <p>Org_4 pursues a reasonable level of quality control. The interviewee explains this in detail:</p> <p><i>“Unfortunately, there’s an awful lot of corruption in some of the places where we work and systems and processes don’t work as efficiently as they should. So there are a lot of checks that we take it upon ourselves to do that really the suppliers ought to be doing, in terms of if a bottle says it’s got a 100 tablets in it, has it got a 100 tablets in or has it got 98, or 96 or 84? So there are really basic things that we check and we spot check whenever we buy stuff to make sure that we don’t get caught out. Or that things have been relabelled which is critical in medical aid. Sometimes people are quite ‘ethical’ - sort of - when they are being unethical, in that, they will give you vitamins or something instead of the medication. So it’s not going to kill the person.” - O4IT</i></p> <p>Finally, Org_4 ensures information sharing not only with staff and suppliers but also with programme participants and governmental agencies, particularly the police when issues bother on criminality.</p>
<p>Human Resource Management</p>	<p>Org_4 understands that its recruitment of staff can play a role in avoiding risks as well as providing top talent that can help improve its supply chain. This is shown in the organisation’s employment of local staff where necessary, because of their</p>

	<p>local knowledge and the verification of prospective employee background for criminal reference/record checks, verbal referee checks and the incorporation of behavioural-based interview questions. There is also the attraction and retention of people with experience, knowledge and the required transformational leadership skills. The CEO explains:</p> <p><i>“That’s why you have your protocols in place and that’s why you use experienced staff. I mean Emp_2 has been in C_4, I’ve been in International Development for twenty-six years, he’s been in it for even longer than I have. And that wisdom comes with experience. Ultimately, we trust our people; we give the decisions autonomy to the people on the ground. Emp_1 knows who her dealers are, who her contractors are, who her suppliers are and we let her make those decisions...”</i> - O4IT</p> <p>Org_4 also compensates its employees fairly as it indicates that, it:</p> <p><i>“...always aim to pay staff within the top 25% (known as the upper quartile) of salaries in the UK charity sector, but do not compete on pay with the public or private sectors.”</i> - O4PH</p> <p>Training and support for new and existing staff are prioritised to increase awareness and develop the potential for efficient and improved decision making, and compliance.</p> <p>With all these done, staff are made aware of the disciplinary actions breach of policies will result in, including contacting government agencies when there are legal infractions. The policy handbook indicates that:</p> <p><i>“Org_4 will regard any unlawful breach of any provision of the Act by any staff, paid or unpaid, as a serious matter which will result in disciplinary action. Any employee who breaches this policy statement will be dealt with under the disciplinary procedure which may result in dismissal for gross misconduct. Any such breach could also lead to criminal prosecution.”</i> O4PH</p> <p>For documentation, Org_4 has a shared drive where relevant information is to be saved for accessibility. However, with regards to supplier information and procurement transactions, the interviewee indicates that there is none of these on the shared drive. Even though policy documents require record keeping, Org_4 relies more on the experience of staff than on proper documentation, which is a flaw.</p> <p><i>“It works on the fact that we’ve had staff for a long time and they know what they are doing and what’s happened previously but it isn’t actually documented.”</i> - O4IT</p>
<p>Collaboration</p>	<p>Org_4 creates awareness through information sharing with or by its staff through training, localised groups for aid requirements during emergencies and suppliers through policy sharing and contractual obligations. Org_4 collaborates with its suppliers in dealing with fraud and corruption as well as in terms of supply information. Org_4’s CEO explains an example:</p>

	<p><i>“Well, they let us know when they are running out or when there’s a world shortage. Like with the anaesthetics, we had a heads up from them before, that there were three containers full of anaesthetics that were held out because of the politics, so they were literally sitting on the sea in a ship but they weren’t coming in. So we knew that that was happening and so we could bring some in through our volunteers. And it also meant we bought a lot from pharmacies ahead of the game because our suppliers had informed us.” - O4IT</i></p> <p>There is also collaboration with the government when issues bother on criminality but also sometimes in receiving critical medication. There is cooperation with the media to enhance public response as well as with charities for policy direction, staff training, consultation, storage of inventory, recommendations and references for prospective suppliers and helping each other reach difficult terrains. There are however times that this collaboration does not work out. The interviewee explains an example:</p> <p><i>“With the pneumonic plague, what we call the big boys were on the East coast and they were giving those antibiotics and coordinating a big response there; but when we approached them and said we would like to take antibiotics to the areas we were going with, they wouldn’t because we don’t have a partnership with them, so they used their partner organisations. It was impossible to get hold of that antibiotic at the time in C_1; so we could do nothing.” O4IT</i></p> <p>Internal collaboration is also encouraged whereby staff are encouraged to seek advice from other employees as well as from subject matter experts within the organisation.</p>
<p>Sustainability</p>	<p>Org_4 shows some commitment to social sustainability as it seeks to ensure local participation by employing local staff and procuring locally to engender the flourishing and long-term sustainability of local communities. There is a commitment to equal opportunity for both employees and suppliers. The interviewee explains:</p> <p><i>“Not really because we are so desperate; it’s so difficult to get it. It would be a nice thing to do but from a supplier point of view I don’t care who is selling; whether they are black, white, yellow, whatever they are, if they’ve got the thing there in the right location and the price is good and the quality is right, I’ll buy it. But what needs to be said however is that we buy locally. And so I would rather buy from a local supplier than I would from any other supplier because I want to keep my money within the local economy. So I would do that. But ultimately that isn’t going to be my major priority.” - O4IT</i></p> <p>Org_4 keeps an eye on environmental sustainability but due to a limited budget, it does sometimes procure overseas. There is an acknowledgement of the need for economic sustainability and this Org_4 pursues by avoiding dependence on a single funding source and ensuring an operating reserve which seems to be three months’ worth of expected expenditure. Despite this, the organisation</p>

	<p>acknowledges that they do not have the needed reserve balance. Besides this, Org_4 keeps a disaster fund that it initially falls on in the immediate aftermath of disasters. Nevertheless, inadequate funding has meant that Org_4 is unable to bulk buy or have refrigerated stores which are crucial for the storage of the vaccines and medicines the organisation sometimes administers to the vulnerable.</p>
Flexibility	<p>Flexibility in Org_4 manifests predominantly in their decision making where certain procurement decisions are left for staff who are closest to the issues to make. When explaining the decision making around quantities of vaccines to be purchased and the considerations made under emergencies, the interviewee indicated that:</p> <p><i>“Emp_1 who is our project manager has to make those kinds of decisions at the time.” - O4IT</i></p> <p>On supplier selection, it was pointed out that:</p> <p><i>“...it’s knowing what’s local and what’s not; so we know our preferred tool suppliers within those areas and we put word out that we need however many hammers, nails and saws. Then Emp_2 will make all of those decisions because he’s on the ground.” - O4IT</i></p> <p>These decisions are questioned and reviewed later, particularly if things do not go as planned, but the approach helps in improving Org_4’s responsiveness. There is however very little indication of sourcing flexibility in Org_4 as there is no use of framework agreements, multiple suppliers from various locations or back-up suppliers.</p>
Agility	<p>To improve their responsiveness in the immediate aftermath of disasters, Org_4 holds a reserve fund that is used to respond to communities that have suffered floods or hit by cyclones, while it awaits more donations. The organisation also sources potential suppliers, vets them, and visits them during the time of the year where emergencies are rare. This thereby makes it easier to know which suppliers are capable of responding in emergencies when the floods and cyclones set in. The interviewee explains:</p> <p><i>“So there are 7 months where we are doing just normal medical clinics or well building or WASH projects. It’s your sort of relaxing period where you can evaluate suppliers, you can go and meet them, you can look at the quality of their products, and you can make informed sort of slower decisions. And then the 5 months where there’s disasters, you rely on the information that you’ve made in those 7 months.” - O4IT</i></p> <p>Nevertheless, due to inadequate funding, the organisation is neither able to buy or store critical medication in bulk, and this greatly affects Org_4’s agility.</p>
Information Technology	<p>Org_4 encourages online data storage as it states in its policy handbook, that:</p> <p><i>“We are moving towards a paper-free environment, so, where possible all new data will be collected and stored online rather than on paper. We are working towards all paper records being transferred online or destroyed.” - O4IT</i></p>

	<p>Notwithstanding, the interviewed professional pointed out that despite the use of a shared point for data storage, information about suppliers could not be found there.</p> <p><i>“When I came in last year and said where do we buy from and who do we get our supplies from, there are lists but there’s nothing that is in the shared drive.” - O4IT</i></p> <p>At this point in Org_4, information technology is not used for electronic procurement or training purposes.</p>
Redundancy	<p>Org_4 keeps a fund reserve as well as limited relevant stock (particularly medication) for emergencies. There is also storage of data albeit not as effectively as is required. There is no knowledge backup through cross-training as Org_4 relies heavily on the experience of some of its staff to make certain critical decisions. The CEO explains:</p> <p><i>“...that’s why you use experienced staff. I mean Emp_2 has been in C_4, I’ve been in International Development for twenty-six years, he’s been in it for even longer than I have. And that wisdom comes with experience. Ultimately, we trust our people; we give the decisions autonomy to the people on the ground. Emp_1 knows who her dealers are, who her contractors are, who her suppliers are and we let her make those decisions...” - O4IT</i></p> <p>This is a major vulnerability as the resignation or death of these employees may result in knowledge gaps and threaten business continuity.</p> <p>The absence of framework agreements also means that there are no redundant supplier relationships which means when particular suppliers fail, that supplier chain suffers a disruption that could be avoided.</p>
Robustness	<p>To remain robust and maintain a reasonable level of operation despite disruptions, Org_4 has in place policies that serve as an internal mechanism for remedying workplace wrongdoing. It also keeps a fair amount of medication stocks and funds to permit operations in case of disruptions.</p> <p>Nonetheless, limited funding and the absence of procurement experts has meant that Org_4 has several weak links in its supply chains which threaten its robustness in the face of supplier-sourced disruptions.</p>
Security	<p>Org_4 ensures data security by limiting access to storage locations for documentation and electronic data storage media. The organisation stipulates actions including the relocation of documentation, computers and other electronic data storage media, prevention of suspicious individuals from having access to these and obtaining urgent advice from suitably qualified experts with regards to the handling of electronic documentation or media, to ensure data safety.</p> <p>Unless a country outside of the European Economic Area has equivalent levels of personal data protection, the transfer of such data is prohibited.</p>

