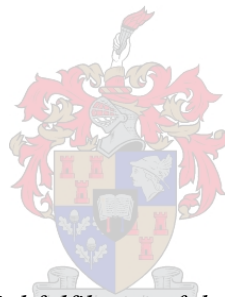


Leadership approaches related to complex global risks: A literature study

by
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*Thesis presented in partial fulfilment of the requirements for the degree
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at Stellenbosch University*

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Declaration

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (safe to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third-party rights and that I have not previously, in its entirety or in part, submitted it for obtaining any qualification.

Date: April 2019

Abstract

An increasingly globalised world presents countries such as South Africa with tremendous challenges and opportunities. Increasing interconnections between the economic, environmental, technological, and geopolitical realms call for a leadership approach that is capable of meeting the demands of such complex global systems.

For many decades, the study of leadership has placed an emphasis on the role of the individual leader in dealing with challenges. The development of leadership research has also witnessed a shift from traditional Great Man (Carlyle, 1993:2) theories to approaches that go beyond the scope of an individual leader to incorporate those being led and others within their respective institutions. Although only recently emerging, there is a growing literature on leadership that takes into consideration the system in which leadership operates and reevaluates the positions and roles in which leaders find themselves in modern times.

The World Economic Forum (WEF) publishes an annual Global Risk Report (GRR) that identifies major risks that reside within the increasingly interconnected global society and the subsequent complexity that arises from these systems. For South Africa, the response to such risks can be found in the National Development Plan (NDP) which aims to address the most pressing issues facing the country by considering its economic, political, social, environmental and technological realms.

An analysis of both of these papers strongly calls for an appropriate model of leadership that is adaptable to interconnected, fast-paced and complex global and national systems. Complex adaptive leadership, and more specifically learning leadership, provides a fitting approach that eases the pressure off individual leaders by reconsidering their roles from providing all the answers to asking the right questions and from playing a directive role to becoming key facilitators in a larger system.

Opsomming

'n Toenemend geglobaliseerde wêreld konfronteer lande soos Suid-Afrika met ongelooflike uitdagings en moontlikhede. 'n Toename in verbindings tussen ekonomies, omgewings-, tegnologiese en geografiese gebiede verg 'n aanpasbare leierskap wat in staat is om aan die eise van sodanige globale stelsels te voldoen.

Die studie van leierskap het vir vele dekades die klem op die rol van die individuele leier om uitdagings die hoof te bied, geplaas. Die ontwikkeling van leierskapnavorsing het ook 'n skuif van Great Man-teorieë (Carlyle, 1993:2) na benaderings wat verder as die omvang van die individuele leier gaan om dié wat gelei word en ander in hul onderskeie organisasies in te sluit. Alhoewel dit eers onlangs na vore gekom het, is daar 'n groeiende literatuur oor leierskap wat die stelsel waarin leierskap funksioneer in ag neem en die posisies en rolle waarin leiers hulself in die moderne era bevind, herevalueer.

Die Wêreld Ekonomiese Forum (WEF) publiseer 'n jaarlikse Global Risiko Verslag (GRV) wat die hoofrisiko's wat in die toenemend verbonde globale gemeenskap en die gepaardgaande kompleksiteit wat vanuit hierdie stelsel voortspruit, voorkom. Suid-Afrika se reaksie op hierdie risiko's kan in die Nasionale Ontwikkelingsplan (NOP) wat poog om die mees dringende sake wat die land in die gesig staar, aan te spreek deur ekonomies, politieke, sosiale, omgewings- en tegnologiese gebiede in ag te neem, bespeur word.

'n Analise van beide hierdie dokumente verg 'n toepaslike leierskapsmodel wat by verbonde, vinnige en komplekse globale en nasionale stelsels kan aanpas. Komplekse aanpasbare leierskap, en meer spesifiek leerleierskap, verskaf 'n gepaste benadering wat die druk van individuele leiers af wegneem deur hul rolle as verskaffers van alle antwoorde na die vra van die regte vrae en van 'n rigtinggewende rol na sleutelfasiliteerders in 'n groter stelsel in heroënskou te neem.

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Lastly, to my study group at the School of Public Leadership, Nicole (Gilliomee), Max, Danielle, Waldo and Nicole (Kernelle), for partnering with me through our first year of study, I offer my sincerest appreciation.

Dedications

I would like to dedicate this thesis to God Almighty, because it is by His grace alone that I could complete it. For this reason, I give it back to him, so that he may receive the credit. I am confident that he will use it for a much greater purpose than I could ever think possible.

List of abbreviations

BRICS:	Brazil, Russia, India, China, South Africa
CAS:	Complex Adaptive Systems
CCL:	Creative Centre for Leadership
DEA:	Department of Environmental Affairs
GDP:	Gross Domestic Product
GRPS:	Global Risk Perception Survey
GRR:	Global Risks Report
ICT:	Information Communication Technology
KM:	Knowledge Management
LL:	Learning Leadership
NDP:	National Development Plan
NGO:	Non-governmental organisation
NPC:	National Planning Commission
OECD:	Organisation for Economic Co-operation and Development
OL:	Organisational Learning
WEF:	World Economic Forum

Definitions

Leadership theories/approaches: Disciplines that discover and describe what makes leaders successful and effective.

Traditional leadership approaches: Early leadership theories understood predominantly by the internal qualities with which individuals are born.

Leadership style: The way in which leaders function and behave.

Autocratic leadership: Autocratic leaders maintain most of the authority with little consideration for group opinions in making decisions.

Charismatic leadership: The charismatic leader gains followers through their personal charm, as opposed to other forms of external authority.

Democratic leadership: Democratic leaders give authority to followers and considers their opinions prior to making decisions.

Participative leadership: Instead of taking autocratic decisions, the participative leader involves others in the process, including followers, peers, stakeholders and supervisors.

Complex adaptive system: Complex behaviours that emerge from nonlinear interactions between systems at different levels of organisation.

Complex adaptive challenges: Challenges or risks that reside within complex adaptive systems.

Complex adaptive leadership: Leadership approaches designed to combat complex adaptive challenges.

Anti-establishments: Opposition to the current global, social, economic and political principalities and norms.

Global risks: A global risk is defined as an occurrence that causes significant negative impact on several countries and industries over a time frame of up to 10 years.

Fourth Industrial Revolution: The fourth major industrial era, characterised by the fusion of technologies which blur t

he lines between digital, physical and biological systems.

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CHAPTER 1

BACKGROUND, ORIENTATION, METHODOLOGY AND OVERVIEW

1.1 INTRODUCTION

Globalisation has given countries such as South Africa tremendous opportunities for economic and social development, but it also presents an array of leadership challenges in an increasingly interconnected and complex global environment. The World Economic Forum's (WEF) annual Global Risks Report (GRR) contains a list of global risks that have an increasingly interconnected nature and calls for a form of leadership that is more adaptable to uncertainty and rapid transitions in the modern world. The words of Clarence Darrow accurately depict what is required of the 21st-century leader: "It is not the strongest species that survive, nor the most intelligent, but rather the one most adaptable to change" (Quoteinvestigator, 2018).

Indeed, the very nature of leadership itself continues to change and, as proposed in this study, will need to adapt to the demands of a seamless global environment. Leadership, whether in the public or private (corporate, civil or non-profit) sector, will be key in addressing the challenges facing countries such as South Africa. Samans (2018) notes that none of the global risks can be addressed without public-private partnerships, hence the need for a leadership approach that considers both the public and private sectors.

Leaders across the globe, and in South Africa, who are serious about addressing the most pressing global risks must treat these risks with the appropriate leadership responses. Complex challenges, for example, cannot be dealt with by means of conventional linear models of leadership without recognising the complex interaction within a complex adaptive system.

This study will accordingly provide an argument which illuminates the need for, and attainment of, alternative thinking by global leaders and policymakers when considering how to approach and address issues related to economic failure, weakening geopolitical trust, environmental sustainability and growing cyber risks.

1.2 PROBLEM STATEMENT

Individual-centred or Great Man leadership approaches are inappropriate in dealing with complex and interconnected economic, environmental, technological and geopolitical risks, which instead require an alternative leadership paradigm. This leadership paradigm will be focused on dealing specifically with complex and interconnected challenges.

1.3 GOALS AND OBJECTIVES OF THE STUDY

The goal of this study is to synthesise and present a leadership approach for modern global and South African leaders that is effective in confronting complex adaptive challenges. In order to reach this goal, the following objectives will be pursued:

- Understanding the development of leadership research, current leadership practices and emerging leadership approaches;
- Analysing the major global risks outlined in the WEF GRR (2017a, 2018b) as well as the current leadership responses to them;
- Contextualising major risks facing South Africa according to the NDP;
- Categorising the identified global risks as complex adaptive challenges for leadership;
- Presenting a framework for leadership approaches, such as Learning Leadership (LL) that are suitable for addressing complex adaptive challenges; and
- Presenting research findings, conclusions and suggestions for future studies.

1.4 MOTIVATION FOR THE STUDY

Traditional Western leadership approaches that emphasise the role of individual leaders have been shown to be ineffective in dealing with the complex problems of a globalised world that require more collaborative approaches that are beyond leader-follower relationships. This study seeks to bridge the gap between leadership mentalities and their failure to consider the entire system in which the process of leadership takes place. By taking a systems approach,

leadership may be far more capable of addressing complex challenges, offering the South African leader a more robust approach to address problems such as poverty, inequality, corruption, environmental degradation and rapid technological change.

Africa, and indeed South Africa, has a history of leadership that drastically affects the lives of millions of citizens in detrimental ways. South Africa's record of poor leadership, whether discriminatory policies of its apartheid governmental system or more recent cases of corruption, fraud and immoral leadership displays right up to its presidential office, is evidence enough of the critical role that leadership plays in the South African nation.

Three basic reasons, which are applicable to South African situation, outlining why leaders are required, are raised by Bennis (1989). These are as follows:

- Leaders are required for the improvement of South African organisations' overall effectiveness;
- Leaders are required because South Africans require a guiding purpose, which gives meaning to their lives; and
- Leaders are required because there are concerns about the integrity of South African organisations and the quality and quantity of leadership available may have a large impact on this.

This study therefore attempts to extend into a growing literature of leadership that seeks to promote leaders (all non-state actors) in public and private spheres with the necessary aptitudes, knowledge, and moral integrity for leadership tasks in a globalised world. The need for leaders that are capable of adapting to meet the demands of increasingly complex economic, environmental, technological and geopolitical realms is echoed by literature in the field of leadership. The challenges that such complexities bring about are presented by the WEF as global risks, emphasising the increased interconnected nature of global problems in a world that functions with higher levels of interdependency between nations as a result of globalisation.

This study also takes into account the need for new methods and approaches capable of dealing with leadership tasks that have arisen due to these complexities brought about by globalisation. The loss of trust in global political and economic systems in Europe and America (WEF, 2018b) is no longer an isolated event that has little or no impact on countries with emerging economies, such as South Africa.

1.5 CHAPTER OVERVIEW

The current chapter provides an outline of the study, including the orientation, motivation, research objectives and the research design and research methodology selected for the study.

Chapter 2 provides a body of literature pertaining to leadership theories of the past and present, leadership styles and the emergence of alternative leadership thinking in the face of complex adaptive challenges.

Chapter 3 analyses the WEF's GRR to present the major global risks, the complex nature of these risks and the current leadership responses to them.

Chapter 4 contextualises the major risks in South Africa by referring to the NDP as a response to eliminating poverty and reducing inequality in the country.

Chapter 5 provides an evidence-based argument that the global risks covered in chapters 3 and 4 can be categorised as complex adaptive challenges. This becomes evident when consulting research by Grint (2013) and Heifetz (2014).

Chapter 6 aims to provide a solution to complex adaptive challenges by conceptualising leadership within complex adaptive systems and proposing LL along with 6 leadership attributes as an appropriate response to address complex challenges.

Chapter 7 concludes the study by conveying its findings and suggesting future investigations into the research topic.

1.6 RESEARCH METHODOLOGY

The study has primarily made use of a qualitative research methodology in the form of grounded theory to achieve its objectives. Grounded theory was first developed in 1967 by sociologists Barney Glaser and Anselm Strauss in their book *Discovery of the Grounded Theory* (1967). This approach to theory development is grounded in data and not in the empirical testing of the theory. Thus, data is collected, analysed and used to develop a theory

(Glaser & Strauss, 1967). Data analysed in this study was primarily taken from the WEF's annual Global Risks Reports and the South African NDP. Once analysed, the data was used to strengthen persuasive arguments for leadership theory based on complex adaptive approaches.

Glaser and Strauss (1967) defined grounded theory as theory derived from data which is systematically arranged and analysed in the research process. Walia (2015:124) adds that grounded theory can also be useful in generating theory by using observations. Grounded theory was important in discovering new methods of understanding the social processes and interactions in the study of leadership and for generating substantive arguments for leadership theory based on observable patterns (Glaser & Strauss, 1967:57).

Furthermore, the theory selected in this study was used to construct a concrete argument in order to progress beyond abstract ideas that are not applicable to leadership practice. Following this logic, Walker and Avant (1995:38) recommended the value of constructive arguments and the use of knowledge as a means to substantiate them. Key concepts in the field of leadership were therefore selected, analysed and later categorised. These concepts were broken down and explained in order to provide definitions of the theory explored for the remainder of the study.

