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Leader Readiness in a Volatile, Uncertain, Complex, and Ambiguous (VUCA) Business Environment

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This is to certify that the doctoral dissertation by

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has been found to be complete and satisfactory in all respects,
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Abstract

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by

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MPhil, Walden University, USA, 2019

MBA, Royal Melbourne Institute of Technology, Australia, 2003

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Management

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Abstract

Organizational leaders in the 21st century face relentless changes in the business environments in which they operate. The diversity, intensity, and rapidity of these changes create volatility, uncertainty, complexity, and ambiguity (VUCA), which challenge leaders on ways to lead effectively as existing methods prove inadequate. The problem in this study was that of inadequate leader preparedness to lead and win in VUCA environments. The purpose of this hermeneutic phenomenological study was to explore the lived experiences of 15 Nigerian corporate executives about their VUCA business environment and the strategies they employed for VUCA-readiness and success within the manufacturing sector. The research question guiding the study related to the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment. Chaos theory and complexity leadership theory were used to frame the study. Data collection occurred through snowball sampling to interview 15 participants who are senior executives in large manufacturing corporations in Lagos, Nigeria. Data was analyzed through Ricoeur's theory of interpretation and member checking. As a result, 4 key themes that emerged were business agility, strategic workforce and demand planning, recovery management for organizational resilience, and conscientious and value-based leadership. The study findings may contribute to positive social change in providing strategies for organizational sustainability, business readiness, responsive leadership, and enhanced employee well-being in VUCA. Recommendations include VUCA training for preparedness and organizational resilience.

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Dedication

This dissertation is dedicated to my husband Tom and my daughters Nadia and Kanana, whose enduring love, encouragement, and sacrifices sustained me through the arduous dissertation years.

To my dad, my true North, whose prayers never cease and whose mentorship allowed perspective when I needed that extra push. I promised you the first PhD in the family, here you go dad!

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Last, it is difficult to name my entire support system, but I have the best friends in the world. Everyone did their personal best to ensure I had sufficient study time and a fabulous social scene to take the stress away.

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Chapter 1: Introduction to the Study

Introduction

Organizational leaders in the 21st century face dynamic and profound change that is unprecedented with the speed, intensity, and frequency of change ascending rapidly to produce volatile, uncertain, complex, and ambiguous (VUCA) operating environments (Bereznoy, 2017; Johansen & Euchner, 2013; Matthysen & Harris, 2018). VUCA refers to an operating environment that is constantly changing in conflicting, dramatic, and relentless ways to produce leadership and organizational challenges (Deaton, 2018). Each letter of the acronym VUCA represents a type of change that leaders should identify to contend fully with the environmental flux without wasting resources due to incorrect issue identification. Volatile changes are frequent and cause instability; uncertain changes are those of which leaders lack full knowledge; complex changes are confounding due to the interconnectedness of processes and information; while ambiguous changes are those that lack precedence (Bennett & Lemoine, 2014). Globalization and technology fuel VUCA dynamics through increased innovation, interconnectivity, and digital revolutions, which, in turn, create new and nimble competitors, who operate globally to transform customer expectations radically and thus produce organizational turmoil (Horney & O'Shea, 2015). Deaton (2018) observed that the current turbulence confounded leaders due to its novelty and because proven approaches were inadequate in the VUCA-world.

A recent study of 13,124 leaders indicated that VUCA was the greatest challenge facing leaders in this century and, unfortunately, the research exposed that only 18% of leaders were capable of leading in a VUCA world (Bennett & Lemoine, 2014; DDI,

2015; Hall & Rowland, 2016). Furthermore, Cook (2016) pointed out that 50% of chief ecology officers lacked adequate preparation for VUCA operating environments. The requirement for readiness as a leader competency would help leaders facing high pressure, frequent changes, and ambiguous and uncertain environments to balance the conflicting and opposing issues in a mature and calm way to thrive in the unknown (Kayes, 2018). However, Heinonen, Karjalainen, Ruotsalainen, and Steinmüller (2017) observed that being VUCA-ready was an unachievable feat, as the tsunami of volatile and persistent change facing leaders and organizations built immense pressure and disruption that blinded leaders on ways to anticipate change promptly and consequently on ways to build solutions or processes for effective transformation. Bennett and Lemoine (2014) disagreed with Heinonen et al. and proposed that careful analysis of the situation and investment in efficient agile people, systems, and tools would help prepare leaders for VUCA. The conflicting views on achieving VUCA readiness portray a need to change current leadership models and operating systems, and to invest in new learning tools.

Conventional linear models of leader decision-making and problem-solving are not as effective in the new and dynamic world requiring nonlinear thinking and ambidextrous leadership (Du & Chen, 2018; Hall & Rowland, 2016; Heinonen et al., 2017). The challenge identified in this study was that few leaders are VUCA-ready, meaning that they are ill-prepared to deal with VUCA challenges and as such, use traditional leadership tools that are linear in a nonlinear and highly disruptive business environment. A deeper understanding of VUCA is likely to increase leader readiness in times of confounding change. Such change often leads to wasted resources,

organizational obsolescence, and worse still-employee stress (Abdelzaher, Latheef, & Abdelzaher, 2017; Bennett & Lemoine, 2014; Horney & O'Shea, 2015). The side effects caused by VUCA negatively affect social change efforts, lending credence to the need to broaden leader understanding on ways to manage VUCA.

Enhancing leader understanding of complexity permits the reimagination of organizational structures and decision-making frameworks to fight inertia or senescence (Hannan, 2005). Hannan and Freeman (1984) argued that structural inertia hindered organizations from adapting to environmental changes due to their inflexibility to transform to meet external and internal demands. The lack of adaptation to existing flux can result in failure, which in turn may have a costly impact on social change. This study might contribute to expanding organizational and academic leader understanding of VUCA to adjust existing inertia. This chapter includes the background, problem statement, purpose statement, research question, conceptual framework, nature of the study, definitions, assumptions, scope and delimitation, limitations, and significance sections of the study.

Background of the Study

The focus of this study was on VUCA-readiness as a key leadership construct that is indispensable in a new world order characterized by unparalleled change and confusion. The context of leadership in a VUCA world and the complexity surrounding decision-making in times of VUCA proves problematic as authors examine leader responses to turbulence and offer solutions that enable agility without looking at leader preparedness for VUCA (Bennett & Lemoine, 2014; Du & Chen, 2018; Horney &

O'Shea, 2015). VUCA challenges the very essence of Henri Fayol's thinking and the cornerstone of management where planning, controlling, organizing, commanding, and coordinating are no longer possible in a highly turbulent business environment. Authors in the VUCA domain demonstrate that new skills such as clarity (Johansen, 2012), cognitive readiness (Bawany, 2016), sensemaking (Salicru, 2018), dilemma flipping (Johansen & Euchner, 2013), readiness (Burt, Mackay, van der Heijden, & Verheijdt, 2017), and new models, such as the agile model (Horney & O'Shea, 2015), must replace old leadership thinking and behavior if organizations are to survive and succeed in a VUCA world. Profound change disrupts leadership and organizational models designed for reliability and accountability, which in a VUCA world creates inertia and resistance to transformation (Hannan & Freeman, 1984). Enriching leader understanding of VUCA may help create a knowledge pool to enhance leadership and organizational flexibility to manage in times of turbulence.

The Nigerian business operating environment presents a paradox in that the country has ample potential and abundant human and natural resources; yet the current reality, as VUCA dynamics impact the state, is that the country is ailing and unable to utilize its resources fully (Ojo & Ajayi, 2017). The World Bank annual reports for 2012, 2013, 2014, and 2015 indicated that Nigeria had the fastest growing economy in Africa and in 2014 it had the third fastest growing economy in the world. Currently, Nigeria ranks in the 41st position in the fastest growing economies in Africa and 88th in the world (World Bank, 2018). It ranks 14th in the global most fragile states index (Fragile States Index, 2018). In the World Bank (2017) ease of doing business report, its shipping

port in Apapa was ranked 182 out of 185 in terms of efficiency. Issues of ineffective leadership, political instability, corruption, poverty, unemployment, poor implementation of development plans, competition from global actors, technological sluggishness, and poor adaptive capacity in the face of change, among other issues, contribute to Nigeria's poor performance in the current VUCA age (Ehie & Muogboh, 2016; Ojo & Ajayi, 2017). Managing complexity as the tsunami of problems slams the country is one of the defining challenges for Nigeria.

The manufacturing sector of Nigeria has not been sheltered from VUCA, which has been experiencing a severe disruption since 2016 when it recorded negative growth (Ehie & Muogboh, 2016). Omolade and Ngalawa (2017) observed that the manufacturing sector of any country was the "engine room" of the economy and postulated that this was especially true for oil-producing countries like Nigeria (p. 1248). The manufacturing sector is a significant growth area for the Nigerian government, as the government seeks to diversify the country's GDP given its overreliance on oil and gas. However, the manufacturing sector faces many challenges that impact its growth and performance, chief among them being inconsistent and insufficient power supply, government regulations, multiple and high taxes, infrastructure deficiencies, new and nimble competitors, technological inadequacy, and few manufacturing experts (Ehie & Muogboh, 2016; Ogah, 2018; Ojo & Ajayi, 2017). To meet the lofty expectation of the government, where the manufacturing sector immunizes the country's GDP from the effects of global oil price changes, requires organizational resilience to complex problems brought on by VUCA dynamics.

Studies on VUCA as a phenomenon focus mostly on North America (Bennett & Lemoine, 2014; Horney & O'Shea, 2015; Johansen & Euchner, 2013) and other developed nations such as China (Du & Chen, 2018), Australia and New Zealand (Murthy & Murthy, 2014), Italy (Vagnoni & Khoddami, 2016), and the European and Asian markets (Vecchiato, 2015). A gap exists in studying VUCA as a phenomenon in the African market. Additionally, existing VUCA studies cover areas such as deeper understanding of the elements of VUCA and resulting responses (Bennett & Lemoine, 2014), organizational ambidexterity (Du & Chen, 2018), leadership skills for VUCA (Johansen, 2012), agility models (Horney & O'Shea, 2015; Horney, Pasmore, & O'Shea, 2010), and leadership responses to VUCA (Murthy & Murthy, 2014). Bawany (2016) discussed the concept of cognitive readiness for leaders in VUCA environments and its significance in operational success; yet, the concept of VUCA-readiness remains empirically unstudied.

VUCA-readiness encompasses leadership intelligence and sensemaking to conceptualize competing narratives to sense and respond astutely to VUCA challenges (Burt et al., 2017; Salicru, 2018). Understanding VUCA from a leader readiness perspective may equip organizational leaders with technical, structural, and psychological tools to manage the onslaught of change facing firms in the 21st century. Being VUCA-ready may protect organizations against poor performance in VUCA periods, enhance flexibility due to the adoption of agile models, reduce redundancies, curb obsolescence, reduce operational costs caused by errors, and lower employee stress. This study may

highlight strategies to enhance the readiness quotient of leaders affected by VUCA dynamics.

Problem Statement

Research shows that only 18% of today's leaders are ready to lead in a VUCA world (Development Dimension International [DDI], 2015). Lack of VUCA readiness may cause corporate executives to suffer from increased stress and other mental health issues, and organizations to perform poorly due to the unpredictability, chaos, complexity, and confusion present in the operating environment (Abdelzaher et al., 2017; Millar, Groth, & Mahon, 2018). Increased understanding of VUCA and how corporate executives can enhance their VUCA readiness could add new knowledge to both theory and practice, which, in turn, may help avert VUCA-related problems (Bennett & Lemoine, 2014; Horney & O'Shea, 2015). The general management problem was that business environments plagued with VUCA create significant challenges that confound corporate executives, requiring further exploration to enhance leader readiness. The specific problem was that some leaders are inadequately prepared to lead and win in a highly VUCA environment, such as, the manufacturing sector of Nigeria.

To put the specific problem into context, 2016 was a severe VUCA-beleaguered year for Nigeria. The President of the Manufacturers Association of Nigeria declared that in 2016, 272 manufacturing firms and plants closed, resulting in 180,000 jobs lost, over Naira 500 billion (US$1.385 billion) recorded in cumulative losses, firm relocations to other countries, and more than half of the manufacturing companies left ailing (*Business News, Nigeria,* 2016; *Premium Times, Nigeria,* 2017). Most recently, in 2018, Proctor

and Gamble Nigeria, a global conglomerate, shut down its largest manufacturing plant (commissioned in 2017) at the cost of US$300 million and laid off 120 workers due to unprecedented change driven by VUCA dynamics (Olawoyin, 2018). These statistics confirm the need to understand deeply how leaders' sense and respond to VUCA challenges, what readiness looks like in a VUCA world, and what meaning leaders' attach to VUCA in the Nigerian context.

The effects of VUCA on the Nigerian manufacturing sector reflect an important gap in research on VUCA-readiness. Horney and O'Shea (2015) discussed the importance of VUCA-readiness for organizational leaders as it prepares leaders to anticipate and respond to change in a multipolar world. Studies on VUCA as a leadership phenomenon are predominantly in the first world and grossly understudied in the African context. The effects of globalization, technology, and nimble global competitors coupled with endemic structural, regulatory, and political issues that consistently upset the Nigerian business environment, makes VUCA a persistent and crippling leadership problem (Ehie & Muogboh, 2016; Ojo & Ajayi, 2017). No authors have researched VUCA from an African organizational leadership perspective, creating a gap that this study sought to fill.

VUCA as a management phenomenon requires deeper understanding, with several authors recommending more studies on VUCA as a fundamental change leadership and positive social change tool (Choain & Malzy, 2017; Millar et al., 2018; Nandram, 2017). Improving leader understanding of VUCA and providing new ideas for VUCA-readiness may contribute to enhanced leadership responses to persistent change,

thereby reducing leader and employee stress, increasing organizational performance, and enhancing the utilization of company assets.

Purpose of the Study

The purpose of this hermeneutic phenomenological study was to explore the lived experiences of Nigerian corporate executives about their VUCA business environment and the strategies they employ for VUCA-readiness within the manufacturing industry. A comprehensive review of the literature did not yield studies that captured Nigerian corporate leaders' perceptions of VUCA and the strategies they employed to manage these dynamics. Using hermeneutic phenomenology to interpret leader perceptions in context may allow a deeper and more holistic appreciation of VUCA and possibly increase understanding of complex challenges to enhance organizational growth and profitability (Heidegger, 1962). Readiness is typical in follower discourse (Goodson, McGee, & Cashman, 1989; Hersey & Blanchard, 1969) and not in corporate leader dialogue, creating a gap that this study may contribute to filling in the leadership literature. This study may add to the scant research on VUCA as a management challenge (Nandram, 2017) and contribute new knowledge to the strategy-setting process in business environments constantly plagued by turbulence.

Research Questions

The central research question that guided this study was: What are the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment?

Conceptual Framework

The concepts that undergirded this study were turbulent business environments, complexity leadership, and readiness. The conceptual framework for this study was a combination of chaos theory and complexity leadership theory (CLT). Chaos theory helped frame the VUCA behaviors of nonlinearity, irregularity, unpredictability, and the oscillatory dynamics that occur over time (Brown, 2004; Levy, 1994; Lorenz, 1963). Chaos theory explained the turbulence and complexity of leading in a world filled with paradox and how, through single-loop and double-loop systems learning, leaders are able to self-organize by modifying behavior based on environmental clues (Burns, 2002). The focus of this study is on VUCA-readiness from a leadership perspective. Therefore, CLT provides a lens into how leaders manage effectively in highly complex environments through enhanced learning, innovation, flexibility, and adaptability (Uhl-Bien, Marion, & McKelvey, 2007). CLT recognizes three types of leadership—entrepreneurial, adaptive, and enabling—that help leaders manage turbulence (Uhl-Bien & Arena, 2018). In addition, CLT comprehensively helps differentiate between leadership and leaders, which is primal to this study to understand leadership in complex environments and the responses of individual leaders when faced with complex situations (Uhl-Bien et al., 2007). Chaos theory and CLT provide a theoretical lens into the macro-VUCA world of complexity management from an organizational and leadership point of view. A more detailed review is given in Chapter 2.

The key constructs of the study comprised increased understanding of how to define and address VUCA (Bennett & Lemoine, 2014) through leaders' cognitive

readiness (Bawany, 2016) and organizational agility and flexibility (Horney et al., 2010; Sopelana, Kunc, & Hernáez, 2014). A conceptual framework "explains the key things to be studied and the presumed relationship among them" (Miles & Huberman, 1994, as cited in Maxwell, 2004, p. 33). Chaos theory and CLT supported the research concepts identified in the problem statement and provided a conceptual lens into the key assumptions and expectations to respond to the research question in order to achieve the research purpose.

Nature of the Study

The nature of this study was qualitative to enable a comprehensive understanding of leaders' lived experiences in a VUCA environment (Baxter & Jack, 2008). Qualitative studies illuminate meaning through participants' perspectives on an area that is not well understood and understudied (Patton, 2015), as is the case in this study. VUCA business environments are a contemporary concept in the field of management as VUCA originated from the U. S. military to explain new challenges faced by army personnel in the 21st century battlefield (Cousins, 2018; Nandram, 2017). The novelty and complexity of VUCA and the exploratory nature of the study compel qualitative research for the realization of deeper understanding, thereby disqualifying both quantitative and mixed-method approaches.

Phenomenology is the research design suitable for this study as it allows for the exploration of VUCA and VUCA-readiness as a lived experience among leaders within the manufacturing sector of Nigeria. Choain and Malzy (2017) recommended phenomenology as the best option for studying VUCA, as a way to fill the next

generation research gap using in-depth, real-time, relevant, and firsthand leader experiences. Phenomenology illuminates specific experiences, both individual and shared, from actors involved in a phenomenon (Groenewald, 2004; Moustakas, 1994). To ensure a more critical understanding of the phenomenon in context and its impact on practice, a hermeneutic phenomenology design best suited this study. Hermeneutic phenomenology allows the interpretation of participants' narratives from a world-view (Heidegger, 1962), beyond concepts and knowledge, towards human experiences in context (Gadamer, 1976; Lopez & Willis, 2004). As VUCA is a novel concept, the use of hermeneutic phenomenology may result in a broader appreciation of leaders' experiences and how the operating context influences these experiences.

Participants in this phenomenological study were chief executive officers, directors, and senior managers of manufacturing companies in Nigeria who have experienced VUCA. I used both purposive and snowball sampling to choose participants who could articulate their experiences with VUCA (Clur, Barnard, & Joubert, 2017; van Manen, 2016). Participants had at least 5 years' experience in leadership positions and had worked in Lagos, Nigeria in 2016.

Ricoeur's theory of interpretation, which is a tool for data analysis in hermeneutic phenomenology, guided the data analysis to ensure rigor and conformance to the research design (Tan, Wilson, & Olver, 2009). Ricoeur (1981) described three levels of interpretation for data analysis, referred to as the hermeneutic arc, and which Heidegger (1962) referred to as the hermeneutic circle. The three levels comprise explanation where coding occurs, naïve understanding where theming occurs, and in-depth understanding

where the researcher moves back and forth between explanation and understanding—the hermeneutic arc—to interpret the data (Ricoeur, 1981; Tan et al., 2009).

Definitions

The terms below are critical to providing clarity to the study of VUCA as a novel management concept for today's leaders.

Agility: Agility is the capability of organizations to be fast, focused, and flexible due to the alignment of technology, processes, and people to anticipate, monitor, and respond to uncompromising changes in VUCA environments (Horney & O'Shea, 2015).

Clarity: Johansen (2012) defined clarity in VUCA as the ability for leaders to make sense of chaos, to comprehend clutter and paradoxes, and envision a future that others cannot yet see.

Corporate executives: In this study, corporate executives refer to the chief executive officers, directors, and senior managers of medium to large manufacturing companies in Nigeria that have been through any form of VUCA.

Dilemma flipping: Dilemma flipping is the ability for leaders to have the readiness to turn threats posed in a VUCA world into opportunities (Johansen & Euchner, 2013).

Readiness: Burt et al. (2017) defined readiness as an open disposition where people have the capacity to work effectively with the competing narratives, tensions, dilemmas, and differences present in VUCA business environments.

Sensemaking: Salicru (2018) defined sensemaking as a core leadership capability for contemporary complex, uncertain, and dynamic environments where leaders use contextual rationality to make sense of increasing turbulence and evolving situations.

VUCA: Hall and Rowland (2016) described VUCA as the modern world of work characterized by volatility, uncertainty, complexity, and ambiguity in a business environment filled with persistent and unprecedented change.

VUCA-readiness: VUCA-readiness is the ability to anticipate, sense, and respond to competing VUCA threats by using clarity of focus, speed, and flexibility as agility actions for business survival (Horney & O'Shea, 2015).

VUCA world: VUCA World is a phrase that represents a business environment afflicted by significant changes that are volatile, uncertain, complex, and ambiguous, which can be problematic to diagnose clearly and to which executives may have challenges in responding (Bennett & Lemoine, 2014).

Assumptions

Kafle (2013) observed that in hermeneutic phenomenology the aim of the researcher is to uncover deep and rich accounts of a phenomenon from interviews conducted with participants, which requires the acknowledgment of implicit assumptions. By acknowledging implicit assumptions, they become explicit. The first assumption made in this study was that the participants were honest and shared in their experiences in a competent manner. The second assumption was that participants would take part in a 60-minute interview. The third assumption was that the participants understood the phenomenon of VUCA and could articulate it based on their experiences in the Nigerian business environment. The fourth assumption was that corporate executives in Nigerian manufacturing firms were the best placed to provide qualitative data for this study. Fifth

and last was an assumption that the interview questions were suitable for collecting accurate data necessary for this study.

Scope and Delimitations

The scope of this study was organizational leader readiness to lead and succeed in VUCA business environments—the manufacturing sector of Nigeria. The manufacturing sector is a key growth area for the Nigerian government as a key strategy to diversify its gross domestic product (GDP) from an overall reliance on oil (Ehie & Muogboh, 2016). Ehie and Muogboh observed that the sector has had many growth issues due to challenges in the business environment related to VUCA undercurrents. The sector was therefore a pertinent focus area consisting of many potential participants with recent VUCA experience who could provide valid insights on what it takes to be VUCA-ready. Another aspect that limited the scope of this study was the conceptual framework of chaos theory and complexity leadership theory. These theories helped anchor and focus the study. Data gathered through the interviews with participants additionally limited the scope of the study, as that data formed the primary foundation for the findings of the research (Rubin & Rubin, 2012).

A delimitation of this study was that VUCA affects several other business sectors in Nigeria as well as other countries; yet, to ensure focus and manageability, these were not part of the study. Another delimitation was the use of corporate executives as the main participants of the study to provide data on their lived experiences on VUCA and VUCA-readiness. The use of executives excluded non-executives whose perspectives could have been valuable to the study. Other factors affect corporate executives lived

experiences though they did not form part of the study. The choice of hermeneutic phenomenology as a research design is also time and resource consuming and, therefore, delimited the scope of the study to available time and resources in line with the dissertation process. The scope and delimitations may therefore affect the transferability of the study's findings.

Limitations

The first limitation of the study was the use of qualitative research; the search for understanding and meaning through participants' feedback presents subjectivity that may affect the quality of the study (Lincoln & Guba, 1985; Ravitch & Carl, 2016). Positivist researchers criticize the quality and rigor of qualitative studies as it differs from quantitative research, which inherently ensures objectivity, reliability, validity, and generalizability. Guba and Lincoln (1994) discussed the five criteria for ensuring quality in qualitative studies: credibility, transferability, dependability, confirmability, and authenticity. For this study, a limitation for achieving rigor depended on the quality and selection of participants, the truthfulness of the participants' feedback, and my ability to manage bias (Rubin & Rubin, 2012). A lack of transferability was also a limitation of the study.

The choice of phenomenology was a limitation as the data collected was unique to each participant and their personal experience, making it difficult to transfer the findings. Ziakas and Boukas (2014) agreed and noted that "the concept of *truth* ("italics added") is situationally driven and personally constructed" in phenomenological studies hampering generalizability and credibility of studies (p. 70). Using hermeneutic phenomenology had

the additional limitation of not only the individuals' unique responses but also the contextual setting of the participant's worldviews, limiting the potential for the findings to inform policy changes (Gadamer, 1976; Pieper, 1989). Moran (2000) observed that use of interviewing in hermeneutic phenomenology "carries certain presumptions which govern the enquiry and even predetermine to a certain extent what can be discovered,"—another potential limitation of the study (p. 237). To reduce the impact of these limitations, I applied several strategies to enhance trustworthiness and quality, such as triangulation, member checking, thick descriptions, reflection, and iteration, as discussed in Chapter 3.