	<p>The organisation's fund reserves also provide it with financial security. Org_4 insists on holding suitable insurances for its employees, volunteers, equipment and office premises. Seeking to address corruption by reducing perceived opportunities, Org_4 uses safes to secure money. Thus, it can be seen that Org_4 explores a variety of means to ensure security within it even though it is not readily apparent this extends to the rest of the supply chain in the form of well-written contracts, and personnel and inventory security in the field.</p>
Top Managerial Commitment	<p>Org_4's board of trustees and senior managers show their interest in resilience by reviewing the company's risk register, ensuring adherence to its code of conduct and an annual review of the control environment in terms of the organisation's governance structures, policies and instituted procedures. There is particular interest in corruption and safeguarding issues as the board recognises the major this poses to their reputation and hence funding.</p>
Culture	<p>Reporting is strongly highlighted in Org_4's culture as this is engrained in multiple of its policies. Employees, partners, contractors and suppliers are encouraged to report suspicions of fraudulent and corrupt practices, data breach and safeguarding malpractices. Obstruction to reporting any of these, as the organisation's policy stipulates is:</p> <p><i>"...is a serious breach of the Org_4's Code of Conduct and may result in disciplinary measures."</i> - O4FBCP</p> <p>Where appropriate, reporting is to extend to government institutions such as the police and the charity commission. There is also a commitment to learning based on reports within the year, annual reviews of policies and guidelines. Org_4's HR director, CEO or chair have the responsibility to ensure that lessons learned are enacted. The CEO narrates a lesson-learnt encounter with a supplier:</p> <p><i>"So there are things where we've given money for something specific and then they've not given us the amount that they said they would. So lessons learnt is that we now get Emp_1 and Emp_3 to pick it up rather than getting them (the suppliers) to distribute it. So we've had suppliers say 'we'll distribute it directly' and where we've trusted them they failed. We only trusted them once, we never did it again."</i></p> <p>- O4IT</p> <p>Overall, Org_4's staff and management are made aware in the policy handbook that, they:</p> <p><i>"...are responsible for the effective identification, management, reporting and control of risk within their areas of responsibility, and for developing a risk aware culture"</i> - O4PH.</p>
Integration	<p>Externally, there is not much indication of integration in Org_4 with its suppliers. Internally, there is no use of an inter-departmental procurement committee but there is significant encouragement for collaboration and consultation. Being a relatively small and well-coordinated organisation, Org_4, as its CEO explains, has it:</p>

	<p>“...much easier for us to make those decisions. Emp_1 might see something and ring Emp_2 and say ‘Listen, there’s a pallet load of this, should I get it?’ And he will say ‘Actually no; we’ve got an engine coming in next week that needs to be stored there’ or whatever, or ‘Yes, absolutely.’” - O4IT</p>
Governance and Accountability	<p>Org_4 acknowledges the need for accountability to its donors by ensuring transparency in reporting its activities both from a financial perspective as well as from the perspective of the effectiveness of its disaster assistance impact. Designation of authority and responsibility for specific roles such as oversight for implementation of policies on corruption and safeguarding is used to ensure staff are held accountable for their actions. These offices and committees have the power to authorise or approve employee actions which thereby keeps arbitrariness in check. The use of external auditors further ensures accountability in Org_4. However, there is no indication of proportionality, particularly in Org_4’s procurement, as the organisation does not even have a procurement policy document.</p>
Decision making	<p>Decision making in Org_4 is decentralised as the majority of procurement decisions are left to those on the ground. The CEO explained:</p> <p><i>“Then again, it’s knowing what’s local and what’s not; so we know our preferred tool suppliers within those areas and we put word out that we need however many hammers, nails and saws. Then Emp_2 will make all of those decisions because he’s on the ground.”</i> - O4IT</p> <p><i>“Very much on the ground. The designated powers I think is the official word. So we have guidelines, written and unwritten; but at the end, Emp_2 is the country director. He ultimately takes responsibility for it. But often it is Emp_1 and Emp_2 who are making those decisions. Because in disasters, it is an ambiguous situation you are facing; if your preferred suppliers don’t have the medication, you’ve got to choose between two people in the marketplace. Who looks more trustworthy or who do you know, are they still in their packaging, do they appear to be ok? Because if they don’t, we won’t get them because you have no idea the quality of the drugs and it’s medication, you’re dealing with people’s lives.”</i> - O4IT</p> <p>Org_4 also recognises how its policies can influence its resilience in terms of its integrity and the avoidance of reputational risks as its policy handbook states:</p> <p><i>“The purposes of this policy are to protect the integrity of Org_4s’s decision-making process, to enable our stakeholders to have confidence in our integrity, and to protect the integrity and reputation of volunteers, staff and committee members.”</i> - O4PH</p>

A9.5 Discussion of How SCR Formative Elements are Pursued in Org_5

Formative element	Application
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Avoidance

To avoid situations of risk or uncertainty with suppliers, Org_5 embarks on a variety of approaches including due diligence, legal and regulatory compliance, policy compliance and conformity, awareness creation, careful contracting (in terms of duration and terms and conditions) and a well-thought-out communication strategy. Further, it ensures fairness and transparency, pursues financial resilience and vigorous risk identification and assessment, and also enforces quality control.

Before suppliers are contracted with Org_5, they are required to go through a supplier pre-qualification process to ensure suitability in terms of competence, sustainability, behaviours and processes. There are periodic reviews of suppliers to ensure that there has not been a decline in these areas. To assure itself that the necessary procedures have been followed, all suppliers are required to commit to several documents depending on the service or good. These, as specified in the organisation's procurement procedure document, include a fully signed contract, signed confidentiality agreement, completed pre-qualification questionnaire, signed copy of supplier code of conduct or supplier principles' agreement, their bank details, three years' financial statements and copies of relevant insurance certificates and accreditations as appropriate. Once suppliers are contracted, Org_5 adopts:

"...a systematic, risk-based approach which can include both announced and unannounced site visits." - O5SCP

Though of varying frequencies depending on the case, ongoing supplier due diligence is pursued through activities such as financial status checks, supplier risk monitoring, supply chain reviews and compliance reviews.

Suppliers are required to comply with relevant international (where applicable) and the local legislation and regulations of the countries in which they operate. Org_5 requires its suppliers, through its contractual obligations and the signing of relevant policy and positional documents, to commit to abiding by laws such as safeguarding, data protection, modern slavery, fraud, bribery, and corruption. These give it legal grounds to terminate supplier contracts where breaches are identified, so as avoid complicity and vulnerability to reputational and financial risks.

Within the organisation, it pursues compliance through policies, staff training and staff obligations. The organisation participates in some sector oversight groups such as the Fundraising regulator and Direct Marketing Association, to ensure the highest levels of compliance while also seeking relevant accreditation such as the ISO14001 standards. It further defines its policies based on consultation with sector experts and the standards set by the United Nations, International Labour Organisation and the Ethical Trading Initiative, to ensure that the highest of standards are required of it and its staff. Continuous review of procurement

policies and procurement strategy documents ensures that the organisation's policies are in line with contemporary laws, regulations and lessons learnt.

Beyond creating awareness within the organisation and across its supply chain, Org_5 ensures that the public and the accessors of its services are aware of relevant policies. Indeed, the organisation engages the public in dealing with modern slavery. It reports:

“The hidden nature of modern slavery and human trafficking is why Org_5 is not content with just helping people to escape it and regain their lives. It's why we're also strongly committed to exposing this hidden crime, largely by recruiting the public to be our eyes and ears. In the 7 years since we've been running the anonymised_programme1 and anonymised_programme2 Service, we have not only been instrumental in getting the public to be on the lookout for possible cases of modern slavery.” - O5AR

But pursuing fairness, equity and transparency, Org_5 ensures that suppliers have trust in it and its procedures.

For the avoidance of miscommunication or unauthorised public communication by suppliers, Org_5 ensures that supplier requirements are stipulated and are made available to their workers in the native language. Further, without prior written consent, public announcements of contractual relationships and details are prohibited.

With regards, to quality control, Org_5 requires its suppliers to employ competent personnel and to train them to deliver services per required rules, procedures and statutory and regulatory requirements. Goods are also inspected and/or tested on receipt to ensure they are of agreed quality and conform with the contractual agreement.