In order to present the main themes of the study, key sources were carefully selected from the body of literature and integrated into the study's arguments and recommendations. Theory development as presented by Walker and Avant (1995) enabled the researcher to strengthen these arguments by carefully consulting non-empirical literature sources.

CHAPTER 2

LEADERSHIP AND RELEVANT THEORETICAL CONCEPTS: A LITERATURE STUDY

2.1 INTRODUCTION

Chapter 1 provided the background to this study, namely the need for a particular leadership approach which is capable of adapting to current trends and dealing with complex challenges. Chapter 2 will present a literature review that highlights important leadership research that will help contextualise the rest of the study and subsequent findings. In order to conduct this review, the following objectives have been set:

- Firstly, a definition of leadership will be provided by reviewing numerous definitions and identifying common themes among them in order to provide a working definition that can be used throughout the rest of the study.
- Secondly, a description and historical overview of the main leadership theories that have helped shaped modern leadership research will be provided as a background for understanding modern leadership approaches that can be applied to complex adaptive challenges.
- Thirdly, leadership styles will be defined and presented in order to understand how different leaders approach leadership and in order to understand what will be required of leaders that face situations in which their own leadership styles are challenged.
- Fourthly, good and bad leadership will be defined and distinguished in order to provide a clear definition of what constitutes good leadership practice.
- Lastly, literature on alternative approaches to leadership will be reviewed in order to find a leadership approach that is effective in addressing complex adaptive challenges.

Reaching these objectives will help provide a framework for understanding leadership research as it has developed since the 1900s to the present day with its modern thinking in order to find alternative approaches that can address the complex adaptive challenges of the 21st century.

2.2 LEADERSHIP: TOWARDS A WORKING DEFINITION

The first objective of this chapter is to provide a definition of leadership that is most applicable to this study. The broad nature of leadership itself makes this process less straightforward, requiring a review of multiple definitions.

Leadership is difficult to define because of its different meanings to different organisations. Roger Gill (2013) accounts the various concepts and definitions of leadership and how they agree and differ as well as the problems that the lack of consensus on a general definition may bring. In fact, a Google search of “leadership definitions” results in over 32 400 000 results, which is just an indication of the large amount of online research on the topic alone.

The British Academy of Management (2018) mentions that the subject of leadership has given rise to a plethora of research, publications and debate and has become one of the key issues in both the private and public sector (Gill, 2013). According to Kathleen Patterson and Bruce Winston (2016), the problem with the lack of consensus arises from the attempt to study only part of leadership as opposed to studying leadership as a whole. Gill (2013:15) similarly views theories on leadership, such as transformational, action-centred and transactional leadership, as all being part of the same larger jigsaw puzzle.

2.2.1 Relevant definitions of leadership

The Leadership Trust (2018) defines leadership as an application of personal power to achieve common goals. This working definition implies certain principles, such as the existence of a common goal which the leader will need in order to gain his followers’ commitment to the goal. James MacGregor Burns (1978) defines leadership as the process of mobilising individuals, using power that they draw from their motivation, values and resources to achieve their goals.

Andrew DuBrin (2013) highlights common characteristics of a leader as being able to inspire and stimulate others to achieve goals that are worthwhile. He therefore provides the following definition of leadership: “Leadership is the ability to inspire confidence and support among people who are needed to achieve organisational goals” (DuBrin, 2013:2). Yukl (1999:280), in turn, provides a comprehensive definition of leadership when describing leadership as “a process of influencing others to understand and agree about what needs to be done and how it can be done effectively, and the process of facilitating individual and collective efforts to accomplish shared objectives”.

A common thread among many of these definitions includes the elements of inspiration, motivation and purpose which are instilled in followers by a leader. The above-mentioned definitions also describe leadership as a process, which will be referred to later in the study when dealing with systemic challenges.

2.2.2 Simplified definition

Perhaps a more basic but useful definition is presented by Gill (2013:13), drawn from the etymology of the word lead, which originates from the Old English word “laedan”, meaning “to show the way”, “to take others along a safe path to their journey’s destination”. The Icelandic derivative “leidha” refers to the person in front who guides the ship.

Because leadership can be employed in so many situations, the terms leaders and leadership have strayed from their original meanings which in essence related to showing others the way. The definition provided by Gill (2013:13) is that “leadership shows the way and helps others pursue it.” This definition entails envisioning a future and promoting a clear purpose, values, strategies and empowerment of all involved. This definition can further be useful for recommending a model of leadership which is capable of navigating a global environment characterised by uncertainties and risks. According to this definition, leaders are required to understand the complex risks facing their societies today and help others move towards a desired future in a cooperative manner.

To conclude, it is hard to select a general definition because of the lack of consensus within the field of leadership study and the different organisational needs that require different approaches to leadership. Another potential shortcoming with the above descriptions is that

leadership is often viewed as a one-way process, where it is expected of the leader to provide all solutions to their followers. This study will hence consider the broader scope of the process of leadership when dealing with more complex and systemic issues.

It is useful to employ a combination of the basic definition of leadership by Gill (2013) and some of the common themes found in the earlier definitions of leadership, without neglecting the larger system in which leadership may occur. In doing so, we can view leadership as a process within a larger system, where leaders use their influence to help others move towards an ideal destination.

The next section will consider the history of leadership theory and specifically how it developed over the last century.

2.3 HISTORICAL OVERVIEW OF LEADERSHIP THEORY

The second objective of this chapter is to provide an overview of the history of leadership theory in order to gain a better understanding of where current leadership thought originated and perhaps provide some insight into where it is heading in the future. This will provide a platform from which to observe some of the more modern leadership approaches considered later in this study.

Antonakis, Cianciolo and Sternberg (2004) present the history of how leadership has evolved over the years by dividing leadership research into eight major schools as represented in Figure 2.1.

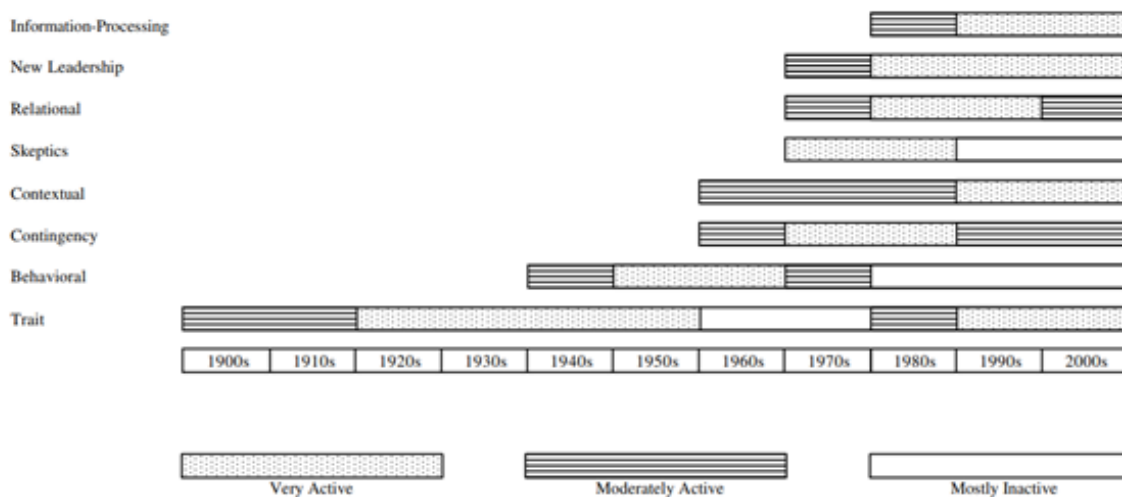


Figure 2.1: Eight major schools of leadership

Traits school of leadership

At the turn of the 20th century, the scientific study of leadership began along with the promotion of the Great Man (Carlyle, 1993:12) perspective on leadership which identified exceptional individuals as capable of shaping history. The Great Man theory assumed that specific characteristics were what made someone a leader. The research thus focused on isolating individual differences associated with leadership. Certain traits, such as intelligence and dominance, were consequently associated with leadership (Mann, 1959:230-270; Stogdill, 1948:20-70). These views brought about much contempt because of their rather pessimistic interpretations and the research was subsequently shut down.

Behavioural school of leadership

The pessimistic reception of the trait theory led to a movement of leadership thought in the 1950s that focused on behaviours. The behavioural research considered the behaviours that leaders displayed and their treatment of followers, once again placing an emphasis on the role of the individual within the leadership process.

The study on behavioural leadership fell short of providing convincing evidence because of contradictions found in relation to differing behavioural approaches and it subsequently put leadership in a state of crisis once again. It soon became evident that the success of a

leader's behaviour was contingent on the situation, thus giving way to leadership theory that focused on contingencies in the 1960s.

Contingency school of leadership

Fiedler (1971:339-355) pioneered the contingency theory, stating that the effectiveness of leadership is determined by task structures, positional power and leader-member relations. Other research into contingency theory contributed to a growth in the field, although interest appeared to decline, suggesting that the introduction of contextual approaches may have contributed to this.

Relational school of leadership

After research into the contingency theory grew in popularity, the relational theory of leadership was researched extensively. Relational theory is built on the leader-member exchange theory, which describes the nature of leader-follower relations. High-quality relations between the leaders and followers in this model are built on trust and mutual respect, whereas low-quality relations are built on contractual obligations. The leader-member exchange theory suggests that high-quality relations produce more positive leader results than lower quality relations (Lowe & Gardner, 2000:461-513).

Sceptics of leadership school

The 1970s and 1980s saw more episodes of crises in leadership research, such as the questioning of the validity of leadership ratings produced from questionnaires, with some arguing that ratings were subjected to tainting by the implicit leadership theories of those presenting the ratings (Eden & Leviatan, 1975:737-740; Rush, Thomas & Lord, 1977:94-109).

These arguments assume that what leaders do is largely irrelevant and some even questioned whether leadership was needed or whether it made a difference to organisational performance (Meindl & Ehrlich, 1987:91-109; Pfeffer, 1977:105-113). These arguments have been tempered by leadership scholars categorised as realists.

Although there remains unanswered questions presented by the sceptics of leadership, research into leadership has been strengthened by pessimistic criticism resulting in research that applies more rigorous methodologies, distinguishing between top-level and supervisory

leadership, and a greater focus on followers and their perception of reality. Studies into followership have resulted in the information-processing approach of leadership, which has benefitted leadership research immensely.

Information-processing school of leadership

The information-processing school has been pioneered by Foti and De Vader (1984) in an attempt to understand why leaders are legitimised by the expectations of followers. It has also been used to understand how cognition is related to various leader behaviours.

The new leadership (charismatic, transformational, visionary) school of leadership

During a period of disinterest in leadership research, the work of Bass (1985:55-73) began to reignite interest in leadership research across many leadership disciplines. The work of Bass (1985:55-73) elaborated on work by Burns (1978) to argue that traditional leadership paradigms were focused on transactional obligations through mutual satisfaction.

Burns (1978:112-145) believed that a different approach to leadership was necessary to account for follower outcomes, which were rooted in a purpose and an idealised mission. He referred to this approach to leadership as transformational leadership which is idealised and visionary and inspires values from the leader in followers in order for followers to transcend their own interests for that of the greater good.

This school of leadership was followed with intense interest seeing one-third of articles published in the Leadership Quarterly based on this new school of leadership (Antonakis & Sivasubramaniam, 2003).

This historical overview has shown the evolution in the research of leadership, providing a better understanding of the changes that leadership has undergone and continues to experience. A common theme identified throughout these approaches is the emphasis placed on the role of the individual leader and/or follower.

The historical development in leadership research provides a better understanding of contemporary leadership's focus and also highlights the lack of a more systemic approach which goes beyond leader-follower relationships in dealing with more complex challenges.

The following section will assess different styles of leadership in order to understand how different leaders approach their leadership tasks.

2.4 LEADERSHIP STYLES

This section will select and review key leadership styles that determine the various ways in which leaders interact with their followers. In order to do so, a definition of leadership style is first provided and the various leadership styles are then reviewed briefly.

Definition of leadership style

Leadership style is the general manner, outlook, attitude and behaviour of a leader, particularly in relation to their colleagues and team members. This can be expressed in various ways, including in what leaders say, how they say it, the example they set, their body language, and their general conduct and character (CMI, 2013:1).

Main leadership styles

Charismatic leadership

The charismatic leader gains followers through their personal charm, as opposed to other forms of external authority. An important characteristic of this leader is their strong self-belief. The ability to win the admiration of others by making them feel special is what enables the charismatic leader to achieve support and personal goals (DuBrin, 2010:113-135).

Democratic leadership

Democratic leaders give authority to the group and considers the group's opinion prior to making decisions (DuBrin, 2010:113-135).

Autocratic leadership

Autocratic leaders maintain most of the authority, with little consideration of group opinions in making decisions (DuBrin, 2010:113–135).

Laissez-faire leadership

The laissez-faire leadership style suggests that followers are capable of solving problems and navigating through an expedition with little guidance. These leaders provide little guidance when handling group issues on the task, allowing the group to make decisions on their own. The laissez-faire leadership style is based on a “hands-off” approach to leadership, encouraging the group to solve problems and practice critical thinking, without allowing followers to be over-dependent on their leader for decision-making (Val & Kemp, 2012:29-30).