Significance of the Study

Leaders in organizations contribute significantly to society and create positive social change in many ways that promote the dignity of their employees and the communities in which they operate. However, the accelerated flux in the business environment confounds leaders and challenges organizational allocation of resources between meeting habitual expenses or investing in agile solutions that create resilience against turbulence (Horney & O'Shea, 2015). Investing intelligently to address the dynamic VUCA turmoil facing organizations requires a new way of thinking and making decisions that embraces paradox, questions the status quo, and a way of thinking that is fast, focused, and flexible (Bennett & Lemoine, 2014; Du & Chen, 2018; Horney & O'Shea, 2015). Studies in VUCA promote empirical knowledge generation that better prepares leaders to face persistent change by enhancing organizational leaders' readiness, awareness, and their understanding of complexity management in an era of constant

change (Choain & Malzy, 2017). Conducting this study may contribute to new knowledge, assist leaders through the emotional turmoil brought on by VUCA, and inform leaders on ways to be VUCA-ready to reduce instances of corporate failures that lead to negative social change. The focus on leader readiness is strategic in this study in order to focus learning on necessary competencies for leader resilience. Leader resilience promotes positive social change through functional and agile teams that can withstand the onslaught of persistent change.

Significance to Practice

VUCA is the greatest challenge facing leaders in the 21st century and only 18% of leaders are ready to lead in a VUCA world (Bennett & Lemoine, 2014; DDI, 2015; Horney & O'Shea, 2015). This study may contribute to organizational practice by providing context to the strategies corporate executives in the manufacturing sector of Nigeria have used in preparing for and overcoming VUCA. Due to scant research on practical and successful organizational strategies to sense and respond to VUCA, the findings could inform current and future leaders on ways to ensure that their strategies are robust, agile, and sufficiently adaptive to navigate in a highly complex environment (Bennett & Lemoine, 2014; Du & Chen, 2018; Saleh & Watson, 2017; Vecchiato, 2015). Understanding how to navigate VUCA could build organizational resilience by minimizing the impact of damage and operational losses and hence promoting positive social change.

VUCA-readiness is still understudied in the VUCA literature and in organizational practice. Johansen and Euchner (2013) opined that readiness helped

leaders find clarity of direction and aptly flip dilemmas into opportunities when faced with VUCA. This study sought to understand and document these readiness strategies for leader reference and application, in a bid to strengthen the practical knowledge of efficiently managing VUCA. Many corporate executives still use linear thinking and traditional leadership in their daily routines, which compromises organizational ability to thrive in complexity (Hall & Rowland, 2016; Heinonen et al., 2017). New strategies and new ways of thinking in an era of unprecedented change bolster leadership, firm performance, and resilience.

Significance to Theory

The significance of this study to theory is four-fold. First, it may fill a gap in the literature by increasing knowledge on VUCA as a business phenomenon, which is currently an understudied management concept (Nandram, 2017). Second, few authors discuss the phenomenon of VUCA-readiness as a necessary tool for today's organizations, despite ample documentation of the negative impact of VUCA. Readiness is a novel leadership phenomenon, as it is normally a follower management discourse. Third, studying corporate executive perceptions on VUCA in an African setting, especially in the country with the highest GDP and population in Africa, could contribute to the academic literature by providing a much-needed African perspective (International Monetary Fund, 2017). Fourth, Hall and Rowland (2016) observed that Masters of Business Administration courses were still stuck in an age before VUCA and noted the need for educational institutions to update their curriculum to include leadership skills for managing in VUCA environments. In essence, the study findings may help to generate

new knowledge on VUCA, enhance leader understanding of the concept of VUCA-readiness as a new leadership competence, provide an African perspective to the VUCA literature, and inform academia on new ways to approach leadership educational programs in a new age.

Significance to Social Change

The reduction of social issues in Nigeria continues to defy logic as poverty levels, economic decline, environmental degradation, and continued human suffering persist, despite the country's tremendously abundant human and natural resources (Fragile States Index, 2018; Ojo & Ajayi, 2017). Organizations play an important role in furthering social change through employment, economic contribution, and corporate social responsibility activities. The business problems identified in this study caused by VUCA include high closure rates of manufacturing firms, relocations to other countries, economic and financial losses, and increased retrenchment (*Business News, Nigeria,* 2016; Ogah, 2018; Ojo & Ajayi, 2017; *Premium Times, Nigeria,* 2017). These business-related problems converge and translate into social problems due to reduced economic activity and increased unemployment. Understanding how to lead in a VUCA environment contributes to business success, thereby alleviating negative social change stemming from organizational operations (Saleh & Watson, 2017; Vecchiato, 2015). Leader actions that decrease direct and indirect social problems caused by failing or ailing organizations contribute to positive social change through economic stimulation and increased employment.

VUCA has the added burden of causing leader and follower stress, which intrinsically leads to communal tension. Abdelzaher et al. (2017) posited that market turbulence causes "intense employee stress," creating a need for deeper understanding of better ways to manage and prepare for VUCA (p. 222). Being VUCA-ready could translate to positive social change in organizations, as employees would learn readiness mechanisms for coping with VUCA-related stress. Coping tactics enhance employee morale and engagement leading to better performance, which naturally produces an all-encompassing positive social change (Abdelzaher et al., 2017).

Summary and Transition

The frequent disruption caused by VUCA dynamics challenge leadership and, in turn, organizational success, triggering the need for additional VUCA research. The intention of conducting this study was to seek a deeper understanding of VUCA as a management challenge for the 21st century and key stakeholder perceptions on what it means to be VUCA-ready (Nandram, 2017). The Nigerian manufacturing sector faces recurrent VUCA disruption, which influences its overall performance. This disruption affects government GDP development plans, unemployment, and employee stress (Abdelzaher et al., 2017; Ehie & Muogboh, 2016; Omolade & Ngalawa, 2017). Using a hermeneutic phenomenological research design to discover the lived experiences of corporate executives in the Nigerian manufacturing sector helped to provide meaningful perceptions that may frame the VUCA challenge for African leaders. The conceptual framework that anchors this study was chaos theory and complexity leadership theory.

Chapter 2 includes the literature search strategy, a detailed conceptual framework discussion, and the literature review for the study. Chapter 3 comprises the research design and rationale, the role of the researcher, research methodology, and issues of trustworthiness. Chapter 4 includes participant demographics, the research setting, data collection, data analysis, evidence of trustworthiness, and the description of the main categories and themes. Chapter 5 covers the interpretation and analysis of the findings, limitations, the recommendations, and the social change implications of the study.

Chapter 2: Literature Review

Environments affected by constant change that is volatile, uncertain, complex, and ambiguous (VUCA) require leaders to think differently and question foundational leadership learning. The problem under study was that of organizational leader readiness to lead and win in highly volatile, uncertain, complex, and ambiguous environments, such as the manufacturing sector of Nigeria. The purpose was to explore the lived experiences of the corporate executives about their VUCA business environment and the strategies they employ for VUCA-readiness within the Nigerian manufacturing industry. The topical issues surrounding this study were as follows: (a) the use of conventional leadership tools and linear thinking models in nonconventional times, (b) the speed and intensity of change confounds corporate executives, and (c) slow or wrong identification of the VUCA situation leads to leadership errors that cost the organization both finances and people (Bennett & Lemoine, 2014; Cook, 2016; Hall & Rowland, 2016; Heinonen et al., 2017).

Chapter 2 contains three sections, namely, the literature search strategy, a discussion of the conceptual framework, and the literature review. The literature review is an analysis and synthesis of the topical VUCA literature. It contains five subsections that guide the reader to understand the challenge presented by the phenomenon under study, the gap in the literature, and how answering the research question may help fill that gap. The subsections in the literature review include understanding VUCA, Nigeria as a VUCA environment, organizational challenges in a VUCA world, achieving success in a VUCA world, and readiness as a critical competency in VUCA.

Literature Search Strategy

The literature search strategy focused on (a) VUCA, (b) leader readiness in VUCA environments, (c) chaos theory, (d) complexity leadership theory, (e) business success in VUCA and (f) hermeneutic phenomenology. The Walden library databases were the primary sources for peer-reviewed articles and dissertations used to prepare this literature review. The business and management databases, specifically the ABI/INFORM, Business Source Complete, Emerald Insight, Sage Journals, and ScienceDirect, formed the foundational resources. Secondary sources were used to ensure a multi-dimensional review: multidisciplinary databases such as Academic Search Complete, together with Google scholar, Nigerian government databases, the World Bank and related databases, trade publications, and manufacturing and consulting websites.

The key search terms included *VUCA, volatility, uncertainty, complexity, ambiguity, turbulence, complex business environments, chaos, chaos theory, Nigeria, Africa, leadership, readiness, complexity leadership, complexity leadership theory, VUCA leadership skills, change, change management, manufacturing, Nigeria manufacturing sector, organizational ecology, qualitative research, phenomenology, hermeneutic phenomenology, Heidegger, Ricoeur,* and *Ricoeur's theory of interpretation.* Varying combinations of the key search terms resulted in richer data for analysis.

Conceptual Framework

The intent of this study was to increase understanding of VUCA business environments and explore how leaders can prepare adequately to lead in these rapidly

changing environments. To help align and structure the discussion, a conceptual framework consisting of chaos theory and complexity leadership theory anchors the study. Conceptual frameworks serve different roles in research studies, but in this study, it helps to link the various aspects of the study to align and structure the literature review and research methods for congruence (Ravitch & Riggan, 2017). Chaos theory helps explain the turbulence and paradox in VUCA environments while complexity leadership theory can be used to examine leadership under duress.

Chaos theory refers to a systems behavior that is complex, irregular, and unpredictable, yet not random as there is hidden order in the chaos (Lorenz, 1963). Chaos is nonlinear and dynamic (Narh, Thorpe, Bell, & Hill, 2016) and causes wicked problems in organizational leadership (Raisio & Lundström, 2015). Chaos theory contributes three important factors to understanding chaotic behavior (a) evidence that systems can be unpredictable, (b) small perturbations in the conditions can have amplified effects on the systems output (butterfly effect), and (c) order exists in the seeming randomness (Resler, 2016). Narh et al. (2016) used these three chaos theory factors in their study on traffic management as traffic is unpredictable, minor events can cause traffic congestion, and there are parameters for order restoration. Shahvazian, Mortazavi, Lagzian, and Rahimnia (2016) compared the complex and unpredictable nature of retaining talented staff to the underlying concepts of chaos theory in a bid to show that despite the complexity, retention was manageable. The two studies illuminate the contribution of chaos theory in research studies where chaos and disorder define the phenomenon under study.

Chaos theory is relevant to organizations as organizations are chaotic, nonlinear, and dynamic systems oscillating between stability and instability, convergence and divergence, and evolution and devolution (Thiétart & Forgues, 1995). The study focuses on VUCA and VUCA-readiness in organizations and hence the use of chaos theory to structure arguments relating to corporates experiencing turbulence and complexity. The three chaos theory factors (Lorenz, 1963; Narh et al., 2016; Raisio & Lundström, 2015; Resler, 2016) below are important in a VUCA discussion,

- To confirm that the unpredictability and irregularity caused by VUCA exists in organizations. The causes of the unpredictability and irregularity may be due to infrastructure deficiencies, political instability, financial and economic changes, corruption, discerning customers, and low barriers of entry causing increased competitors in the various sectors.
- That small environmental changes can have catastrophic impacts on an organization, for example, foreign currency fluctuations, technological changes, new agile competitors, export restrictions, ecological disasters, loss of key employees, corrupt systems, and regulatory changes.
- That despite the chaos, order and predictability is possible if organizations increase their understanding of turbulent environments and shape their strategies and decision-making procedures to meet these challenges.

Chaos theory, therefore, helps to frame this study's foundational underpinning of the disorder brought on by VUCA to organizations and structures the research into VUCA-readiness as a preamble to achieving order in the turbulence.

In understanding nuanced problems, such as VUCA, Raisio and Lundström (2015) observed the need to use a conceptual framework that included chaos theory and complexity sciences to grasp fully the chaotic nature of the organization together with the complexity of leadership in these systems. As such, this study uses complexity leadership theory together with chaos theory to complete the circle of understanding of complexity, volatility, uncertainty, and ambiguity in organizations. While chaos theory was used to structure the organizational aspects of the study, complexity leadership theory helped to frame the discussion on leaders and their responses in complex situations. Complexity leadership theory refers to a changing view of organizations from mechanical, top-down, bureaucratic, and vision-led to one of complex adaptive systems operating in a modern, knowledge-oriented, agile, and highly turbulent world (Uhl-Bien & Arena, 2018; Uhl-Bien et al., 2007). Unprecedented change characterizes the current business environment with technology and globalization producing new rules for organizations to operate.

Complexity leadership theory is a lens to comprehend the changing environment and instill new mindsets that embrace flexible leadership, innovation, double-loop learning, and agility in structural construction (Uhl-Bien et al., 2007). Flexibility, agility, and ambidexterity in leadership are the new competencies for leaders in the 21st century as surprise and disruption from technology, globalization, and new forms of employment change corporate normalcy (Du & Chen, 2018; Hall & Rowland, 2016; Heinonen et al., 2017; Horney et al., 2010; Sopelana et al., 2014). Several researchers use complexity leadership theory as a lens to frame conversations of change; few examples include studies in learning and innovation (Mendes, Gomes, Marques-Quinteiro, Lind, & Curral,

2016), leadership and sensemaking (Abreu Pederezini, 2017), and management studies in Africa (Ochara, 2017). The first central framework of complexity leadership theory was an entanglement of three leadership roles, namely, adaptive leadership where innovation and adaptation emerged, administrative leadership where bureaucratic work continued to happen, and enabling leadership where conditions fit for emergence developed (Uhl-Bien et al., 2007). The authors, keeping in tandem with continuous learning principles, identified an emergent error in their framework and updated the leadership roles to align with the VUCA world.

The revised leadership roles based on Uhl-Bien and Arena (2018) include (a) entrepreneurial leadership-to enhance the products and learning through exploration, (b) enabling leadership-the adaptive space where VUCA tensions are integrated and responded to innovatively through transformation, and (c) operational leadership-to ensure efficiency in administrative roles through exploitation. The three leadership roles create a new complexity leadership framework that addresses increasing change and leadership pressure to create organizational adaptability in a VUCA world (Uhl-Bien & Arena, 2018). Complexity leadership theory is an important lens for this study, as it guided the review and analysis of leadership in VUCA and VUCA-readiness using this tripartite leadership framework. Understanding the role leadership plays in managing complexity and the new competencies necessary to achieve fitness in this era of increasing change contributed significantly to achieving the study's purpose and answering the research question.

Literature Review

The purpose of this study was to explore the lived experiences of Nigerian corporate executives about their VUCA business environment and the strategies they employ for VUCA-readiness within the manufacturing industry. The literature review is an analysis and synthesis of current research on a chosen phenomenon to illuminate concepts relevant to the field, provide an overview of current trends, and identify a gap in the literature. The phenomenon under investigation in this study is VUCA, which stands for volatility, uncertainty, complexity, and ambiguity. This chapter encompasses a review of the VUCA literature from an organizational and leadership point of view, specifically to assess leader understanding and preparedness in turbulent environments. The presentation of issues is neutral to present a balanced approach to the study and it is comprehensive to provide an understanding of the available literature based on set inclusion and exclusion criteria. The inclusion and exclusion criteria helped identify relevant seminal and topical work pertinent to VUCA and VUCA-readiness.

The organization of the chapter includes five major sections each linked to the research question, what are the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment? The five sections include understanding VUCA, Nigeria as a VUCA environment, organizational challenges in a VUCA world, achieving success in a VUCA world, and readiness as a critical competency in VUCA. Each major section has several sub-sections to grasp fully the universe of the available literature. The literature review involved an analysis through iteration of articles from peer-reviewed journals,

textbooks, some business journals on VUCA, VUCA related subjects, and phenomenological studies on VUCA or leadership in turbulent environments.

Understanding VUCA

This section consists of topics that enhance the readers understanding of VUCA. It begins with the military origin of the term VUCA followed by a discussion of how VUCA entered the organizational lexicon and how it is understood and ends with a definition and discussion of each VUCA acronym to differentiate each leader challenge. The use of current authors helps present a topical understanding of VUCA.

Military Beginnings

In the 1990s, the U.S. Army War College coined the term VUCA to denote the end of the Old War and the beginning of a new NextGen warfare characterized by volatility, uncertainty, complexity, and ambiguity (Cousins, 2018; Elkington, Pearse, Moss, Van, & Martin, 2017; Fry, 2016; Tint, McWaters, & Raymond, 2015). The Old Wars, such as World War I, World War II, and the Cold War happened in the field with known enemies and were defined by known tactics of engagement, aggression, combat, and were long term in nature (Fry, 2016). The 21st century marked the beginning of the NextGen warfare, such as 9/11 and the Syrian war, where globalization and technology fueled a new kind of conflict defined by guerilla tactics of ambush, infiltration, and insurgency (Fry, 2016). Authors described the dynamic transformation of war strategies in poignant ways, such as “asymmetric warfare with agile, dispersed opponents fighting under different rules for causes not fully understood” (Jari Roy & Lauraeus, 2018, p. 38) or “the new theatre of war” (Elkington et al., 2017, p. 1044). The shift in the Army’s

operating environment led to the emergence of VUCA to signify volatile, uncertain, complex, and ambiguous environments with agile and dynamic actors.

Old methods of combat that worked effectively during the old war where the rules of engagement followed a known path were no longer relevant in the new war where environments and enemies were constantly changing, highly unpredictable, and mostly unknown (Palacios, 2018; Tudorache & Ispas, 2018). Current military war zones such as Iraq, Syria, and Afghanistan where the U. S. Army confronted volatile, uncertain, complex, and ambiguous situations challenged the forces and revealed an urgency to adapt military training and performance to succeed in a new environment with new dexterous players (Tudorache & Ispas, 2018). Classical and strategic intelligence became irrelevant in VUCA conditions, which required modern adaptive thinking in continuously changing environments with unconventional players (Palacios, 2018). The Army had to adopt new approaches, such as the joint, interagency, intergovernmental, and multinational perspective to counter the sudden revolution (Clark, 2016; Tudorache & Ispas, 2018). The joint, interagency, intergovernmental, and multinational perspective is a diversified tactical, operational, and strategic approach that uses several agencies in alliances to harness the power of numbers and information for a forceful and unified combat capability in VUCA environments; and currently employed in Afghanistan, a VUCA environment (Tudorache & Ispas, 2018).

Transformation is gradual even in the military and Clark (2016) pointed out that three generations still exist in the U.S. Army and each generation possesses a unique competency to allow situational leadership. The superpower generation who constitute

the oldest cohorts made up primarily of late baby boomers taught to fight in the Cold War. The second generation is that of the long war generation consisting of generation X and old millennials who fought in Iraq and Afghanistan with new enemies like the Taliban using different and unstructured war maneuvers. The last generation is the nascent generation who are multifaceted in their thinking, trained to fight in diverse environments, and operate in small contingent cohorts (Clark, 2016). JIIM and the generational competency training reflects a learning process and a need to incorporate change deep in the tactical and operational processes of the armed forces to be able to fight and win in VUCA environments.

Using VUCA difficulties such as generational differences effectively indicates a way to employ Johansen and Euchner's (2013) VUCA competency of *dilemma flipping* to switch challenges into opportunities. With VUCA originating in the U. S. War Academy, this review allows an appreciation of how the Army has had to revolutionize its training, operations, strategies, and use generational abilities effectively to succeed in a period of revolution and cope with new actors using unpredictable and previously unknown methods. The military discussion is a preamble to this study's literature review to provide a glimpse of how organizations can reform in a VUCA-world, as did the military and offer precedent to necessary changes required in leadership to tackle VUCA in organizations.

VUCA in Organizations

Like the military, organizations are experiencing a shift in their operating environments similarly fueled by globalization, technology, and hyper-competition,

which marks the end of relative stability, known rules, and structured thinking. VUCA entered the business lexicon in the late 1990s and early 2000s primarily through the work of Johansen (2007) and Stiehm and Townsend (2002). The founding fathers of VUCA in organizations described it as the turbulence experienced in today's world of work (Stiehm & Townsend, 2002) while Johansen (2007) defined is as the 21st century's conceptual framework. Despite the age of these assertions, the current reality portrays a complex and dynamic business environment. The simultaneous and high intensity changes at the macro-levels of the global, economic, social, environmental, regulatory, and political arenas became a constant predicament expedited by digital disruptions that redefined the concept of work (Noonan, Richter, Durham, & Pierce, 2017). The impact of the dynamic and turbulent changes penetrated the micro-levels to upset normalcy.

The changing concept of work and the unfamiliar environmental cues caused leader uncertainty, unpredictability, and mental anguish necessitating attention as confounded leaders negatively affect organizational performance (Abdelzaher et al., 2017; Bennett & Lemoine, 2014; King & Badham, 2018). In the face of incessant change, the foundational leadership tools and methods, which worked before the 21st century, became antiquated. VUCA is a metaphor for today's leadership defining the different textures of change that require a different leadership approach from traditional leadership (Rodriguez & Rodriguez, 2015). These authors confirm that in a VUCA environment, leaders require a new set of operating procedures that have the flexibility to change with each VUCA predicament.

VUCA manifests itself in organizations through economic turbulence such as the financial crisis of 2008/9, cyber warfare, generational changes in human resources, disruptive technology, regulatory changes, geopolitical instability, hyper competition, artificial intelligence, uneven wealth distribution, infrastructural inadequacies, climate change, terrorism, and territorial conflicts (Heinonen et al., 2017; Horney & O'Shea, 2015; Johansen & Euchner, 2013). When these issues afflict companies simultaneously or in varying combinations with escalating speed and intensity then leaders are experiencing VUCA (Johansen & Euchner, 2013). Terms, such as *disruption, age of acceleration,* and *megatrends* have gained currency in a VUCA world in a bid to explain the relentless need for agility in a time of convolution (Heinonen et al., 2017; Park, 2014). The key six megatrends of VUCA in organizations described by Vielmetter and Sell (2014) include accelerated globalization, digitization, environmental catastrophe, changes in demography, technological convergence, and value multiplicity. The megatrends and increasing disruptions affect organizations in several areas disturbing stable operations and well-defined decision making matrices.

If a VUCA event afflicting the organization is diagnosed incorrectly, leaders may apply erroneous solutions that severely affect their performance. Confusion and errors mark leader responses in VUCA times with inertia, poor performance, and obsolescence marking corporate bottom lines (Bennett & Lemoine, 2014). Vecchiato (2015) agreed with Bennett and Lemoine's (2014) observations and compared the Shell and Nokia responses to elements of VUCA in their respective fields. Vecchiato (2015) found that Shell's response of scenario planning and trend management successfully helped the

company navigate the drivers of change in a mature oil and gas market. Nokia's response of environmental scanning and roadmaps for digital transformation failed due to erratic change drivers, which blindsided the total mobile phone market. The iPhone, in particular, and later Google's Android technologies revolutionized the cellular phone market affecting Nokia and other laggards. Vecchiato observed that roadmaps were the wrong tool for Nokia to adopt at that specific VUCA time, as roadmaps were historic in nature and the cellphone industry was playing by new eclectic rules that required responses that were more agile, current, and futuristic. Vecchiato's study has the benefit of hindsight, which leaders mostly do not have though they can learn from active preparation, failure, or from dynamically sourcing current information.

The greatest challenge in managing and understanding VUCA in organizations is not just the unrelenting change but also the lack of a complete appreciation of VUCA as a business and leadership concept. To enhance this understanding, Bennett and Lemoine (2014) recommended that leaders possess a thorough appreciation of what each factor of volatility, uncertainty, complexity, and ambiguity represented to avoid erroneous diagnosis that affected firm performance. Using the factors of change, that is, volatility, uncertainty, complexity, and ambiguity as synonyms led to expensive errors, as companies read the environmental signals wrongly hence spent resources on the wrong solutions (Bennett & Lemoine, 2014). The cases of Nokia, Blackberry, Kodak, Philips, JVC, Blockbuster, and others are poignant examples of organizations that failed to read the changes in their environments correctly, thus did not adapt their operations accurately, and suffered the consequences (Alunni & Llambías, 2018; Bushe & Marshak,

2016; Schoemaker, 2018). These authors make it clear that the only way to realize the opportunities in the turbulence is through clarity of the situation facing the organization and by channeling resources to the right challenge. The below definitions and descriptions of each VUCA factor allows a deeper understanding of the key differences and signals of each factor to distinguish the phenomenon present in the environment.