To ensure financial resilience which reduces the organisation's exposure to lack or inadequate funds to procure needed goods and/or services, Org_5 reports that its income streams consist of:

“...statutory funding, income from the sale of assets and income from legacies and donations which have been specifically made to and received directly” (O5AR) by it. The head of procurement further indicates that:

“We have multiple sources of funding. We have public donations, government contracts and trading income.” - O5IT

Finally, Org_5 avoids inventory holding as much as possible. The interviewee explains why:

“We don't actually have the space even if we wanted to hold stock. But if we did have the space, we still would want to avoid it because of the cost of holding stock in terms of insuring it, the risk of obsolescence or deterioration or what cash will be locked up in it.” - O5IT

<p>Human Resource Management</p>	<p>Recognising the need for expertise, Org_5 regularly reviews its recruitment and ensures proper remuneration to help attract, appoint and retain the best possible candidates. In its procurement strategy, the organisation indicates its commitment to:</p> <p><i>“Build a high performing in-house procurement team who will consistently deliver savings that outweigh the costs of the Unit.” - O5PP1</i></p> <p>Employees and directors are provided with various forms of training including personnel development programmes and learning tools, policies and procedure training and a software system that forces employees to read and acknowledge they have read relevant documents.</p> <p>To ensure compliance with its procurement procedures and policy, Org_5 stipulates to all employees that:</p> <p><i>“Wilful breach of this Policy may constitute a disciplinary offence.” - O5PP1, O5PP2</i></p> <p>Org_5 provides regulated accessibility of relevant documents to staff including access to all procurement guidance documents and a central database for all contracts. Indeed, suppliers are also required to provide access to relevant documents as stipulated in Org_5’s supplier terms and conditions and conduct policy documents.</p> <p>The requirement to store these documents and make them accessible, help ensure transparency, business continuity and also provides a chain of evidence for auditing and compliance purposes. An insistence on the use of purchase orders when budgetary allocations are outside of codified approval limits or with unapproved suppliers, allow for monitoring, approvals, negotiations and efficiency.</p> <p>The head of procurement provides further explanation for Org_5’s insistence on documentation.</p> <p><i>“For clarity and if needed, so that we can justify retrospectively the decision we made but the primary reason is that everyone involved in the project is clear on why you want a supply. So say if it was a tender, the document scoring sheets would be stored as well as the comments so that everyone is clear who was successful and why. There’s an element of it being good to have an audit trail but primarily it’s about ensuring clarity at the time for all stakeholders.” - O5IT</i></p>
<p>Collaboration</p>	<p>Recognising the usefulness of information sharing in enhancing collaboration within the organisation as well as with suppliers, Org_5 embarks on information sharing with all relevant stakeholders. It admits in its procurement strategy, the need to maintain:</p> <p><i>“...open and ongoing two-way communication and information sharing with all affected stakeholders to ensure their requirements are always at the forefront of procurement decisions.” - O5PS</i></p>

	<p>Org_5 collaborates with suppliers to increase visibility and allow for close monitoring of compliance. While ensuring compliance with new laws for existing suppliers, Org_5 admits the possibility of those who would not pass the qualification process and the need for a collaborative action plan to ensure requirements are attained.</p> <p>There is also collaboration with other charities whereby useful information about supplier feedback and the pros and cons of working with different suppliers and systems are shared periodically. Org_5 however does not utilise any charity sector framework agreements at the moment because it deems them limited and that it can get comparable ones from government frameworks or direct contracting.</p> <p>Internally, there is a significant effort put into ensuring internal collaboration in the form of consultation with relevant stakeholders (such as the procurement, legal services and finance units) by budget holders, to ensure efficient and resilient procuring.</p>
Sustainability	<p>Org_4 pursues sustainable procurement by ensuring that it meets: <i>“...the needs of Org_5 for goods, services etc. in a way that achieves value for money (on a whole life basis) in terms of generating benefits not only to Org_5, but also to society and the economy, whilst minimising damage to the environment.”</i> - O5PS</p> <p>Suppliers are also required to agree to and comply with the organisation’s supplier conduct document which has stipulations on ethics, social and environmental sustainability.</p> <p>Economically, Org_5 is committed to ensuring financial resilience through adjusting its financial planning and commitments, rigorous checks on the financial stability of prospective suppliers and ensuring value for money.</p> <p>To ensure social sustainability, multiple measures at avoiding suppliers engaged in modern slavery, human trafficking, unfair employment conditions and similar risks are in place. Suppliers are expected to declare compliance and sign legally binding documents based on which Org_5 can terminate contracts if breaches are identified. These agreements also cover environmental sustainability, particularly with regards to carbon emissions and the impact on climate change.</p> <p>To ensure internal compliance and enforcement in dealing with suppliers, these sustainability requirements have been codified in various policies where staff are trained on and required to adhere to.</p>
Flexibility	<p>Org_5 pursues sourcing flexibility through the use of framework agreements that could either have single or multiple suppliers. The head of procurement explains this: <i>“For us, the framework agreement is having a supplier signed up to provide goods or services with no minimal commitment or spend. So framework is the list of</i></p>

	<p><i>suppliers that we've already contracted and can use as and when we want. So having suppliers on a framework agreement as opposed to a direct contract for us, is that we are not sure if or how much we are going to buy something but we want someone available if we do. So whether the supplier is on a framework agreement or directly contracted with isn't so much about their financial or ethical risks, it's about our certainty of needing to purchase and what needs to be purchased. Having framework agreements enables us to ensure that we've got preapproved and contracted sources of supply for various goods or services that are variable in our requirements..." - O5IT</i></p>
Agility	<p>Org_5 identifies the need to be responsive to its ever-changing needs and that of its people. The procurement team has a clearly defined structure that stipulates roles and responsibilities. Besides clearly stipulated dispute resolution procedures in its terms and conditions document to deal with supplier disruptions, Org_5's financial resilience and use of framework agreements ensure that it is well-positioned to respond to disruptions and procurement under emergencies.</p>
Information Technology	<p>Org_5 has digital platforms where policy documents and contracts are stored and made accessible to relevant staff. The contract management system provides Org_5 with exact alerts to ensure contracts do not end without proper closure or renewal when necessary.</p> <p>There is also a site where information is shared with staff. There is also the use of an e-procurement platform to manage the procurement cycle which helps improve the speed of the procurement process, reduce administration and protect the organisation from fraud.</p>
Redundancy	<p>A major approach adopted in Org_5 is the multiple income streams that it has. Coupled with a little over 10% of its average annual expenditure as its general reserves, Org_5 has significant funding redundancy for resilience purposes.</p> <p>Through the use of information technology, there is electronic data backup on digital storage platforms and decision redundancy through the use of e-procurement. By using framework agreements, Org_5 achieves both tangible redundancies in the form of actual multiple suppliers as well as intangible redundancy in terms of supplier relationships which can be exploited in case of disruptions.</p> <p>Org_5 holds very little stock at local sites as required but generally avoids holding stock due to costs, unavailability of space, insurance requirements, risk of obsolescence or deterioration or that cash may be locked up.</p>
Robustness	<p>Org_5 ensures a good enough level of operation despite disruptions through its fund reserves, multiple funding sources and framework agreements. Recognising the risks with certain suppliers and their threat to the overall resilience of the supply chain, Org_5 carries out ongoing supplier monitoring and development programmes to help address risks and points of weakness. Checks done include</p>

	<p>financial status checks, supply chain reviews and compliance reviews. The interviewee provides further insight:</p> <p><i>“...where we have to assess a high-risk supplier on ethical, environmental, information security, data risks, we will periodically assess them, normally annually but it could be more often if we have reasons to. As well as regular reviews; for the high risk or important suppliers, quarterly, half-yearly or sometimes even monthly reviews to get sort of a close range, better or regular understanding of what is going on within their organisation.”</i> - O5IT</p>
Security	<p>Suppliers of Org_5 are required under its terms and conditions document, to maintain insurance with a regulated and authorised insurance company for the contractual term and six years thereafter, to cover for any liabilities that may arise under or in connection with the contract. Besides this, Org_5 maintains its own insurance policy as an organisation.</p> <p>Cyber and information security controls are also in place and are regularly reviewed to ensure that the organisation’s data systems are secured. Org_5’s fund reserves also provide it with financial security.</p>
Top Managerial Commitment	<p>The top management in Org_5 shows its commitment to resilience by showing leadership in risk management and spearheading the organisation’s environmental agenda. They ensure its incorporation into the organisation’s policies, corporate planning and strategies. They also participate in training sections at least once a year to be updated on relevant issues which may pose risks to Org_5. By leading the agenda, they set the tone for the rest of the organisation.</p>
Culture	<p>Org_5 insists on reporting both within it and with its suppliers, as it requires suppliers to ensure their employees and those of sub-contractors have fair opportunities to report grievances while having their confidentiality protected. Further, it has a dedicated team for reporting on procurement activities, while at an organisational level, complaints are monitored and compared with previous years to evaluate the effectiveness of the application of its complaint policy. Org_5’s procurement strategy indicates that it <i>“...should be viewed as laying the foundations for the deployment of an effective procurement culture throughout Org_5.”</i> - O5PS</p> <p>Its procurement policy indicates that it seeks to <i>“...create an ethical culture for supplier management, reinforced by effective monitoring and performance management tools. Ensure ethical and lawful behaviour by suppliers, by communicating required standards and closely monitoring compliance.”</i> - O5PP1</p> <p>All of these undergird the overarching learning culture of Org_5 which seeks to continually improve by encouraging the reporting of incidents, revising extant policies and ensuring adherence to these.</p>
Integration	<p>External integration is barely pursued in Org_5 as there is no integration of logistics or technology. Nevertheless, the organisation through effective</p>

	<p>monitoring and performance management engages in supplier development where it identifies existing suppliers that fall short on requirements that would reduce its supply chain’s vulnerability.</p> <p>Internally, there is a lot of internal consultations, stakeholder engagement and a concerted effort to ensure visibility and improved decision making.</p>
Governance and Accountability	<p>All procuring budget holders are required in Org_5 to have “<i>all contracts with external suppliers are to be reviewed by the Procurement Unit and are to be processed through the appropriate governance route before contract signature</i>” - O5PP2. A clear governance structure with regards to procurement is provided in the organisation’s strategy so that roles and responsibilities are unambiguous. With this in place, procurers are required to seek authorisations and approvals from relevant quarters “<i>...to ensure that all expenditure is correctly authorised, controlled and recorded</i>” (O5PP1), as is required by its procurement policy. Specialised committees and units also have defined roles (such as safeguarding, environment, procurement, audit and so on) so that purchasing officers know who to consult depending on the nature of the procurement.</p> <p>Org_5 ensures proportionality so that the level of scrutiny for various procurement processes and suppliers is commensurate with the severity of potential risk anticipated. Its pre-qualification questionnaire is one of the ways it determines this.</p>
Decision making	<p>Procurement decision making in Org_5 is guided by the organisation’s policies and the defined ethos of the procurement unit to “<i>...deliver the best value solutions to Org_5</i>” (O5PS). Decision making is decentralised, and purchasing is done by local teams in whatever country the activity is taking place even though this is guided by and subject to Org_5’s procurement policies. When in doubt, or there is a need for any waivers on procurement methods, procurers are required to consult the head of procurement and obtain approvals.</p> <p>Org_5’s procurement unit monitors adherence to its procurement procedure at both individual and organisational responsibility levels.</p> <p>When full competitive tendering is the stipulated procurement method per procurement procedure document (due to monetary value and/or level of risk exposure), the process is to be led and managed with the support of the procurement team.</p>