Participative leadership

Instead of making autocratic decisions, the participative leader involves others in the process including followers, peers, stakeholders and supervisors. How much control the leader is willing to delegate is up to their own discretion (DuBrin, 2010:113-135). Table 2.1 shows how participative the leadership process can be depending on the leader.

<Low Participation

High Participation>

Autocratic decision-making.	Leader considers feedback.	Decision voting.	Shared decision-making.	Leader decision delegation.
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Table 2.1: Level of participation

Situational leadership

Situations, rather than preference for a particular leadership style, are what determines the decisions that leaders make according to this leadership approach. Factors that affect situations include the motivation and capabilities of followers where the leader’s perception of followers plays a key role in the leader’s decisions (DuBrin, 2010:113-135).

Transactional leadership

This style of leadership functions in terms of clear structures of authority where followers know what tasks they are expected to perform in order to receive rewards. Transactional leadership assumes that people are motivated by rewards and punishment and that social systems work best with a clear chain of command (Adams, 2010).

Transformational leadership

Transformational leadership can be defined as a leader's effect on their followers where the followers trust, respect and are loyal to their leader. In addition, followers are internally motivated to achieve beyond expectation (Bass, 1990:24). Transformational leadership focusses on a connection between the leader and their followers that inspires a collective vision towards achieving organisational goals (Antonakis & Sivasubramaniam, 2003:261-295).

Servant leadership

The leader serves their followers to help them grow and improve as opposed to them only serving the leader. Servant leadership is a natural model for leadership in the public sector and should not be interpreted as weak or ineffective by any means. In fact, servant leadership causes intrinsic motivation in followers that leads to personal transformation and replication of the leadership style within their own lives and professions (Adams, 2010).

In this section, different styles with which leaders approach their respective leadership tasks have been observed. It is therefore necessary to accept that the inherent differences in people's leadership styles mean that no single leadership style alone is applicable in developing a model for undertaking leadership tasks. Once again, leadership styles are found to be heavily centred around the individual leader and follower, this time focusing on their different behaviours in the leadership process, with little value placed on the numerous interactions occurring within the larger system of their respective organisations.

The next section will attempt to define good leadership by contrasting it with poor and ineffective leadership.

2.5 GOOD AND BAD LEADERSHIP

Before presenting approaches to leadership for dealing with complex challenges in a modernised world, it may be useful to understand what is broadly referred to as good and bad leadership. It is, however, necessary to distinguish between the two and provide a description of what good leadership looks like. As such, Ciulle (2004) notes that good leadership has two interrelated components, namely good in the sense of being effective in the task of leadership and good in the sense of possessing moral integrity.

Van Niekerk (2014:24) lists the following six guiding concepts to help define what good leadership means. These are effective leadership, servant leadership, emotionally intelligent leadership, ethical leadership, thought leadership and resonant leadership. The notion of good versus bad or effective versus ineffective links to each concept.

2.5.1 Six guiding concepts for good leadership

1. Servant leadership

This concept defines a leader who is primarily committed to serve others and help them develop for the benefit of the common good.

2. Thought leadership

This concept uses the power of ideas to change the way people think. These thought leaders pioneer their new ideas to peers or superiors.

3. Ethical leadership

Ethics is argued to be central to leadership. Ethical leadership is characterised by morality, integrity and ethical behaviour (DuBrin, 2006:142). He refers to integrity as one's loyalty towards rational principles. Integrity entails the practising of what one preaches despite states of social or emotional pressure.

4. Effective leadership

DuBrin (2013:155) defines an effective leader as someone who attains a desirable outcome, for example high-quality satisfaction or productivity in a given context.

5. Resonant and dissonant leadership

Resonant leadership links closely to emotional aspects that may face leaders and their followers. Resonance is formed when leaders positively drive their emotions. Dissonance, in contrast, forms when leaders negatively control their emotions, which causes emotional destabilisation that hinders the environment of their followers (Van Niekerk, 2014:13).

6. Emotionally intelligent leadership

Emotionally intelligent leaders are described as being capable of managing leadership complexities through the maintenance of focus on self, others and context. Maintaining a consciousness of and focus on the context entails that the leader has an awareness of the bigger environment in which leadership takes place (Van Niekerk, 2014:14).

In short, good leadership transcends the leader's capabilities, knowledge and skills when exercising leadership to incorporate a number of sought-after values and quality of character which distinguishes it as good leadership practice.

2.5.2 Bad leadership

Referring to the negative extremes of the above attributes of good leadership will lead to a better understanding of what may be referred to as bad or ineffective leadership.

Kellerman (2004:38) lists bad leadership under the following seven groups:

- Rigid: Leaders characterised as rigid fail to adopt innovation, information and changes in their environments. These leaders may also be limited in their ability to learn new ways of doing things, preventing their organisations from achieving growth.
- Incompetent: Leaders characterised as incompetent fail to create positive change.
- Corrupt: Leaders characterised as corrupt, are liars, cheaters and thieves that engage in destructive behaviours toward their followers.
- Callous: Leaders characterised as callous are mean and disregard the needs of their followers.
- Intemperate: Leaders characterised as intemperate are out of control and their followers are incapable of stopping them.

- Insular: Leaders characterised as insular refuse to acknowledge their destructive actions and undoing of those outside of their group.
- Evil: Leaders characterised as evil make use of malevolent methods to cause physical, mental or emotional harm to followers or others.

The last two sections have attempted to provide a description of good leadership by categorising it in terms of effectiveness and moral integrity. It is clear from this section, that there is an apparent contrast between good and bad leadership practice, especially when considering the differences in values and characters between the two types of leadership.

The final section of this chapter will review alternative thinking in leadership that may provide new ways of dealing with complex leadership challenges in more effective ways. These approaches will also help highlight ineffective ways of approaching leadership that deals with challenges that are interrelated in nature and require an understanding of the whole system in which they operate.

2.6 LEADERSHIP PARADIGMS FOR COMPLEX ADAPTIVE PROBLEMS

So far, chapter 2 has reviewed the development of leadership research since the turn of the 19th century. It is evident that leadership itself has evolved over time, in terms of the way it is defined and implemented. One of the aims of this study as described in chapter 1 is to search for a leadership approach that meets the demands of an ever-increasingly complex global environment in which leaders find themselves today.

The following section aims to conceptualise complex adaptive problems in order to formulate an argument for a leadership approach that considers the complexities of the environment in which it is applied. The objectives of this section is to define complexity and what is referred to as complex adaptive systems in order to understand the challenges that leaders face in modern society and to review some of the work on leadership that aims to address such complex adaptive problems.

2.6.1 Complexity and complex adaptive systems

Complexity

The root of the word complexity can be traced back to plexus, meaning “braided from”, which is derived from the word complexus, meaning braided together. Complexity can therefore be associated with the intertwining and interconnectivity of different elements in a system and its environment (Chan, 2001:1).

Complex adaptive systems

Natural sciences refer to the complex behaviours that emerge from nonlinear interactions between component systems at different levels of organisation as complex adaptive systems (CAS). Complex adaptive systems are dynamic systems that cannot be separated from their environments in that the systems are constantly adapting to change (Chan, 2001:1).

The above definition of complexity is important for this study, because it proposes a search for a leadership approach that takes into account the environment in which leadership is employed. The fact that leadership is not isolated and functions in an interrelated manner with other systems in the environment means that further complexity will arise. The challenge for leadership in a globalised and modernised world is therefore related to how such complexities are approached. The following section will review leadership studies that attempt to address such complexities.

2.6.2 Leadership for wicked problems

Perhaps a different approach to leadership thinking is presented by Grint (2008:3), Professor of Public and Business Leadership at the Warwick Business School, who identifies “wicked problems” in leadership – that is, problems that are more complex in nature and not solvable in a straightforward manner. These wicked problems require leaders to come up with integrative solutions that address complex problems.

The following section will review these approaches in order to propose a more effective leadership approach that will be able to address the complex challenges with which global and South African leaders might be faced.

Distinguishing between tame and wicked problems

Grint (2008:12) makes use of the typology that Rittel and Weber (1973) use to describe tame and wicked problems. Tame problems are associated with limited uncertainty and have usually been solved before. These can be solved in a straightforward manner even though they themselves may be complex in nature. Wicked problems pose more uncertainty and are more complex than they are complicated in nature. Therefore, wicked problems cannot be solved without affecting the entire environment in which they reside.

When considering the South African context and the leadership challenges that the country faces, issues of poverty, crime, environmental degradation and economic failures may be viewed as different parts of one complex system. The complex nature of the South African demographics, which include people with different cultural backgrounds, religious beliefs and historical advantages or disadvantages, leads to an array of wicked problems that have proven to be unsolvable with conventional solutions. In addressing inequality, for example, the South African public official needs to provide a means for compensating the poor, but in doing so, may be forced to make a trade-off between the interests of different social classes. Situations such as these have the potential to cause a cascading effect in the social system. High levels of inequality further add to the complexity of this wicked problem with which the country is faced.

The aforementioned challenges presented by complex environments are highlighted in this study for the purpose of finding leadership approaches that take into account the interconnectedness and interactions of such complex challenges.

According to Grint (2008:3), leadership is often associated with the precise opposite of such complex problems in that it is associated with the ability to solve such problems and act decisively, which may not be the case in reality. He further notes that with wicked problems one cannot find complete solutions, act decisively or know what to do. After all, knowing what to do would entail that one is dealing with a tame problem. The pressure to act decisively forces leaders to solve problems as if they were tame problems. For the South African leader to approach the issue of poverty through the provision of subsidies for the poor, a tame solution will be required. Providing subsidies for the poor would have a negative effect on

government spending. Therefore, in attempting to address one issue, another will emerge. This is the main issue with wicked problems.

Clampitt and DeKoch (2016:18) emphasise the importance of embracing uncertainties in leadership by recognising that there are many problems for which leaders do not possess the solutions. The forces of modern-day society, they argue, are what pressurise leaders to have all the answers to a problem.

It is clear that with wicked problems “we” becomes an important word in describing the collective nature of these kinds of problems (Grint, 2008:14). Whereas tame problems are commonly associated with individual solutions, wicked problems cannot be resolved fully by individual genius, as they are beyond the capacity of a single leader. Wicked problems thus need the transfer of authority from the individual leader to the collective in order to create more integrative solutions for complex problems.

Taking into account the reality of such complexity, Grint (2008:13) defines leadership from the wicked problems perspective as an art as opposed to a science that can be broken down and understood in scientific terms. The role of leadership requires leaders to start asking the right questions instead of providing the right answers, because the answers may not be self-evident. As a result, a collective approach is required in order to make progress.

A complex adaptive leadership approach may contrast traditional thinking about leadership that focusses on the individual leader and the subsequent expectations for solutions that weigh on the leader’s ability to make sense of problems and find solutions to them. By conceptualising leadership challenges as being part of a more complex adaptive system, the study’s context, i.e. proposing leadership for complex problems, is established.

The following section will further consider alternative approaches to leadership thinking by reviewing adaptive challenges with which leaders may be faced in order to further contextualise leadership in complex environments.

2.6.3 Adaptive leadership

In a similar vein to Grint’s (2008:3) understanding of the leadership process, Heifetz and Laurie (1997:3) propose that it is not the leader’s responsibility to have all the answers, but

rather to have the ability to ask the correct questions. Leadership thinking that acknowledges the system in which leadership operates and the complexities brought about by interconnections are vastly different from traditional leadership theory that assigns the leader the central role as the hero-like figure who decides the fate of all those around them.

Perhaps leadership theories should relax expectations for discovering perfect models. In addition, leadership theories should move away from expecting leaders to have all the answers to a problem. Heifetz and Laurie (1997:1) use an analogy of the leadership task that a doctor has in mobilising their patient to making changes to life habits that will help improve the patient's long-term health. The doctor can only provide a certain measure of expertise and support to the patient, but ultimately the leadership challenge entails empowering someone to take responsibility to make positive lifestyle changes that only they can make. In a similar way, modern organisations are confronted with what Heifetz and Laurie (1997:1) refer to as adaptive challenges. The changing nature of markets, customers, citizens, competition and technology forces organisations to learn newer ways of operating. In this meta-environment, the leader must mobilise people and resources to achieve adaptive work.

The modern leader should achieve adaptive work when formerly held beliefs and world views are challenged and the values that led to success in the past become more irrelevant in current practices. Along with technological advancements, adaptive work becomes a critical component for the leader in a fast-changing environment (Heifetz & Laurie, 1997:3).

Table 2.2 shows how adaptive challenges are different from technical problems, i.e. problems that are clearer in nature and require less complex solutions:

Kind of challenge	Problem definition	Solution	Locus of work
Technical	Clear	Clear	Authority
Technical and adaptive	Clear	Requires learning	Authority and stakeholders
Adaptive	Requires learning	Requires learning	Stakeholders

Table 2.2: Distinguishing technical and adaptive challenges (Heifetz, Grashow & Linsky, 2009:20).

According to this approach to leadership, developing leaders that will meet the demands of an ever-changing and competitive environment, will require the capacity to mobilise organisations for adapting behaviour. The challenge, however, is that developing this type of adaptive leadership is difficult for a number of reasons:

Firstly, for change to occur, long-standing patterns of behaviour should be broken, such as providing leadership to the organisation in the form of solutions. To achieve adaptive work, responsibility should shift from a model of leadership that offers all the solutions to one where responsibility is shared and the leader can offer the correct questions instead. The difficulty with this emerges when leaders in executive positions find it challenging to surrender their positions of providing solutions to all problems because of the fear of losing the virtue of their competence.