Volatility Aspect of VUCA

The word *volatile* implies instability. Organizations experience volatility when unexpected events upset an established routine (Horney & O'Shea, 2015) with the speed, magnitude, and volume of change creating disorder (Horney et al., 2010; Pandit, Joshi, Sahay, & Gupta, 2018; Saleh & Watson, 2017). In volatility, leaders understand the changes and have sufficient information about the change. However, the frequency and unpredictability of the changes compound risk exposure and decision-making (Bennett & Lemoine, 2014; Gilman, 2017; Horney & O'Shea, 2015). Volatility is not a new concept in the world of work the only difference is that previously volatility happened periodically driven by wars, natural disasters, epidemics, and severe economic crises (Horney & O'Shea, 2015). Today, the catalysts of volatility are broad and far-reaching fuelled by globalization triggering increased interconnectivity and interdependence, technology instigating digital and social media disruptions, financial interdependences producing volatile markets, and growing consumer awareness leading to constantly changing demands (Heinonen et al., 2017; Horney & O'Shea, 2015). The flurry of sudden changes creates challenges for organizations built to operate in relative stability adhering to set plans and routines with fixed structures built for reliability.

In volatility, the dynamics of change are understood yet unpredictable and the rapidity of occurrence challenge the speed of responses and leader focus. Examples of volatility include stock market fluctuations, jet fuel costs, lifestyle changes, renewable energy, changing politics, and changing customer preferences (Bennett & Lemoine, 2014; Heinonen et al., 2017). Codreanu (2016) observed that conventional leader practices of pattern identification, experience, and use of best practice were obsolete in a world of increasing volatile change. Codreanu based their conclusions on an analysis of the literature of key authors in the field and not research. Nevertheless, several authors agreed with Codreanu that to counter volatility organizations and leaders needed to reform and adopt agile practices to sense changing tides and seize opportunities (Bennett & Lemoine, 2014; Cousins, 2018; Johansen, 2012). Agility refers to creating flexibility in organizational structures to ensure resources are available to address volatile events, for example, Southwest airlines hedged 70% of its jet-fuel purchases saving them more than 50% costs on fuel during the fuel crisis, which severely affected many other airlines (Bennett & Lemoine, 2014; Horney et al., 2010). Horney et al. succinctly advanced that organizations in the 21st century should "strive to become *Velcro organizations* in which people and capacity can be rearranged creatively and quickly without major structural change" (p. 33). It is not all solemn, as profit opportunities exist in volatility (Bennett & Lemoine, 2014). The challenge remains in clearly identifying the event and recognizing threats of the event, and the opportunities therein.

Uncertainty Aspect of VUCA

There are two schools of thought on what uncertainty represents in turbulent environments. The first one states that organizations experience uncertainty in situations where they know the change happening yet are unable to determine the level of impact the change have on the organization (Bennett & Lemoine, 2014; Johansen & Euchner, 2013; Saleh & Watson, 2017). Bennett and Lemoine (2014) gave the example of terrorism as an uncertain issue affecting markets. The authors explained that the causes of terrorism were known with the time, place, and impact of a terrorist attack remaining relatively unknown. The solution to this predicament is the need to increase leader knowledge and information to reduce uncertainty. To increase leader understanding, a multilayered approach where leaders seek new data, new partnerships, from new perspectives help to bolster organizational intelligence on all aspects of their business (Bennett & Lemoine, 2014; Johansen & Euchner, 2013). For example, post 9/11 data collection, mining, and sharing; new partnerships with unlikely allies; and new intelligence tools form a critical component in reducing the uncertainty of future events (Bennett & Lemoine, 2014). In effect, this school advocates that organizations invest resources in information gathering, data processing, as well as effectively utilizing stakeholder networks to manage uncertainty. The downside of this school of thought is it fails to demonstrate how leaders would effectively mine the enormous amount data to select the correct triggers for action.

The second school of thought posits that uncertainty is being unable to predict events and lacking clarity on what is happening in the business environment (Heinonen et

al., 2017; Horney & O'Shea, 2015; Horney et al., 2010; Pandit et al., 2018). The speed of change and the multitude of players with often conflicting interests complicate the levels of uncertainty experienced by leaders (Heinonen et al., 2017; Horney & O'Shea, 2015). A lack of leader confidence and control follow events that cause uncertainty, which unfortunately lead to inaction, sluggishness in responses, and/or to indecision (Horney & O'Shea, 2015). To counter these negative effects, Heinonen et al. (2017) advised that leaders should first, invest in forecasting tools to enable prediction, second, realize that some events were "black swans" hence unpredictable, and thirdly, some events fall in between the first two and the devil of the detail would often help solve these challenges (p. 3). In summary, this school believes that enhancing predictability tools through investments in technology and big data would provide better clarity of events and timely solutions.

Complexity Aspect of VUCA

In complex business environments, simple patterns combine and interconnect in multiple ways that result in disruptions, convolutions, and information overload (Bartscht, 2015; Bennett & Lemoine, 2014; Cousins, 2018; Heinonen et al., 2017). Complexity refers to the many moving parts, their iterations, and the multiplicity of actors in any given situation causing chaos, confusion, and a lack of mastering the intricacies to formulate cohesive responses (Codreanu, 2016; Johansen & Euchner, 2013). Internal and external business environments have become more complex as globalization and technology increase both the volume and the rate of networking to fashion what Heinonen et al. (2017) referred to as wicked problems for decision-making.

The authors defined wicked problems as those without simple, clear, or lasting solutions. The tsunami of convolutions may create high levels of disorder that can overwhelm decision makers (Horney & O'Shea, 2015). Horney and O'Shea indicated that (a) complexity was one of the greatest challenges facing chief executive officers in this century and (b) complexity had the power to influence the other VUCA elements by making them worse. Complexity, unlike the other VUCA elements, is a leadership challenge in the management lexicon with several authors and schools of thought discussing various ways to manage the chaos of complex environments.

Organizations face complexity when they move to new markets, outsource parts of their operations, transition from old ways to new digital ones, engage millennials, offer unfamiliar products, contend with changing regulations, exposure to political instability, and many more (Bennett & Lemoine, 2014; Codreanu, 2016; Heinonen et al., 2017). From a VUCA standpoint, resolving complexity is a difficult task with many authors providing differing solutions. Bennett and Lemoine's (2014) solution of organizational restructuring is the most popular and accepted by a majority of other authors such as Cousins (2018), Heinonen et al. (2017), and Saleh and Watson (2017). Restructuring here involves the breakdown of existing structures to create new ones that mirror external complexities. Organizations have used restructuring over the years to fit internal strategies often dictated by management consultants and using it creatively to fit external realities is a significant leadership challenge.

Another solution to complexity is organizational acuity and innovativeness. Horney and O'Shea (2015) thought that organizational dexterity and leader creativity

were the best tools to fight complexity as they injected clarity and new thinking for adaption and competitive advantage. Johansen and Euchner (2013) pointed out that leaders who possessed the competence of clarity helped their teams and organizations shape simple responses to complex problems. Unfortunately, the authors did not make it clear as to how leaders would possess or classify clarity putting credence to this study's intent of what constituted leader readiness in VUCA. The last solution for complexity is by Cousins (2018). The solution is two-fold, one, they agreed with Bennett and Lemoine's (2014) concept of restructuring and two, observed that in addition leaders should use knowledge-based strategies to combat complexity. Cousins' solution of knowledge-based strategies aligns with the growth of the knowledge era often referred to as the 21st century, which replaces the industrial era and with it mechanical thinking. In summary, complexity is the most researched and discussed VUCA element as it causes chaos in organizations and often confounds leaders although several solutions exist to reduce complexity.

Ambiguity Aspect of VUCA

The current organizational reality is hazy with mixed meanings (Horney et al., 2010), multifarious (Codreanu, 2016), and opaque (Heinonen et al., 2017) leading to a lack of concrete knowledge or solutions due to the ambiguity. VUCA subject authors cannot agree on a single characterization of ambiguity. One school of thought believes that ambiguity is born of the other three VUCA events when they happen simultaneously affecting an organizations ability to read the signals, hence resulting in vague multifarious situations (Codreanu, 2016; Horney & O'Shea, 2015; Johansen & Euchner,

2013). The authors in this school of thought propose agility, defined as a process where the organization quickly adopts to external conditions, as the solution for ambiguity. Agility, however, seems to be the overarching solution for VUCA in general and the specific solution for volatility as discussed above creating overlap and lack of symmetry, hence the need for a secondary definition of ambiguity.

The second school of thought posits that ambiguous situations are novel, unusual, and/or emergent where the cause and effect of the situation are unknown as it lacks precedence, which makes prognosis difficult (Bennett & Lemoine, 2014; Cousins, 2018; Gilman, 2017; Heinonen et al., 2017). Similarly, Heinonen et al. (2017) referred to ambiguity as surprises happening in the organizational environment that disrupt trend-based intelligence, a hallmark of conventional leadership. The authors classified these surprises into three categories (a) *black swans*--highly unlikely events, (b) *wild cards*--low possibility with high impact events, and (c) *extreme events*--events that forcefully drive change in both structural operations and leadership mental models. In ambiguity, the lack of clarity due to the many competing narratives, perspectives, and interpretations is compounded by a lack of understanding due to the novelty of the innovation or market, which leads to leader distress (Heinonen et al., 2017; Pandit et al., 2018). The most apt example given of ambiguity by most of the authors is the move from print media to digital media. The lack of vocabulary to explain this innovation, or predict what its influences would be, and what effect it would have on organizations, rendered its emergence ambiguous (Bennett & Lemoine, 2014). The raise of technology and the

discovery of new markets intensify the ambiguity quotient for leaders, as the uncharted terrain is deficient of elaboration, thus complicating decision-making.

Ambiguity differs from the other VUCA elements in that ambiguity profoundly emerges in novelty. Since ambiguity is present in newness, increasing knowledge improves the adaptability and innovativeness of the company (Bartscht, 2015). Bennett and Lemoine (2014) refuted this view of increasing knowledge as they argued that in unique situations it would be difficult for leaders to know which information was valuable. Cousins (2018) agreed with Bennett and Lemoine's observation due to the dilemma of figuring out which information was most useful in a novel situation. To counter the dilemma of deciding which information is useful, Bennett and Lemoine (2014) discussed the concept of experimentation as a possible solution to ambiguity. According to the authors, experimentation involves a trial and error method where leaders apply intelligent strategies to ambiguous situations to determine the most beneficial ones. The authors gave the example of print publishers experimenting with e-books as technology presented both challenges to their old way of working and opportunities to a whole new market and revenue stream. However, experimentation is a double-edged sword as it comes with both advantages and risks if the experiments do not work. Another solution for ambiguity is to invest in futures research to arm the company with prediction tools that also challenge trend-based mental models as they anticipate disruptions and extreme events (Heinonen et al., 2017). Experimentation and futures research as solutions for ambiguity challenge the core assumptions of leadership and

mainstream performance management, indicating changing tides for leaders in VUCA times.

To recap, volatility represents frequent unstable changes and requires agility to address effectively. Uncertainty is the lack of full knowledge of the impact of an event and new information, investment in technology, and big data enhances prediction to reduce uncertainty. Complexity is the convolution of information and processes and requires restructuring internal operations to address effectively. Ambiguity is present in novel situations that lack precedence and to reduce ambiguity organizational leaders should invest in experimentation and futures research. Each VUCA element presents a unique challenge to leaders and the key to success is the careful diagnosis of the VUCA event experienced at any point in time and dealing with each event appropriately. Bennett and Lemoine (2014) warned that VUCA events do not occur asynchronously and could occur together in varying degrees and combinations. VUCA environments present frequent multifaceted problems and most leaders and their organizations lack prerequisite preparation for incessant revolution (Bushe & Marshak, 2016). Nigeria fits the model of a VUCA environment though an exhaustive search of the literature did not yield any studies of VUCA in Nigeria from a leadership or manufacturing perspective, which this study hopes to contribute.

Nigeria as a VUCA Environment

VUCA environments experience high degrees of change manifested persistently in volatile, uncertain, complex, and ambiguous ways that confound leadership. In Nigeria, constant issues pertaining to political instability, sectorial terrorism, economic

and financial uncertainties, high levels of unemployment leading to poverty and insecurity, debilitating levels of corruption, ineffective leadership, poor implementation of development plans, unfair competition due to lack of sound regulations, and poor infrastructure contribute significantly to a VUCA defined economy (Ehie & Muogboh, 2016; Fragile States Index, 2018; Ojo & Ajayi, 2017; World Bank, 2017). When these challenges, among others, combine in multiple ways on an ongoing basis, they create unique problems for leaders in all sectors of the country thus, complicating decision-making, resource allocation, organizational performance, and sustainability (Robinson, Sinclair, Tobias, & Choi, 2017). Paradoxically, the country is rich in human and natural resources, yet struggles to utilize them fully in efficient ways (Ojo & Ajayi, 2017). The country is home to several local businesses, multinational companies, and is a key African market that has great potential to be a global front-runner, forming a strategic study location.

Nigeria is primarily an oil producing country that experiences the instabilities associated with oil price fluctuations and suffers a lack of sustainable development as it follows the oil-wealth myth that directly affects its growth (Ojakorotu, Kamidza, & Eesuola, 2018). To depart strategically from oil and consistently cushion its GDP from oil price oscillations and the development chaos therein, Nigeria has focused its internal development energies towards the manufacturing sector (Ehie & Muogboh, 2016; Omolade & Ngalawa, 2017). Unfortunately, the Nigerian manufacturing sector suffers several VUCA challenges that have affected its contribution to the country's GDP. Authors identified the chief issues associated with the manufacturing sector's poor

performance with poor organizational leadership, corrupt leaders, inefficiency, epileptic power supply, multiple and high taxes, infrastructure deficiencies, technological inadequacies, changing regulations, employees not prepared for VUCA, shifting consumer demands, and nimble competitors (Ehie & Muogboh, 2016; Ogah, 2018; Ojo & Ajayi, 2017). The issues straddle several of the VUCA elements and present varying leadership challenges consistent with the global affliction of VUCA.

Nigeria is not unique in its VUCA challenges and as in all VUCA environments, understanding how to deal effectively with the challenges is imperative to thriving in the long run. Organizational leadership is often under attack due to debatable internal organizational practices that make the external VUCA challenges an added burden. The internal organizational VUCA issues identified in several studies include a long history of mismanagement and corruption (Ugoani, 2017), a history of despotic leadership (Adegbami & Uche, 2016), employee silence due to victimization (Emelifeonwu & Valk, 2019), ineffective leader communication (Ejohwomu, Oshodi, & Lam, 2017), and poor performance appraisal systems (Aro-Gordon, 2016) that impede sound management. Emelifeonwu and Valk (2019) argued that poor leadership and employee victimization were a Sub-Saharan African leadership culture and therefore a normalcy in organizational leadership. However, in their quantitative study of Nigerian leaders, Okereke, Vincent, and Mordi (2018) found that Nigerian leaders led through the African Ubuntu philosophy of compassion, humanness, and unity. The overwhelming evidence as noted above is that there is a problem of leadership in Nigerian organizations.

The lack of coherence in research studies on Nigerian organizational leadership practices makes finding apt solutions complicated, as it is difficult to solve a problem few believe exists. Nonetheless, conflicting and deprived leadership serves to aggravate VUCA challenges and enhance leader and employee frustrations. Current organizational structures and conventional leadership models reveal an inadequacy of leading in a VUCA world, a need for increased research, and an opportunity for enhancing leader readiness for coping with VUCA events.

Organizational Challenges in a VUCA World

In this section, conventional leadership and linear models is one of the two organizational challenges that make VUCA difficult for leaders as they practice tried and tested leadership strategies in a changed world. The other challenge is that of business schools using dated curriculum not adopted to changes in the business environment and organizational learning principles that require change to be effective in a VUCA world.

Conventional Leadership and Linear Models

Understanding VUCA and its four categories prompts a discussion on the preparedness of both organizations and leaders to thrive in turbulence. Changes in the organizational landscape over the years have prompted several changes to organizational structures and to leadership models. Organizational adaptation to environmental threats and changes is at the heart of organizational survival and in turn organization population and diversity, referred to as organizational ecology. Organizational ecology concerns the changes in the population, types, growth, and death of organizations (Hannan & Freeman, 1984). Organizations built in the industrial era faced fewer threats than organizations in

the 21st century, the knowledge era, and their foundational aim was to deliver accountability and reliability (Hannan & Freeman, 1984). Delivering this consistency led to organizational structures and routines that were rigid to perform in machine-like ways, thus, less adaptive to external pressures (Hannan, 2005). In a VUCA world, change is constant and structural inertia could mean organizational failure as more adaptive competitors replace organizations that resist transformation (Alunni & Llambías, 2018). A disconnect exists where organizations built for stability and reliability have to perform in a VUCA environment that lacks stability and is constantly changing.

Despite the evolution of leadership over the years from command and control to transformational leadership models, organizational leadership in VUCA environments is in desperate need of reform. Larger companies, due to size and scale, are unable to break away from tried and tested methods where visionary leaders with followers work towards a common goal to ensure the delivery of set performance targets (Bushe & Marshak, 2016; Rodriguez & Rodriguez, 2015). In addition, the use of strategic plans, either 5-year or 10-year plans, worked effectively in stable environments and afforded leaders opportunities to plan, coordinate, and organize resources. Bureaucratic organizations, visionary one-person leadership, performance mindsets, and long-term strategic plans do not fit the purpose of the current multidimensional world characterized by change at all levels of operating (Bushe & Marshak, 2016). In a VUCA-world, the rapidity and intensity of change disrupt conventional leadership thinking and challenge rigid organizational structures (Jari Roy & Lauraeus, 2018). Sadly, conventional organizational and leadership models form the foundational business education of most practicing

leaders, which explains the conventional organizational and leadership models in practice and the gradual transformation in adapting new and different models.

Business Schools and Organizational Learning

Organizational structures and leadership models for large organizations follow a known path where despite surprise and constant change being the new normal, leaders still think in linear modes (Du & Chen, 2018; Heinonen et al., 2017). Bushe and Marshak (2016) opined that traditional leadership paradigms and linear thinking were no longer relevant in VUCA environments. Yet, looking at where it all begins, universities and colleges, business education curriculums remain entrenched in conventional forms. To illustrate, Hall and Rowland (2016) using a grounded theory approach studied the VUCA-readiness of 20 tertiary institutions in the UK and followed the institutions MBA graduates to understand how well they integrated into VUCA impacted organizations. They found that the graduates were unprepared for what Johansen and Euchner (2013) referred to as the "dilemma flipping" of operating in a VUCA environment as the institutions curriculums remained entrenched in traditional cognitive leadership learning (p. 10). Hall and Rowland also found that the learning institutions were in complete compliance of regulatory requirements and were fully accredited, portraying a wider problem of governments and professional bodies needing to align with the growing VUCA predicament. The study's results may not be generalizable as they use a small population based in the UK, though they provide a staggering reality.

Hall and Rowland's study reflected current curriculum challenges on a global scale that lack alignment to existing and growing turbulence in the business environment.

Millar et al. (2018), Noonan et al. (2017), and Rodriguez and Rodriguez (2015) agreed with Hall and Rowland's (2016) findings and posited that employees required new knowledge, competencies, and capabilities to succeed in a VUCA world as competencies in VUCA had a low shelf life due to persistent change. With VUCA being the conceptual framework for the 21st century (Johansen, 2007) new leadership education has never been more needed or relevant.

To counter an education system that is slow to adapt, several authors are challenging organizations to invest in new ways of thinking, learning, and doing that supplement current ways and complement the VUCA environment. To demonstrate, two case studies on new ways of learning in a VUCA environment follow. First, García, Navarro, Rodríguez, Fernández, and Freixes (2017) conducted a case study using gamification as a learning tool that enabled employees to develop speed, proactivity, innovative thinking, and strategic thinking for faster adaption in VUCA environments. The authors observed that in dealing with constant transformation, there was a need to increase employee engagement and learning effectiveness using digital tools that were consistent with VUCA's technological transformations. Digital games have the bad reputation of wasting time and interfering with strategic thinking capabilities but this study portrays a valuable opportunity to convert games into positive organizational learning tools.

Second, using a case study research design, Cousins (2018) studied the application of design thinking as an organizational learning tool for organizations operating in VUCA environments. The author defined design thinking as an "integrative

thinking and abductive logic" process that puts into consideration both parts of and the whole problem to find the most ideal solution for the organization and its stakeholders in a turbulent environment (p. 7). Cousins observed the need to include both design thinking in MBA curricula and leader development efforts to enhance faster problem solving and increase out of the box thinking for innovative solutions to existing flux. The two studies indicate that getting comfortable with technology and dexterous thinking prepares employees to tackle emergent change as gamification sharpens problem solving and design thinking allows option generation and selection.

The changing landscape can serve as a call for organizational, leadership, and educational transformation to create readiness in organizational structures, people, and processes to respond in a timely and accurate manner to volatile, uncertain, complex, and ambiguous situations. Adapting corporate cultures to the reality and pace of change, enabling structural elasticity, and people strategies that support swift thinking and decision-making in the face of change are new competitive and survival challenges facing organizations today (García et al., 2017). Failure to adapt to rapid change not only leads to organizational stress but to employee mental health issues, lower morale, and poor engagement levels, which compounds an already precarious situation (Abdelzaher et al., 2017; King & Badham, 2018). Levels of stress increase in direct proportion to the levels of volatility, uncertainty, complexity, and ambiguity experienced especially if employees lack the necessary skills and tools to manage turbulence effectively. Employee stress, low moral, and poor engagement levels directly influence an organization's performance and if not dealt with quickly and adequately could affect organizational survival (Abdelzaher

et al., 2017; Hannan & Freeman, 1984). Achieving success in a VUCA world is critical to ensuring continued organizational survival, business excellence, as well as better mental health for employees.

Achieving Success in a VUCA World

In this section on achieving success in a VUCA world is a summary of the literature on what authors believe success looks like in a VUCA world. The section begins with researcher solutions to achieve success, followed by an analysis of the changing concept of leadership, and ends with the new competencies and skills found to be necessary for success in a VUCA world. This discussion helps to build a case for readiness as a critical competency for leaders operating in VUCA environments.

Research Solutions to Success in VUCA

Research articles, books, and management consultant papers on the most viable solutions for achieving success in a VUCA environment exist in abundance. The most common strategy, based on the seminal work of Horney and O'Shea (2002b), is agility. Horney et al. (2010) referred to agile organizations as Velcro organizations, discussed earlier under volatility, due to their ability to transform quickly and creatively depending on the environmental change. Over the years, the authors have revised their definition to include learning from their consulting work in line with continuous improvement principles. The new definition from Horney and O'Shea (2015) is that agile organizations are those that adapt quickly and continuously to changing circumstances in a "focused, fast, and flexible" manner due to the alignment of people, processes, and technology (p. 2). The new definition is richer and more explanatory than the previous one to enhance

leader understanding on the need to align their thinking through all aspects of the organization. For organizations to achieve high levels of agility, the authors developed an agile model containing five research-based competencies, which organizations can use to assess their leaders' capacity to identify the VUCA threat, appropriately respond, and carry along other stakeholders. The competencies include, "**a**nticipate change, **g**enerate confidence, **i**nitiate action, **l**iberate thinking, and **e**valuate results" (Horney & O'Shea, 2015, p. 22). Each first letter helps spell out AGILE, hence the name, The Agile Model.

Several studies and dissertations have used both the concept of organizational agility and the Agile Model to study their efficacy in turbulent markets with much success. For example, Nold, Anzengruber, Woelfle, and Michel (2018) quantitatively studied organizational agility as a diagnostic tool for complex systems. Similarly, Vagnoni and Khoddami (2016) quantitatively studied strategic agility in turbulent environments as a tool for competitive advantage. Sopelana et al. (2014) studied organizational flexibility as a solution for survival in turbulent markets. These three study findings support and confirm the efficacy of agility as a success instrument in turbulent markets. Other studies used adaptability instead of agility, such as Uhl-Bien and Arena (2018) and Vecchiato (2015), to qualitatively study and prescribe solutions for VUCA environments. Conversely, Du and Chen (2018) qualitatively studied the need for organizational ambidexterity as a strategic solution for managing in flux and winning in volatile digital markets by using Alibaba Group and Tencent Holdings as the case studies. The study does not use agility, adaptability, ambidexterity, or the agile model as key constructs for the study due to the exhaustive studies already done.