A9.6 Discussion of How SCR Formative Elements are Pursued in Org_6

Formative element	Application
Avoidance	In making sure that risks and uncertainties around disruptions are avoided, Org_6 embarks on a comprehensive due diligence regime and continues to assess

and monitor suppliers throughout the course of contractual delivery. There is an insistence on legal and regulatory compliance as well as compliance and conformity to organisational policy within the organisation and along its supply chain. Through well-written contracts, the creation of awareness, the pursuit of fairness and transparency and strategic communication, Org_6 reduces the likelihood of disruptions in its supply chains. Financial controls and resilience, quality control, staff obligations (in the form of disclosure, conflict of interest, confidentiality, ethical staff behaviour, refusal of gifts and hospitality), consultation and stakeholder participation, support and development of suppliers and partners as well as improved procurement processes further ensure that Org_6's vulnerability to risks and uncertainties are reduced.

With regards to due diligence, suppliers are required to complete 2 forms (supplier questionnaire and supplier mandatory vetting form) before the execution of contracts may begin. The financial standing of suppliers is verified using CreditSafe and ethical checks are carried out on new suppliers. This is done in addition to all the documents prospective suppliers are required to provide to Org_6 including two financial years' turnover, audited account and a statement of cash flow forecast for the current year along with a bank letter outlining the supplier's current cash and credit position. The organisation continues to monitor its suppliers to ensure the effectiveness of its policy position across its supply chain.

Seeing the need for compliance to relevant legislation and regulations, Org_6 ensures UK Accounting standards, GDPR provisions, Modern Slavery Act 2015, Bribery Act 2010 and all applicable anti-bribery, anti-money laundering, anti-terrorism laws are followed in its procurement activities. To do this, it uses organisational policies, staff training, supplier prequalification questionnaire and supplier contractual obligations. There is adherence to relevant sector frameworks and guidelines which though not compulsory, ensures that the organisation's practices and activities are benchmarked. Org_6 continually reviews and updates its policies to ensure compliance with both legislation and best practice. Acknowledging that its policies play a role in legal and regulatory compliance, Org_6 ensures global policy alignment with its suppliers and partners and obliges compliance from staff and suppliers alike.

In avoiding risks, awareness creation is paramount. Org_6 encourages information sharing with staff and suppliers in terms of knowledge sharing and the creation of visibility to improve decision making.

Org_6 uses contract durations to optimise contract value, provide security (especially in case of few available suppliers) and also mitigate against being tied down to a particular supplier when others may be less risky and offer better prices, products or services. Contractual terms and conditions along with obligations

	<p>therein stipulated ensure that suppliers abide by contractual provisions or risk contract termination. This insulates the organisation from reputational damage in case a suppliers’ breach of legal and/or regulatory provisions becomes public. Furthermore, contract management ensures suppliers deliver as expected and that needed modifications are made in time to avoid major disruptions.</p> <p>Insistence on fairness and transparency in its procurement processes ensures that supplier’ trust is boosted and that there is accountability within Org_6 and its supply chain.</p> <p>Recognising the risk of reputational damage due to poor and/or unauthorised communication, Org_6 has a committee with oversight on its public communications. Suppliers are required to seek its approval before making public their dealings with Org_6. Furthermore, supply expectations are communicated clearly so that suppliers know exactly what is expected of them.</p> <p>Org_6 implements quality control beginning from its pre-qualification questionnaire in which suppliers are asked of various quality management certification where applicable. Suppliers are enjoined to deliver quality goods that can be inspected on delivery or in the case of services, have documents signed to prove quality delivery before the supplier leaves the premises.</p> <p>With several months’ worth of planned annual expenditure in its general reserves, Org_6 ensures that it is secured against uncertainties and unanticipated disruptions that could threaten its operations and aid delivery.</p>
<p>Human Resource Management</p>	<p>Even though Org_6 does not indicate how it uses recruitment of its staff to improve its supply chain resilience, it does that with its suppliers, whereby they are required to indicate as part of the pre-qualification questionnaire, whether they practice fair recruitment and employee rights. This helps prevent working with suppliers who carry the risk of unfair staff treatment and modern slavery. On its part, employees of Org_6 are provided with training and support to help them understand procurement processes and policies for improved decision making and compliance. Meticulous documentation is vigorously pursued by Org_6 for various reasons. It allows for accessibility.</p> <p>Contracts, procurement committee terms of reference template, procurement-related forms, letters of correspondence and policy documents are available on a SharePoint, for easy access to all relevant staff. This helps with transparency and business continuity. It also provides a chain of evidence for both internal and external auditing. The procurement manager explains:</p> <p><i>“If I’m searching for something and I’ve got 3 written quotes and I’ve made a choice from them, I have to write up why I chose that person over the other two. And as it goes up the RFP line, then the same thing is done for all the submissions. So if I received 10 submissions for direct printing, then I’ll have to write up why I chose this group over the other 9 and why they fit our needs and why the money</i></p>

	<p><i>is there etc. If it's above 50,000, then they also have to address our risk strategy that we wrote out earlier; in other words, how they are going to meet our risk strategy concerns. And so I will say everything is documented definitely from about 5,000 up. I always take a great deal of this information, particularly the three written quotes and the RFP reports and then I attach that to the final written contracts so that when an auditor comes in, he has the ability to see how it's gone from original concept to final contract.” - O6IT</i></p> <p>The insistence on documentation upholds the requirement for approvals to be given by departmental heads of purchasing officer on exceptions to standard process, as written business cases are expected and these shared with the Contracts and Procurement manager. Documentation further allows for the procurement experts to review outgoing forms for appropriate documentation. Insistence on written quotes and contracts further help with clarity of communication as such documents are expected to have clear terms of reference.</p>
Collaboration	<p>By encouraging information sharing within Org_6 and with its suppliers, visibility is enhanced and collaboration is greatly improved. For example, suppliers are required to promptly inform Org_6 of any circumstances that might lead to delay or additional work with regards to agreed terms of reference or any circumstances of conflict of interest. In such cases,</p> <p><i>“Both parties are under an affirmative requirement to discuss such conflicts of interests, and take appropriate action to resolve this issue, up to, and including, cancellation of this Original Supplier Contract.” - O6SCA</i></p> <p>There is the provision of procurement technical services for Org_6's international partners. It also works with them to develop effective policies to combat issues such as modern slavery. Org_4 further relies on other charities for references and insight on new prospective suppliers to assist in supplier selection. Internally, Org_6 ensures collaboration through the use of procurement committees which it says ensures that:</p> <p><i>“...there is appropriate delegated authority, technical knowledge, and procurement or commercial expertise to make informed decisions about high risk procurements.” - O6CPG</i></p> <p>They also <i>“...mitigate the risk of fraud, corruption and unfair subjective bias, due to the separation of duties and increased level of accountability.” - O6CPG</i></p>
Sustainability	<p>All suppliers contracted by Org_6 are expected to undergo ethical and sustainability screening. This is done as part of the vetting process done by its contracts and procurement department where suppliers are required to adhere to legal compliance on anti-discrimination and fair treatment of employees, and its ethical code of conduct. Suppliers are required to agree to a social audit on employees by Org_6 at any time. The organisation also uses complaints by employees of suppliers to ensure sustainability expectations are being adhered to. Internally, there is a commitment to equality and diversity and compliance to anti-discrimination legislation and health and safety regulations.</p>

	<p>Org_6 upholds its responsibilities towards the environment through its policies that encourage responsible use of resources and a reduction in the output of all types of waste and harmful emissions. In prequalifying suppliers, they are required to indicate if they have an environmental policy or environmental procurement policy, the steps taken to minimise their environmental impact and to explain the safeguards put in place to ensure products are sourced from environmentally sound suppliers.</p> <p>Seeking to ensure its economic sustainability, the organisation seeks to stabilise and grow its supporter acquisitions in the UK through cost efficiency and transparency. It further maintains almost 6-months' worth of planned annual expenditure to insulate it from unanticipated shocks. There is an effort to diversify its sources of funding through a global resource mobilisation strategy and the hiring of highly skilled, professional consultants to support its programme funding work.</p>
Flexibility	<p>Org_6 utilises flexible contracting through the use of framework agreements. Notwithstanding, in cases where multi-year contracts are involved and demands over begin to increase beyond forecasted levels, Org_6 addresses this through half-year or annual reviews to cater for these.</p> <p>Decision flexibility is also prominent in Org_6's procurement as decision making is decentralised for low value, low-risk purchases. Cross-training ensures that procuring staff from various departments are capable of informed procurement decisions. In the case of high-risk and/or high-value contracts, contracts and procurement's involvement is mandated to ensure risks are properly mitigated and that there is value for money.</p>
Agility	<p>With the use of framework agreements and with its fund reserve, Org_6 ensures that in case of unexpected events, it will be responsive. Provision for permitted exceptions are made for emergencies in the organisation's procurement policy wherein it allows for derogations:</p> <p><i>"...where, in cases of extreme urgency brought about by events which could not have been foreseen and which are not attributable to delay by the purchasing staff themselves, the timescales necessary to complete the mandated procurement process will wholly or substantially negate the benefit being procured". - O6PP</i></p>
Information Technology	<p>Org_6 has transformed its procurement process and digitalised it. Information Technology has further allowed digital copies of contracts, policies and other relevant procurement documents to be stored online to increase accessibility, security and transparency. Furthermore, Org_6 uses online resources such as CreditSafe in its evaluation of potential suppliers. The Contracts and Procurement manager provides insight into the use of IT in Org_6 for procurement purposes:</p> <p><i>"...we've recently automated a lot of the procurement process through the use of SmartSheets and for that reason you no longer physically submit things and bring</i></p>