Secondly, achieving adaptive change comes from the difficulty of going through periods of change. People are required to develop new ways of working, new ways of behaving and new values. Employees often meet these demands to change and sacrifice with much resistance. Furthermore, employees will usually expect leaders to shoulder all responsibility according to traditional leadership models, which often overemphasise the primary role of the leader over the follower and others (Heifetz et al., 2009:29-35). It is imperative that such expectations be unlearned. This is achieved by having new leaders ask the tough questions as opposed to providing employees with all the answers. Instead of protecting their followers from external threats, leaders must allow followers to experience a level of discomfort in order to adapt.

Heifetz and Laurie's (1997:3-9) six principles to achieve adaptive work

1. Getting on the balcony

Top strategic leaders, whether in public organisations or businesses, require the ability to see patterns as if they were positioned on a balcony. Being on the field where the action takes place does such a leader no good (Heifetz & Laurie, 1997:3). Moreover, leaders operating on larger scales, such as those involved in public service, cannot function effectively without taking a more strategic approach to their tasks.

Leaders should be developed with this in mind in order to be able to respond more appropriately to change. By standing on a balcony, the strategic public (or private) leader will be able to guide their organisations through periods of change. Without such a

perspective, they face the risk of being immobilised and being ineffective among different public demands and service backlogs that cannot be managed by only a few. Instead, leadership that is effective in this case would mobilise people to do adaptive work (Heifetz & Laurie, 1997:3).

2. Identifying adaptive challenges

Leaders are those who set the strategic direction of organisations. It is therefore important that they are also able to identify and respond to threats in their environments. Understanding how to respond to an ever-changing South African socio-economic, political and environmental climate is important for South African leaders because they should adapt their organisations to change accordingly. Without the ability to identify adaptive challenges, local municipalities, for example, will struggle to meet the demands of the public where the social climate is often changing and difficult to predict.

Heifetz et al. (2009) further identify the process of adaptive leadership as comprising three activities: 1) observation of surrounding events, 2) interpretation of observation and 3) interventions to the interpretations. Figure 2.2 illustrates the process leaders follow when identifying adaptive challenges:

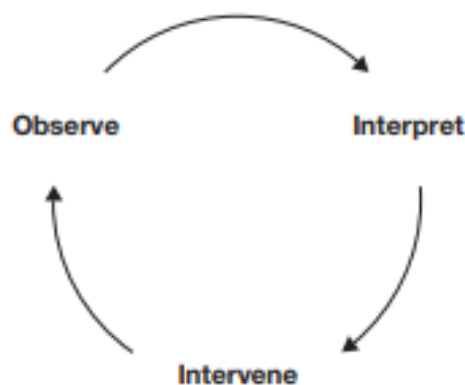


Figure 2.2: The adaptive leadership process (Heifetz & Laurie, 1997:8).

3. Regulating distress

Achieving adaptive change comes with a level of stress. The leader's role is to manage that stress so that employees do not feel overwhelmed by change. A healthy amount of stress is still required to mobilise employees to change as well. Achieving the balance is the key skill required in the leader.

4. Maintaining attention

Leaders have to develop counter measures to distractions that hamper adaptive work. Denial and scapegoating without focusing on the real enemy form part of work avoidance and distractions that occur when attempting to undertake adaptive work within the organisation. Public servants need leaders who can keep their focus on the issues that are central to public affairs.

5. Returning the work to the people

Far too often people look up to the chain of command to take decisive action on problems that they themselves can solve. Leaders that support such overdependence only reinforce the passive behaviour of employees in an organisation.

However, giving responsibility to employees is no easy task. Employees often feel comfortable being told what to do and leaders prefer treating staff like mechanical resources at their disposal. In order to return the work to the people, a structural change will need to take place within the organisation, including a change in its culture. This requires leaders to take time, risk and energy to invest in empowering employees. Employees should be empowered to do the work before they are given the work. Leaders must therefore be willing to support employees when they fail.

6. Protecting voices of leadership from below

Giving the people at the bottom of an organisational structure a voice is the sign of an organisation that is willing to listen and learn. In reality, whistle-blowers and creative thinkers are routinely silenced because they are accused of disrupting the status quo.

When facing adaptive challenges, leaders that wish to protect the voices of people at the bottom must take time to consider what issues those in lower structures of the organisation bring to attention. A common problem faced by whistle-blowers is the poor timing or incorrect procedure when raising an issue. Their otherwise genuine complaints are quickly snuffed out by higher-ups in the organisation without giving further thought or attention to their voices. A leader must create a culture that avoids setting the higher-ups' agendas above those of the organisation (Heifetz & Laurie, 1997:9).

2.7 CONCLUSION

The objective of this section was to define what complexities and complex adaptive systems are and how leadership operates within a system that is characterised by interconnections, dependencies and variables that further deepen the complexities associated with the processes of leadership.

Work done by Keith Grint (2008) highlights new ways of conceptualising leadership in order to understand its effectiveness as well as ineffectiveness when dealing with complex problems that are labelled as “wicked problems” – that is, problems that may cause further problems in an attempt to be solved and thus have no set blueprint with which to solve them.

Heifetz and Laurie (1997:3) talk about complex adaptive challenges in leadership which require that leadership itself adapts as the environment evolves. Similar to Grint (2008:3), Heifetz and Laurie (1997:3) view the role of leaders as limited when dealing with complex problems. The role of leaders should shift from being expected to provide all the answers to asking the correct questions.

In this chapter, the goal was to present a literature study of research in leadership that will provide a framework for the remainder of this study in order to find and recommend alternative approaches for leadership that is capable of addressing complex adaptive challenges. In order to do so, the following goals were met:

Firstly, the chapter found that the vast literature on leadership struggles to find a single definition that is agreed upon by all authors, although universal principles, such as leadership providing inspiration, motivation, vision and guidance, are identified.

A simple yet working definition of leadership as a role that paves the way forward for others. This definition was combined with common themes among more leadership definitions, which created the following definition: leadership is a process where leaders influence their followers in a way that mobilises them towards an ideal future.

Secondly, leadership styles were defined and listed, providing evidence of a variety of different styles that leaders may use in the leadership process. Due to the inherent differences found among individuals, there is no single leadership style that should be followed.

Thirdly, this section defined good leadership as being effective and moral in the leadership process. Examples of bad leadership, in turn, especially in the public domain, highlight the amount of damage that bad leaders can cause to public trust. These bad examples further emphasise the urgency to raise leaders that are different.

Finally, the literature on alternative thinking on leadership by Grint (2008) and Heifetz and Laurie (1997) gives an overview of how leadership itself is transforming to adapt to an increasingly changing and uncertain modern world. These approaches give way to approaches that are participative and integrative in nature, presenting a far more effective approach in dealing with global risks facing modern South Africa and the globe.

In chapter 3 and 4, these global risks, as presented by the World Economic Forum, and their implications for countries like South Africa, respectively, will be analysed.

CHAPTER 3

ANALYSIS OF WORLD ECONOMIC FORUM GLOBAL RISKS

3.1 INTRODUCTION

The previous chapter provided a literature review covering concepts of leadership research with the purpose of providing a framework of leadership that can be used for the remainder of the study. This framework has incorporated different theories of leadership and the emergence of leadership approaches that are capable of dealing with more complex leadership challenges.

Chapter 3 aims to contextualise these challenges by reviewing the work of the World Economic Forum (WEF) in the 12th and 13th editions of their annual Global Risks Report, published in 2017 and 2018 respectively, in order to make a case for the need of a complementing leadership approach for the aforementioned challenges. To achieve this, the following objectives will be pursued:

Firstly, an introduction of the WEF global risks will be provided, which will describe the nature and purposes of these reports.

Secondly, the major risks as outlined in the latest publications will be reviewed to understand the systemic nature of these risks and the challenges that they present to modern leaders.

Lastly, the current leadership responses to each major risk will be examined and discussed in order to see if current leadership approaches are appropriate for dealing with complex adaptive challenges.

At the end of this chapter, the review of the Global Risks Report should underline the nature of the global challenges that leadership faces in modern times and present a case for complex adaptive leadership.

3.2 THE GLOBAL RISKS REPORT

Each year the WEF publishes their annual Global Risks Report. This report is compiled by employing academic experts and international decision makers to identify the most pressing issues that the world faces. Along with the acceleration in the pace of change, these global risks have interconnections that are deepening, increasing the complexity of the issues that present themselves to leaders in the public, private and civil sectors. Following these challenges is a plan to promote the need for systems thinking and uncover new ways of collaboration between global stakeholders (WEF, 2017a:23).

According to the WEF (2017a:23), leaders across the globe must work together in order to prevent crises and make the world a more resilient place for current and future generations. Collaboration is critical because humanity cannot deal with the multiplicity of challenges in isolation where global risks present themselves in more complex, interconnected and cascading forms. It is therefore imperative that global responses are more interconnected across multiple global systems.

Finally, the Global Risks Report has a unique position within the WEF, finding itself at the heart of deepening partnerships with world governments and international organisations. In the case of this study, the Global Risks Report of 2017 and 2018 therefore provides key information about the trends in international risks and challenges facing leaders in key positions.

Global Risks Report Review

The 12th and 13th editions of the Global Risks Report continue to show an intensification of political uncertainty among the international community within recent years, along with increasing discontent with political and economic systems.

Despite projected economic growth in the year 2018, widespread uncertainty, fragility and instability are reflected in the annual Global Risks Perception Survey 2018 (GRPS 2018) where respondents remain pessimistic about the year 2018 and beyond (WEF, 2018b). The 2018 report highlights four major concerns, including persistent inequality and unfairness, international and domestic political tensions, environmental dangers and cyber

vulnerabilities. The report concludes by highlighting increased dangers of systemic breakdown. These challenges raise the demand for an appropriate leadership response among global leaders in order to address these complex challenges.

As a case in point, multiple complex transitions occurring in the world already began in the shift towards a low-carbon future, technological change at unforeseen levels and new global economic balances which all require a shift in thinking, especially among strategically located leaders. Figure 3.1 shows the current global risks landscape as presented by the Global Risks Report 2017. The x-axis shows the likelihood of risks occurring and the y-axis shows the impact that the associated risk may have.

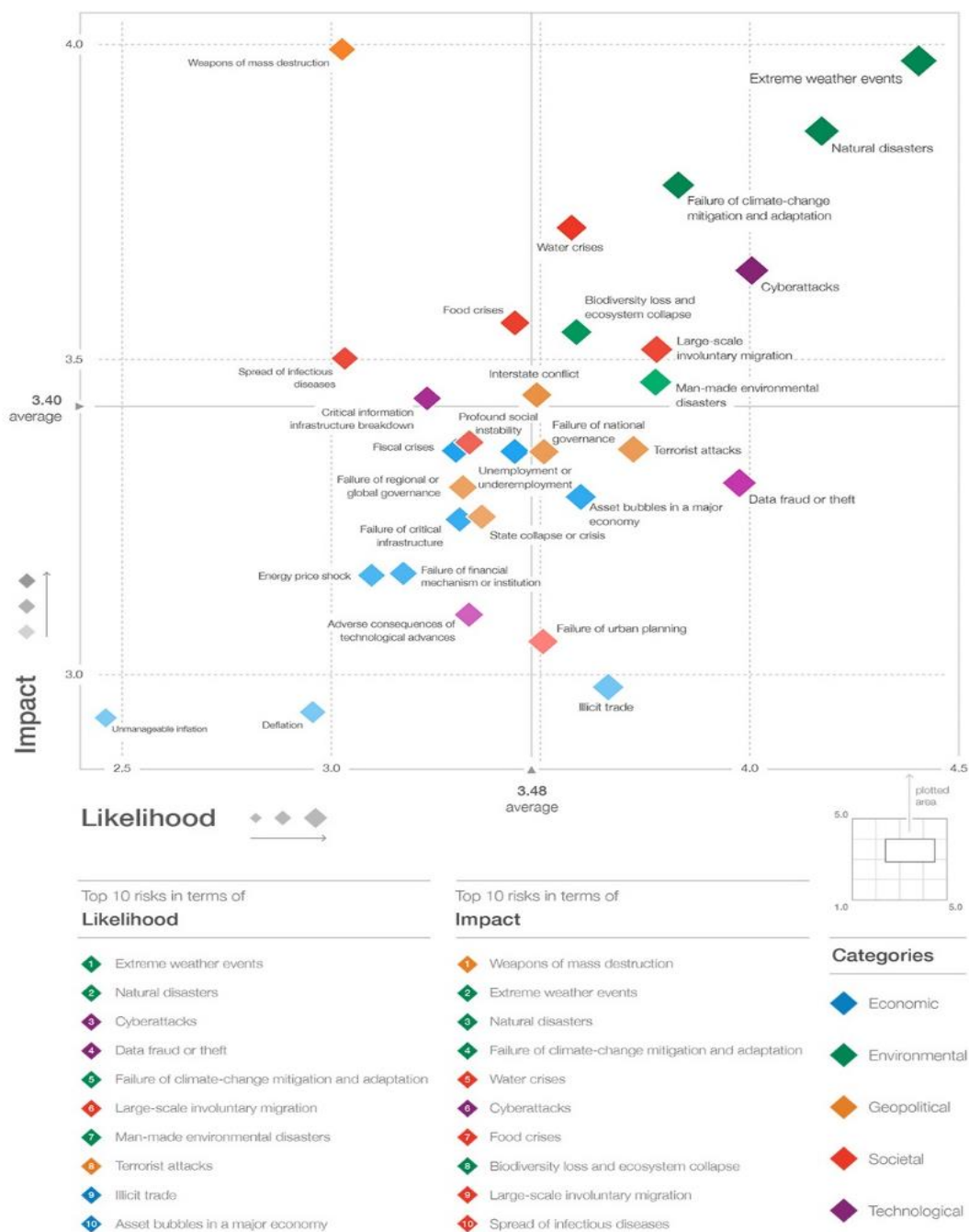


Figure 3.1: Global risks landscape 2018 (WEF, 2018b:3)

Rising systemic risks

The Global Risks Report 2018 recognises the relatively simple process of resolving conventional risks with standard risk management methods. The problem arises when dealing with complex risks that reside in a system built of feedback loops and cause-and-effect relationships that make interventions less simple (WEF, 2018b). Examples of such systems are societies, economies, ecosystems and global financial systems which

have different intersections with one another. From global power generation to transport networks, all are becoming increasingly connected digitally. Global tensions and the pace of change in the 21st century have also given effect to a global ethical value system characterised by unpredictability and fragility in what is accepted as normal.