Another solution for VUCA, utilized by Deaton (2018) and Johansen (2012) is to flip the VUCA acronym from a threat to a solution. Deaton gave **v**alues, **u**s, **c**uriosity, and **a**spirations as pertinent tools for success in volatile, uncertain, complex, and ambiguous conditions. Deaton proposed a combination of the elements when leaders faced VUCA problems. She advanced that *values* grounded leadership to provide a solid footing despite the ever-changing environment for a consistent and sustainable decision-making framework. The concept of *us* helped leaders realize that in great turbulence, great-man theories are inept as ideas and innovations can come from anywhere in the organization, and collaboration was key for survival. Deaton noted that the challenge with VUCA is the surprises it presents to leaders, and observed that her tool of *curiosity* allowed questioning, discovery, and exploration to enhance knowledge and embrace newness. The last tool of *aspirations* boosted leader drive and clarity of purpose to ensure a forward thinking culture that was not stuck in the melee but had the energy and vision to keep moving. The authors core concepts of *curiosity* and *aspirations* enrich key leader behaviors, as they are pertinent to shifting mindsets in highly destabilizing environments. The concepts of *values and us* have been in the business lexicon for several decades with *us* represented under team/teamwork, and hence add little value in terms of novel solutions for VUCA, unless not currently practiced by leaders in the firm.

Johansen (2009) gave compounding Vision, Understanding, Clarity, and Agility as solutions for volatility, uncertainty, complexity, and ambiguity. Unlike Deaton (2018), Johansen's (2009) tools are a direct solution to each VUCA element, such that "volatility yields to vision, uncertainty yields to improved understanding, complexity yields to

clarity, and ambiguity yields to agility" (p. 6). These tools, especially Johansen's, form the foundational understanding of most VUCA studies and other VUCA literature. Some overlaps and misconceptions exist in Johansen's theory with new research on VUCA where authors do not agree with his solutions, such as vision for volatility and agility for ambiguity (Bennett & Lemoine, 2014; Heinonen et al., 2017). The evolution of the study of VUCA could explain the inconsistencies as new studies and new ways of thinking help to change the understanding of VUCA in organizations.

Corporate foresight is a significant subject in any VUCA discussion as it supplants the concept of strategic management, traditionally used as a prediction and planning tool for leaders, which is a debatable solution in a VUCA-world. Foresight offers leaders a tool for future thinking, research, and planning to sense and respond to volatile, uncertain, complex, and ambiguous changes in the VUCA-world (Bereznoy, 2017; Burrows & Gnad, 2018; Jari Roy & Lauraeus, 2018; Millar et al., 2018). Consistent to this thinking, Vecchiato (2015) confirmed the efficacy of foresight and planning in their qualitative multiple case studies of Shell Oil Corporation and Nokia Mobile Phone Company, as discussed earlier in this paper. The author studied only two corporations, which may make the study lack transferability though more studies with different organizations may help bolster the research findings. Researchers demonstrate that practicing strategic management makes leaders base their decision-making on past evaluation, current evidence, and trend assessment for planning, which prove mute in a fast-changing and unpredictable world (Burrows & Gnad, 2018). Foresight is a system of tools that first, entrenches a discipline of variance in the future environment in leaders,

secondly, helps leaders recognize the need to influence the future today, and thirdly to develop foresight collaboration and participative decision-making necessary for comprehensive alternative thinking (Bereznoy, 2017; Millar et al., 2018). Jari Roy and Lauraeus (2018) offered nine foresight tools relevant to success in a VUCA environment.

Below are the nine tools and their functions.

1. Anticipation tools – for risk and emerging markets identification.
2. Interpreting tools – analyze anticipation tool products to create a big-picture.
3. Challenging tools – challenge groupthink, identify alternatives, and amplify signals.
4. Decision-making tools – helps leaders make future-based decisions, use multiple options in decision making, and use challenging tools results to challenge thinking and identify apt alternatives.
5. Aligning tools – help leaders align thinking with stakeholders and bridge any differences arising.
6. Learning tools – engender experimentation, discussed as a solution for ambiguity by Bennett and Lemoine (2014), and deep organizational learning in VUCA times.
7. Combination tools – entrench transcendental leadership within the organization where leaders develop a triple leadership narrative – self, others, and organization.

   (Jari Roy & Lauraeus, 2018, p.45)

Corporate foresight as a VUCA tool helps leaders embrace change, turbulence, and disruption through technology, engendering the whole organization plus stakeholders, and by vacating status quo and bureaucracy to get comfortable with surprise, noise, and chaos. The solution of corporate foresight to achieving success in VUCA is fitting and helps question the readiness of leaders and organizations to adopt new ways of thinking, deciding, doing, and leading in a world where command and control lacks efficiency. Hence, this study.

Collaboration and participative leadership emerge as a recurring thread in the above discussion of achieving success in VUCA environments. In chaotic circumstances, it looks like misery does love company. To illustrate, Bammer (2018) opined that to tackle VUCA problems there was a need to create strategic alliances and strengthen community research to be at the forefront of change. Similarly, Millar et al. (2018) agreed with Bammer (2018) and offered a more exhaustive opinion of how collaboration can help leaders in a VUCA-world. Millar et al. posited that collaboration in VUCA should be a formula comprising ecosystems, integration, interconnectedness, and synergy among the various parts of the organization to take advantage of the separate intelligences, data, and insights in a timely and dynamic manner. Cook (2016) gave the example of Unilever Group who uses collaboration as a VUCA leadership strategy to harness the power of stakeholders for experimentation and to innovate the future.

Dealing with constant change in isolation can be overwhelming even to the most astute employee, with collaboration and sharing, constant change becomes a way of life that teams work through together. Nevertheless, constant change as presented in VUCA

environments does lead to change fatigue and employee stress (Abdelzaher et al., 2017). King and Badham (2018) observed the need for mindfulness as a solution to change fatigue, burnout, and stress caused by disruption and uncertainty. Mindfulness helps leaders to be aware, accept change, be reflexive, and compassionate; and it helps the organization develop resilience, adaptability, and collective wisdom through collaboration (King & Badham, 2018). Mindfulness is a growing management philosophy that is topical in the era of VUCA challenges and the related negative employee consequences, though it falls outside the scope of this study. The solutions discussed for achieving success in VUCA environments imply changing expectations of leadership, leader skill sets, and new ways of thinking.

Changing Concept of Leadership

The VUCA world is a transformational opportunity for leaders to align internal processes with the rapidly changing external environments, a process that will instill resilience and sustainability (Khan, 2015). To do this, leaders need to reframe their thinking and reimagine their operations by unlearning obsolete leadership training and learning new skills, competencies, and new ways of leading and operating. Organizations should build agile structures that are responsive to changing circumstances, hire and train employees who are dexterous, adaptable, innovative, and collaborative, while building strong stakeholder networks to have a pulse on the changing circumstances, and creating cultures that symbolize mindfulness and a higher purpose (Darlington, 2015). Ingenious new concepts of leading and operating are sprouting, offering leaders unique narratives to follow.

The creativity of new leadership styles and operational models emerge from the periphery, mostly technologically oriented firms and from smaller firms due to size, scale, and lack of hierarchies, hence faster decision-making. Laloux (2015) observed that in contrast to larger firms, some smaller institutions disrupted by VUCA elements, strategically renovated both their organizational paradigms and their leadership styles. In his study, Laloux found that three key features defined management in the 21st century. The features included (a) *self-management*--employees had high autonomy to make decisions in their domain and used peer relationships to deliver targets, (b) *wholeness*--leaders embraced whole persons not just the professional person at work, and (c) *evolutionary purpose*--structures evolved based on environmental changes in agile ways that sensed and responded efficiently. These three features are a stark contrast to previous leadership thinking and introduce a new reality vital for winning in a VUCA-world.

Kurki and Wilenius (2016) and Laloux (2015) gave the example of Buurtzorg, a Dutch home care provider that moved from basic nursing services to adopt the three features to provide a holistic solution for patient care. For self-management, the nurses had full autonomy of their location, patients, and made all the decisions pertaining to their work to ensure patients were well cared for and lived an autonomous life. For wholeness, Buurtzorg adopted a human-centric model where the nurses worked in teams without leaders rather, with evolving leadership structures based on expertise, they helped each other to ensure high levels of service, and could be themselves at work. For evolutionary purpose, the teams sensed changes within their environments and responded appropriately and swiftly; they did not need to consult upwards as long as they aligned

with the larger organization's perspectives. Buurtzorg exceeded all financial targets by embracing change and adopting new concepts of managing and operating. Laloux's study reviewed ten organizations practicing this new thinking and each company exceeded performance targets compared to peer organizations.

Self-organizing, as seen with Buurtzorg, is quickly gaining traction due to the advantage it presents in turbulent times, that of faster decision-making due to flatter organizations. Self-organizing requires fluid structures that replace hierarchies where decision-making and power lies within the network, it creates efficiency by utilizing emergent technologies to adapt nimbly and enhances organizational interaction for collaboration (Kurki & Wilenius, 2016; Laloux, 2015). A germane example of a type of self-organizing model is *holacracy*, famously popularized by Zappos, where employees are intrapreneurs with multiple roles, work in networked teams called circles, the organization is flat, and decisions are made fluidly in the circles which band and disband based on real-time demand (Robertson, 2015). In holacracy, even the usual leadership terminologies cease to exist to reflect new ways of leading and thinking. For example, the term manager, the person leading the circle, becomes the lead link and the teams responsible for employee growth are mentors (Robertson, 2015). Holacracy demonstrates creative management that is unusual in an unusual world. However, the authors fail to demonstrate how larger organizations with hierarchies and processes that have been institutionalized over many years can adapt to principles of self-organizing, wholeness, and evolutionary purpose.

The above new models of management display a high dependency on collaboration, partnerships, and trust as an important advantage in achieving success in VUCA environments. There is a new realization that intelligence is decentralized and not necessarily only found at the top of the pyramid or the higher echelons of the organizational hierarchy. Authors refer to this as distributed intelligence or swarm intelligence (Karaboga, Gorkemli, Ozturk, & Karaboga, 2014). Borrowed again from the margin, distributed or swarm intelligence, helps leaders learn from social insects, such as bees, ants, and termites, key skills of self-organizing and decentralized management.

The insects operate in efficient and effective social networks guided by peer-relationships, spontaneous leadership, autonomy, and the ultimate goal of safeguarding the needs of their respective colonies (Karaboga et al., 2014). As with holacracy, the insects evolve in responsibility as the needs of the colony evolve, the evolution is fluid and random following no set rules to ensure an appropriate response to fulfill the current need and promote resilience (Karaboga et al., 2014). Natural resources have existed for many centuries and borrowing crucial efficient mechanisms from nature may promote simple yet powerful solution to everyday leadership challenges. Other authors in technology-related fields agree and utilize swarm intelligence in algorithms, brainstorming, data collection, solution creation, and in mobile network protocols for the Internet of Things (Agnihotri, & Ramkumar, 2017; Cheng, Qin, Chen, & Shi, 2016). Swarm intelligence in a VUCA world can help leaders to increase efficiency, innovation, communication, knowledge, adaptability, resilience, and sensemaking to manage

turbulence and evolution. No study has so far linked swarm intelligence and VUCA, creating an opportunity for future research.

Studies in leadership styles have gone full circle from execution focused leadership styles, such as transactional leadership to dual focused leadership styles where leaders balance people and work strategies, such as transformational and authentic leadership to leader based styles, such as visionary leadership and to employee based styles, such as servant leadership (Curtis, 2018; Sarkar, 2016). The notion of leadership style in the age of constant and abundant change is mutating once more in line with the changing circumstances, with several authors specifying new leadership styles for the VUCA world. The underlying philosophies of the new leadership models are a greater sense of stakeholder collaboration, moral management, sustainability, and systems thinking. Vielmetter and Sell (2014) described leadership under VUCA conditions as more of a social practice than a control, rank, and perform function. The authors highlighted the three distinguishing features of leadership in the new era as (a) relationship building and adept stakeholder engagement, (b) high moral values, metacognition, and self-awareness, and (c) complexity management, tactical thinking, and execution. However, only the third feature seems to be new as the former two, save from metacognition, form part of management philosophies over time.

Few authors agree on the one best leadership style for complex, chaotic, and turbulent environments. Following is a brief discussion of the five most discussed leadership styles that support constant change and leading in uncertainty. First, altrocentric leadership, proposed by Vielmetter and Sell (2014), which specifies

leadership being about the other (altro in Latin means other) and directly follows the authors thinking of leadership as a social practice to cope with high levels of change. The authors referred to VUCA as the perfect storm that leaders needed to brave and shifting the focus of leadership to managing through others is a radical new shift in thinking and doing for leaders currently used to holding all the cards in high positions of power. Vielmetter and Sell added that altrocentric leaders did not just focus on others; they also had to be adept listeners, emotionally open, empathetic, and intellectually curious. The beauty of this leadership style is that there is strength in numbers and creating good solid relationships cushions the impact of change by ensuring solidarity and well-thought-out decision-making.

Second, cloud leadership, discussed by Rodriguez and Rodriguez (2015) who considered VUCA leadership from the metaphor of a cloud. The authors borrowed the word *cloud* from the technology world where users save documents in personal clouds for access from anywhere and from any device. Cloud leaders are easily accessible with a direct, clear, and open line of communication hence the name cloud. The authors viewed the changing landscape defined by VUCA, retiring baby boomers, and increasing millennials in the workplace as a turning point for leadership. Johansen and Euchner (2013) agreed with Rodriguez and Rodriguez (2015) that millennials formed a major success factor in managing VUCA, as they were “digital natives” (p. 13). Johansen and Euchner defined digital natives as those comfortable with technology as they had grown in the digital age and had digital competencies that allow great innovative thinking, an important requirement for a VUCA world. Cloud leaders discover, build, and harness

individual dynamics to unleash positivity and energy that brings out the best in every employee (Rodriguez & Rodriguez, 2015). Cloud leaders also develop individuals based on each person's predicament and motivations towards a network of individuals who converge to form strong collective teams. Like Vielmetter and Sell's (2014) altrocentric leadership, cloud leadership embodies open leadership, collaboration, and the concept of entrusting others. The cloud metaphor in leadership borrows again from the margin to indicate the evolution of the field of management.

Third, complexity leadership, popularized by Uhl-Bien and Arena (2018) as a more direct form of leadership for VUCA dynamics in that it demonstrates how leaders can directly cope with complex environments. Complexity leadership encompasses a leadership style that enables dynamic interaction, adaptability, and the emergence of solutions from the system to seamlessly perform at high levels through transformation and innovation (Uhl-Bien & Arena, 2018). Using organizational adaptability as the key success factor for complex environments, the authors divided the role of a leader into three key categories. First, entrepreneurial leadership, leaders work to create sustainability through exploration. Second, enabling leadership, the leader's role is to create and nurture the adaptability systems and processes for the organization to sustain emergence. Third, operational leadership, the leader here exploits the firm's structures, processes, and systems to deliver efficiency through meticulous selection and execution. Du and Chen (2018) agreed with Uhl-Bien and Arena (2018) on the need for ambidexterity in VUCA leadership where organizations needed both the strategies of exploration and that of exploitation.

Fourth, responsible leadership, by Sarkar (2016), which combines transformational, servant, and authentic leadership to define a leadership style that represents people, learning, ethics, partnerships, and corporate social responsibility. The author observed that with responsible leadership, change was easier to manage due to the high levels of exchange created among all stakeholders who have a mutual benefit for the organization's performance and sustainability. Responsible leaders set high ethical standards, create strong networks, are humble, intelligent, and include others in decision-making. Responsible leadership draws many parallels with altrocentric leadership with both their foundational reality being leadership strengthened by humility and cooperation.

Fifth, transcendental leadership, often confused with spiritual leadership, exemplifies a type of moral management system that seeks to achieve a triple bottom line agenda (people, profit, planet) for a sustainable world (Barney, Wicks, Otto-Scharmer, & Pavlovich, 2015). Transcendental leadership has been heralded as the best emergent leadership style for the challenges of the 21st century due to its theory on wholeness where the concepts of spirituality, self, others, and organization play primary roles in leadership (Barney et al., 2015; Jari Roy & Lauraeus, 2018). Tehubijuluw (2014) in her quantitative study additionally concluded that transcendental leaders delivered superior performance through the generation of worker job satisfaction and happiness. Through others, transcendental leaders created emergent environments fostered by learning, spirituality, and transcendent motivations to fashion creativity in dealing with complexity through integrity, humility, love, courage, and healing (Barney et al., 2015). The five new leadership styles straddle the need for adaptability with the need for sustainability, which

addresses a developing leadership challenge for morality in a capitalist economic environment muddled with turbulence. New leader styles portray an expectation of new leader competencies and skills that proportionally support the new styles as discussed next.

New Competencies and Skills

The changing environment together with the chaos and unpredictability brought about by the incessant change requires organizational leaders to think and work in different ways than they did in more stable environments. Employers are looking for people who possess critical survival instincts to perform effectively in unpredictable and unknown scenarios (Horney et al., 2010; Tint et al., 2015). Tint et al. qualified this expectation by giving seven new expectations of employees in an ever-changing world. The seven employee competencies include:

1. People who can take necessary and strategic risks
2. People who are good in error recovery instead of failure evasion
3. People who can stay calm and focused in the midst of challenges
4. People who can possess multiple dimensions of a situation at once
5. People who can thrive in the unknown
6. People who can collaborate and communicate effectively with others
7. People who can problem solve quickly in the face of uncertainty

   (Tint et al., 2015, p. 74)

The authors observed that the people who possess the above seven characteristics can thrive in a VUCA-world as they have resilience and survival instincts as foundational

characters. Tint et al. opined that experiential training was relevant to teach current employees the above seven competencies as theoretical knowledge rarely translated into practical competency. The use of technological gamification (García et al., 2017; Johansen & Euchner, 2013) and applied improvisation (Tint et al., 2015) are new learning tools in VUCA environments that require stability of mind, clarity, and focus on the most critical issues to adapt in agile ways. A challenge exists in the current reality of leadership training in institutions of learning and in corporate training as the seven competencies do not come naturally for all people and require external stimulation to possess.

The employee competencies discussed by Tint et al. support Johansen's (2012) view that today's leaders required new skills to thrive and succeed in VUCA. Johansen is one of the most significant authors on VUCA as a management challenge and the seminal author of the ten leadership skills needed for VUCA leadership. Several VUCA authors in their articles, books, and dissertations widely share and discuss the ten skills as key skills for leadership in the 21st century where leaders operate in high-pressure environments. The ten skills include:

1. *Maker instinct* – "the ability to exploit inner drive to build and grow things, as well as connect with others in the making" (Manders, 2014, p. 114).
2. *Clarity* – "the ability to make sense of clutter, to see through messes and contradictions to a future that others cannot yet see" (Johansen, 2012, p. 47).
3. *Dilemma flipping* – "the ability to turn dilemmas, which unlike problems, cannot be solved, into advantages and opportunities" (Manders, 2014, p. 114).

4. *Immersive learning* – "the ability to immerse yourself in unfamiliar environments, to learn from them in a first-person way" (Manders, 2014, pp. 114-115).
5. *Bio-empathy* – "the ability to see things from nature's point of view; to understand, respect, and learn from nature's patterns" (Manders, 2014, p. 115).
6. *Constructive depolarizing* – "the ability to calm tense situations where differences dominate and communication has broken down and bring people from divergent cultures towards constructive engagement" (Johansen, 2009, p. 88).
7. *Quiet transparency* – "the ability to be open and authentic about what matters to you without advertising yourself" (Johansen, 2009, p. 101).
8. *Rapid prototyping* – "the ability to create quick early versions of innovations with the expectation that later success will require early failures" (Manders, 2014, p. 115).
9. *Smart mob organizing* – "the ability to create, engage with, and nurture purposeful change networks through intelligent use of electronic and other media" (Johansen, 2009, p. 125; Manders, 2014, p. 115).
10. *Commons creating* – "the ability to seed, nurture, and grow shared assets that can benefit other players and sometimes allow competition at a higher level" (Johansen, 2009, p. 135).

The 10 leadership skills do not replace the standard leadership skills but complement them to provide for leader effectiveness when faced with volatile, uncertain, complex, and ambiguous changes in the operating environment. To move past the pressure, surprise, and stress caused by VUCA dynamics, leaders need to learn these new skills as they prepare leaders for survival and to realize the latent opportunities present in the chaos (Johansen & Euchner, 2013). As with businesses, leaders must reinvent themselves in line with the changing times by updating their skills to remain relevant in a VUCA environment.

In reviewing the VUCA literature, there are key mentions of the need for readiness as a critical competency in VUCA. Key authors in the VUCA literature, observed the need for a readiness discipline, which helped leaders to anticipate change, prepare for the unknown and practice continuously to develop mental and physical fitness to survive and reduce noise in an intimidating VUCA environment (Horney & O'Shea, 2015; Johansen, 2012; Johansen & Euchner, 2013). Studies in readiness have not used VUCA as a lens to determine the efficacy of readiness in turbulent environments, creating a gap that this study hopes to fill. Next is a discussion of why readiness is a required competency in a VUCA world.

Readiness as a Critical Competency in VUCA

The VUCA leadership competencies and skills described in the previous section imply a form of readiness in leaders to possess the enthusiasm to pursue excellence despite the odds. With only 18% of leaders being ready to lead in a VUCA world, readiness becomes a critically necessary competence for leaders in the 21st century (DDI,

2015). Burt et al. (2017) defined readiness as an open disposition where people have the capacity to work effectively with the "competing narratives, dilemmas, tensions, and differences of opinion" present in VUCA business environments (p. 17). The authors explained that having an open disposition is whereby an individual is able to remain comfortable in difficult situations and conversations to live and work through complexity, paradox, and ambiguity in a non-defensive manner. There is confusion that comes with conflicting tensions in an unstable situation, and often, clarity and performance can suffer if teams are not ready and expectant of the volatility, uncertainty, complexity, and ambiguity that come with VUCA challenges. To weather the storm that VUCA challenges present and manage crisis efficiently, Kayes (2018) observed that both leaders and employees needed to be ready to balance the opposing demands and act decisively. Decisive action, maturity, and calmness symbolize a readiness culture in turbulent environments.

One of the success factors for leading in a VUCA world is the competency to anticipate, sense, and respond to changes, which implies that leaders are ready to modify with shifting circumstances and define winning parameters in agile and innovative ways. To do this, Cook (2016) stated that in a VUCA world, employees needed to bring their minds, hearts, and souls to work to excel in a quickly transforming environment and remain resilient. Essentially, to be fully present or have readiness (Johansen & Euchner, 2013). Employees in VUCA environments require possessing self-control in stressful situations through cognitive readiness (Bawany, 2016). Bawany postulated that cognitive readiness included "situational awareness, attentional control, metacognition,

sensemaking, intuition, learning agility, adaptability, dealing with ambiguity, and managing emotions" (p. 40). Despite the extensive scope of these cognitive readiness elements, it is imperative for leaders to competently articulate them to be able to systematically anticipate wild cards and black swans in VUCA environments. Readiness prepares leaders and their teams for the novelty and stress-related issues present in a VUCA world.

Leader readiness in VUCA environments enables antifragility and resilience in the face of tremendous pressure. Readiness goes hand in hand with sensemaking, which is a core leadership competency for leaders in contemporary VUCA environments. Sensemaking is where leaders use context driven judiciousness to make sense of increasing turbulence and evolving situations (Salicru, 2018). Without possessing readiness, that is, the skill to work with competing narratives, growing tensions, and ever-present dilemmas through metacognition, emotional management, and learned intuition, then it would be difficult to make rational sense of continuously moving targets (Bawany, 2016; Burt et al., 2017). To make sense of clutter, anticipate, sense, and respond effectively to VUCA, leaders and their teams need to have VUCA readiness. PepsiCo in their six enabling strategies to win in a VUCA world have listed "the pursuit of readiness" as the third critical enabler, among business agility, strategic workforce planning, gathering and using data, the learning organization, and talent management stability (Sundarajan, 2018, p. 3). The fact that companies such as PepsiCo identify readiness as a necessary competence for contemporary leaders gives credence to this study on leader readiness in VUCA environments.