	<p><i>things in. We now do contracts electronically and so everything has now become digitalised in general. But with the new procurement system, they have to go through a process of requesting the contract first, then carrying out the signing of the contract and then uploading it after it's been signed to a monitoring system. When we did a review about a year and a half ago, we found out that we were missing close to 80% of those contracts because they used to be just done by the departments and never brought to our attention. Now you have to bring it to Contracts and Procurement's attention and go through the process.” - O6IT</i></p>
Redundancy	<p>Even though Org_6 does not decidedly multisource for the same good or service, it does maintain redundant supplier relationships through its use of framework agreements. The only identifiable tangible redundancy it uses is its fund reserve while intangible redundancy includes electronic back up of documents and decision redundancy through the use of its e-procurement platform and the required digital documentation of procurement committee and departmental procuring decisions.</p> <p>There is also knowledge backup through cross-training albeit quite limited and admittedly inefficient as the interviewee explains...</p> <p><i>“So once a quarter we hold training to basically do the same thing I would do in an induction but in much more detail for about an hour and a half. I try to get them to understand how to go through the procurement procedures. I still have people who I know I've trained who still write me roughly on a weekly basis to ask me about the processes. The retention level is a little concerning to me but I think it's just because they know I'm there and so they'd just ask rather than remember it.” - O6IT</i></p>
Robustness	<p>As has been the pattern with the other organisations, knowledge redundancy which is achieved through cross-training is very useful in relieving the workload on a very small procurement team. The use of fund reserves and framework agreements also allow the organisation to maintain reasonable levels of operations during disruptions. Through half-year and annual reviews, Org_6 is able to identify the need for renegotiation or new tenders to meet demand that was not originally forecasted.</p>
Security	<p>Org_6 reports that, it provides security training to <i>“...all staff and volunteers who travel overseas, risk assessments are undertaken before travel and appropriate monitoring and reporting mechanisms are in place.” - O6SR</i> Further, suppliers are required in the organisation's prequalification questionnaire, to confirm their willingness to <i>“...take out the appropriate level of insurance cover as set out in the Statement of Requirement if you are successful in winning the contract” - O6PQC.</i> Once a contract is signed, a supplier is enjoined to (at its own expense) <i>“...ensure that it has in place insurance that reflects the supplier's liabilities under this agreement, with a reputable insurance provider.” - O6SCA</i></p> <p>The organisation also uses contractual indemnity clauses which secure it against claims, liabilities, costs, proceedings and expenses awarded against or incurred as</p>

	<p>a result of supplier contracting. The organisation’s fund reserves also provide the organisation with financial security.</p>
Top Managerial Commitment	<p>Top managerial commitment in Org_6 is generally seen in the responsibility of its top managers for risk management, including risks related to the use of funds and that fundraising is in line with legal obligations and public expectations. They also have oversight of the organisation’s public communications strategy. They are thus responsible for identifying and appropriately managing all risks associated with Org_6’s fundraising, organisational risks, internal audits and risk management reports and use of funds as well as evaluate the effectiveness of the organisation’s risk mitigative actions.</p> <p>It is worthy to note that even though these risks have implications on its supply chain resilience, there is no indication of a direct commitment to procurement-related risks or indeed risks specifically identified from a supply chain perspective.</p>
Culture	<p>The two major cultural characteristics that are evident within Org_6 and fuel a resilience-seeking culture are reporting and learning. It is reported that staff and volunteers are encouraged to “<i>...raise suspicions of wrongdoing, risk or malpractice within the organisation</i>” - O6SR. Suppliers are also encouraged to write out their complaints and send them to the Contract and Procurement manager. Escalation is allowed all the way up to the Chief Operating Officer.</p> <p>There is a continuous review of compliance to laws and regulations and an update to policies to ensure compliance and best practice. This, coupled with reporting, ensures that there is continuous improvement in the organisation. The contractual provision below captures this quite well: <i>“All injuries, however small, sustained by the Supplier in the course of this assignment must be reported, in London to the Facilities Manager, or in Chard, to the Health & Safety Officer. Accident records are crucial to the effective monitoring and revision of the policy and must therefore be accurate and comprehensive.”</i> - O6SCA</p>
Integration	<p>Integration within Org_6 is largely internal and predominantly lateral. There is significant stakeholder engagement, particularly with high-value and/or high-risk procurements as evinced in the organisation’s use of procurement committees and request for proposal review teams. The purpose is summarised as to ensure “<i>...there is appropriate delegated authority, technical knowledge, and procurement or commercial expertise to make informed decisions about high risk procurements.</i>” - O6CPG</p> <p>Procuring officers from various departments are required to notify subject matter experts (particularly contracts and procurement) on technical issues and objections that may be raised by prospective suppliers for solutions to be found. This, along with the online storage of relevant documents, helps create visibility, process and data integration.</p>

<p>Governance and Accountability</p>	<p>The need for proportionality has meant that Org_6 in its procurement policy document, commits to “...ensure that the costs of carrying out a procurement exercise do not outweigh the benefits to be achieved, and we will invest the greatest effort where the risk is greatest” - O6PP. Because of this, Org_6 ensures compliance with donor obligations as applicable and that appropriate authorisations and approvals are obtained in case of procedural exceptions or depending on contractual value and risks. This is because the organisation has in place “...robust governance structures and systems, maintain true accurate and appropriate record keeping, have clear decision making processes, and aim to be transparent and fair in the award of contracts” (O6CC). Insistence on documentation, accessibility and transparency ensures that decision makers are accountable.</p> <p>This has translated into the formation of various committees that have oversight over different aspects of the procurement process and compliance. As managerial and committee oversight overlap, there are checks and balances. An audit committee oversees internal control frameworks and receives “...summaries of all internal audit reports, regular progress reports and updates on the status of organisational risks and associated mitigating actions that are in place” - O6SR. External auditing serves as the final step in ensuring this formative element is being pursued.</p>
<p>Decision making</p>	<p>Procurement decision making in Org_6 is decentralised internationally, that is, partners “directly procure all elements within the scope of their MoU or Partnership Agreement” - O6PP. Within the UK, requesting departments handle procurement for low value (up to £20,000) and/or low-risk contracts, albeit with the support and oversight of contracts and procurement. As the value increases above this limit, there is the involvement of Contracts and procurement, procurement committees, director of operations, director of the procuring department and ultimately the chief executive officer for contracts above £100,000.</p> <p>Procurement decision processes are to be documented (irrespective of contractual value or sourcing procedure) for audit purposes. In determining contract durations, decisions are influenced by the security of funding, nature of the supply market, initial investment and the cost of changing suppliers.</p> <p>Overall, decisions are guided by various organisational policies and guidelines, and these ensure accountability, transparency, efficiency and effectiveness.</p>

A9.7 Discussion of How SCR Formative Elements are Pursued in Org_7

Formative element	Application
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Avoidance

A major activity taken by organisations to avoid risks sourced from suppliers is to do due diligence and continuous supplier assessment and monitoring. An example in Org_7 with regards to modern slavery is that it indicates that:

“Our country and regional offices identify risks arising through their supplier due diligence work that they engage in, and provide support and clarification where needed on modern slavery to suppliers.” - O7MSP

Supply receiving departments are expected to *“...monitor delivery and service against the contractual terms, feeding back relevant performance information to Procurement”* (O7PP). Through reporting mechanisms and supplier visits, possible risks posed by suppliers are evaluated and mitigated.

To avoid a breach of legal or regulatory provisions, Org_7 ensures that relevant organisational policies are in place, that staff are trained on these and also compliance is enforced through staff and supplier contractual obligations. Seeing that it works globally, and legal provisions defer in different places, Org_7 staff are required to *“...comply with all applicable local legislative requirements”* (O7PP).

To further ensure its activities reflect the highest global standards, Org_7 works closely with institutions such as the UK Charity Commission, Transparency International and other partners, donor and law enforcement agencies. In addition to these, Org_7 ensures global policy alignment across the organisation as well as with suppliers. Org_7 understands the utility of creating awareness in its supply chain and thus prioritises raising awareness through mandatory training and establishing reporting mechanisms. It reports *“Prevention begins with awareness”* (O7AR2). This principle extends to suppliers, governmental organisations as well as aid recipients.

Employees are enjoined to ensure that, unless excused by provisions in its procurement manual, a contract or purchase order is in place before supply commences. Through well-written contract terms and conditions as shown in supplier obligations, indemnities and termination, Org_7 is able to avoid a myriad of supply risks. It also uses framework agreements to avoid having to run a full procurement process during emergencies. Through short term contracts, it avoids being tied down too long with a particular group of suppliers or contractual terms when prevailing circumstances change over time.