According to the Global Risks Report 2018, global risks that cascade through a complex system are not in danger of incremental danger, but rather of what the Report refers to as “runaway collapse”. An example of this could be the collapse of the global financial system a decade ago, which triggered a number of economic, political, social and geopolitical disruptions.

What the Global Risks Report 2018 found was that with global infrastructure becoming increasingly networked, and as the pace of change in the 21st century continues to accelerate, signs of strain on a fragile global, social, economic and geopolitical system emerge. Sustained stress will lead to economies, environments and societies losing their ability to rebound and absorb disruptions, allowing the aforementioned systems to become at risk of failing (WEF, 2018b:16).

Figure 3.2 maps the interconnections of global risks, displaying the complexity of major risks when considering the interplay between each of the different risks identified.

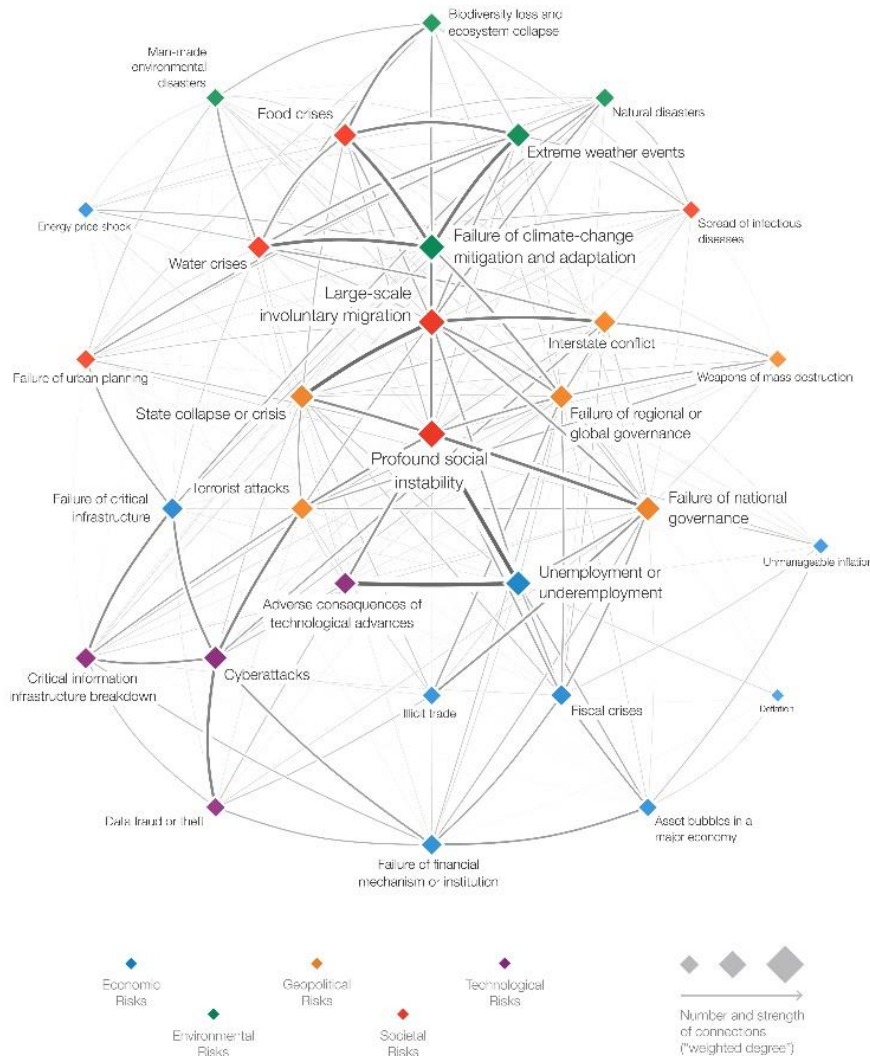


Figure 4.2: Global risks interconnections 2018 (WEF, 2018b:5)

The following section will review some of the major risks referred to by the WEF in more detail and then consider the current leadership responses to these risks.

3.3 MAJOR RISKS AND LEADERSHIP CHALLENGES

In this section, major global risks will be assessed in order to understand how modern leaders approach these risks before making a case for complex adaptive leadership. The major risks to be assessed include economic, environmental, technological and geopolitical risks.

3.3.1 Economic growth and reformations

Decades of peace and prosperity are marked by economic imbalances that threaten anti-establishment politics and backlashes against globalisation. The 2008 financial crisis has caused a stunt in the growth of the world economy. However, according to the Global Risks Report 2017, simply boosting economic growth will fall short of mending deeper fractures within the political economy (WEF, 2017a). Instead, the Global Risks Report 2017 recommends the application of more fundamental reforms to market capitalism that address the lack of harmony between those at the top of national income distributions in wealth and those further down. Globally, inequality between different countries has been decreasing, but inequality between people has been increasing within countries. Since the 1980s, the share of income distributed among the top 1% has increased in the industrialised world as well as in South Africa.

Overall, it remains difficult to discover avenues that will restore global economic rates. However, the Global Risks Report 2017 lists growth as only a part of the challenge that national leaders and policymakers will need to deal with (WEF, 2017a). Wealth and income distribution are now becoming much more politically disruptive and there is a greater demand for addressing rising financial instabilities that influence the livelihoods of national citizens.

The global nature of socio-economics is met with frustration in South Africa because of the inability of national politics to provide stability. Inequalities in countries like South Africa and political polarisation are examples of threats that may amplify global risks and shake the solidarity and trust upon which current economic and political systems are built.

In South Africa, youth unemployment has been recognised as one of the country's major socio-economic challenges facing its leaders. Youth unemployment is caused by a lack of experience and skills among the country's youth. The aforementioned experience and skills are required for the youth to attain formal employment and to partake in productive economic activities (National Treasury, 2011:45).

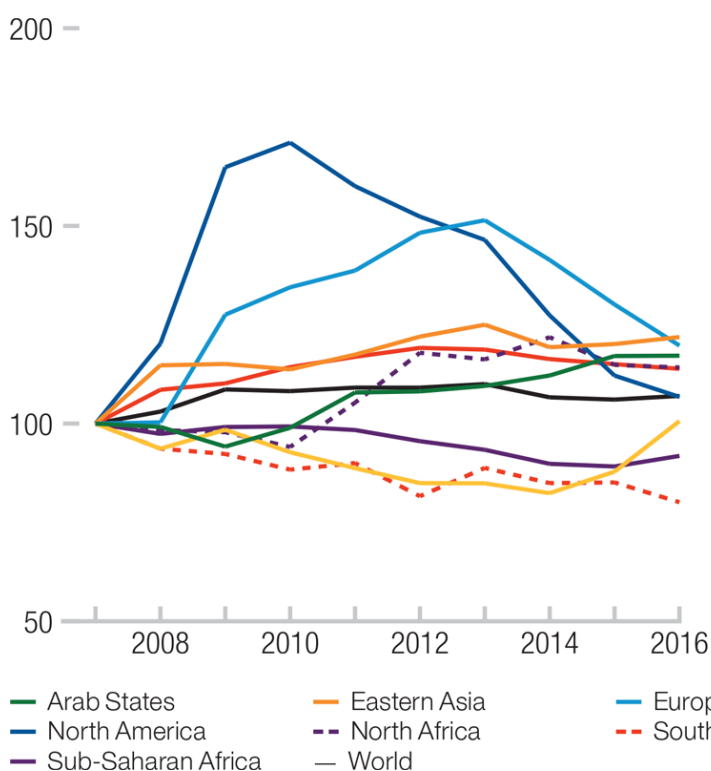
The Global Risks Report 2017 calls for new economic systems and political paradigms that will address the sources of dissatisfaction in current systems (WEF, 2017a). Such new systems should include more people to benefit from skills-based technological change, which is currently skewed towards well-educated citizens and more responsive government systems.

It is clear that employing these kinds of reforms will be no simple task. In fact, shifting from a capitalist system will present a more adaptive as opposed to a more technical type of challenge (Heifetz, Grashow & Linsky, 2009:30-33).

Youth Unemployment

As much as South Africa faces the challenges of youth unemployment, the Global Risks Report 2018 noted that the global financial crisis would cause a “lost generation” of young people across the globe and that youth unemployment would create a corrosive legacy, limiting young people’s capacity to integrate into traditional economic patterns (WEF, 2018b:54). Figure 3.3 shows the rate of youth unemployment across the globe, signalling an increase in rates since the global financial crisis. One of the alarming effects is unemployment in some regions. Even where job creation has increased since the crisis, it remains overshadowed by the increase in low-quality employment along with the rise in the so-called “gig economy” (WEF, 2018b:54).

Unemployment rates, indexed to 2007



Unemployment rates, percent

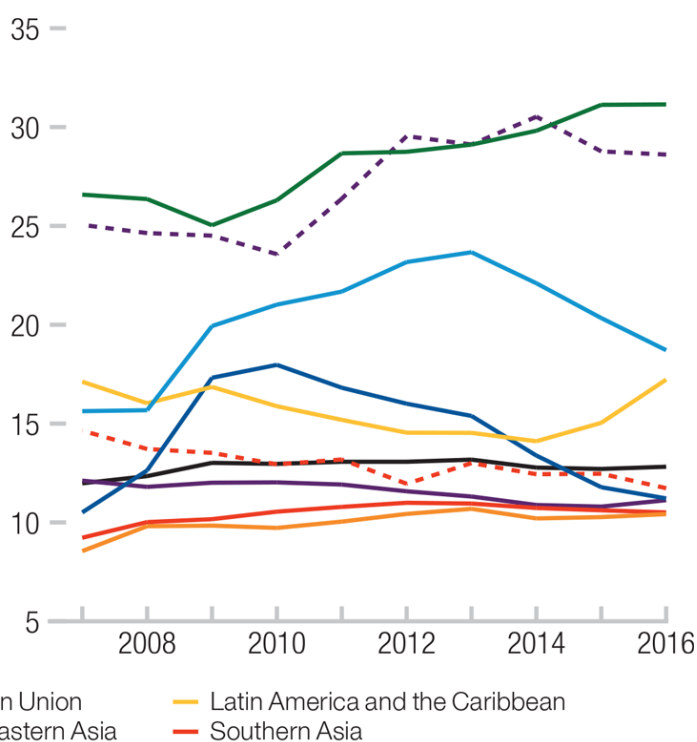


Figure 5.3: Regional youth unemployment (WEF, 2018b:54)

Youth unemployment presents a serious leadership challenge for countries such as South Africa and is set to remain as a global challenge that will impact developing countries undergoing demographic shifts. The result is an amplification of domestic and global risks, namely mass migration, social exclusions and fiscal and monetary policy complications between generations (WEF, 2018b:55). Risks that spill over from high youth unemployment rates call for a complex leadership approach prepared to cope with these potential spill-over effects.

It is, however, worth noting that complex problem-solving expertise alone will not be sufficient in dealing with the global risk of youth unemployment and its spill-over effects. Mumford, Marks, Connely, Zaccaro and Reiter-Palmon (2000:90) note that leaders must also be capable of implementing and revising solutions to such problems while taking into account the demands of the environment in which they operate. It is therefore important that leaders respond appropriately to these economic risks, which will be discussed below.

Leadership Response to Economic Risks

This section will consider the leadership responses to the economic risks highlighted above.

The success of economic development has been tied to the capacity for obtaining civic and political support for development objectives, integrating all stakeholders and ensuring the integrity of any initiatives (Rich & Stoker, 2014:44-45). The Organisation for Economic Co-operation and Development (OECD) suggests that collaborative leadership plays a key role in reaching these economic objectives (OECD, 2015:22).