In change management, change readiness is a key success factor that strongly influences the success or failure of change projects (Matthysen & Harris, 2018). Change readiness is a multifaceted concept where for employees to be ready for change, they have to engage emotionally, mentally, and intentionally (Matthysen & Harris, 2018). The authors additionally added that for employees to have emotional, mental, and intentional readiness for change they required to trust in the change process, the leadership, and have personal commitment to the organization. Similarly, to attain VUCA readiness, there has to be unequivocal clarity in terms of the influencing factors that enable a high level of readiness to emotionally, mentally, and intentionally engage constructively in continuous turbulence. The lack of clear definitive factors of VUCA readiness is the gap this study hopes to fill. Uhl-Bien and Arena (2018) posited that in VUCA conditions few understood the concepts of positioning and enabling organizations and employees to adapt to changing circumstances. The study findings hope to contribute to enhancing that understanding.

Summary and Conclusions

The term VUCA originated from the U. S. Army War Academy to denote significant changes in the war arena brought on by increased globalization, technology, and new nimble enemies that deviated from the norm. The NextGen warfare triggered a realization that the current conditions required new thinking, new tools, and new learning to win in a volatile, uncertain, complex, and ambiguous military environment. Similarly, the same effects of globalization, technology, and new nimble competitors afflicted the organizational environment creating immense pressure for leaders due to unprecedented

change and disruption. The term VUCA entered the business lexicon, fashioning a new way of thinking, learning, and doing that questioned conventional leadership models and linear thinking that business leaders had learned in business schools. Several studies offered solutions on how leaders could achieve success in VUCA environments, such as new leadership models, novel leadership skills and competencies, and new learning and development tools.

In the literature review, several gaps emerged as VUCA studies are still in their infancy. The first was that of scant VUCA studies in Sub-Saharan Africa as most VUCA studies were in the developed world. The second gap is the lack of studies linking swarm intelligence and self-organizing leadership models to VUCA troubled organizations. The third gap was that most studies and VUCA authors identified readiness as a critical competency in VUCA, though a search of the literature did not yield any research studies on readiness as a VUCA competency. The study aims to fill two of the identified gaps in the literature review that of studying VUCA in Nigeria, a Sub-Saharan country, which as per the literature review fits the definition of a VUCA environment. The second gap this study hopes to fill was that of readiness as a critical competency for VUCA. Developing readiness to cope with VUCA allows leaders to thrive effectively in high-pressure environments and reduce the associated stress levels.

Most studies reviewed in the literature review are quantitative in nature and others are qualitative case studies, creating an opportunity to study VUCA phenomenologically. The study uses a hermeneutic phenomenological research design in a bid to capture leaders contextual lived experiences as proposed by Choain and Malzy, to understand

VUCA from a management perspective as discussed by Nandram, and to increase enabling strategies for leaders as suggested by Uhl-Bien and Arena. Chapter 3 contains the rationale for choosing this research design, the methodology, issues of trustworthiness, and ethics procedures.

Chapter 3: Research Method

The purpose of this hermeneutic phenomenological study was to explore the lived experiences of Nigerian corporate executives about their VUCA business environment and the strategies they employ for VUCA-readiness within the manufacturing industry. Chapter 3 includes the research design and rationale, the role of the researcher, methodology and instrumentation, pilot study, data analysis plan, issues of trustworthiness, and ethical procedures.

Research Design and Rationale

The overarching research question for this study was:

What are the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment?

The research question guided the choice of the research method and design (Miles, Huberman, & Saldana, 2014). In this study, the research question reflected a search for the lived experiences of a select sample with experience in the central phenomenon of VUCA. Lived experiences are a feature of phenomenological research designs, which are qualitative in nature, as lived experiences help provide a deeper and richer understanding of a specified phenomenon (Kafle, 2013; Moustakas, 1994). The search for deeper understanding excludes the use of the quantitative research method, which uses numeric data in statistical formats to test variables and support or refute set hypothesis (Apuke, 2017). Qualitative research is non-numeric in nature and involves the collection of data in the form of rich descriptions to give meaning to a chosen

phenomenon (Gaus, 2017). The intent of this study was to elicit rich descriptions for in-depth knowledge and thereby rationalizing the use of qualitative research.

Qualitative research comprises several research approaches, namely, case studies, grounded theory, narrative inquiry, ethnography, and phenomenology, to name the most commonly used (Patton, 2015). The use of case studies was a possible research approach due to its in-depth inquiry and descriptive nature of complex issues, yet it was excluded because the focus of the study was on individual's lived experiences and not on cases with multiple sources of data (Yin, 2018). The intention of this study was not to generate theory to explain a process or event and thus grounded theory did not align with the research purpose (Corbin & Strauss, 1990). The collection of stories from the worldview of one or two participants, as is the case with narrative inquiry, may not provide this study with sufficient comprehensive data required to understand complex and turbulent markets, and therefore was not considered (Clandinin, 2006). Ethnography is the study of culture and its influences, which precludes it as a possible research design, as this study is not about culture or its influences (Hoey, 2014). Phenomenology aligns with both the research purpose, the research question, and rationally emerges as the most appropriate approach.

Phenomenology has three distinct types of designs: transcendental, existential, and hermeneutic. Transcendental phenomenology is the most popular form of phenomenological research. Transcendental phenomenologists, such as Moustakas, believe that researchers have to use reduction and bracketing to allow participant responses to guide a study's findings (Kafle, 2013; Moran, 2000). In transcendental

phenomenology, the researcher describes the experiences of the participants free from judgment or interpretation due to bracketing of the researcher's biases and opinions (Laverty, 2003). In this study, there was a need to examine multiple realities to answer the research question by interpreting data, which inherently means that reduction was not possible. Gadamer (1976) and Ricoeur (1981) stated that it was impossible to apply the concept of reduction in a research process chosen by the researcher and hence the decision to eliminate the use of transcendental phenomenology. Existential phenomenology is the most recent form of phenomenological research, which rejects the Husserlian school of thought of reduction, bases experiences on human existence, and is often confused with hermeneutic phenomenology (Kafle, 2013). de Vries and Berger (2017) stated that existential phenomenologists believed that the researcher, and more widely human beings, and the world have a reciprocal and circular relationship, which informs the understanding of the lived experiences. This study did not use existential phenomenology mainly due to a lack of sufficient information on its use in leadership studies and the many parallels with hermeneutic phenomenology.

Heidegger (1962), who similarly rejected Husserl's concept of reduction, popularized hermeneutic phenomenology. Heidegger observed that to understand a phenomenon, a researcher should interpret, not merely describe, the data and argued the impossibility to bracket previous learning as appraised by Husserl. Hermeneutic phenomenologists believe that an individual's history forms part of the interpretive process whereby prior experiences and knowledge influences the interpretation of experience or phenomenon (Laverty, 2003; van Manen, 2016). Gadamer (1989)

discussed the fusion of horizons in hermeneutic phenomenological studies, where the researcher aims to reach new understanding through the fusion of their knowledge with that of the study participants. The importance of this fusion is in the collaborative nature of the research, which introduces rigor to the study and new knowledge to enhance the understanding of a phenomenon. The individual participant's experience, the collective experience of other participants, together with the researcher's theoretical knowledge means using hermeneutic phenomenology helps form dense textual descriptions of a phenomenon to enhance meaning (van Manen, 1997).

Hermeneutic phenomenologists consider subjective individual and group experiences in context and by using the hermeneutic circle they comprehensively question and analyze the parts and the whole of the participants' world to interpret meaning (Gadamer, 1976; Heidegger, 1962; Kafle, 2013). Gadamer (1976) related hermeneutic phenomenology to a work of art as it incorporated both theory and practice to complete the circle of understanding. To grasp fully the VUCA experience of the participants as they live it, there is a need to analyze text and language to unveil both concrete and trivial experiences, reveal preconceptions and pre-understanding based on reality, and then interpret the experiences circularly and in context (Gadamer, 1976; Heidegger, 1962; van Manen, 2016). Therefore, an interpretive paradigm forms the foundation for this study and aligns the study's methodology to that of hermeneutic phenomenology.

To summarize, the use of hermeneutic phenomenology aptly fits the purpose and intent of this study as participants lived experiences interpreted in context would yield

richer data for analysis. Using hermeneutic phenomenology helps the researcher to appreciate unique participants and the meaning they attribute to a specified phenomenon and further understand the interaction of these individuals and their environment (Lopez & Willis, 2004). Volatile, uncertain, complex, and ambiguous business environments challenge leaders and using hermeneutic phenomenology may help the researcher gain deeper understanding of both leader experiences and the contextual contribution to those experiences.

Role of the Researcher

The role of the researcher in the study was that of an observer. I have no conflict of interest or coercive opportunities with the intended participants of this study, as I neither work in the manufacturing sector of Nigeria nor have direct personal access to practitioners in that sector. The choice of VUCA as the phenomenon of interest in this study was due to curiosity on the impact of turbulence on the manufacturing sector; a sector earmarked for the country's GDP growth. By using purposive and snowball sampling, no conflict or coercion to participate was possible from the researcher as participants volunteered to participate directly or through recommendation by their peers. Additionally, no ethical issues related to peer pressure arose, as I do not know the participants, work with them or in their sector, and do not intend to offer financial or other rewards for participation. The intended participants were not minors and did not intentionally belong to vulnerable groups.

In qualitative studies, there is a connection between the researcher's role and the research process as the researcher is involved in the choice of study, recruitment of

participants, the collection of data, and in the data analysis process as both an observer and instrument of the research (Patton, 2015; van Manen, 1997). To bracket fully or remove the researcher's personal prejudice from the research process is impossible in hermeneutic phenomenology, as postulated by Heidegger (1962). Additionally, Ginev (2017) posited that the role of the researcher in hermeneutic phenomenological studies is dialogical in that, there is a comingling of the researcher's interpersonal subjectivity with their existential facts, which affects their understanding and interpretation. Thus, self-awareness is a critical concept in the interpretation and understanding of hermeneutic phenomenological studies as it helps reduce researcher bias, through the process of questioning and reflexivity (Gadamer, 1989). As such, the role of the researcher is to ensure an understanding of how personal history affects the conduct of the research, collection of data, and use the hermeneutic arc as suggested by Ricoeur (1981) to move back and forth between explanation and understanding to interpret the data objectively. To ensure that during interviews, the researcher did not interrupt or contribute to the participant's responses and maintained an air of neutrality.

Methodology

In this section, a discussion of the sequential steps as pertains to the participant selection logic, participant recruitment, the data collection instrument, and the data analysis plan for this study follows. Figure 1 below graphically summarizes the flow of events to provide an overview of the research approach.

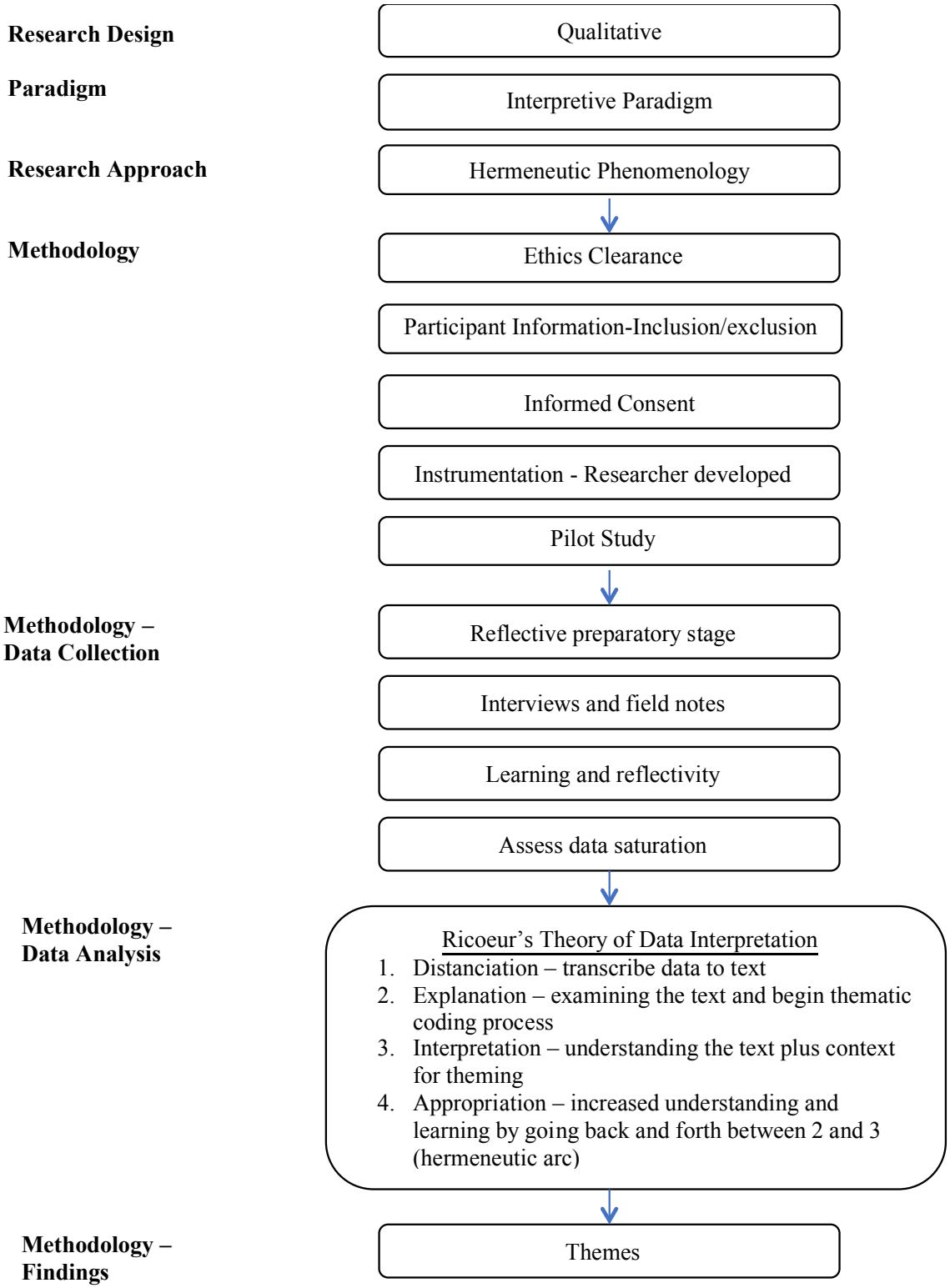

Figure 1. Flowchart displaying the research approach for the study.

Participant Selection Logic

Interviews with 15 corporate executives in the Nigerian manufacturing sector, informed the study. The Nigerian manufacturing sector hence formed the target population. The study focused on understanding the lived experiences of these corporate executives about their VUCA business environment and how they prepared for VUCA. Hycner (1985) observed that in phenomenological studies the phenomenon under study dictated the method (not the method dictating the phenomenon) including the type of participants for the study. A focused sampling strategy helped to narrow down the number of possible participants to ensure the selection of information rich cases through the identification of manufacturing professionals who had lived experiences of VUCA (van Manen, 1997). Van Manen described information rich participants as those who are diverse enough from one another as to provide unique perspectives of their experience to enrich the research findings.

To achieve this diversity, the primary participants were purposively selected from the various sectors within the manufacturing industry, which included, fast moving consumer goods, brewing, cement, pharmaceuticals, packaging, chemicals, metals, tobacco, and food manufacturers among others. The Manufacturers Association of Nigeria has over 3,000 local and multinational corporate members in all the various categories, forming a rich and varying pool for the selection of primary participants. Majority of corporate executives in Nigeria are also members of the Lagos Chamber of Commerce and Industry, another rich pool for primary participants.

The sampling criteria was organizations operating in Lagos, Nigeria for ease of interviewing and access to executives as the majority of manufacturing companies have their head offices in Lagos. Contact with the Manufacturers Association of Nigeria and the Lagos Chamber of Commerce and Industry was carried out after the approval process to request access to members who formed the primary sample. The selection criterion for participants was corporate executives with at least five years of leadership experience in positions of decision-making that had experienced VUCA. The year 2016 was a significant year for the manufacturing sector of Nigeria and the effects of VUCA to the sector were especially grave (*Business News, Nigeria,* 2016; *Premium Times, Nigeria,* 2017). Ensuring that the participants were working in a manufacturing company in that year provided access to information rich cases.

Snowball sampling was used to achieve a sample size of 15 participants. Data saturation is the point during data collection when the researcher starts hearing the same responses from interviewees, thus no new ideas become forthcoming (Guest, Bunce, & Johnson, 2006). To achieve the point of data saturation, Guest et al. observed that 6-12 interviews were sufficient if purposive sampling guided the selection process, as the choice of participants is explicit to meet the research purpose. For this study, purposive sampling was used to select the primary participants with snowball sampling helping to garner secondary participants to achieve the set sample size of 10–15 participants. Snowball sampling is a type of purposive sampling (Patton, 2015), hence qualifying the use of 10–15 participants for this study as discussed by Guest et al. Snowball sampling is a process where the researcher requests each of the primary participants to propose

another corporate executive/s with experience on the phenomenon under study (Babbie, 2017; Waters, 2015). Snowball sampling adds a layer of impartiality to a study as it ensures the researcher, through a snowball effect, has access to participants they may not have had access and/or influence.

The sample size of 10–15 was informed by reviewing current hermeneutic phenomenological studies, such as Alharbi, McKenna, and Whittall (2019) who used 8 participants, Clur et al. (2017) who used 8 participants, Coates (2017) who used 5 participants, Mjorud, Engedal, Rosvik, and Kirkevold (2017) who used 12 participants, and Sibanda and Ramrathan (2017) who used 12 participants. The number of the participants was also consistent with hermeneutic phenomenological philosophers; for example, Laverty (2003) noted that the point of saturation should guide the number of participants in a hermeneutic phenomenological study. Dukes (1984) posited that a sample of one was theoretically sufficient while Polkinghorne (1989) observed that the number of participants in hermeneutic phenomenological studies varied with studies using 3-325 participants.

The identification of primary participants was through access to the Manufacturers Association of Nigeria and the Lagos Chamber of Commerce and Industry databases. An e-mail sent to the Manufacturers Association of Nigeria and to the Lagos Chamber of Commerce and Industry to send to its members giving a synopsis of the study, its importance to the manufacturing sector, participant selection criteria, and the researchers contact details for interested participants. From the responses, I e-mailed the executives to request their basic details to ensure they meet the minimum inclusion

criteria. Subsequently, I selected corporate executives who meet the 5-year in leadership criterion and who were working in the manufacturing sector in 2016. I then e-mailed them separately with further information on the study, the length of the face-to-face interview, and details of the informed consent procedure to gauge definite interest. Once they responded confirming interest, I recruited them by e-mailing the informed consent and confirming the study's ethics process, which gave them the right to terminate participation at any time, provided them with confidentiality, and stipulated anonymity throughout the research process.

Instrumentation

Instrumentation specifies a method of data collection (Miles et al., 2014). In hermeneutic phenomenological studies, the researcher is the principal data collection instrument and in this study, the researcher used an interview guide as the instrument of data collection. Polkinghorne (1989) observed that interviews in hermeneutic phenomenology studies enhanced the relationship between participant and researcher to create a vital embodied relationship of care and trust that allowed the generation and interpretation of rich text and data.

An exhaustive search of the literature did not yield an interview instrument appropriate for the study. Therefore, to facilitate the interviews, a researcher developed interview instrument guided the process. The interview guide included seven open-ended interview questions as shown in Appendix A. The questions aligned to the research question to ensure data collected was sufficient to answer the overarching research question. Open-ended research questions are essential to the hermeneutic phenomenology

research paradigm as they help generate openness, which permits participant responses to remain true to the lived experience (Laverty, 2003; Vagle, 2014). The interview guide serves as an instrument that augments the data collection process to ease participant and researcher relationship by providing guidance and setting precedent, it helps ensure relative harmony between the various interviews, and data collected is in alignment with the research question (Rubin & Rubin, 2012). To ensure content validity, a pilot study using two pertinent participants assisted the alignment between the research question and the interview questions as well as helped review the interview questions for sufficiency and participant ease of understanding. The final interview guide included the learning from the pilot study.

The conceptual framework, the literature review, and the hermeneutic phenomenology research methods guided the development of the seven structured interview questions for this study, shown in Appendix A. The first question is a general question on the participants' perception of VUCA, the principal phenomenon under study, asked to squarely set the basis of the interview on turbulence in the business environment. The question is an easy start with a broad focus as recommended by Rubin and Rubin (2012) and helps answer the research question on leader perceptions of VUCA. In the literature review, several authors discussed the need for a deeper understanding of VUCA from leaders' perspectives, and the first question was a response to this invitation, to seek a management understanding of VUCA and specifically fill a gap in understanding VUCA from an African perspective (Bennett & Lemoine, 2014; Choain & Malzy, 2017; Nandram, 2017).

The second question focused on the executive's organization and its current operations in a highly turbulent environment. Using the understanding of chaos theory as discussed by Burns (2002), one of the conceptual frameworks for this study, the second question is asked to seek an understanding of how the organization copes under duress and the operational responses applied by its leaders to combat VUCA. The third question centered on strategic initiatives that led to critical successes in difficult working environments, to highlight key winning VUCA strategies. The question aligns with Saleh and Watson's (2017) business excellence in volatile, uncertain, complex, and ambiguous (BEVUCA) conceptual framework as the responses may denote important strategies employed by leaders experiencing turmoil in the operating environment.

The fourth question helped drill deeper into the changes made to the strategy setting process to cope with VUCA, which is important to underscore change management initiatives in today's rapidly changing environment. The fourth question is especially imperative as the Nigerian business environment experiences rapid-fire changes caused by several internal and external pressures (Ehie & Muogboh, 2016; Ojo & Ajayi, 2017). Mr. Yaw Nsarkoh, the executive vice president of Unilever Ghana and Nigeria, in an article he wrote on VUCA in the Nigerian market, pointed out that VUCA in Nigeria was not a conceptual thought but an every day, week, and monthly manifestation. The fifth question allowed the interviewer to shift the conversation to VUCA readiness, one of the elements of the research question. The main gap identified in this study is that only 18% of leaders were ready to lead in a VUCA world (DDI, 2015).

The fifth question helped fill this gap as it seeks leaders' perceptions of what readiness constitutes in a volatile and complex market.

The researcher in the sixth question inquired on vital skills necessary for leadership in volatile and complex markets, to realize any skill differences between VUCA leadership and traditional leadership. The question follows Johansen's (2012) 10 new leadership skills necessary for operating in a VUCA world. It would be informative to compare Johansen's list with that of Nigerian organizational leaders and further seek an understanding on areas of congruence and divergence, a fundamental requirement in data interpretation using the hermeneutic phenomenological arc (Ricoeur, 1981; Tan et al., 2009). The seventh and last question, helped close the interview by finding out what had been important to the executive in working in a turbulent and volatile environment. Asking the last question is in a bid to capture any other information the participant may wish to share not covered by the previous questions (Rubin & Rubin, 2012). The interviewee in the last question discussed important issues novel to the study, therefore providing new insights.

The unstructured part of the interview was the follow-up questions and probes, guided by the responses from the participants to seek clarity or request further information. The difference between probes and follow-up questions, is that probes help with elaboration, interpretation, and clarification while follow-up questions help fill gaps, bring out new ideas emerging from the interview, and ensure the interviewee answers the main question asked (Rubin & Rubin, 2012). In hermeneutic phenomenology, the recommendation is to use of general prompts, such as *Would you like to tell me more*

about that or *What was the impact of that*, to clarify unclear, contradicting, or vague responses (Tan et al., 2009). The key is not to write down the probes but to let the responses from the participant guide the probes and hence the unstructured part of the interview guide.

A week before the face-to-face interview, the participants received an e-mail containing the interview questions to allow them time for preparation and introspection. The interviews were audio taped to capture the participants' responses verbatim and recording permits the researcher to engage fully in the communication process instead of scribbling responses. Tan et al. (2009) supported the use of audiotapes in hermeneutic phenomenological interviews for ease of transcription, tone and nuance appreciation, and recommended the use of interview transcripts to capture nonverbal cues. During interviewing, van Manen (1997) established the importance of paying attention to silence to understand what may be taken for granted, which he observed was normally hidden in the different types of silences and advocated for the use of interview transcripts to capture these crucial responses. As such, the use of interview transcripts formed another data collection instrument for this study to capture nonverbal cues.

Pilot Study

Pilot studies help qualitative researchers to test researcher-developed instruments, protocols, and instructions to ensure success in the main study. Conducted before the main study, the pilot study assists the researcher to practice their interviewing skills, the friendliness of the research instrument on potential participants, as well as refine the study's methodology (Schachtebeck, Groenewald, & Nieuwenhuizen, 2018). Alignment

of the interview questions with that of the research question is another key role of conducting pilot studies, a necessary step to ensure the achievement of the research purpose. The pilot study utilized two corporate executives working in the Nigerian manufacturing industry in line with the participant criteria for the main study.