As fairness and transparency are prioritised in its procurement procedure, Org_7 ensures suppliers trust them and this helps avoid disgruntled suppliers and the bad publicity that could result from it. Through clarity of communication and restrictions on staff and suppliers from making unauthorised public pronouncements, Org_7 also avoids risks that could be sourced from miscommunication. Other measures such as financial controls, financial resilience, quality control and assurance, confidentiality, conflict of interest guidelines,

	<p>consultation and stakeholder participation and governmental collaboration ensure that Org_7 avoids risks. Milestone payments, support to country teams, category management, no inventory holding, removing of perceived opportunities for corruption and obligatory ethical behaviour by staff are also part of Org_7's approach to risk avoidance.</p>
Human Resource Management	<p>Through careful recruitment, training and staff support, Org_7 through human resource management improves its supply chain resilience. Through careful recruitment, Org_7 prevents the risk of modern slavery within it and also ensures that competent staff who do not pose safeguarding risks are employed. Staff continually receive training on policies to enhance compliance and improve decision making. On data security, for instance, Org_7 reports that it is “...<i>training staff on core information security policies and practices and upgrading our IT procedures to identify and manage risks and report incidents. Specialist staff have been recruited to support these initiatives and embed best practice.</i>” - O7SR</p> <p>Staff are obliged to comply with the organisation's policies and have a clearly defined code of conduct which is to guide their work. Failure to abide by these results in disciplinary actions including formal warnings, dismissals and/or referrals to the police if appropriate. Recognising the need to maintain skilled employees, Org_7 regularly reviews salaries to ensure they are competitive in the sector.</p>
Collaboration	<p>Org_7 collaborates extensively with its suppliers through information sharing, coordinated disaster response, vendor managed inventory and joint risk management. It works with suppliers and partners to build capacity and improve on processes and internal controls. Org_7 works with governments, communities, families and aid recipients to put in place laws, policies and services for their activities. The organisation collaborates with businesses “...<i>to agree the list of suppliers to invite to quote or tender, and to make sure that the supplier selected meets business requirements, through agreeing supplier selection criteria.</i>” - O7PP</p> <p>Internally Org_7 prioritises stakeholder consultation and participation to ensure appropriate planning, attainment of supply objectives, competent decision making and transparency. Procurement committees, as explained by interviewed personnel, are comprised of “...<i>a member of Finance, a procurement lead, usually a business owner and then depending on the type of good or supplier, you may need a technical member as well.</i>” - O7IT</p> <p>With regards to collaboration with other charities, despite multiple initiatives, collaborative procurement has been limited to technical knowledge sharing and efforts at stamping out abuse of any kind.</p>
Sustainability	<p>Org_7 has its goals for the next decade aligned with the United Nations Sustainable Development Goals, thereby showing its commitment to sustainability. It indeed employs the Global Reporting Initiative (GRI) framework in its reporting. It is the only one to do so out of all participating organisations. Through its policies and contractual obligations, both staff and suppliers are enjoined to be sustainable in</p>

	<p>their practices and procedures. Suppliers, for instance, are expected to, at the minimum, “...comply with all statutory and other legal requirements relating to environmental impacts of their business” (O7ItT; O7SCC) including areas such as waste management, packaging and paper, conservation and energy use.</p> <p>Socially, Org_7 works to ensure that discrimination, unfair employee conditions and modern slavery are curbed within it and also with its suppliers. By reviewing three years’ audited accounts of suppliers, Org_7 verifies the financial viability of its suppliers for the duration of contract delivery. Through policies such as the reserves policy, risk management policy, fraud, bribery and corruption policy and the prohibited transactions and money laundering policy, Org_7 ensures sustainable and transparent financial management. There is a commitment to diversification and growth of income, particularly unrestricted income to ensure sustainable income and availability of funds for continuous operation.</p>
Flexibility	<p>Flexibility in Org_7 from a procurement perspective is primarily pursued through decision flexibility and sourcing flexibility. Procurement is decentralised across the organisation both at the local level, where various departments are able to procure needed materials and at the global level where different country teams are allowed to procure needed goods and services, albeit guided by its procurement policy, procurement manual, donor policies, applicable laws and value for money principles. Procuring staff from various departments are however required to contact procurement before any supplier engagement. These employees are trained on Org_7’s procurement guidelines and policies by the central procurement team and are tested “...to confirm their competence and understanding” (O7MSS). Despite this, when a particular product or service is considered too risky, it is mandated centrally at the global level from a mandated framework from which local teams may then work with.</p> <p>Sourcing flexibility is attained primarily through flexible contracting (framework agreements and panel of preferred suppliers) and a non-rigid procurement process that takes into account emergencies. To facilitate this, Org_7 pursues flexibility over its funds and also, a reduction in the time requirements for sourcing procedures in the case of an emergency.</p>
Agility	<p>As pointed out under flexibility, Org_7 not only has an emergency procurement procedure, it also has clearly defined events categorised as emergencies so that staff are aware when to switch to the emergency procurement procedure. Recognising the crucial role of its supply chain in its responsiveness, sourcing strategies emergencies are prescribed to be Business as Usual (BAU) and to be part of its planning process. Indeed, to facilitate responsiveness, especially when essential in saving lives, purchasing of goods and services is to be made “...from the most appropriate available source.” - O7SCC</p> <p>To further improve on its responsiveness, Org_7 requires for framework agreements and/or prequalified supplier lists to be in place for response supplies,</p>

	<p>warehousing and vehicles. Also, the organisation has in place goods or service-specific ordering procedures which helps improve response times and also makes provisions in its contract terms and conditions for supplier support outside of normal business hours in case of emergencies.</p>
Information Technology	<p>Org_7 has a digital reporting platform that facilitates information sharing with relevant stakeholders including donors, senior management and whistle-blowers. The organisation reports “<i>an increase in the rate of incident reporting in the quarter immediately following the rollout</i>” (O7AR1) of this reporting system. Using information technology, Org_7 provides a central data storage where necessary documents are available to relevant staff to increase accessibility, transparency, accountability and auditing.</p> <p>At the time of data collection, effort was underway in implementing a human resource information system and also “<i>...developing an online procurement platform, to automate many source to pay procedures, and its procurement systems across the organisation will gradually be transitioned onto this system. The platform aims to simplify procurement procedures enabling greater visibility over ORG 7’s supply chain and enabling increased compliance.</i>” - O7MSS</p> <p>Seeking to turn around its institutional funding portfolio, Org_7 has focused on its digital presence and supporter engagement. The organisation is also investing in ensuring access to a high-quality internet connection to its staff globally, citing this as needful for improving reporting time and costs on all projects as well as improve on compliance with donor requirements.</p>
Redundancy	<p>Org_7 tangibly pursues redundancy through the use of fund reserve, backup suppliers and prepositioned stock. Concerning backup supplier, the sourcing specialist explains:</p> <p>“<i>There’s a large amount of spend going through, the products are key to our house programming, they are very critical and so on. The strategy would suggest...so after reviewing all of the data and the information, doing internal and external analysis and everything else that is involved in the management strategy for specific goods and services, it was decided that in order to mitigate against the collapse of a supplier, we would have backups in place. There are other reasons that we have that as well but I think that certainly takes the worry off your shoulders.</i>” - O7IT</p> <p>As regards prepositioned stock, Org_7 has agreements with suppliers to hold stock (including safety) on their behalf in case of emergency.</p> <p>In terms of intangible redundancy, there is knowledge backup through cross-training of staff of other departments, to handle less risky and lower value contracts, electronic data backup, contingency planning and redundant supplier relationships through its use of framework agreements.</p>
Robustness	<p>As has proved common in the organisations discussed thus far, knowledge backup is a crucial way by which humanitarian organisations remedy the risk of not having enough procurement professionals to handle all procurement-related issues.</p>

	<p>Org_7 is no different. Org_7 keenly monitors its suppliers and partners, identifies risks or potential risks and works with them to address these. Seeing it does not have licenses to hold certain types of stock such as medications, Org_7 requires its suppliers to hold inventory on its behalf, thereby allowing it to maintain a reasonable level of operation during disruptions. Besides, its framework agreements and fund reserves also help improve the organisation's robustness.</p>
Security	<p>Org_7 staff are trained on safety and security in addition to the policies and procedures the organisation has in place. To support staff and embed best practice on security initiatives, specialist staff have been recruited. With regards to data security, staff are trained on core information security policies and practices and the organisation's IT procedures to identify, manage and report risks and incidents. Through well-written contracts, the organisation secures indemnities for itself in its supplier contracting. Suppliers are required to maintain in force various forms of insurance during the term of contracts.</p> <p>In keeping its fund reserves, Org_7 indicates that the purposes include coverage for income downturn or unforeseen costs increase, costs of unforeseen liabilities, protection against foreign exchange losses and a cover for the associated costs in the event of closure of its core operations.</p>
Top Managerial Commitment	<p>Org_7 senior management partakes in the risk management process which allows them to consider the organisation's major risks and satisfy themselves that they are being mitigated appropriately. For instance, they funded an external consultant to review the organisation's approach to dealing with risks of fraud and then, based on the results directed a reassessment of the organisation's strategy. After this, the organisation invested in a re-skilling and resourcing process in addition to the delivery of the revised strategy.</p> <p>They further show their commitment through the appointment of extra staff to address identified risk areas the organisation is exposed to. With regards specifically to its supply chains, the organisation invested by contracting a consultancy group to analyse the then state of its supply chain, identify weaknesses and highlight key areas for improvement. It can thus be seen that top management in Org_7 is committed to improving the organisation's supply chain resilience both directly and indirectly.</p>
Culture	<p>Resilience-seeking culture in Org_7 can be devolved into the pursuit of ethical culture, learning culture, risk awareness culture and a whistleblowing and reporting culture. Ethically, Org_7 seeks to establish a culture that does not tolerate any form of misconduct, where every staff member understands and accepts their role in upholding the organisation's ethics.</p> <p>Seeking to build a culture of awareness to prevent, rather than mitigate risks, the organisation is enhancing existing local and global reporting mechanism so that risks are identified early, reported and acted upon. Incident reporting is strongly encouraged, and the organisation has invested in a reported system that provides</p>