The OECD (2015:22) further views leadership of local economies as a distributed system, comprised not only of a few select leaders, but also business leadership organisations, public departments, individual firms and partners from the NGO sector. By considering this approach, leadership that will benefit economic development and the management of economic risks must be considered within the system in which it operates. Identifying the system and achieving collective action will require networked governance to collaborate between municipal leadership and all actors involved, all of which possess key roles in the overall success of strategic direction and the development of economies (Hambleton, 2011).

Responding to economic risks seems to be more daunting for government systems. Furthermore, government systems' main tasks are often associated with service management and administration, whereas local economic development has more distinct characteristics. Leaders are required to not only manage services, assets, resources and systems covering the local economy, but they are also responsible for shaping and influencing activities over which they have no authority and which affect the greater system of local development.

Achieving leadership collaboration and addressing risks are dynamic processes. Some local economies mandate collaboration through state processes. However, many others require more interaction between institutions and actors that can address economic risks. For local economies that promote interaction between different players, collaboration will be easier and as a result will be more effective in dealing with complex adaptive challenges.

Connected to these economic risks and responses are environmental risks which will be discussed next.

3.3.2 Environmental risks

Environmental risks have risen in prominence in the latest editions of the WEF Global Risks Report (WEF, 2018b) which have listed climate change, extreme weather and water crises as high-priority interconnected global risks. Mismanagement of the global commons, namely the atmosphere, oceans and climate system, will have drastic local and global impacts. An example of such an impact could be that of climate change on South Africa's weather patterns and water crises, specifically in the Western Cape. Such crises have the potential to trigger societal and geopolitical risks, such as involuntary migration.

Globally, the rise in temperatures and occurrence of heat waves are expected to disrupt agricultural systems that are already being strained. The United Nations Food and Agricultural Organization (FAO, 2003:26) estimates the possibilities of droughts and heat waves that could cause major failures in maize production in China and the USA – two of the largest maize producers globally. The impact that this will have on global food supply and prices could further cause widespread famine, especially in poorer nations. Naturally, the effects of environmental degradation affect biodiversity negatively. The result of this

degradation is mass extinction rates. Between 1970 and 2012, the vertebrate species population has declined by 58%, driven by human destruction of habitats such as forests (WEF, 2018b:12).

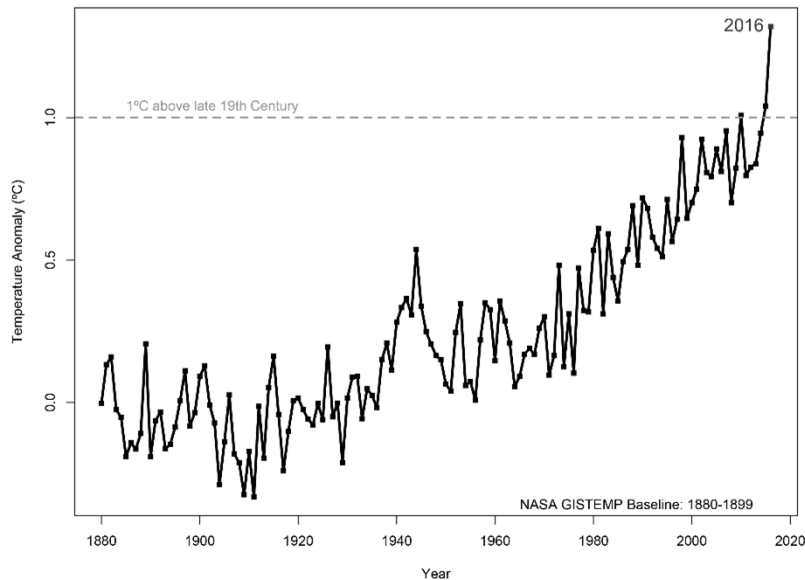


Figure 6.4: Global mean surface temperature (Phys, 2018)

Concerns about addressing these environmental risks were raised when, in 2017, the USA decided to withdraw from the Paris Agreement. What is needed is a network of public-private and subnational collaboration to counter environmental risks. In addition to combating environmental risks, the Global Risks Report 2018 also warns about the potential societal and economic risks associated with a transition to a low-carbon economic model (WEF, 2018b). Examples of fossil fuel disinvestment include Norway's plans for reduction in oil and gas shares announced in November 2017 and the World Bank's announcement of a moratorium on oil and gas investments after 2019 (WEF, 2018b:13).

It is evident that risks associated with environmental degradation can lead to other risks such as the failures in the global economic system. It is therefore imperative that leadership responses paint a complete picture of the system in which leadership tasks related to these risks operate. The leadership response to these environmental risks will now be discussed.

Leadership response

The water crisis in the City of Cape Town demonstrated an environmental risk resulting from various interlinked risks. Poor urban planning by local government is one of the issues in a city that has witnessed a population growth of 79% since 1995 from about 2.4 million to 4.3 million in 2018, while dam storage has increased by only 15% over the same period (Bohatch, 2018).

The droughts and subsequent water crisis affecting the Cape Town area have also been attributed to climate change. The challenge for leadership among public officials addressing this crisis will need to consider all factors and how they interact with one another. The following section will highlight current leadership responses to the environmental risks discussed.

Leadership for sustainable environments

Leadership is recognised as an important factor in changing human behaviour towards more sustainable practices (Evans, Hicks, Cohen, Prideaux, & Mills, 2015). The engagement of political leaders is listed as critical for regional and global sustainable development initiatives (Walker, Barrett, Polasky, Galaz, Folke, Engström, Ackerman, Arrow, Carpenter, Chopra, & Daily, 2009)

The study of leadership has traditionally been underpinned by certain behaviours of individual leaders (Tannenbaum & Schmidt, 1958:95-102; Likert, 1961; Fiedler, 1967:202; Hersey & Blanchard, 1988:173). Alternative leadership approaches such as complexity leadership theory (Marion & Uhl-Bien, 2001), which go beyond the heroic leadership of individuals that underpin traditional thought, are emerging (Hosking, 1999:71; Gemmill & Oakley, 1992:114-116; Maccoby, 2000:1-4; Jones, 2005:179-181; Warner & Grint, 2006:225).

Within the context of the current study, it is important to consider studies conducted by Evans et al. (2015) that explore how leadership may be conceptualised in environmental sciences by considering leaders, entrepreneurs, brokers, pioneers, champions, organisations and groups along with their characteristics and actions which may affect outcomes.

Evans et al. (2015) reviewed ISI web of science literature spanning the period of 2003 to 2013, focussing on leadership in conservation, natural resource management and socio-ecological systems governance. Their search produced 187 papers of which 57 dealt purely with leadership within environmental sciences. The results showed that most of the environmental leadership literature focussed on a few individuals with desirable leadership qualities (Evans et al., 2015). Only a small portion of literature highlighted interacting forms of leadership that recognise systems and interconnections.

An emphasis on the individual

Evans et al. (2015) review of the literature identified the most common approach to conceptualising environmental leadership, as identifying the individual leaders responsible for outcomes. Walters (2007:306) argues that one single individual may be credited with the successful example of adaptive governance. Other papers were found to refer to specific leadership positions or individuals. As such, Kates, Travis and Wilbanks (2012:7156-7161) identified individuals in the UK and the USA who, in their formal positions as political leaders, have catalysed climate change planning and action.

It is becoming more common practice for literature on environmental sciences associated with complex systems and socio-ecological systems to refer to entrepreneurs that may bring about social change (Biggs, Westley & Carpenter, 2010). Whether entrepreneurs or key individuals are emphasised, much of the current research in environmental sciences disregards a systemic notion of leadership.

Interactions

Of the literature reviewed, Evans et al. (2015) only discovered a subset that pertained to interactions between different sources of leadership (Olsson, Gunderson, Carpenter, Ryan, Lebel, Folke, & Holling, 2006; Zulu, 2008; Marschke & Berkes, 2005; Marín, Gelcich, Castilla, & Berkes, 2012). Marín et al. (2012) determined that a governance network is a source of leadership and claimed that the network was successful in revolutionising ecosystem management. Olsson et al. (2006) in turn argued for an integrative form of leadership in their analysis of the Australian Great Barrier Reef Park. This integrative form of leadership successfully promoted interactions among different types of organisations for the achievement of institutional change (Olsson et al., 2006).

Findings

The importance of leadership in environmental domains cannot be refuted, with leadership acting as a key to effective implementation of environmental governance and policies for climate change (Walters, 2007; Biggs et al., 2010; Kates et al., 2012). According to Biggs et al. (2010:9), leadership contributes to ecosystem-based water management and to the successful implementation of marine management and natural resource management policy. Expanding on this logic, Evans et al. (2015) concluded that an absence of leadership results in ineffective management outcomes. A review of 30 cases in fisheries management, for example, found that a lack of leadership was the main cause of failure in implementing initiatives and reaching outcomes (Walters, 2007:306).

Need for alternative approaches

The previous study has demonstrated the high level of focus on individuals within the leadership school and could arguably be traced back to the Great Man theory from the early 1900s (Case et al., 2011; Haslam et al., 2011). The idealised notions of leadership in environmental sciences may limit future attempts at addressing risks associated with climate change and the environment. Great Man leadership frameworks present an incomplete model that is not able to systematically predict who is able to fulfil leadership roles and fails to consider follower motivations (Haslam et al., 2011).

Evans et al. (2015:8-9) noted that, in response to these shortcomings, alternative approaches have emerged that consider the relationship between the leaders and those they lead. Transactional approaches, on the one hand, provide an exchange of resources between leaders and followers while transformational approaches, on the other hand, respond to the lack of relation between leaders and followers. Alternative approaches are argued to have emerged from the shortcomings of the individualistic model of leadership. However, these approaches may still be rooted in Great Man (Carlyle, 1993:2) theories themselves.

From this review, it is evident that the environmental sciences appreciate the role that leadership plays in addressing environmental challenges and risks. Leadership in this field, however, is still anchored in an understanding of leadership that may be at risk of overemphasising the role of individual leaders. It is therefore clear that proposing a form of complex adaptive leadership is not only beneficial to the environmental sciences, but may also provide a better understanding of how leaders function within their different systems and

how they tackle complex issues related to the conditions of the environment (Evans et al., 2015).

The next major risk which will be discussed is related to the growing impact that technology is having on global systems and the challenges that the era of technological advancement presents to leadership across the globe.

3.3.3 Technological disruptions

Technological change provides a challenge for policymakers, private sector authorities and civil society leaders, with deteriorating labour prospects and industrial decline. The reason for this is that production, energy, communication and mobility are changing rapidly in speed and scope, causing disruptions in employment patterns, social systems and geopolitical stability. According to the Global Risks Report 2018 (WEF, 2018b:22), the convergence between physical, digital and biological technologies caused by the fourth industrial revolution is intensifying global risks and forming new ones.

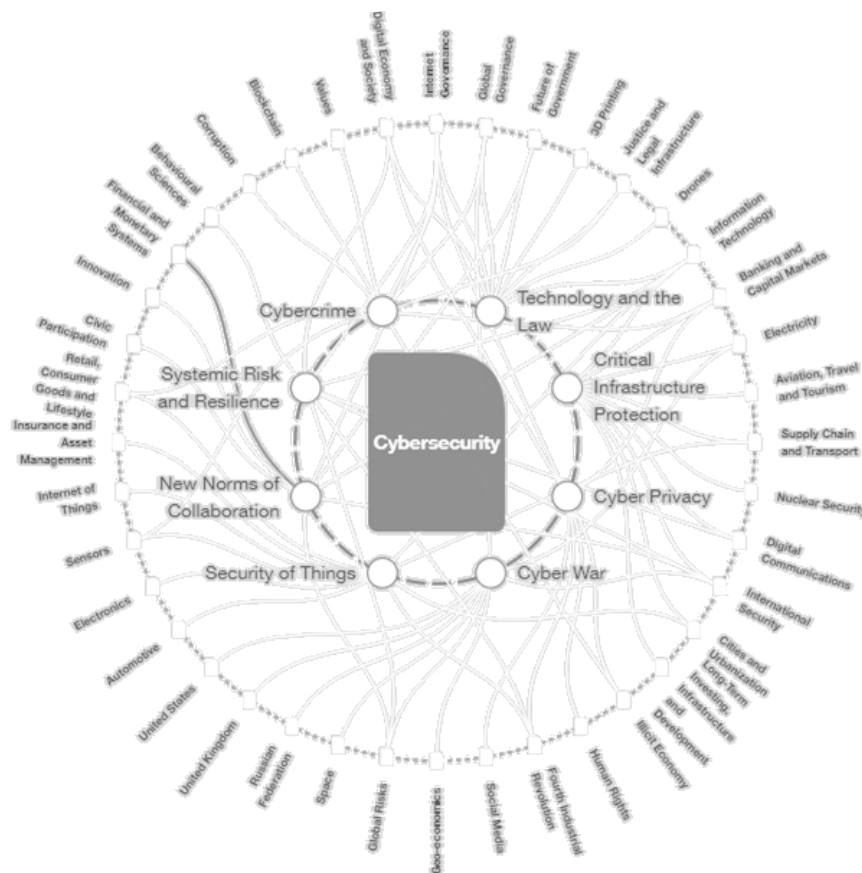


Figure 7.5: Cyber security (Toplink, 2018)

In developing nations like South Africa, public leaders may need to learn how to manage such emerging risks and one way may be to take advantage of the benefits of the fourth industrial revolution (WEF, 2018b:22). By applying careful governance, one can navigate the benefits and impacts of global risks, because new technologies are heavily influenced by corporate policies, social norms, regulations and industrial standards. This will inevitably be dependent on the leadership capacity that countries like South Africa have prepared to deal with the Fourth industrial revolution. Leaders that are knowledgeable about the potential threats and opportunities brought about by technological trends will be crucial in guiding policies that are intended for combatting poverty and inequality.