An e-mail to the Manufacturers Association of Nigeria and the Lagos Chamber of Commerce and Industry helped to achieve the two pilot study participants as a way to check the fitness of the study methodology on participant recruitment. The data collection method for the study was face-to-face interviews conducted at the participants' premises or a mutually agreed conducive location. The participants signed an informed consent then proceeded to the interview questions as shown in Appendix A. Feedback received on question structure, ease of understanding the study's purpose, and overall responses towards the attainment of the research purpose was used in modifying the interview protocol in readiness for the main study data collection.

Procedures for Recruitment, Participation, and Data Collection

The participants for this study were corporate executives who had at least five years of working experience in leadership positions in the manufacturing sector of Nigeria. The corporate executives additionally had to have worked in the manufacturing sector during a severe VUCA period, set as the year 2016 for this study. This recent experience allowed the state of turbulence and complexity to inform the lived experience to achieve the study's purpose. The first step of recruitment was to send an e-mail to the Manufacturers Association of Nigeria and the Lagos Chamber of Commerce and Industry describing the study and its importance to the Nigerian manufacturing sector. In the e-

mail, I requested the associations to send my e-mail to their members to request participation. Access to the Manufacturers Association of Nigeria and the Lagos Chamber of Commerce and Industry databases realized the primary participants for the study.

The second step of recruitment was a formal e-mail to the interested executives who respond to the e-mail from the Manufacturers Association of Nigeria and the Lagos Chamber of Commerce and Industry. In the e-mail, I specified the study's intent, explained in detail the participation procedure, and responded to any questions arising. The third step of recruitment was to e-mail the informed consent to the interested parties and await the formal consent for participation. After the receipt of consent, the fourth step of recruitment was to e-mail the participant a copy of the interview protocol, respond to any questions arising, and provide the participant 48 hours to assimilate the questions. The fifth step was to arrange a time and place for the data collection interview, physically sign the informed consent, and conduct the interview. The last and sixth step was to send a thank you e-mail to the participant and mention the need for a follow-up telephone call in the event some aspect of the interview requires more information and/or clarification. In the appreciation e-mail, I reiterated the undertaking of confidentiality and anonymity and inquired if the participant wanted details of the study's findings. Participants requiring a copy of the findings would receive an abridged version of the study's conclusions.

Lagos was the data collection location since it is the primary base of the participants. I collected the data in the participants' offices or a mutually agreed location

that provides safety and privacy like a rental office space or room in a library. The set duration of the interview was 60 minutes per participant with three to six interviews conducted weekly to help manage researcher energy, allow reflectivity, adjust follow-up questions to maximize data collection in subsequent interviews, and gauge data saturation (Laverty, 2003; Rubin & Rubin, 2012). An audio recorder and interview transcripts captured both verbal and non-verbal cues, respectively. Transcription of the audio-recorded data translated audio into text and I checked each transcribed interview by listening back to the recording to ensure the elimination of errors in transcribing. I transcribed the interviews using a transcription application downloaded to my laptop that only I have access, to safeguard confidentiality. Since English is an official language in Nigeria, conducting all interviews was in English eliminated the need for language translation. I e-mailed a soft copy of the text transcripts to each participant for concurrence. A 48-hour window given to each participant to review the transcripts allowed room for changes or edits from the participants before data coding and theming. In the e-mail, I specified that a lack of response would be assent.

A review of the data and the member checking process marked the end of primary data collection and in the event, any additional questions arose, I telephoned the participants to discuss the issues arising. If no issues arose, an e-mail thanking the participant and confirming the confidential and anonymous nature of the interview marked the end of the data collection process. In the e-mail, I asked participants if they wanted a copy of the findings of the study and will comply as requested.

Data Analysis Plan

In order to answer the research question, a process of transcription, coding, and analysis of participant responses helped to align responses to each element of the research question. Data analysis, the identification of units of meaning, is the process by which researchers identify recurrent themes in data collected from participants that help them respond to the research question (Saldaña, 2016; van Manen, 1990). The focus of data analysis in phenomenological studies is in the holistic appreciation of the phenomenon understudy informed by participants lived experiences (Ricoeur, 1981). Ricoeur's theory of interpretation guided the process to ensure a data interpretation procedure that is in line with the hermeneutic phenomenology design.

Figure 1 succinctly displays the steps of data analysis, which started with the transcription of data to text to safeguard distanciation. Distanciation is an essential part of hermeneutic phenomenology where the world of text distances the researcher from the participants and their discourse leaving only words for analysis, unfortunately it excludes the expressions of the participant (Tan et al., 2009). The importance of interview transcripts or field notes is to capture the expressions or non-verbal cues that considerably assist with the analysis process to close the drawback of distanciation. According to Ricoeur (1981), distanciation creates a unique world of text mutually created by both the interviewer and the interviewee that informs the interpretation process for new understanding. After creating the text, the next step in Ricoeur's theory was explanation.

In explanation, an internal analysis of each interview transcript objectively helped to identify critical codes that build the naïve understanding of the phenomenon under study as well as assess data saturation (Tan et al., 2009). In this study, coding began immediately after the first interview and subsequently after each interview to assess the sufficiency of the interview guide and follow-up questions and to track data saturation. Due to the small sample, the researcher utilized manual coding using Microsoft Excel and Word instead of software coding. After analyzing each transcript, a cross transcript analysis helped in identifying commonalities and differences in participant responses to develop a richer collective understanding of the phenomenon (Bazeley, 2009; Saldaña, 2016). In phenomenological studies, thematic coding-the use of phrases not words-helped the researcher capture concepts and categories that developed into themes essential to the phenomenon under study (Saldaña, 2016; van Manen, 1990). The thematic codes developed within transcript and across transcripts apply in the next stage of interpretation.

Interpretation is a process that helps the researcher to build an in-depth understanding of the phenomenon under study based on the interviewees' practical understanding of the phenomenon with that of the researcher based on personal and theoretical understanding (Ricoeur, 1981). The reduction of themes happens at the level of interpretation where specific ideas forming immature understanding integrate in a coherent manner to become explanatory ideas that help formulate deeper understanding (Bazeley, 2009; Ricoeur, 1981; Tan et al., 2009). The next process in Ricoeur's theory of interpretation is in-depth understanding where the researcher moves back and forth

between explanation and interpretation creating the hermeneutic arc. The back and forth movement allows new understanding to develop as the researcher looks at data more in-depth and uses the new learning from the coding and theming process to create a holistic understanding (Tan et al., 2009). The identification of ambiguities and discrepancies become more prominent during the progression on the hermeneutic arc, which allows the researcher to implement a discrepancy procedure.

Management of discrepant and contradictory cases includes a review of the audiotapes and interview transcripts at the point of contention, to ensure no errors of analysis or prejudice occurred (Tan et al., 2009). To clarify any issues still outstanding, an e-mail sent to the concerned participant requested a member checking of the transcript and the themes arising from the interview. Member checking is a strategy that helps qualitative researchers to enhance the credibility of their studies as the study's participants review the transcripts and findings to confirm accuracy in data analysis (Lincoln & Guba, 1985; Rubin & Rubin, 2012). An analysis of the responses from the participants helps with the decision to either include corrections or exclude the discrepancy. The process of analyzing data using the hermeneutic arc helped triangulate data collected from participants, theoretical data, and researcher knowledge to provide sufficient evidence to manage discrepancies.

The last step in Ricoeur's process is appropriation. Appropriation is a process of self-understanding that the researcher goes through during the process of data collection and analysis (Ricoeur, 1981). According to Ricoeur, a new enlarged self emerges that integrates the new learning received in data analysis and interpretation with the existing

and theoretical knowledge of the researcher. Ricoeur observed that the participants and readers of the study might also experience appropriation. The concept of appropriation is important as it allows people to relate and act in new ways informed by a holistic hermeneutic learning process (Tan et al., 2009). The study hopes to contribute to positive social change and the process of appropriation may help leaders gain new understanding to manage volatility and complexity in their organizations. Effective management of turbulence makes organizations more resilient and agile to ensure continuity, a key contributor for positive social change.

Issues of Trustworthiness

The subjective nature of qualitative studies brings about issues of trustworthiness. Trustworthiness is the level of confidence given by the naturalist researcher's methods to enhance credibility, transferability, dependability, and confirmability to a study (Lincoln & Guba, 1985). To attain trustworthiness, researchers at every phase of a study from the preparatory stages to the data analysis and reporting stage have to abide by high ethical standards and demonstrate methodological rigor (Elo, Kääriäinen, Kanste, Pölkki, Utriainen, & Kyngäs, 2014). Some authors argue that issues of trustworthiness should be paradigm and context based as not all techniques can apply universally to all research studies (Armour, Rivaux, & Bell, 2009). In hermeneutic phenomenological studies, validity and objectivity form part of the process as contextual data influences a study's findings augmenting participant data for the assessment of honesty, thoroughness, and logical interpretation (Armour et al., 2009). The below discussion on credibility,

transferability, dependability, and confirmability demonstrates the strategies of managing issues of trustworthiness in this hermeneutic phenomenology study.

Credibility

Credibility is the accurate interpretation of research findings (Gaus, 2017). To enhance accuracy in this study, I ensured proper adherence to the theoretical foundations of the study, used transparent recruitment and informed consent, selected participants diverse from each other for uniqueness, used the hermeneutic circle to triangulate data for informed interpretation, and member checking to evaluate accuracy (Abdalla, Oliveira, Azevedo, & Gonzalez, 2018; Gaus, 2017; van Manen, 1997). The strategies for credibility also informed the management of discrepancies and contradictions as the back and forth assessment of data along the hermeneutic arc was used to triangulate multiple sources of data to resolve issues arising while member checks assisted the researcher with resolution mechanisms (Armour et al., 2009; Lincoln & Guba, 1985; Tan et al., 2009). To enhance credibility for this study, I also used the point of data saturation during data collection and data analysis to ascertain exhaustion of ideas and used reflexivity to capture thoughts and changing attitudes throughout the study.

Transferability

Transferability is the extent to which research findings are generalizable and is the equivalent of external validity in quantitative research (Gaus, 2017). To invite judgment from readers afflicted or interested in VUCA, I ensured the study used rich and thick descriptions, pertinent recruitment, and data collection procedures that should convince readers of the study's rigor and in turn its findings (Abdalla et al., 2018; Gaus, 2017).

Generalization is not a focus of qualitative studies as different researchers may come up with different conclusions in similar studies (Abdalla et al., 2018; Lincoln & Guba, 1985). However, a key strength is scientific studies is being able to transcend academic value to provide practical value as stated in the Walden University's mission statement. Transferability then becomes a hallmark of trustworthiness and value.

Dependability

Dependability is the consistency of research methods and findings to allow replication (Gaus, 2017). Gaus observed that dependability is relevant in interpretive studies as is the case with this study. In chapter 3, I provided detailed descriptions of the research design and methodology to create a roadmap for replication. In data collection and analysis, I ensured I kept an audit trail of all soft and hard copies of the study for both record keeping and inquiry as an additional strategy to enhance dependability (Patton, 2015). Hermeneutic phenomenology requires researchers to use theoretical context and researcher knowledge to interpret participant responses using the hermeneutic arc, thus providing a strategy to triangulate data and enhance dependability (Ricoeur, 1981). The above strategies should help inject dependability and trustworthiness to the study.

Confirmability

Confirmability refers to the accuracy of data findings being reflective of participant responses and the lived experience of the phenomenon devoid of bias (Elo et al., 2014). Elo et al. posited that at least two or three independent people must agree on the data's accuracy and relevance for the study to be confirmable thus trustworthy. Bracketing is one of the leading strategies used by qualitative researchers to maintain

rigor in their studies (Tufford & Newman, 2010). Since hermeneutic phenomenology accepts the potential for the researcher to use inherent knowledge to strengthen research findings, the key to maintaining confirmability is therefore through reflexivity (Gadamer, 1989). Self-awareness through the maintenance of a reflexive journal was used in exercising reflexivity (Tufford & Newman, 2010). I used the reflexive journal to understand my personal input into the study and cautiously applied theoretical research in the interpretive process-hermeneutic arc-as part of the triangulation of data, which fundamentally increases rigor in qualitative studies (Ricoeur, 1981). Warranting process and method adherence was used to achieve confirmation of the findings, as an audit trail demonstrated the procedures and the triangulation process.

Ethical Procedures

Ethics in qualitative research plays an essential role in enhancing a study's integrity as it helps guarantee the protection of participants' rights and interests and ensures the conformance to the codes of conduct acceptable to the qualitative research community (Babbie, 2017). Walden University's institutional review board (IRB) works with students to guide the ethical considerations in research studies to guarantee the protection of participants. I received IRB approval (No. 05-06-19-0591499) before I started the recruitment process as a failsafe method in managing ethical issues. To attain the IRB approval, I discussed my study procedures with IRB and undertook an online certification course with the National Institute of Health to ascertain my awareness levels of how to ethically treat and manage the study's participants.

After I received IRB approval, I started the recruitment procedure, which involved ensuring all participants signed an informed consent. The informed consent stipulated the study's basic purpose for participant appreciation and to understand the voluntary, confidential, and anonymous nature of their participation. I abided by the National Institute of Health's policies of respect, beneficence, and justice. The participants for this study were all mature adults and did not belong to vulnerable groups. I also had no conflict of interest, as I do not work in their sector or in Nigeria. In the data collection process, I ensured the participants were no worse off than before their participation in the study as I treated each participant with the respect they deserved and honored their needs (Rubin & Rubin, 2012). I guaranteed the accommodation of differing and diverse opinions to preserve rigor and in data analysis portrayed fidelity to the participants lived experiences (Ravitch & Carl, 2016). I used member checking as a symbol of trustworthiness and fidelity to participants.

Confidentiality and anonymity strategies are integral to upholding high levels of ethics and integrity in social research (Babbie, 2017). Protecting the privacy of research participants encompasses maintaining confidentiality so a person's unique identifiers are not disclosed at any point during the research and ensuring anonymity such that a person's name was concealed and where possible findings were aggregated and not individualized (Ravitch & Carl, 2016). To maintain confidentiality and anonymity for this study, I certified (a) no use of third parties, (b) saved all data files on my personal computer in password protected folders, (c) assigned unique identifiers to participants and the file with the matching name and identifier were saved in a password protected

folder in my personal laptop. I intend to share a summary of the findings with the participants for member checking and only disseminate aggregate findings for academic purposes. The statute of limitation for data storage is in line with Walden University mandatory stipulation of five years.

Summary

The chapter included a discussion of the research design, approach, and methodology for the study. The choice of qualitative research design was necessary due to the need for increased understanding on the phenomenon of interest. Hermeneutic phenomenology emerged as the best-suited research approach to answer the research question and to meet the study's purpose as it allowed the researcher to build context into the data collection process. Studies on new phenomena, such as VUCA, require contextual support to holistically understand both practical and theoretical assumptions, philosophies, and opinions that form the world-view of the human experiences. A discussion on research participation explained the inclusion criteria for recruitment, the location, and the sector of the participants to appreciate how their responses fully met the study's purpose. The provision of data collection and analysis procedures in a systematic format allows replication of the study, a key strategy for enhancing the quality of the study. To close the chapter, there was a discussion on strategies for developing trustworthiness and the ethical procedures guiding the study.

Chapter 4: Results

The purpose of this hermeneutic phenomenological study was to explore the lived experiences of Nigerian corporate executives about their VUCA business environment and the strategies they employ for VUCA-readiness within the manufacturing industry. The central research question that guided this study was: What are the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment? Presented in this chapter are the pilot study, research settings, participant demographics, data collection, data analysis, evidence of trustworthiness, results, and a summary. These sections lead to conclusions, described in Chapter 5.

Pilot Study

Pilot studies help qualitative researchers to test researcher-developed instruments, protocols, and instructions to ensure success in the main study. Conducted before the main study, the pilot study helped me to practice interviewing skills, the friendliness of the research instrument on potential participants, as well as to refine the study's methodology (Schachtebeck, Groenewald, & Nieuwenhuizen, 2018). Alignment of the interview questions with that of the research question was another key role of conducting the pilot study—a necessary step to ensure the achievement of the research purpose. The pilot study used two corporate executives working in the Nigerian manufacturing sector in line with the participant criteria for the main study.

I sent an e-mail to the Manufacturers Association of Nigeria and the Lagos Chamber of Commerce and Industry, which yielded the two pilot study participants as a

way to check the fitness of the study methodology on participant recruitment. The data collection method for the study was face-to-face interviews conducted on the participants' premises. The participants signed an informed consent then proceeded to the interview questions (Appendix A). The pilot study participants were comfortable with the question structure and understood the study's purpose. One change made was in the introduction on what VUCA stands for to ensure a simple understanding using local examples. The participants' overall responses confirmed the validity of the interview protocol and also yielded helpful insights for follow-up questions and probes.

Research Setting

I conducted 15 semistructured interviews at the participants' offices at their chosen time. This format corresponded with the data-collection method described in Chapter 3 of participants being in a convenient, private, and comfortable environment. All the participants had been in leadership positions in the manufacturing sector for more than 10 years and worked in Lagos in 2016. These participation criteria aligned with the statements in Chapter 1 and Chapter 3 that participants should have at least 5 years' experience in leadership positions and had worked in Lagos, Nigeria in 2016. Eleven of the participants had worked in different countries before coming to Nigeria. In their current roles, all participants were in leadership positions in the year 2016, a crucial VUCA-beleaguered year in Nigeria.

Demographics

All participants were male. There was no deliberate attempt to exclude females from the study, yet no female corporate executive volunteered to participate. Further

online research confirmed that the preponderance of executives in this field and environment tended to be male so this was not surprising. Nine of the participants were from multiple African countries, three from the Middle East, two from Asia, and one was European. While 11 of the participants worked in multinational organizations, three worked in local manufacturing companies and one participant worked in a multinational company that had just acquired a local manufacturing company, offered the benefit of learning how both local and multinational strategies affect leadership in VUCA environments. The years of manufacturing experience for the participants in the study ranged from10 to 50 years. See Table 1 for a summary of the participants' demographics.

Table 1

Demographics of Participants

Participant	Gender	Ethnicity	Position	Years in manufacturing	Corporate type	Countries worked
PP1	Male	African	Director	20	Multinational	Multiple
PP2	Male	Middle Eastern	CEO	44	Local	Multiple
PP3	Male	African	CEO	25	Multinational	Multiple
PP4	Male	Asian	Director	19	Multinational	Multiple
PP5	Male	African	Director	17	Multinational	Single
PP6	Male	Asian	CEO	25	Local	Multiple
PP7	Male	African	Director	21	Multinational	Multiple
PP8	Male	European	CEO	21	Multinational	Multiple
PP9	Male	African	Senior Manager	10	Multinational	Single
PP10	Male	African	Director	14	Multinational	Multiple
PP11	Male	Middle Eastern	CEO	30	Multinational	Multiple
PP12	Male	African	CEO	20	Local	Single
PP13	Male	African	Director	19	Local/Multinational	Multiple
PP14	Male	Middle Eastern	CEO/Chairman	50	Multinational	Single
PP15	Male	African	CEO	26	Multinational	Multiple

Because age and education were not part of the inclusion criteria for participation, I made no attempt at finding out the participants' age and education level. However, all participants had a minimum of 10 years manufacturing experience and more importantly, each defined VUCA as the turbulence, uncertainty, and complexity of doing business in Nigeria, and demonstrated a grounded knowledge on the phenomenon understudy before the interview process.

Data Collection

After receiving IRB approval, I collected data from 15 corporate executives working in the manufacturing industry of Lagos, Nigeria, who fit all the participant inclusion criteria in accordance with the approval. Although 21 corporate executives initially volunteered for the interviews through referrals, I conducted 15 semistructured interviews to fulfill the stated sample size of a maximum of 15 participants as stated in Chapter 3. The 15 interviews produced a substantial data to answer the research question. Majority of the 21 volunteers were from snowballing as the primary interviewees referred many of their peers as potentially experienced to participate in this study. The decision on who to interview was primarily based on mutual availability. The study location was the participant's private offices or a mutually agreed private office space. An audio recording device captured the verbal aspects of the data collection while I took field notes to capture key points for follow up questions and non-verbal communication. The interviews ranged from 30 minutes to just over 2 hours as some of the participants wanted to fully describe critical issues affecting their experiences and the success strategies that worked for them.

I implemented the data collection plan as submitted and approved by Walden's IRB. One change form was submitted to IRB after the approval to adjust the access parameters as recommended by the partner organizations. I did not encounter any unusual circumstances during the data collection and was surprised at the enthusiasm of the participants on the study topic. A review of the data and the member checking process marked the end of primary data collection and in the event, any additional questions arose, I reached out to the relevant participants via telephone. I sent an e-mail thanking the participants and confirming the confidential and anonymous nature of the interview, and that ended the data collection process. I transcribed each recording through a manual transcription process. Each participant received a copy of the interview transcription and validated the data collection. Table 2 contains the summary of the data collection process.

Table 2:

Summary of the Data Collection Elements using Hermeneutic Phenomenology

Research question	Interview question	Type of data collection tool	Analysis
What are the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment?	What is your perception of VUCA (volatility, uncertainty, complexity, and ambiguity) in a business environment? Can you share with me a time and instance when you were satisfied with how your company	Semistructured face-to-face interviews Field notes	Process of transcription, coding, and analysis of participant responses using Ricoeur's theory of interpretation

operated?

Can you give some examples of successful strategies you implemented that led to success in today's volatile business environment?

Please share with me an example of your current strategic planning process and how the process is different than in the past when the environment might not have been as complex or volatile?

In your own experience, share a few examples of what readiness strategies are required in an organization to weather the impact of VUCA?

If you were to mentor an up and coming future CEO, what key VUCA skills would you expect your protégé to master to qualify for the job?

What experiences have been important

to you personally in terms of operating in a volatile and ambiguous business environment?

Data Analysis

Data analysis is the identification of units of meaning, the process by which researchers identify recurrent themes in data collected from participants that responded to the interview question (Saldaña, 2016; van Manen, 1990). The 11 findings in this study resulted from the data analysis and interpretation from the data collection process. Data collection included the transcribed interviews, field notes, and manual coding to generate themes. The transcription process took 10 working days. I produced over 128 pages of transcribed data. It took several reviews to get comfortable with the variety of expressions (language, speech pattern, and jargon). The coding process took another 10 days, which began from the first interview and continued subsequently after each interview. Ricoeur's theory of interpretation guided the process to ensure a data interpretation procedure that was in line with the hermeneutic phenomenology design. I went through each transcript and highlighted significant passages that related to VUCA business environment and the strategies corporate executives employed for VUCA-readiness. I continued the process of manually coding using Microsoft Excel for each interview, based on the field notes and recordings to develop a list of statements repeated words or phrases that emerged over the course of the interview; this process fulfilled Ricoeur's first level of explanation. I developed these thematic codes further into

categories during the subsequent days to achieve Ricoeur's second level of naïve understanding.

Through the back and forth between explanation and naïve understanding, referred to as the hermeneutic arc, I was able to move towards the emergence of themes (see Table 3). The recurring themes that were mentioned by all or most of the participants and included (a) business agility, (b) strategic workforce and demand planning, (c) recovery management for organizational resilience, (d) system thinking organization and shared leadership, (e) conscientious and value-based leadership, (f) multistakeholder-approach management, (g) change orientation and readiness, (h) lean management, (i) new leadership mindset and competence, (j) talent management sustainability and (k) purpose-driven leadership.