	<p>accountability to donors, senior leadership and the reporters themselves. Staff and suppliers alike, are enjoined to report any incidents of harassment, abuse, fraud, bribery, corruption and modern slavery. Failure to report is treated as serious and could result in termination of any agreement with Org_7, and in the case of its employees, disciplinary action.</p> <p>Besides early detection for avoidance and/or mitigation of risks, the reporting culture also facilitates a learning culture. At the time of data collection, efforts were underway to incorporate more detailed information about how to investigate and act on reports of modern slavery within Org_7's supply chain in its procurement manual. In its procurement policy, Org_7 indicates that <i>“Procurement will also use historic performance to inform future supply decisions and recommendations”</i> (O7PP). Trainings are informed by lessons learned in order to mitigate against future incidents. All of these culminate into a diversified culture that is resilience seeking.</p>
<p>Integration</p>	<p>As has been seen in the other organisations, integration in Org_7 is largely lateral. Stakeholder engagement is paramount, and this is particularly seen in its use of procurement committees which has representation from various departments in the organisation. There is data integration and the creation of visibility through awareness creation across the organisation. In responding to a question on the reviews of its procurement policy, the interviewee indicated that though it is primarily the role of the head of procurement, <i>“...it’s a very consultative process. Usually, it would require cross-functional inputs into what that should be.”</i> This aligns with its procurement policy position that: <i>“Employees will support Procurement to develop and implement consolidated Plans and Sourcing Strategies to enable supply objectives to be achieved.”</i> - O7IT</p>
<p>Governance and Accountability</p>	<p>Org_7 understands the need to secure and maintain the trust of its donors and the general public and hence is committed to being accountable to them. The need for accountability does not only manifest externally but internally as well. Internally, Org_7 ensures this by assigning <i>“ownership of specific risks and where appropriate joint accountability”</i> (O7SR) to it. With regards to the procurement process, roles and responsibilities are clearly defined and approving departments and/or managers are stated so that decision makers can be held accountable. Committees such as the audit and risk committee, finance committee, governance committee, procurement committee and others, have oversight on various types of decision making ensuring that appropriate approvals are obtained and that internal auditing and controls are upheld.</p> <p>The oversight of the multiple committees on various aspects of decision making ensures there are checks and balances, and that decision making is not arbitrary. There is an insistence on documentation of decisions, contracts and purchase orders to provide evidence and facilitate transparency and auditing. Further, Org_7 undergoes external independent auditing locally and globally.</p>

<p>Decision making</p>	<p>Procurement decision making in Org_7 is flexible, with some decisions being made locally and others globally. For example, the organisation’s “...existing processes require that all potential new suppliers be vetted locally and globally and that local teams, who understand the local context, consider risks associated with a potential supplier and make risk-based decisions for each sourcing activity” - O7MSS. Even though procurement functions such as tendering and negotiation of supplier contracts are established as primarily the procurement team’s responsibility, some decisions and accountability for them “...may be delegated back to the business by Procurement” - O7PP.</p> <p>Decisions made and supporting documents such as tender or RFQ documents, signed conflict of interest confirmations, emails or written approvals and meeting minutes from procurement committee meetings are documented and stored on the organisation’s SharePoint. This allows for decision redundancy and facilitates the future application of lessons learnt.</p> <p>Procurement committees are also used in Org_7, particularly when dealing with large spends, to ensure as many persons or roles have reviewed bids, that the procurement process is funning fairly and that all perspectives on received bids are considered to ensure compliance with original demand. As the interviewee admitted, decisions by a procurement committee have “<i>much weight</i>” compared to a decision made by just a single procurement officer. The role of procurement committees in decision making is further explained by the interviewee: <i>“If I were to go to Senior management and say I’ve selected XYZ as suppliers based on 40 million spend to go through this framework agreement, that wouldn’t hold up or have much weight, as opposed to me going to say that an entire procurement committee has agreed that this proposal going forward is the correct one. It’s about process and it ensures that things have been followed properly; that you are not the only one who came to the decision by being the one who’s written the tender, engaged with the suppliers and will manage the contract going forward. It minimises any risks of supplier bias or conflict of interests. It irons out any of those problems that may have been seen years ago before procurement units were established.”</i> - O7IT</p> <p>Other decisions, particularly those made by employees in procuring business units, are guided by Org_7’s procurement policy and associated documents to ensure consistency and compliance.</p>
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A9.8 Discussion of How SCR Formative Elements are Pursued in Org_8

Formative element	Application
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<p>Avoidance</p>	<p>Org_8 states in its procurement policy that suppliers from which procurement can be made have to be on a formally approved list by its procurement team. Org_8 makes provisions for legal compliance in its policies including the recognition that different legal and regulatory requirements may be required in different locations. The organisation ensures compliance through supplier contractual obligations, staff training, supplier selection and organisational policies. Org_8 insists on policy alignment and obligatory compliance with its suppliers and acknowledges the utility of staff training in creating awareness and compliance of policies. There is the acknowledgement of the need for policy review and update.</p> <p>Org_8 recognises the preventive utility of creating awareness with staff (through information sharing and training), suppliers and governmental or regulatory bodies such as the police, charity commission, information commissioner’s office and the national fraud and cybercrime reporting centre. There are contractual provisions to ensure supplier compliance with legal and regulatory provisions, failure of which could lead to termination of contracts.</p> <p>Org_8 implements financial controls to prevent financial misappropriation. It does this through a variety of means including ensuring purchases are made through approved budgetary provisions and payment for only invoices linked with valid purchase order numbers. Org_8 incorporates a variety of quality control measures including inspection of goods and services and rejection of goods and service in case they do not meet agreed requirements.</p> <p>Other efforts at risk avoidance in Org_8 includes staff ethical obligations (with conflict of interest and refusal of gifts and hospitality), stakeholder participation, support to country teams and development of suppliers and partners.</p> <p>Despite all these provisions, guidelines around due diligence, for example, are not adhered to as procuring departments continue to engage with suppliers without much background checks. The interviewee cites an example: <i>“We had a supplier go defunct; one that we had asked to provide services to our end users. They were unable to provide customer service support on the devices anymore and so now our end users have looked at us and said ‘you’ve left us hanging, who’s going to maintain these, what’s your plan?’”</i> - O8IT</p> <p>Despite provisions for staff obligatory compliance to procurement policy, staff do not comply. These challenges have been identified and there is an effort from the procurement manager to cause a change in the organisational culture.</p>
<p>Human Resource Management</p>	<p>Staff are required to adhere fully to organisational policies, breach of which they could a variety of disciplinary actions including dismissal and reporting to regulatory and governmental agencies. The interviewed expert explains this situation with regards to Org_8’s procurement policy:</p>

	<p><i>“At the end of the policy it does say that “Failure to adhere to this...” and it tells you what the consequences are. That’s something the policy didn’t do previously; it didn’t say what the consequences of failing to comply by the procurement process was. So it’s now considered as a core policy; which means there has to be mandatory training in relation to it; you have to tick it off and have to say I’ve done it.” - O8IT</i></p> <p>Staff are supported as the organisation recognises the need to have in place the right infrastructure to facilitate staff effectiveness and efficiency. Unfortunately, this support does not reflect in the procurement function as there is no team to support it. Despite highlighting the need to recruit, retain and motivate its employees for its sustainability and success, the procurement function remains a one-man team. Training on a variety of policies that impact procurement and resilience such as the modern slavery policy, safeguarding and information security are undertaken in Org_8 but there is none specifically on the procurement process. This has been recognised and mandatory procurement training has now been included in the organisation’s new procurement policy.</p> <p>As regards documentation, Org_8 requires all relevant supplier documentation such as licences, permissions, authorisations, consents, permits and compliance agreements to be documented. These along with the written contracts and agreed contract variations are stored by Org_8 as well as the supplier who is so obliged by Org_8’s terms and conditions. Nonetheless, records of such contracts and related documents are not readily available as the internal demand for such standardised documentation was non-existent outside of being stated in the organisation’s documents. To rectify this, there is an effort to take stock of all departmental contracts with suppliers and make them accessible digitally. Org_8’s procurement policy and procedures manual, along with other related documents, are however available on the company’s digital platform for ease of access.</p>
<p>Collaboration</p>	<p>Even though there are contractual provisions for collaboration in the form of information sharing to facilitate quality management, there are challenges with Org_8’s collaboration with suppliers. Because of poor demand forecasting and little to no supplier relationship management, suppliers are unable to properly meet emergency demands thereby resulting in the need to deal with suppliers that the organisation would normally not use. The head of procurement explains further:</p> <p><i>“Such situations militate against your quality assurance and control systems and against your budget plans because you can’t be paying premium prices. So we don’t help suppliers enough. If we did, we would organise our forecasts and they would be accurate in time. We would make sure that as much as we can give them, to ensure that that level of business is under control so that when the variances do happen, our approved list of suppliers, our core suppliers would have a better chance to deal with it.” - O8IT</i></p>