The global community is experiencing highly disruptive technological development and the fourth industrial revolution can create global risks that will require policymakers, other stakeholders across government, civil society, the private sector and academia to collaborate in adaptive and responsive ways in terms of global governance and risk management.

Speaking at the 2018 Global Risks Forum Davos (Davos, 2018), John Drzik, the President of Marsh Global Risk and Digital, remarked that cyber risks have been intensifying in recent years and ranked as the number one risk across their business leadership executive surveys. According to the Global Risks Report Perceptions Survey (WEF, 2018b:6), it ranked as the most likely risk to occur from 2018 and beyond.

According to Drzik (2018), the scale on which cyberattacks take place are set to increase and these attacks may also be linked to geopolitical risks that are taking place around the globe, where state-sponsored attacks are becoming a more common reality. He also suggests that these risks are growing along with the increase in interconnectedness of digital devices around the world (Drzik, 2018). There are currently around 8.4 billion devices, already exceeding the global population of 7.6 billion, and this number is projected to grow to 20 billion by the year 2020 (Drzik, 2018).

Dzrik (2018) calls for government and business to work together in implementing cyber risk management strategies, because initiatives to combat cyber risks are still very under-resourced globally. In order to understand the scale of economic cost resulting from these risks, Drzik (2018) illustrates the costs resulting from these risks and compares them to damage caused by natural disasters. Attacks on major cloud service providers are estimated to cost between 50 and 100 billion US dollars per annum. The aggregate cost of cyberattacks is now at \$1 trillion annually versus the cost of \$300 billion resulting from natural disasters in 2017 (Drzik, 2018).

Cyber risks are growing in intensity and, as illustrated, they cause damage and cost similar to and even more than natural catastrophes, although the infrastructure to combat and manage these technological risks are far smaller in scale than the infrastructure to combat environmental risks (Drzik, 2018). Cyber breaches of businesses have been dramatically rising over the last few years and cybercriminals are exponentially increasing their targets due to the rise in cloud services and the expansion of the *Internet of Things*, which can be described as the process where the internet becomes more integrated into people's lives, is projected to expand dramatically by the year 2020 as discussed previously. Financial costs of cyberattacks are also rising. A 2017 study undertaken by Accenture (2017:12-50), of 254 companies in seven countries reported the annual cost of cyberattacks to amount to £11.7

million annually with a year-on-year increase of 27.4%. Furthermore, the expected costs of cyberattacks to business over the next five years was estimated at \$8 trillion (Drzik, 2018).

Figure 3.6 represents another study conducted by Accenture (2017), showing the rise in the average total cost of cybercrime by country, organisation and industry. A sharp upward trend in recent years is evident.

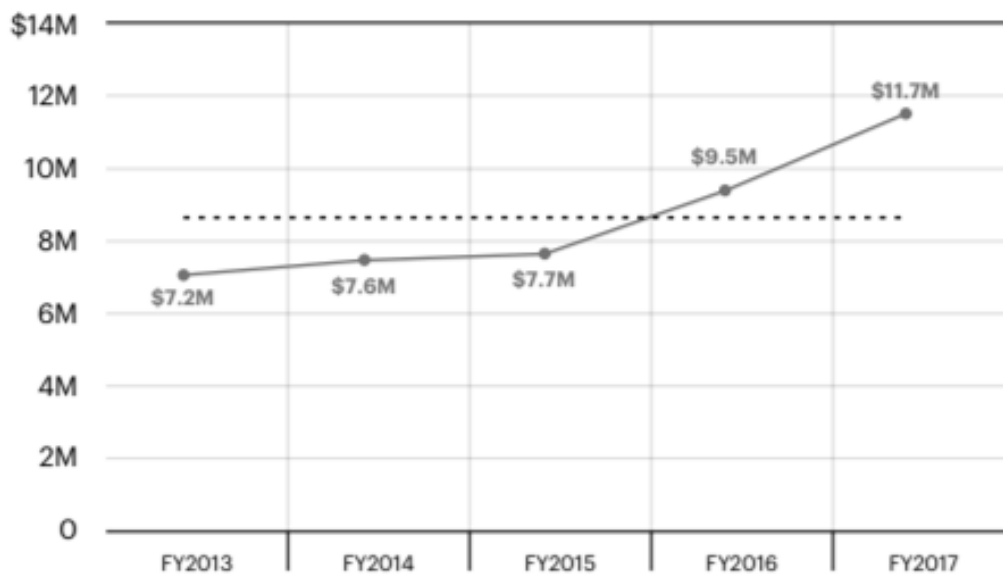


Figure 8.6: Average total cost of cybercrime (Accenture, 2017:12)

Along with the growth in the *Internet of Things* and the world's increasing interconnectedness, the vulnerability to cyberattacks heightens, causing both temporary disruptions and potential systemic shocks.

A relatively new risk to the world, and with serious impacts on all other risks, technological disruptions will require new thinking and strategies from leaders across society, which will be discussed below.

Leadership Responses

Samans (2018), Managing Director of the WEF, recognises technological risks as a rapidly emerging headache for boardrooms all across the world due to the insufficient investment in

security against cyber risks. It is for this reason that the WEF together with Interpol have initiated public-private collaboration forums with world leaders to strengthen cooperation in establishing security against cyber risks globally. These initiatives are vital for leaders in the public and private sector to pool their resources, intelligence and ideas into combating cyber risks (Samans, 2018).

Samans (2018) highlights the urgency of a response to cyber risks by leadership, because these risks have only recently emerged and therefore leadership may not yet be equipped to deal with these challenges. The challenge for leadership will be finding a way forward in a technological environment characterised by rapid change and uncertainty. With the advances in technology and the growing cyber risks facing global institutions, it becomes imperative for leaders to be equipped with the necessary knowledge pertaining to the nature of technological environments in order to navigate the way forward into unknown territories where there may be both risks and opportunities.

Figure 3.7 represents average annualised cost by sector resulting from cybercrime. This gives an indication of the areas of focus for leaders when planning for cyber risks. It is also evident from figure 3.7, that no industry is immune to this risk and that a systemic response would be appropriate for managing cyber risks that span different industries.

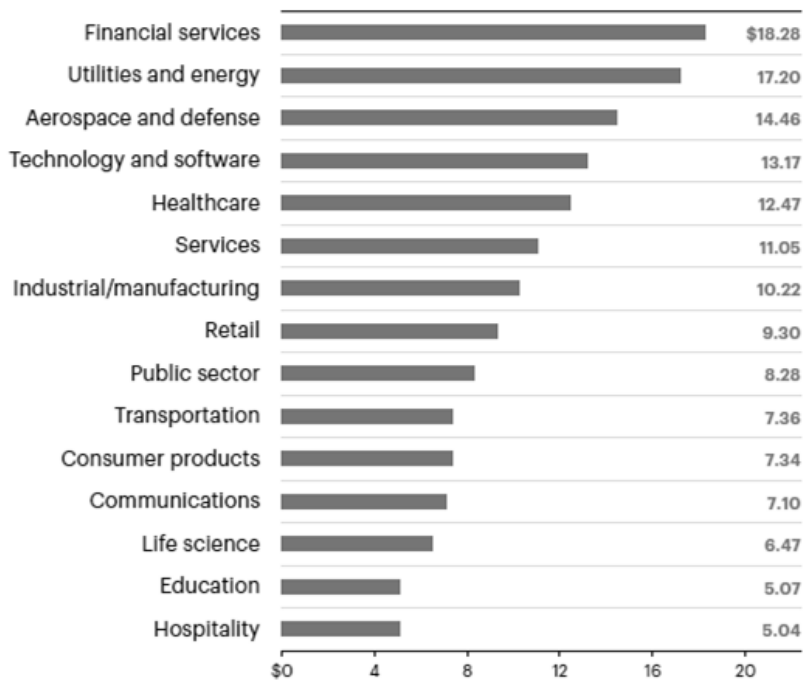


Figure 9.7: Average cyberattack cost by industry (Accenture, 2017:20)

Cyber risks can have an effect on any of the other major risks. State-sponsored cyberattacks, for example, were one of the examples of a geopolitical risk feeding into technological risks. In the next section geopolitical risks will be considered and the disruptions that geopolitical power shifts have begun to cause in the global community.

3.3.4 Geopolitical power shifts

The WEF (2018b:36-40) identifies the risks related to geopolitics as a growing struggle between countries for power, highlighting the movement of the world towards a new and unsettling geopolitical phase. This is characterised by the so-called “New World” order and Washington Consensus thinking, which stipulates that institutions and norms exist for the sake of the world’s major powers. This results in new risks in the form of military tensions and economic disruptions where international relations now play out in more diverse ways, beyond traditional military build ups to include cyber forms of hard and soft power, proxy conflicts, shifts in trade and investment linkages, and alliance dynamics.

The challenges for leadership entities in state and non-state roles consequently include assessing and mitigating risks associated with all these areas of potential conflict by anticipating crises and careful horizontal scanning (WEF, 2018b:36-40).

Figure 3.8 presents the Geopolitical Risks Index (GPR) from the year 1985 to 2015, showing several spikes corresponding to major geopolitical events. Threats of war between countries and terrorist attacks are among the main drivers of volatility in the GPR, and present enormous challenges for global leaders in peace negotiation initiatives.

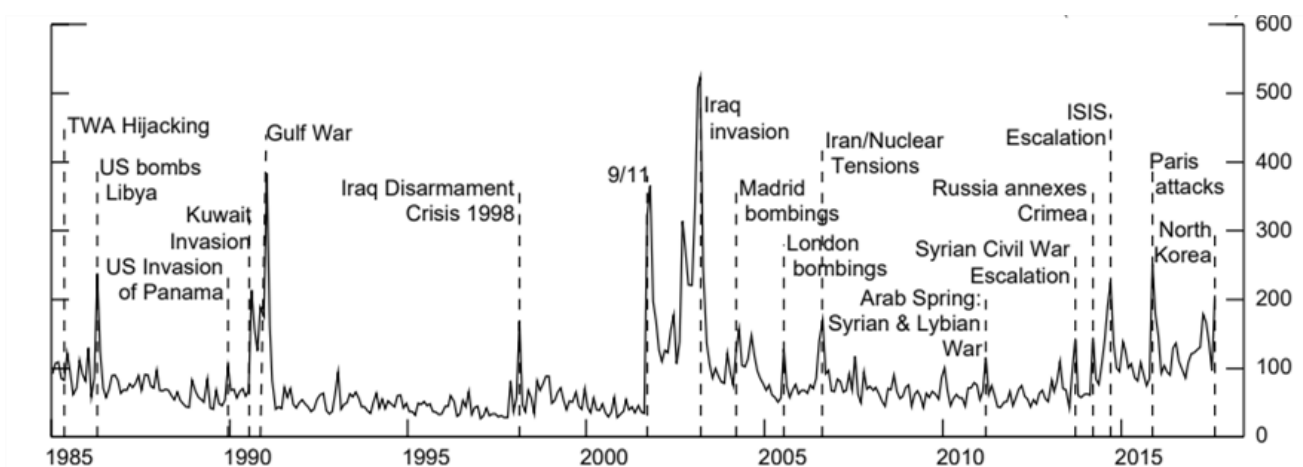


Figure 10.8: Geopolitical risk index (Caldara and Iacoviello, 2018:35)

The WEF (2018b:36-40) found that at the current time of geopolitical flux, it has become tempting for governments to establish their states as the locus of power. Particular mention is made of nationalist agendas of the strong state, which is viewed as an effective means for governments to redress international embarrassments. This is demonstrated by China's President Xi Jinping's call for a great rejuvenation of China and the USA's President Trump's aim to "make America great again".

Nationalist and strong-state stances such as the aforementioned will bring about risks- both domestically and internationally. The degree of risk will depend much on how power is asserted and for what purpose it is used. The WEF (2018:36-40) highlights the danger that such risks present to the domestic interests of non-state actors. If the protection of state power becomes more central to national policy, the rights and protection of individuals, civil society and businesses become more contingent on leaders' perceptions of state interests.

Major power tensions

The rise of strong-state politics has the potential to change the relations between the world's major powers, causing them to become increasingly concerned with their own interests. The result is a breakdown in trust and loss in respect towards global norms and international relations. Cyberspace has emerged as an unregulated battlefield that can create alternative ways for advancing state interests, bringing forth interferences in political and economic affairs which could be considered acts of aggression (WEF, 2018b:36-40).

Smaller-state disruptions

The power shifts among major global powers create more uncertainty for smaller states that are also vulnerable to geopolitical risk. Smaller states benefit from the high predictability that results from a rules-based order. As a result, they are the ones who suffer when rules begin to erode as major powers struggle to assert their own positions.

Examples of smaller states that are caught in the middle of major powers include Singapore, which was warned by some in 2017 to not overestimate its room for movement among its neighbouring power giant China. Instead, Singapore was told to act like the small state that it is. Others recommended Singapore to stand up for itself and act with its own autonomy by defining its own national interests rather than have major powers define these interests for them (WEF, 2018b:36-40).