Table 3:

Data Analysis: Codes and Emerging Themes from the Interview Process

Codes	Themes	Number of occurrences	Percentage of occurrences
It is about agility and intensity; its taking time to learn, re-learn and un-learn, alignment of people and process, speed of action, people have to adapt, agile working, be nimble	Business Agility	15	100%
We are never out of planning. We plan and we plan, it is very dynamic, build in variability, plan for every scenario, accuracy in planning, utilize resources in the highest area of need	Strategic Workforce and Demand Planning	15	100%
It is not just human resilience, its system resilience, even	Recovery Management for Organizational	13	86.7%

strategy resilience, And the concept of resilience acknowledges that you work in a volatile environment, enhance recovery, work through shocks, need for quick recovery from failure, turn problems into opportunities	Resilience		
I think the concept to systems thinking, moving away from linearity; ways of looking at things and thinking everything is either, or, and rather thinking about holistic interrelationship, decision-making, and interdependencies, consulting style working, think in an ecosystem	System Thinking Organization & Shared Leadership	15	100%
Leaders should impact people - need to focus on the health and well-being, have organizational values and personal values that guide work and decision-making, responsible leadership in hardship environments, value based products, need for strong ethics	Conscientious and Value-Based Leadership	14	93.3%
Multi-stakeholders approach to things, capacity to deal with government, regulators, communities, suppliers, and employees, need for networks, collaboration, partnership, solutions come from anywhere, stakeholder management, stakeholder relationships, gather information from stakeholders, listen to the stakeholders	Multistakeholder-approach Management	15	100%
Readiness means you have to	Change Orientation and	12	80%

anticipate what is going to happen, readiness to change, adapt to change, daily changes, change must come from the people, change revolution for emancipation, clarity and focus, change mindset, don't get comfortable	Readiness		
Using lean management to reduce cost or by retrenchment, review operational costs consistently, responsive and short-term plans, invest judiciously, cut out waste everywhere, hire modular multi-skilled people	Lean Management	12	80%
This again is what we call the mindset shift, failure is winning, because the only way you can fail is because you have tried to do something, new competencies for VUCA like courage, resilience, sense of humor, curiosity, stubbornness, magicians, forecasting, new design activators, adaptors who evolve quickly, role models	New Leadership Mindset & Competencies	13	86.7%
I have got operators in the company that came in as cleaners, but they became useful in operating, eager to learn and assist, I have never been scared of pushing junior staff on expensive machines, you get swifter responses to VUCA when you retain staff, people are important, retain people who see the opportunities and have tenacity, high degree of professionalism and integrity,	Talent Management Sustainability	14	93.3%

invest in people			
Corporate purpose has to live beyond the volatility; I like to see significantly purpose-driven leadership because that is a big part of coping with VUCA. Something bigger than something such as the next day sales	Purpose-driven Leadership	15	100%

Evidence of Trustworthiness

Lincoln and Guba (1985) introduced the criteria for confirming the trustworthiness of qualitative research, when the traditional quantitative terminologies of reliability, validity, and generalizability were replaced with terms like (a) credibility, (b) dependability, (c) confirmability, and (d) transferability. Using the four criteria, I determined the rigor and quality of the qualitative hermeneutic phenomenological study to explore the lived experiences of Nigerian corporate executives about their VUCA business environment and the strategies they employ for VUCA-readiness within the manufacturing industry. Korstjens and Moser (2018) described trustworthiness as a measure of the trust and replicability of a study.

Credibility

Credibility refers to the truthfulness of the data collected and is achieved by persistent observation, member checking, or through audit trail (Cope, 2014). To implement credibility, I used an audit trail, which included audio recoding, interview transcripts, and field notes. I recruited participants transparently using both purposive and snowball sampling and had each participant sign a consent form before conducting the interview. I ensured the participants had diversity in terms of both ethnicity and their

manufacturing experience to harness unique feedback. Using Lincoln and Guba's (1985) process for member checking, I sent copies of the full transcripts to the 15 participants after the interviews to ensure authenticity on their responses as well as to enhance credibility. All participants agreed that the full transcripts correctly represented the interview though according to Birt, Scott, Cavers, Campbell, and Walter (2016) sending full transcripts only helped achieve accuracy and not trustworthiness. However, the use of the hermeneutic arc helped enhance credibility due to the process of triangulation, which had the added advantage of helping resolve any discrepancies.

Transferability

Transferability represents the extent to which the results can be transferred to other respondents in different contexts and settings (Korstjens & Moser, 2018). To implement transferability, I adhered to the research methodology as presented in Chapter 3. I discuss the complete findings regarding the research questions using adequate descriptions to ensure that future researchers find the information useful and easy to replicate. Additionally, the participants represented a broad width of experience, majority from multiple contextual experiences, and several ethnic backgrounds to promote transferability. I also made consistent use of the interview protocol and introduced definitions so that there was a common language and common understanding of the key concepts of the study. Despite these steps, Marshall and Rossman (2016) opined that transferability was always left up to the reader to decide.

Dependability

To implement dependability, I carried out a pilot study to check the fitness of the study methodology on participants' recruitment. I used field notes and good quality audio to record the interviews and sent to the participants for validation in line with the research design and methodology. The use of the hermeneutic arc ensured triangulation of data in a bid to build in dependability. I maintained an audit trail to present the systematic process of the research findings and data analysis process. The study could be replicated with similar participants in similar conditions by following the interview protocols, the field notes, and the audit trail that I recorded. I stated in chapter 3 that I would store the data collected from interviews for 5 years before destroying it to ensure a proper audit trail and record keeping.

Confirmability

To implement confirmability, I affirmed the study's credibility, dependability, and transferability. I aligned the findings with the conclusions and interpretation to avoid personal bias into the study. I used member checking to ensure reliability and validity of data by interpreting the transcript of the 15 participants and received feedback that validated the data collection process. Each theme identified was supported by quotes or description from participants. The convergence of insides (similar thoughts from a collection of participants) revealed the consistency of the data. I used reflexivity through a journal during the data collection and analysis process to ensure I was self-aware of the issues that may affect my interpretation and reported only what was derived directly from the triangulation process through the hermeneutic arc for rigor.

Study Results

The purpose of this qualitative hermeneutic phenomenological study was to explore the lived experiences of Nigerian corporate executives about their VUCA business environment and the strategies they employ for VUCA-readiness within the manufacturing industry. The overall research question was: What are the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment? This section highlights the 11 themes that emerged from the research question, by interview question, and document review.

Theme 1: Business Agility

The first emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Fifteen participants who represent 100% responded business agility was the strategy corporate executives in manufacturing companies in Nigeria use in VUCA-readiness and succeeding in a VUCA environment. Participant 1 stated that

> You have to find a solution first, you have to align very quickly and get buy-in from the top management to be able to accept that this is the solution. Then in between looking for solution, you have to find out what could be the risk because I will define it as; trying to fix a car that has three tires, with the bonnet open and stuck so it can't go down, the engine back-firing all the time, with a puncture in one of the tires, and the steering wheel only goes up to 45 degrees but you have to drive continuously as

> you are fixing the problems. So all that collaboration, agility, thinking out of your own kind of confines, like this is your department, you have to think about everything, you almost have to be an expert in all other departments.

Majority of the participants mentioned that VUCA was about agility and intensity; while participant 1 and 3 noted that in VUCA leaders needed to take time to learn, relearn, and unlearn some things and supported this by saying that many employees "had been taught things differently from our past." Participant 5 deduced that preparing for VUCA is becoming nimble with decisions, responding quickly as markets change, becoming dynamic, and agile in decision-making. Participant 5, 7, 9, and 13 summed it up by saying that responding to VUCA was about flexibility and responsiveness, communication, and timely appraising the market directions. Participant 12 noted that a success story in day one does not determine a repetition of success story the next day in VUCA environment and hence the need for business agility.

Theme 2: Strategic Workforce and Demand Planning

The second emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Fifteen who represent 100% responded strategic workforce and demand planning was the strategy corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment. Participant 1 stated:

> You cannot go to the black market because the exchange rate was high. Therefore, you are stuck with local exchange rate, which is 199, but you

> are not able to get it. So you know, at the same time, business has to continue, demand for product has to be met. So what we did was manage getting money from mother companies and we were able to continue with our importation of raw materials. We became leaders in the market because nobody else could get products because forex was not there, people were not able to get money, money was not available, they could not buy the materials.

Participant 14 mentioned that

> Those who systematically design their demand and supply chain to cope with such challenges, those who are able to continue with the operation have the market open for them. Consumption continues in turbulence so we need to plan for an efficient workforce and also the demand as your customers will not wait for you to resolve your challenges, consumption must go on.

Participant 5 stated that "due to high cost of production, very unpredictable, unplanned, unstructured, and frustrating nature of the market, staff should be trained to cope in such environment where customer service is required, also planning for demand is important." Participant 6 offered that organizations needed to "Nigerianize" their solutions. Participant 6 mentioned that "prepare and plan your demand and supply for the worst case scenario, also adapt to the situation by having modular people that can respond to the changing market". Participant 8, 9, 10, and 11 inferred that demand must be planned with flexibility in terms of high stocks and fixed arrangements, have staff who are willing

to be pushed beyond the call of duty, staff with open-mindedness, humble, react positively and are professionals. Participant 15 mentioned:

> Demand decision need less bureaucratic and better legal framework, respond to competition through value-based products, active involvement in policy development through lobbying. The staff should be people who can make change happen, vision oriented, provide superior service, are calm, do not panic, and are tenacious staff.

Theme 3: Recovery Management for Organizational Resilience

The third emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Thirteen participants who represent 86.7% responded recovery management for organizational resilience was the strategy corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment.

Participant 1 and 2 mentioned that to succeed in VUCA one did not hide bad news to enhance recovery and for VUCA-readiness, a change of mindset that failure is winning was a necessary formula as long as mistakes were not repeated. Participant 3 stated that

> One of the things we have talked about, specifically in Nigeria is resilience. It is not just human resilience, it is system resilience, even strategy resilience, and the concept of resilience acknowledges that you work in a volatile environment. So for everything you do you have to be looking at scenarios of, *If failure was to happen, what is your backup strategy?* If things go down tomorrow, what are you going to do? If you

> don't have power, what are you going to do? You just exhibited that by saying to me you have two phones; you are showing to me system resilience. Saying one may go down, we often use phones to describe system resilience to people in the Nigerian context.

Participant 4 and 5 mentioned that to succeed they ensured recovery from losses when it occurred, listened to their consumers, and became resilient. Participant 5 added that "you cannot afford to be slow in taking advantage of the opportunities" demonstrating the efficacy of recovery management. Participant 6, 8, and 9 inferred that leaders prepare for the worst in VUVA environment, be resilient, recovery through external relationships are critical, daily changes are the characteristics of VUCA environment; adapt to them, every challenge is an opportunity to recover. Participants 10, 11, and 12 mentioned that strategy must be iterative for recovery, accept there will be mistakes, plan for every scenario, turn the unexpected to opportunities, be resilient, manage for advanced minds, and look for alternatives. Participants 14, and 15 mentioned that business survives through prioritization and resilience, recover from immediate shocks, innovativeness, and that smart entrepreneurs see opportunity in VUCA.

Theme 4: System Thinking Organization and Shared Leadership

The fourth emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Fifteen participants who represent 100% responded system thinking organization and shared leadership was the strategy corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment.

Participant 1 mentioned that "you have to create your own framework through system thinking." Participant 2 stated that

> You have to share the vision. I have never been scared to push junior staff on expensive machines. Some are good and some are extremely good. In some areas, we have expatriates. The only issue is how to find local talents.

Participant 3 stated:

> I think the concept to system thinking, moving away from linearity; ways of looking at things and thinking everything is either, or, and rather thinking about holistic interrelationship, interdependencies, end to end impacts, fourth to fifth order consequences as to things that we do, those would be key, and people who are able to lead the way in the new ways of working.

Participant 4 mentioned that continuous improvement in VUCA could only be achieved through systems thinking as rigid and complacent thought processes blind leadership in VUCA environments. Participant 5 offered that shared leadership helped to read the markets effectively, engage in astute thinking, and focused the investment in analytics and systems for forecasting and innovation. Participant 7 mentioned that VUCA needed synergy, persistent pulse checks, and solid external relationships to exploit the power of the network. Participant 12 observed that VUCA had a 360-degree impact on the ecosystem and a revolution of people through self-consciousness would aid a necessary systemic shift towards success. Participant 13 stated that daily strategic reviews

of the organizational system were important for effective decision-making and more importantly mistake management. Participants 14 noted that a systems thinking solution for his company was the employment of backward integration as a key strategy for survival. Participant 15 spoke to key area that supported shared leadership such as consultative decision-making, listening, and active involvement. He, however, warned that shared leadership also meant overriding global thinking and standing your ground.

Theme 5: Conscientious and Value-Based Leadership

The fifth emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Fifteen participants responded that conscientious and valued-based leadership were strategies corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment. Participant 1 stated that

> You have to look after yours and that of your neighbors to remain in business. We then had to find a solution; it is not only for us but also for all our key strategic suppliers. This can only happen here. No one elsewhere would go out to look for funds for suppliers. And sign contracts and agreements that match you and the suppliers and so on and so forth, so it was an unthinkable concept. And if we had gone to what is standard, which is the standard thought process, that's like let me find my own money to bring in raw materials, without thinking about the other suppliers, you will shut down.

Participant 2 stated:

> We have different sizes for different customers. Certain time we ran out of materials. The clients did not feel the shortages. We absorb cost so the client does not feel the heat, so that client keeps us as top priority. We try to be conscientious in our approach and keep the values intact.

Participant 3 stated:

> You cannot be exploitative and try to maximize profit but really play a role by improving their lives then you create a value system, which is win-win. So my view to answer your question simple is that: It is central, central to those who are going to win in the future that will produce leaders who can cope with VUCA.

Participant 4 and 7 mentioned listen to consumers for value creation, value system for guidance, and the need to be good and humble to both staff and customers. Participant 8 mentioned that you must understand the environment for value creation, be a role model in the market, be good, humble, be consistent, spend time in the market, not be exploitative, manage all stakeholders, and invest in CSR to maintain balance. Participant 13 mentioned the need for value-based products, a value system to guide decision-making, and a shared vision for protecting, creating, and growing value to manage ethical dilemmas in VUCA environments. Participant 14 stated that conscientious leadership was born of high degrees of professionalism and integrity.

Theme 6: Multistakeholder-Approach Management

The sixth emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Fifteen

participants who represent 100% responded that multistakeholder-approach management was the strategy corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment. Participant 1 mentioned:

> So, its multiple points of approaches, with themselves trying to understand the risk in the environment and trying to respond to them proactively. And recognizing that in this sort of environment, keeping the system going is itself a strategic advantage.

Participant 2 stated:

> Take the period of fuel crisis in 2015, only few players were able to carry on their distributions. Those who had systematically designed their supply chain to cope with such challenges by using multiple approaches and those who were also able to continue with the operation using this same strategy of multiple suppliers.

Participant 3 specified that

> For example, we deal with multiple banks, in very few parts of the world do we do that. In this company for obvious reasons, we have to. We deal with multiple logistics departments; these are learnings we have picked up. One can go down in Nigeria. If one goes down, you don't have your business go down. We have multiple energy sources, because again, none of them is a 100% reliable. I could keep going on and on. So those are the examples of how within the supply chain, we are building resilience to them. Even the sort of people that you have in your team, must be able to

> exhibit that kind of resilience because there could be challenge all the times. People will wake up in the morning and there will be crises of all sorts. You cannot cope with that, in no time, your system falls apart. You need multiple points of resilience, with themselves trying to understand the risk in the environment and trying to respond to them proactively.

Participant 7 mentioned the need to have synergy with multiple stakeholders to understand the environment and create critical relationships that help to bounce back from shocks. Participant 10 described the need to manage stakeholders consistently to gather information, understand context, and get accurate data for planning. Participant 11 stated that leaders must carry all stakeholders along. Participant 13 mentioned that he managed stakeholders through incentives and maintained healthy relationships with them.

Theme 7: Change Orientation and Readiness

The seventh emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Twelve participants who represent 80% responded that change orientation and readiness was the strategy corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment.

Participant 1 stated that

> Readiness means you have to anticipate what is going to happen. You have to be willing to accept that you were blind sided or flatfooted or you did not know this was going to happen. And have the humility that once it has hit you, to quickly run and try to find a solution to resolve it with

> diligence and speed. Readiness would also mean, linked back to what I mentioned earlier, learning, un-learning, and re-learning and accepting that there are a lot of things you don't know. Then it goes back into business, for readiness you have to understand that in many situations, you may not have answers but you have to depend on different people from different parts who will be able to give you an answer. Readiness is understanding that you cannot give all the answers without getting frustrated. One thing you need to avoid in this VUCA environment is get frustrated. Things will come at you fast paced, from different angles, you know, you can't just know what is going to happen next, but you have to take your time to synthesis it but never be in a space where you get frustrated.

Participant 2 suggested, "we would like to see change in the country, but more importantly is the preparation for change that are unexpected in VUCA environments like Nigeria."

Participant 3 stated that

> We can celebrate diversity; you don't need to change the way of the people's orientation. You have to ensure that the whole is bigger than the sum of its part. And for me that comes from an environment where you are able to foster dialogue or a conversation and constantly trying to understand each other's perspective. It is usually with a shared view of

> people that you get the best from a team. This is how we manage change in a VUCA environment.

Participant 5 opined that change leadership in VUCA was about understanding the market effectively. The participant also noted that change orientation meant, "make plans but don't get married to your plans, as things could change against your plans very quickly." Several participants observed the need for readiness and preparation for unexpected changes and most often complex changes. Other participants emphasized that leaders should gather sufficient data for change management and readiness, use teams instead of individuals, create vision, and define the how as change readiness strategies. All the participants agreed that change was constant and as such, VUCA was not a perfect science.

Theme 8: Lean Management

The eighth emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Twelve participants who represent 80% responded that lean management was a strategy corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment. Participant 1 stated that

> So again, your factors of production are not available, you have no money, no currency, you cannot import, you have to meet the demand of the market, you cannot get whatever you need to meet the demand of the market internally, your ports infrastructure is not working, your road infrastructure is messed up. Your power infrastructure is messed up. So all

> these things are coming together and at the end of the day, you have to operate. So, this is what I will call VUCA. What we have to do is to reduce cost internally by focusing on getting products from our affiliates.

Participant 3 stated "the high cost of production could only result to total reduction in cost and manpower to remain in business." Participant 4 mentioned that their decisions impacted cost and labor as a strategy to remain profitable, this included, cutting marketing cost, merging roles, retrenching staff, and subcontracting jobs. Participant 5 stated "we used lean management by cutting cost and retrenching staff to remain in business." Several participants mentioned costs reduction, merging of roles, delay of promotions, and job subcontracting as lean management examples to cope with the VUCA situation.

Theme 9: New Leadership Mindset and Competencies

The ninth emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Thirteen participants who represent 86.7% responded that new leadership mindset and competencies were the strategy corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment. Participant 1 stated that

> It is about changing the mindset, changing the old way we use to do things. Meeting can be held in the corridor; solutions can come from the ground. It about understanding that failure at this point is winning. This again is what we call the mindset shift. Because the only way you can fail

> is because you have tried to do something. Now gone are the days, you were able to really give a strategic view of top line numbers, now these days from top management downward, you spend 75% of your time in the trenches, and the next 25% up.

Participants 2 and 4 mentioned that leadership mindset must change from traditional method to proactive mindset, new design activations, and continuous improvement. Participant 3 stated that

> As a leader, your mindset has to be refined for adaptation; be willing to step back and say *maybe I didn't see this coming*. I have been through this experience now or another person has been through this experience. What have I learnt? What I am going to do?

Some participants discussed the need for homegrown tools as they noted that Western tools were flawed in this environment, participant 6 called this the need to "Nigerianize" solutions. Many participants discussed new leadership skills necessary to survive and thrive in VUCA environments that did not necessarily align to text book business school skills, such as, curiosity, thriving in uncertainty, sense of humor, resilient, people who are modular, do not panic, stay calm under pressure, are nimble and quick to evolve, are magicians, are bold thinkers, and people who can withstand high stress levels. Participants 14 mentioned that leaders should know that two types of leaders operate in a VUCA environment, those who will run away and those who will see the opportunity. Participant 8 and 15 agreed with this observation.

Theme 10: Talent Management Sustainability

The tenth emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Fourteen participants who represent 93.3% responded talent management sustainability was the strategy corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment.

Almost all the participants agreed that talent management was an essential part of readiness and success in a VUCA environment. The participants observed that talented employees were courageous employees who required constant training and retention in the company to help manage turbulence and complexities that confronted the organization. Participant 9 postulated that retaining talent led to swifter responses to VUCA and advised that leaders ought to adapt key performance indicators to capture and sustain talent. Participant 11 observed that people were important in VUCA and his company ensured they recruited, trained, and retained high performing people. Participant 12 talked of the importance of accepting and growing ethical employees who through self-consciousness worked to promote sustainability. Participant 12 additionally mentioned that talent management involved leaders and employees with advanced minds that imbibed good habits to de-risk viewpoints and generate sustainable outcomes. Participant 15 noted the need to hire the right people-and he defined right as experienced high performers-then fully invest in them.

Theme 11: Purpose-Driven Leadership

The eleventh emergent theme resulted from an analysis and interpretation of the data collected from the semistructured interview question, and document review. Fifteen participants who represent 100% responded purpose-driven leadership was the strategy corporate executives in manufacturing companies in Nigeria used in VUCA-readiness and succeeding in a VUCA environment.

Participant 1 stated that purpose-driven leadership included leveraging employees' reason for existence, leveraging their purpose to be able to drive the organization and letting organizational purpose drive your decision to recruit, train, invest, and retain staff. Participant 2 stated "follow your purpose and the market will follow you; we started with zero. Eventually, we gained the market by aligning with the purpose of our customers consumption."

Participant 3 emphasized:

> I like to see significantly purpose-driven strategies, because that is a big part of coping with VUCA, something bigger than the next day sales. That drives you, that makes you wake up and stay in spite of all the challenges, you still have the energy to continue and try to energize people and move on. Being purpose-driven is very important.

Several participants discussed the relevance of balancing profitability with sustainability to safeguard corporate survival in highly turbulent times due to a deeply entrenched purpose-led leadership. Participant 15 added that the set corporate purpose had to live beyond the volatility for stability.

The emerging themes directly help answer the research question, that of, What are the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment? The lived experiences led to the identification of both coping and readiness strategies that the executives used to succeed in a VUCA environment. The coping and readiness strategies that emerged prominently to answer the research question included business agility, workforce and demand planning, recovery management principles, change orientation, new leader competencies, and lean management, which these leaders employed to flourish in unpredictability. The participants added that in VUCA environments, it was critical to work with a network to achieve smart targets due to the multiplicity of issues and they identified the strategies of systems thinking, multistakeholder management, and talent management sustainability as necessary ingredients to succeed in VUCA. The participants discussed the need to apply several leadership styles, such as, shared leadership, conscientious leadership, and purpose-driven leadership to enhance flexibility in decision-making, harness the power of the network, and inject ethics in every decision.

Together the themes succinctly help respond to the research question and demonstrate to leaders that the achievement of success in a VUCA environment means a tactical application of a confluence of strategies in all parts of the organization. The use of several strategies mirrors the VUCA dilemma of several conflicting issues facing organizations at any point in time, hence, an apt response to chaos and complexity. The themes point out to a leadership that is constantly in action adapting, learning, and

collaborating in nimble ways to cease opportunities present in the chaos through the adoption of new leadership mindsets and competencies.

Summary

In Chapter 4, I addressed the demographics, research setting, data collection, data analysis, evidence of trustworthiness, and the description of the main themes and categories. The data resulted from the interview responses from 15 chief executive officers, directors, and senior managers of manufacturing companies in Nigeria who have experienced VUCA. From the data collection and analysis process 11 themes emerged which included business agility, strategic workforce and demand planning, recovery management for organizational resilience, systems thinking organization and shared leadership, conscientious and value-based leadership, multistakeholder-approach management, change orientation and readiness, lean management, new leadership mindset and competencies, talent management sustainability, and purpose-driven leadership. Chapter 5 includes the interpretation and analysis of the findings, the limitations, the recommendations, and the social change implications of the study.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this hermeneutic phenomenological study was to explore the lived experiences of Nigerian corporate executives about their VUCA business environment and the strategies they employed for VUCA-readiness within the manufacturing industry. This study used the hermeneutic phenomenological approach to bring attention to major factors underlying corporate executives' performance in VUCA environments and the strategies they used to prepare for continuous change and the achievement of success despite all odds. The key findings included 11 emerging themes, namely, business agility, strategic workforce and demand planning, recovery management for organizational resilience, systems thinking organization and shared leadership, conscientious and value-based leadership, multistakeholder-approach management, change orientation and readiness, lean management, new leadership mindset and competencies, talent management sustainability, and purpose-driven leadership. In Chapter 5, I discuss the interpretation of these findings, limitations of the study, recommendations, and implications for social change.

Interpretation of Findings

In Chapter 4, I described the data collection and analysis process, issues pertaining to trustworthiness, and the results of the study. The research question was: What are the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment? The themes that emerged from Chapter 4 were topics that impacted the corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a

VUCA environment. Through these themes, not only did participants address the research question, but also built on the literature review. Below is an interpretation of each theme.