	<p>Collaboration with other charities is being considered by Org_8 but at the moment, there is no such collaboration with respect to procurement. Internally, procuring departments involve the legal team for all issues related to contracts. Directors work with the safeguarding team to help deal with safeguarding concerns. When required to deal with suppliers where non-Org_8 terms and conditions are to be used, there is collaboration by the procuring department with Org_8's legal and procurement teams. Notwithstanding, there are multiple occasions that the involvement of procurement on procurement-related issues are left for late. The interviewee cites an example:</p> <p><i>"...in terms of electricity procurement, we had a massive hit to our expenditure budget because of poor performance of the electricity broker and the electricity supplying company. And I'm only now being brought to the table on that one even though that happened at the end of last year. So we have these things but procurement is not necessarily thought of as being part of the solution."</i> - O8IT</p> <p>Org_8 collaborates extensively with governmental agencies through knowledge sharing and provision of training services to these agencies. It works with other governmental organisations to deal with misconduct and breach of legal provisions.</p>
Sustainability	<p>There is a stated commitment in Org_8 to ensure an alignment of sustainability beliefs and virtues in terms of ethics, law, environmentally and socially responsible. Because of public donations, Org_8 seeks to pick suppliers with strong corporate social responsibility image seeing that it engenders sustainability. With regards to this, the interviewee explains that:</p> <p><i>"Because the suppliers announce it, that they work with us and if the public approves of it we sometimes see the traffic on our website. So sometimes we have to associate ourselves with people who the public know and/or like."</i> - O8IT</p> <p>Socially, there is zero-tolerance towards modern slavery. It ensures a fair and safe working environment for its employees as well as those of suppliers, and a focus on the promotion of equality, diversity and inclusion. Environmentally, Org_8 expects itself and suppliers to be environmentally responsible by eliminating or mitigating negative environmental, health and safety impacts, and avoid the use of asbestos in equipment and packaging supplied to Org_8. Economically, Org_8 main effort here is its fund reserves.</p> <p>Notwithstanding, because of the non-standardised approach to procurement, the interviewee confesses that sustainability is not the main focus in departmental procurements.</p>
Flexibility	<p>Sourcing flexibility in Org_8 is pursued only through framework agreements that it has with suppliers. Notwithstanding, due to poor demand forecasting, there are numerous last-minute demand requirements of suppliers which they are unable to meet. Decision making is decentralised so much so that departments make</p>

	procurement decisions without having the input of the procurement expert, thereby making little use of decision flexibility. Thus, there is little flexibility (whether decision or sourcing) in Org_8.
Agility	Org_8 attempts agility through its framework agreements which, as explained by the head of procurement, are meant to “... <i>build some contractual principles, overriding ones and then build something that can be modified or revised or applied in a much more agile way</i> ” (O8IT). There are also contractual provisions for prompt conflict resolutions in case disruptions are sourced from such disagreements. Despite these, Org_8 struggles with swift response to disruptions and emergencies.
Information Technology	<p>Org_8 provides an online central storage facility for its employees where relevant documents such as policies, reports and contracts may be accessed. At the time of data collection, the organisation was testing an application to be used on mobile hand-held devices which aims at improving service delivery through goal-focused conversations with service recipients. In trying to bring about a future step-change in technology and to improve on the reliability of its current systems, the organisation reports that:</p> <p><i>“...we’re planning to move our core systems to the cloud to make sure we benefit from the security, flexibility and cost savings such services offer, as well as helping us to keep up with the pace of technological innovations.” - O8AR</i></p> <p>Recognising the possibility of the failure of computer programs, hardware, systems, plant and equipment containing embedded chips and processors, Org_8 mitigates against this by clearly defining this contractually as an event that does not constitute a Force Majeure. Suppliers are therefore made to indemnify Org_8 against all such circumstances. There is a drive towards an automated online procurement platform in order to force departmental procurers to implement policy stipulations as required. Recognising the risk of commission of fraud and breaching of information security legislation, Org_8 through software applications has introduced new means of managing staff information for increased security.</p>
Redundancy	<p>In terms of tangible redundancy, Org_8 has fund reserve, stores some of its stock in warehouses as well as with suppliers. Intangible redundancy may only be seen through Org_8’s electronic back up of some of its relevant documents.</p> <p>Besides these, there is nothing use of knowledge backup, continuity plans, decision redundancy or redundant supplier relationships even though there is the use of framework agreements.</p>
Robustness	Inadequate funding, as is with all humanitarian organisations, could be a source of risk for Org_8’s supply chain resilience. Hence, its fund reserves ensure that this risk is mitigated and that in the event of a sudden-onset disaster, it is in a position to maintain a reasonable level of operations. The use of supplier-held stocks and framework agreements all held to ensure there is robustness in Org_8’s supply chain. Decentralisation of decision making through cross-training

	<p>of departmental procuring staff, supported by oversight by a central procurement team is a useful way, particularly for humanitarian organisations to avoid its central procurement team from being a weak link due to overwhelming work demands.</p> <p>However, in Org_8, this decentralisation and the absence of a team for its head of procurement has negated this, so that decision making at departmental levels is almost independent of procurement, thereby making this a risk to the supply chain's robustness. There have been instances where procurement's involvement has been left almost too late. Similarly, supplier performance monitoring is weak which thus exposes Org_8's supply chain to that could be mitigated through supplier development. There have been instances of suppliers going defunct or falling short of their contractual obligations and Org_8 has been caught unaware. This thus compromises the robustness of its supply chain.</p>
Security	<p>Org_8 staff "<i>...receive frequent, mandatory training on information security and responsibilities</i>" (O8AR) to ensure they "<i>...better manage Org_8's and their own information security</i>" (O8AR)". Additionally, the organisation collaborates with several governmental institutions and has introduced applications that help reduce the risk of sharing personal and sensitive information. Suppliers are also enjoined through the organisation's supplier terms and conditions document to adhere to the provisions and principles of the Data Protection Act.</p> <p>Similarly, contractual obligations ensure that suppliers have in place standard insurances including employer's liability, public liability, professional indemnity and various other indemnities in order to secure itself and its supply chain. The organisation's fund reserves also do provide some financial security for the organisation in case of a major financial downturn.</p>
Top Managerial Commitment	<p>Top management shows their support towards supply chain resilience by their commitment to addressing various risks such as safeguarding, that Org_8 is exposed to. There is resource commitment towards regulatory compliance and financial resilience. Notwithstanding, there is not much acknowledgement of the role of procurement in the organisation's supply chain resilience. Hence, resource provision (human and material), empowerment and overall commitment required to improve the organisation's resilience from a procurement perspective are lacking. Having identified this and seeking to address this, the head of procurement has reviewed the organisation's procurement policy to incorporate mandatory training with the Executive and Board oversight.</p>
Culture	<p>Organisational culture towards supply chain resilience is shown through Org_8's ethical, learning, risk awareness and reporting cultures. Ethically, Org_8's trustees are facilitating in-depth assurance reviews to ensure that the organisation's "safeguarding culture and practices are robust and embedded". At an organisational level, there is an indication of the need for continuous learning and improvement, particularly with regards to safeguarding issues, service and</p>

	<p>programme delivery. There are however major challenges with procurement but even there, efforts in policy review and procedural changes show some signs towards improvement.</p> <p>Whistleblowing and reporting are strongly encouraged across Org_8 in terms of modern slavery, reporting on abuses and bad behaviour, policy breaches as well as procurement performance. There is a commitment towards building a foundation for a working culture and environment that caters for risks that employees and volunteers are exposed to. However, this needs to extend to the variety of risks the organisation is exposed to because of its current procurement practices.</p>
Integration	<p>There is integration in Org_8 as recognised in its stakeholder engagement and participation in a variety of decisions with regards to safeguarding, policy development and contract drafting and modifications. Procurement's role in this is with the development of the procurement policy whereby together with the organisation's CEO and senior management team, the tone of the policy is set. Despite the indication in the organisation's procurement policy for a procurement committee, which would provide further evidence of internal integration for procurement purposes, the interviewee indicates: <i>"It's just in the document; it doesn't exist in practice."</i> - O8IT</p> <p>With the organisation only having one procurement expert and the further exclusion or late involvement of this person in procurement and procurement-related decision making, integration towards supply chain resilience is very weak in Org_8.</p>
Governance and Accountability	<p>Org_8's policies do well to define functions and responsibilities particularly for decisions related to procurement and aspects of supply chain resilience. This is useful as there is a clear indication of responsibility and hence accountability. Various committees including the audit and risk committee, strategic finance committee and indeed the directors and managers of the organisation have oversight over committee-related decisions, giving approvals, reviewing different scenarios and giving advice and guidance.</p> <p>There is a commitment to transparency, especially in the organisation's supply chain with regards to modern slavery so that it can be accountable to its public donors and the general public. Suppliers are enjoined to ensure policy, legal and regulatory compliance with their sub-contractors as they would be held responsible by Org_8 for any breaches by such contractors. Further, external auditing and third-party review of the organisation's processes ensure a drive for continuous improvement towards resilience. Notwithstanding, the interviewee had reservation about Org_8's auditing.</p> <p><i>"...nobody is asking for it. In my previous workplace, auditors would come in and ask for our key suppliers and ask for the evidence for our supplier relationship management meetings with them; they'll ask that we give them the</i></p>

	<p><i>minutes of the last three meetings. So we find them and give it to them... I think the auditors also come into the charity sector with a very different regard than they would in the private sector. They come in here soft, it doesn't matter. They are not as rigorous, they really aren't, they seriously aren't. There's a lot of things in here that absolutely will not happen in private sector world."</i> - O8IT</p> <p>Having recognised significant challenges with procurement decision making including limits on budgetary expenditure, defined sourcing procedures for various monetary value ranges, oversight of departmental procurement decisions and associated accountability, Org_8's head of procurement has reviewed the organisation's procurement policy seeking to address some of these challenges.</p>
<p>Decision making</p>	<p>Organisational policies are to provide guidance and direction on decision making in Org_8. However, procurement decision making in the organisation is disorganised and not streamlined. There is no standard procurement process as each of the organisation's 30 departments with their procuring employees make their own decisions without recourse to a central procurement team for oversight or approval.</p> <p><i>"...because there's no standardised procurement process that everybody has to go to, everybody is making up their own process; so there's a lot of different processes going on... So it's a very disorganised framework of processes that we have to do our procurement."</i> - O8IT</p> <p>This has resulted in poor decision making, cursory supplier evaluation, multiple contracts with different contractual terms by different departments with the same supplier among other inefficiencies. Decisions are not documented and there is no training on the procurement process. To address these, the head of procurement explains:</p> <p><i>"There's no training on the procurement process; that's what I'm trying to bring. So once I get the policy tone approved; because it's a tone I'm trying to put in place, then I can change all of the processes. I can standardise all of the processes. It gives me the mandate to go in and say I need to bring all into one place, you need to work with me on this one. It says standardised procurement process and I'm trying to build that so you definitely need to yield and allow me to build this. And the same time as I'm building the process, I'm building the training right because the policy says that the training is mandatory."</i> - O8IT</p>

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