Business Agility

The first theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that business agility was a strategy that corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and to succeed in a VUCA environment. This first theme supported Singh and Vinodh (2017) findings on business agility. Singh and Vinodh (2017) appraised agility as the ability of an organization to respond quickly to a wide range of customer demands. As a result of globalization, volatile markets, complex societies, intensive competition, shrinking products life cycle, and stringent quality and delivery requirements, many organizations have adopted the agility strategy to sustain their business. The KPMG 2019 CEO outlook report supported this finding and defined agility as the new currency of business with 67% of global chief executives in agreement.

Arbussa, Bikfalvi, and Marquès (2017) described strategic agility as an organization's capacity to make strategic commitments while staying nimble and flexible, which is considered to be a means by which organizations transfer and reinvent themselves, adapt and ultimately survive in a VUCA environment. Arbussa et al. (2017) categorized strategic agility into (a) strategic sensitivity, (b) leadership unity, and (c) fluidity of resources. This first theme confirms the literature in Chapter 2 of Bennett and Lemoine (2014), Horney et al. (2010), Horney and O'Shea (2015) and Sopelana et al.

(2014) on using strategic agility in VUCA afflicted organizations. These authors observed that agility in VUCA referred to creating alignment between people, process, and technology to enhance the speed of response to VUCA associated elements through focus and flexibility in organizational structures. Succeeding in a VUCA environment requires the ability of the leaders to simultaneously manage both the short-term and the long-term goals of a business (Raghuramapatruni & Kosuri, 2017). The authors opined that in turbulent and fast-changing times, businesses needed to be anchored in a long-term destination while also dynamically managing the short-term. The role of leadership is to have a clear point of view about the future and build an organization that can navigate towards that destination through good times, and importantly, also in bad times. This theme helps answer the research question.

Strategic Workforce and Demand Planning

The second theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that strategic workforce and demand planning was a strategy that corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and succeeding in a VUCA environment. This second theme supported Mayo (2015) and Obedgiu (2017) findings on strategic workforce and demand planning. Obedgiu (2017) identified workforce planning as the ability to (a) align human resource and business strategy, (b) re-engineering organizational processes, (c) listening and responding to employees, and (d) managing transformation and change. Dreyer, Kiil, Dukovska-Popovska, and Kaipia (2018) inferred that the right workforce could determine demand through tactical planning and forecasting to secure product availability, which

requires adaptation to seasonal demand patterns and consistent negotiations with suppliers. The participants observed the need to keep abreast of changing circumstances through sensing and responding by modifying operations constantly.

Demand planning using strategic workforce comprises of (a) efficient consumer response, (b) quick response, (c) vendor managed inventory, and (d) collaborative planning, forecasting, and replenishment (Dreyer et al., 2018). The second theme aligns with other literatures on strategic workforce and demand planning like Vereecke, Vanderheyden, Baecke, and Van Steendam, 2018. In Chapter 2, Sundarajan (2018) discussed the need for strategic workforce planning and Vecchiato (2015) pointed out the success of scenario planning and trend management in VUCA environments. The second theme helps answer the research question.

Recovery Management for Organizational Resilience

The third theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that recovery management for organizational resilience was a strategy that corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and succeeding in a VUCA environment. This third theme supported Chowdhury and Quaddus (2016), Ishak and Williams (2018), and Carlson (2018)'s findings on recovery management and organizational resilience. Martinelli, Tagliazucchi, and Marchi (2018) concluded that in the wake of vulnerabilities and complexities, supply chain managers needed to adopt more intense resilience approaches. Martinelli et al. (2018) described resilience as the ability of a system or organization to return to its original state or move to a new, more desirable state after

being disturbed or having experienced a crisis. Carlson (2018) described crisis as an unexpected problem seriously disturbing the functioning of an organization, sector, or nation, which threatens the basic assumptions of the system.

Some of the challenges confronting organizations in a VUCA environment are (a) environmental exigencies, (b) natural disasters, (c) political uncertainties, (d) financial fluctuations, (e) technological innovations, (f) public relations crises, and (f) a constant evolving global marketplace (Ishak & Williams, 2018). Resilience is the ability of an organization to bounce back after disruption, by identifying effective management approaches, re-integration from disruption, and construction of a communication network (Chowdhury & Quaddus, 2016). This third theme aligns with Horney and O'Shea (2015), Johansen and Euchner (2013), Karaboga et al., 2014, and Khan (2015) as used in Chapter 2 to respond to the research question.

Systems Thinking Organization and Shared Leadership

The fourth theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that systems thinking and shared leadership were strategies corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and success in a VUCA environment. This fourth theme supported Swensen, Gorringe, Caviness, and Peters (2016) findings. Swensen et al. (2016) and Best et al. (2016) described complex issues as *wicked* problems that have no definitive formulation, no stopping rules, and no ultimate test of the solution, which required unique and unprecedented solutions. Binci, Cerruti, and Braganza (2016) identified the properties of a complex system as (a) nonlinear and random nature of many

of the relationships, (b) high number and varied nature of feedback loops, (c) interconnectedness of the risk factors, (d) environmental conditions, (e) policy or practice interventions, (f) heterogeneity of individuals, and (g) resultant stress on the capacity of the system to adapt and self-organize. The participants described these observations in their definitions of VUCA, which additionally tie in with the conceptual framework for this study of chaos theory (Burns, 2002) and complexity leadership theory (Uhl-Bien & Arena, 2018) as discussed in Chapter 2.

Aufegger, Shariq, Bicknell, Ashrafian, and Darzi (2019) evaluated system thinking as a tool for resolving the complex problems in organizations, which entail deliberate coordination, interventions and creative effort to resolve issues at regional, provincial, national, and international level through shared leadership. Best et al. (2016) described shared leadership as a *bossless* team, particularly when members of the team are engaged in the decision making process by influencing and mutual guidance in a continuous shift of the team position from leader to follower and vice versa, as required by specific contextual contingencies. The fourth theme aligned with the conceptual framework as well as with the literature review authors such as, Karaboga et al. (2014), Laloux (2015), Robertson (2015), and Vielmetter and Sell (2014). This theme also further improved on the concept of conventional leadership and linear models as discussed in Chapter 2.

Conscientious and Value-Based Leadership

The fifth theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that conscientious and value-based

leadership were strategies corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and success in a VUCA environment. This fifth theme supported Sun and Shang (2019) and Afsar and Shahjehan (2018) findings on moral and ethical leadership. Sun and Shang (2019) evaluated that conscientious and value-based leadership equated to servant leadership, as servant leaders focused on the growth of those who they simultaneously led and served. A value-based leader empowers direct reports to be independent decision makers rather than direct reports being dependent on their leaders for directions and decisions (Afsar & Shahjehan, 2018). Afsar and Shahjehan (2018) analyzed that value-based leadership traits evolved through life experiences when individuals through socialization to various personally relevant situations that formed important attributes of their self-identity. A conscientious and value-based leadership refers to as ethical leadership (Lajoie, Boudrias, Rousseau, & Brunelle, 2017). Lajoie et al. (2017) described ethical leadership as the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through double-loop communication, reinforcement, and decision-making.

Ethical leadership plays an important role in promoting desirable employee attributes and behaviors, which includes (a) commitment, (b) job satisfaction, (c) pro-social behavior, and (d) job performance (Carnes, Houghton, & Ellison, 2015). The authors further stated that conscientious leaders do what seems right, make decisions based on ethical standards, show concern for others with an open mind, take responsibility for actions approved, and make decisions based on the principles of justice

and rights. Carnes et al. (2015) referred to these leaders as embodying transformational leadership, which they defined as a style of leadership characterized by (a) idealized influence, (b) inspiring motivation, (c) individualized consideration, and (d) intellectual stimulation. Theme fifth aligned with Chapter 2 literature by Barney et al. (2015), Sarkar (2016), and Vielmetter and Sell (2014) and responds to the research question.

Multistakeholder-Approach Management

The sixth theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that multistakeholder-approach management was a strategy that corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and as success factors in a VUCA environment. This sixth theme supported Orazi, Spry, Theilacker, and Vredenburg (2017) and Törmälä and Saraniemi (2018) findings on multistakeholder-approach management. Orazi et al. (2017) suggested that as organizations planned towards uncertainties, the organization required a strategic focus within a complex system of multiple stakeholders in collaborative and equitable partnerships for achieving more sustainable performance. Orazi et al. (2017) appraised multistakeholder perspective to imply complex processes in which multiple actors, representatives of different contexts and systems come together to find a common approach to an issue that affects the organization. Organizational stakeholders range from employees, competitors, shareholders, governments, communities, and suppliers. The ability to manage multiple stakeholders prepares organizations for readiness towards future uncertainties (Fish & Wood, 2017). Törmälä and Saraniemi (2018) identified strategies for readiness as (a) hazard identification, (b) mitigative adaptations, (c)

preparedness planning, and (d) recovery (short-term) and reconstruction (long-term) planning.

Galuppo, Gorli, Scaratti, and Kaneklin (2014) inferred that stakeholder theory served as a lens to determine if the organization was serving and coordinating the interest of relevant constituents to ensure that each stakeholder strived to deliver high-value inputs to the firm. Stakeholder theory helps to recognize the importance of innovative practices that engage stakeholders to achieve value creation and shared risk, ultimately increasing the size of the return of all stakeholders (Galuppo et al., 2014). In Chapter 2, the importance of collaboration and partnership through multi-stakeholder approaches as winning strategies in VUCA featured in the works of Bennett and Lemoine (2014), Cook (2016), Cousins (2018), Darlington (2015), Horney and O'Shea (2015), Jari Roy and Lauraeus (2018), Sarkar (2016), Vielmetter and Sell (2014).

Change Orientation and Readiness

The seventh theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that change orientation and readiness were strategies corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and success in a VUCA environment. This seventh theme supported Caliskan and Isik (2016) and Hemme, Bowers, and Todd (2018) findings on change orientation and readiness. Caliskan and Isik (2016) identified that uncertainty of boundaries with globalization had increased the number of competitors and the international environment for organizations. The creation of consistent change is a characteristic of globalization, which focuses leaders towards engendering employees

with a change orientation for readiness. Trust in management, perceived organizational support, participation in decision making, effective communication, and support for changes are some of the readiness strategies organizations employ to achieve a positive change orientation (Haque, TitiAmayah, & Liu, 2016; Mehrzi & Singh, 2016; Matthews, 2018). The organizational change in a VUCA environment represents a conversion of dominant cultures of the organization to a more flexible, complex, and multi-level culture (Haque et al., 2016).

Hemme et al. (2018) described readiness for change as the process of altering the cognition of employees in order to facilitate organizational change by preempting the likelihood of resistance to change thus increasing the potential for change efforts to be more effective. Organizational members who are considered change-ready hold positive attitude, belief, and sound understanding of the change and why it is important to the organization (Caliskan & Isik, 2016). Using these factors of change such as positive attitude, belief, and sound understanding could become a toolbox for managing change and readiness for change in organizations operating in VUCA environments. These thoughts aligned with the conceptual framework and the observations of Bawany (2016), Burt et al. (2017), Johansen (2012), and Matthysen and Harris (2018) as proposed in Chapter 2.

Lean Management

The eighth theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that lean management was a strategy that corporate executives in manufacturing companies in Nigeria used for VUCA-

readiness and success in a VUCA environment. This eighth theme supported Thorén and Vendel (2019) and Hallam, Valerdi, and Contreras (2018) findings on lean management. Lean management focuses on the elimination of waste and creation of value for the business organization (Thorén & Vendel, 2019). The authors described waste as anything that did not add value to the product or service from the customer's point of view, for example, overproduction, customers waiting time, unnecessary movement of materials, inappropriate processing, defects, underutilization of people, environmental waste, and underutilization of facilities. Conversely, value added activities include activities perceived as being important by the customer and those performed accurately the first time (Wickramasinghe & Wickramasinghe, 2017).

Business executives must take decisions in circumstances that are even more difficult today, as the environment they navigate is volatile. To achieve effective decision making, business executives should manage strategy incrementally, assess options based on the understanding of the current state of business, which may lead to slow and ineffective responses (Hallam et al., 2018). Adopting lean production concepts increases organizational performance through the critical factors of lean management, namely, (a) value creation, (b) value stream, (c) flow of production, (d) pull, and (e) pursuit of perfection (Hallam et al., 2018). The eighth theme aligned with the conceptual framework on complexity leadership theory, which recognizes learning, innovation, flexibility, and adaptability, as strategies used in managing complexity, volatility, ambiguity, and uncertainty (Uhl-Bien et al., 2007). It also aligned with Chapter 2

literature review by Salicru (2018) on using sensemaking to manage in chaos. It also answers the research question on strategies leaders use to manage in VUCA.

New Leadership Mindset and Competencies

The ninth theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that new leadership mindset and competencies were strategies corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and success in a VUCA environment. This ninth theme supported Cseh, Davis, & Khilji (2013), and Schulze, Bals, and Johnsen (2019) findings on new leadership thinking and competencies. Cseh et al. (2013) described employee competencies as the underlying characteristics of an employee's skill, motive, self-image, or social role, which result in superior performance. Competence is a comprehensive combination of individual knowledge, skills, and abilities (Leavy, 2016). Leavy additionally stated that the new leadership mindset in a VUCA environment is that of underlying awareness and familiarity obtained through study, investigation, observation, or experience over the course of time. Cseh et al. (2013) and Gomezel and Rangus (2018) argued that the leadership paradigm that dominated in the twentieth century needed to be changed to include new approaches of thinking, feeling, acting, and being to better fit today's intensely globalized, competitive, dynamic, and VUCA environment. This theme supported previous literature as discussed by Horney et al. (2010), Johansen (2012), Manders (2014), and Tint et al. (2015). The theme further aligned with the concept of changing concepts of leadership (Khan, 2015; Laloux, 2015) and new competencies and skills (Horney et al., 2010; Johansen, 2012) as discussed in Chapter 2.

Talent Management Sustainability

The tenth theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that talent management sustainability was a strategy that corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and success in a VUCA environment. This tenth theme supported Mwila and Turay (2018) and Schreuder and Noorman's (2019) findings on talent management sustainability. Mwila and Turay (2018) described talent management as a series of human resources activities that included recruitment, selection, development, and succession planning. The authors explained that talent management was a process that transformed employees into a fluid strategy, to suit an organization's culture, mission, and values. This observation becomes more apt in VUCA environments as seen in the participants' assertions of the need to retain talent for swifter sensing and responses towards change.

Talent management is strategic, future oriented, and focused on the overall organizational goals making it a key ingredient for every organization to gain competitive advantage and to achieve sustainability (Schreuder & Noorman, 2019). The ability to attract, develop, and retain the best talent is what makes businesses successful in the long-term (Raghuramapatruni & Kosuri, 2017). Today's organizations are no longer defined by fixed workplaces, nine-to-five working hours, or by a set of homogenous employees. Going ahead, organizations of the future will function as platforms connecting diverse, distributed, and multi-talented individuals who will come together to

create value. There is no argument for sustaining talent in the VUCA age as discussed by Shahvazian et al. (2016), Sundarajan, 2018, and Uhl-Bien and Arena (2018) in Chapter 2.

Purpose-Driven Leadership

The eleventh theme resulted from analysis and interpretation of the data collected from the semistructured interview questions. I found that purpose-driven leadership was a strategy that corporate executives in manufacturing companies in Nigeria used for VUCA-readiness and success in a VUCA environment. This eleventh theme supported Dantley (2003) who described purpose-driven leaders as leaders that go beyond the pre-composed and beyond the simple routines to more deeply inspired and instantaneous levels of creativity. The author observed that these leaders understood the empowerment of other employees and allowed them to take the lead from time to time in order to contribute to the ultimate potential of the group. The participants agreed and postulated that purpose-driven leaders focused on helping others cope with elusive and volatile forces while maintaining a vision and hope that transcended the current reality.

Purpose-driven leadership is a model that aligns applied aspects of running organizations with the core values and beliefs of the said organization to as a way to remain sustainable irrespective of the turbulent nature of the environment (Coccia, 2015). A VUCA environment could become a distraction for business when the purpose of the organization does not align with daily action. It is crucial for leaders to focus on the triple bottom line, namely, financial, people, and environmental goals of the organization to become more purpose-driven (Swensen et al., 2016). In addition to cognitive readiness (Bawany, 2016), sensemaking (Salicru, 2018), dilemma flipping (Johansen & Euchner,

2013), readiness (Burt et al., 2017), and new models such as the agile model (Horney & O'Shea, 2015), being purpose-driven can guide leader behavior in VUCA environments.

Limitations of the Study

One of the limitations of the study could be the referral of other corporate executives to participate in the study. When a referral occurred, I was not sure what the two participants discussed that may have influenced the collected data. Another limitation is that some of the participants may have omitted some details in their responses and some may have exaggerated in their responses. I used member checking to establish the reliability and validity of this study and verified the participants' statements within a limited time frame, this may have impacted on the responses of the participants due to lack of sufficient time for proper reflection. The consideration for time restraints, rescheduling, and cancellations was also a contributing factor that might have limited this study. I used Microsoft Word and Excel for the data organization and audit trail to elicit reflexivity towards enhancing dependability and confirmability of the study. The use of hand coding, note taking, and digital audio recorder for the interviews facilitated the credibility and confirmation of the data collection. Consistent checking for reliability and accuracy of the data ensured that the study did not miss any data or have inconsistencies.

Recommendations

The recommendations for this study include recommendations for practice and those for future research. The recommendations for practice are borne of the study's findings to provide leaders with proven tangible and successful strategies used by leaders

in the Nigerian manufacturing environment. The recommendations for future research allow the closure of gaps and limitations found in this study.

Recommendation for Practice

VUCA preparedness. All existing and upcoming top executives in Nigeria, irrespective of sectors require VUCA preparedness using the strategies found in this study. Volatility, uncertainty, complexity, and ambiguity are rife in the 21st century operating environment and decisions made in these environments present chronic dilemmas (Ungureanu, Bertolotti, & Macri, 2018). The wide range of options for any decision in a VUCA environment affects the individual's ethics and well-being, the organizational core values and performance standards, and the way each member and group perform in society. Corporate owners should advocate that their leaders and teams be adequately prepared for VUCA using the strategies found in this study to help overcome the foundational problem that led to this study; that of leaders' inadequate preparation to lead in VUCA environments. Being VUCA ready ensures efficient and strategic organizational management and sustainability.

Organizational resilience. I recommend that employees should be trained on organizational and personal resilience in VUCA environments. Seville (2018) described organizational resilience as the ability of an organization to return to the original form or improve after a market shock. Employee resilience refers to the employee's capability, facilitated and supported by the organization to utilize resources to continually adapt and flourish at work, even when confronted with challenging circumstances (Seville, 2018). Resilience as seen in the study's findings allows for damage reduction, quick recovery

from VUCA impacts, speedy responses to conflicting and competing stimuli, networked system solutions that cushion the organization from deep losses, and the effective management of employees' mental health.

Recommendation for Further Research

A recommendation for further study is to focus on female corporate executives in the manufacturing sector of Nigeria. This recommendation is based on the fact that of the 15 participants interviewed all were male. Women leader experiences on VUCA could add to the male leader experiences to provide a framework for VUCA management in Nigeria. I recommend that further research on corporate executives in other sectors in Nigeria may allow for broader generalization of findings. Another recommendation for future studies is to consider studying line managers and direct reports and how their VUCA experiences differ from those of the executive leaders, as found in this study. What experiences do these employees have that support or deter their daily performance? Outcomes from these studies could close the gap on understanding VUCA from a holistic feedback base in a bid to comprehensively formulate models for work enhancement in turbulent environments as well as training programs.

Another recommendation would be replicating the study to other sectors or countries for comparative purposes and in an effort to extend the study's transferability. Another recommendation for future research is to consider carrying out a quantitative study comparing doing business in a VUCA environment in a manufacturing sector with a non-VUCA environment in a manufacturing sector or within different states or countries. Using quantitative methodology enables generalization (Patton, 2002). The last

recommendation for future research is to consider testing the findings of this study quantitatively to gauge efficacy among leaders practicing in VUCA environments. Testing the findings may provide an avenue for scholars to create a leadership model for firms operating in VUCA environments.

Implications for Social Change

The possible impact for positive social change is the adequate preparation for corporate leaders to win and succeed in a VUCA environment, thereby reducing business failure. Business failure has severe negative ripple effects for employees, their families, and the society due to the reduced economic contribution of the firm. Additionally, adequate preparation for leaders by up-skilling them with key VUCA strategies, gives them an individual survival toolkit that fosters better performance and reduced stress levels. Organizations can use this study's learning to enhance positive social change by applying the emerging themes of shared leadership, conscientious and value-based leadership, multistakeholder-approach management, change readiness, talent management sustainability, and purpose-driven leadership. These themes have the added benefit of empowering employees, injecting ethics into decision-making and leadership, directly growing employees, managing their talents, and preparing them to win despite the odds.

The importance of agility and recovery came out strongly in the leadership feedback for VUCA survival. Both agility and recovery are key skills required not just for organizations but also for individuals and societies in the 21st century where change is a constant feature. To achieve positive social change in constantly changing

circumstances, people, families, organizations, and societies must learn to be agile and enhance recovery from shocks. The conceptual framework of chaos theory and complexity leadership theory underscore the need to modify behavior and adapt based on environmental cues.

The implication of multistakeholder-approach management as a key theme in this study strongly epitomizes positive social change. When groups and people come together, they create a support network that enables the greater performance of the social and economic system due to the shared vision and enhanced systems thinking. The collaboration and partnership found in multistakeholder-approaches to work foster relationships necessary for sensemaking in turbulent times.

The above implications for social change have a globally impact on social change due to the universality of VUCA and the possibility of transferability of this study's findings.

Conclusions

This study captured the lived experiences of corporate executives in the manufacturing sector of Nigeria to help answer the research question. The experiences helped formulate 11 strategies these executives used for VUCA-readiness and the achievement of success in VUCA environments. The strategies directly inform the specific management problem identified in this study's foundational research, that of leaders being inadequately prepared to lead and win in highly VUCA environments. The study's findings may potentially increase the percentage of leaders who are ready to lead in VUCA from the documented 18% (DDI, 2015). Applying the strategies may possibly

help reduce employee stress and other mental health issues brought on by VUCA. This study may contribute to filling some of the identified gaps in the literature like (a) providing a Sub-Saharan Africa perspective on VUCA studies that is currently lacking, (b) a management perspective on VUCA, (c) readiness as a critical competency in VUCA, (d) readiness as a necessary competence in leadership discourse, and (e) providing a hermeneutic phenomenological research on VUCA.

It is important to note that the participants of this study highlighted core success factors that touch at the very essence of working in a constantly changing environment. One of the factors is the need for speed-not reckless speed but cautious speed-in identifying and ceasing opportunities, in recovering from shocks, in decision-making, and speed in connecting the multifarious and confusing stimuli. The second factor is that of thinking outside the normal parameters and constantly modifying behavior and mindsets to accept chaos and thrive in uncertainty. The third factor is the power of harnessing stakeholder value as a key source of failure avoidance, recovery management, and solution management-this factor underscores heavily entrenched management principles on collaboration and partnership. The fourth and last core factor is the power of leadership in ensuring success in difficult circumstances. The participants offered that different leadership styles, such as, shared leadership, conscientious leadership, value-based leadership, and purpose-driven leadership, applied situationally drove success in turbulent environments.

This study adds new knowledge to VUCA literature and helps support some existing authors work on VUCA. The findings support positive social change by

providing strategies for leaders to apply in VUCA environments to achieve success and to reduce employee stress.

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Appendix A: Interview Guide

Research Question

What are the lived experiences of corporate executives in manufacturing companies in Nigeria regarding VUCA-readiness and succeeding in a VUCA environment?

Draft Interview Questions

1. What is your perception of VUCA (volatility, uncertainty, complexity, and ambiguity) in a business environment?
2. Can you share with me a time and instance when you were satisfied with how your company operated?
3. Can you give some examples of successful strategies you implemented that led to success in today's volatile business environment?
4. Please share with me an example of your current strategic planning process and how the process is different than in the past when the environment might not have been as complex or volatile?
5. In your own experience, share a few examples of what readiness strategies are required in an organization to weather the impact of VUCA?
6. If you were to mentor an up and coming future CEO, what key VUCA skills would you expect your protégé to master to qualify for the job?
7. What experiences have been important to you personally in terms of operating in a volatile and ambiguous business environment?