More examples of smaller states facing similar challenges include Bhutan which found itself in the middle of a standoff between China and India in 2017. In its turn, Lebanon is vulnerable to dynamic shifts between powers in the Middle East.

These smaller nations are vulnerable to weakening security alliances that have previously provided them with stability. They are also vulnerable to pressures by major powers to adopt policy that is in line with the interests of the major powers (WEF, 2018b:36-40).

Leadership Responses

According to the WEF (2018b), leadership faces two main international risks. The first main risk arises because of the danger of miscalculation and miscommunications between states when there are no clear rules in place for international order. The global concerns for potential conflict with regard to North Korea is a prime example. The second main risk pertains to state interferences in the domestic affairs of other states. Growing incidences are occurring where states use their power to encourage issues within other countries' borders. The disregard for UN charter principles of non-intervention gives rise to the risk of retaliation or interstate conflict. Interferences in the non-Western state's affairs has caused erosion in the US-led rule-based order.

Leadership on International relations

According to Flesher and Wojcieszewski (2010:8), material and ideational resources are both needed for a regional power to make a difference in regional and international bargaining. The Global Risks Report 2018 (WEF, 2018b:36-40) finds a trend among major powers to revert back to strong-state politics. This may be attributed to their larger capacity of material and ideational resources.

Material power has been seen as a precondition for geopolitical leadership in terms of the theory of hegemonic stability (Keohane, 1980:68; Strange, 1987:551-574) which argues that a materially advantaged state has more interest in providing leadership to add to its sphere of influence. For example, the provision of public goods and services and the possession of military strength all represent the latent power of a country and require some form of leadership to be taken advantage of.

Broader approaches to material power in geopolitics include infrastructure, technology and energy indicators, where the national political leadership acts as the vehicle for converting these resources into military power (Treverton & Jones, 2005:2). These forms of power are all beneficial to understanding the various challenges to leadership in the geopolitical process, especially when considering the power shifts occurring between various states today.

Understanding these sources of power and the possession of resources provides any leadership approach that attempts to address geopolitical risks with important information regarding the complex workings and the available resources, which can be used to influence leadership processes.

Complex adaptive leadership, for example, aims to address the adaptive issue relating to geopolitics facing leaders instead of merely prescribing technical solutions, namely straightforward solutions which, in terms of a complex geopolitical environment, will be ineffective in bringing any solutions to global leaders.

Another form of ideational power in geopolitics stems from authority as a defining characteristic of a power relationship between two actors (Lake, 2006:23-30, 2007:47-79), such as the strong states and smaller states identified through the Global Risks Report 2018 (WEF, 2018b). In these relationships, moral obligations and legitimacy act as the motivating factors to instil followership. Nye (2004:5) defines ideational soft power as the ability to get ones wants through a transaction instead of through coercion.

Many of the geopolitical risks identified by the Global Risks Report 2018 (WEF, 2018b) consist of strong states exploiting these ideational powers which are based on resources, such as their countries' culture or what they consider to be their values and norms. As the report highlights, however, the fragility of changing global norms and what is considered normal will make the tasks of leadership even harder when confronting geopolitical risks.

From this section, two main geopolitical concerns have been identified, namely a breakdown in global rules that establish order in the international realm and state interferences caused by the exercise of powers between states. In order to present an appropriate leadership response to geopolitical risks, it is imperative to understand the above-mentioned forms of power that are used by states to exert their influence. Material power and ideational power are some of the main sources of power that strong states are beginning to use and must therefore be recognised and understood by global leaders confronted with geopolitical risks.

3.4 CONCLUSION

In this chapter, the goal was to contextualise complex adaptive challenges that leaders are facing today by reviewing the work of the WEF Global Risks Report of 2017 and 2018, in order to make a case for the need of a complementing leadership approach for the aforementioned challenges. In order to achieve this, the following objectives were met.

Firstly, an introduction of the WEF global risks was provided, describing the purpose of the Global Risks Report (2017a/2018b) in identifying the increasingly interconnected nature of global risks and describing the intensification of these risks caused by a rapidly changing world.

Secondly, the major risks were outlined as economic, environmental, technological/cyber and geopolitical risks and each risk was discussed in detail, highlighting the complex nature of these challenges.

Lastly, current leadership responses to each major risk were examined and discussed. It became clear that a complex adaptive leadership approach would be required in addressing these global risks, although in reality many leadership responses still revert to individual-focused leadership.

Now that the global context for complex adaptive challenges has been presented, chapter 4 will present the South African context by reviewing the National Development Plan (NDP) in a similar structure to chapter 3. Like the WEF Global Risks Report (2017a) (2018b), the NDP recognises some of the main risks facing South Africa and the need to respond to them appropriately.

CHAPTER 4

THE NATIONAL DEVELOPMENT PLAN

4.1 INTRODUCTION

In the previous chapter, the WEF Global Risks Report was reviewed, listing the major risks, current leadership responses to them and the need for a different form of leadership in the face of these risks. This chapter will look at some of these challenges according to the South African context by reviewing the National Development Plan (NDP), which was specifically created to respond to some of the country's greatest risks and challenges.

The chapter sets out by providing an outline of the National Planning Commission's (NPC) Diagnostic Report (2011) and the NDP (2013), before analysing the major leadership challenges in South Africa's economic, environmental, technological and geopolitical environments. Finally, this chapter will consider how South Africa plans to manoeuvre within the global community and continue improve its position therein, for the benefit of its local economy and job creation. The resulting challenges and complexities from integration will call for a leadership model that South Africa must work towards in order to remain effective in a competitive and fragile global community.

4.2 NPC'S DIAGNOSTIC REPORT

Before the inception of the NDP, the NPC consisting of 26 members largely outside of government, initiated the Diagnostic Report in May 2010 (NDP, 2013:25), as a first step to drafting a national plan for the purpose of addressing South Africa's biggest challenges.

The purpose of the diagnostic report is to identify the country's main challenges and their underlying causes. The diagnostic report was an important first step, as it provided the foundation for drafting the NDP, which would later put in place a more detailed plan for addressing poverty and inequality in South Africa.

The Diagnostic Report (2011:9-26) identified the following 9 primary challenges facing the country:

1. Too few people work

High rates of unemployment, underemployment and a large portion of youths that are not working, present serious challenges for South Africa. A large proportion of inactivity in society limits the potential for economic expansion and inclusive growth.

The Diagnostic report attributes the root cause to South Africa's high unemployment, inequality and poverty to over a century of colonial exploitation and apartheid – denying African people access to quality education, land and asset and business ownership and residence in well located areas.

Decades of racial discrimination, has led to a far more complex problem that intertwines social divisions and economic development. According to the Diagnostic Report (NPC, 2011: 10) racial discrimination has led to social stratification related to skin colour, reinforced by social and economic institutions.

2. Poor quality of school education among black people

Black schools in South Africa face highly unequal physical asset and infrastructure quality as a result of the apartheid legacy. Despite the fact that government spends 6 percent of GDP on education, efforts to raise the quality of education for the poor have largely failed (NPC, 2011:9-26).

3. Inadequate, under-maintained and poorly located infrastructure

According to the NPC (2011:9-26) South Africa has missed out on a generation of infrastructure development, with public investment in new and existing infrastructure falling well below the requirements of the country's economic and social systems.

4. Unsustainably resource intensive national economy

Colonial development models built on the apparent abundance of the country's natural resources, were exploited by colonial rulers for exports while neglecting domestic consumption and development. Today South Africa's economy and society continues to reflect its dependence on natural resource exploitation.

5. The spatial legacy of apartheid

The spatial legacy of apartheid still affects the country today, where the poorest people live in rural and remote locations and those who live in the cities, live far from economic activity. The situation has only worsened since 1994 and adds to the challenge of poor infrastructure previously discussed. According to the NPC (2011:19) reversing these spatial effects of apartheid will be an ongoing challenge for decades to come.

6. Inadequate public health system

The rise of total deaths, high infant mortality and low life expectancy are evidence of a health system in distress. South Africa's score on the United Nation's Human Development Index highlights the impact that the country's quadruple disease burden places on all areas of society (NPC, 2011:9-26).

The first burden is the HIV crises, the second is that of injury, the third consist of infectious disease such as diarrhea, and tuberculosis-causing a negative feedback loop with HIV and malnutrition, and the fourth burden is the lifestyle diseases related to relative affluence.

7. Poor public services

South Africa's Constitution 1996 is designed to protect and advance citizen's rights, although in practice there is often a significant gap in what happens in reality. The uneven public services performance has been attributed to an interplay between complex factors including tensions in the political interface, instability in administrative leadership, an erosion in authority structures and accountability and poor organisational design (NPC, 2011:9-26).

8. High levels of corruption

South Africa is ranked 54th out of 178 countries in the International Corruption Perception Index, measuring the level of corruption where the 1st country is the least corrupt and the 178th, the most.

High levels of corruption have been attributed to weak systems and government institutions, poor oversight and accountability quality, incompetence in auditing for governments and a lack of transparency in procurement procedures and financial budgeting (NPC, 2011:9-26).

9. Divided society.

South Africa has made progress since 1994 in uniting the nation and addressing racism and discrimination. Despite this progress, the country remains a divided society with racial divisions (NPC, 2011:10-27).

The Diagnostic Report identified the previous 9 major challenges, most of which have been caused by South Africa's past policies of discrimination. The NPC (2011) found that these challenges are also linked in some way, which points to the complex nature of these challenges.

The next section will review the NPC's response to these challenges in the form of the NDP, formulated to put more concrete solutions into action.

4.3 NDP OUTLINE AND OBJECTIVES

The NDP is a plan for South Africa to eradicate poverty and reduce inequality by the year 2030. This is to be achieved by uniting South Africa and unleashing the energies of its citizens to grow an inclusive economy, build capabilities and enhance the capabilities of the state and its leaders in collective action, to solve complex problems (NDP, 2013:24).

The plan aims to eliminate poverty and reduce inequality by focusing on similar approaches presented by the Global Risks Report 2017 (WEF, 2017a) and 2018 (WEF, 2018b), such as making use of partnerships, growing an inclusive economy, enhancing state capacities, and promoting leadership.

Despite progress made since South Africa's transition from Apartheid in terms of building an inclusive society and providing more opportunities for newer generations (Van Niekerk, 2014) the country still remains a highly unequal society with high levels of poverty.

The NDP aims to accelerate growth, deepen democracy and improve inclusivity by translating political emancipation into economic well-being for all citizens (NDP, 2013:24). The ambitions of this plan will require transformation of the economy in order to build South Africa's capabilities and ultimately eliminate poverty and inequality.

4.3.1 Six interconnected priorities of the NDP

The NDP includes the following six interconnected priorities:

- Establishing a uniform programme for achieving prosperity;
- Strengthening democracy, development and accountability;
- Speeding up economic growth, investment and labour absorption;
- Focusing on key capabilities;
- Building a developmental state; and
- Encouraging strong leadership throughout the state.

(NDP, 2013:24-26).

The NDP recognises that, in order to achieve its goals, it must respect its position in the international community and the events that are taking place around the globe. The following section highlights the impact of globalisation on South Africa and the NDP's response to the resulting complexities.

4.3.2 NDP and globalisation

Globalisation refers to increased levels of global trade and flow of people, technologies, ideas and capital across borders. In recent decades, globalisation has been the driving force for growing interconnectedness that has removed barriers to entry to promote a system of less restricted trade. Globalisation has also resulted in heightened risk and complexity pertaining to global affairs resulting in global financial volatility, state power shifts and the so-called brain drain of skilled workers. All these risks pose threats to the prospects of developing countries.

According to the NDP (2013:30), South Africa has experienced benefits, but also growing complexities through globalisation. New trade and investment patterns pose risks for South Africans, especially the poor, if the country's leadership fails to take advantage of a removal of barriers to entry. South Africa for example relies on foreign capital for financing investment

and with the high level of dependence on external capital flows, the country is at risk to volatility in the global economy.

Regional cooperation and partnerships among South African leaders and neighbouring leaders in public and private spheres present a favourable approach to trade with South Africa. The key for leaders is to negotiate cooperation for resources that are mutually beneficial.

Understanding how these factors influence South Africa is critical for leadership and the achievement of NDP goals. The next section will list the main risks facing South Africa to further contextualise the nature of the complex adaptive challenges facing the country, while referring to the NDP as a guideline.

4.4 MAJOR RISKS FACING SOUTH AFRICA

In chapter 3, major global risks identified by the WEF were assessed in terms of the challenges that they present to leaders around the world. This section will identify these major risks within the South African context as listed under the NDP. Economic, environmental, technological and geopolitical challenges facing South Africa will be assessed by considering their interconnections, and how any interventions in one area may impact another.

Before considering each major risk in detail, it is important to view the systemic nature of these risks in terms of how they impact one another.

Systemic Collapse

Wakeford (2012:154) mentions the risks in a globalised system associated with systemic collapse due to the interconnected nature of these problems. These global complexities and their associated risks and feedback loops are further replicated in South Africa's socio-economic system, making it vulnerable to systemic collapse. The country's socio-economic system consists of interconnected subsystems such as the energy, financial, transport, telecommunications, water and food systems which all rely on interdependent critical infrastructure.

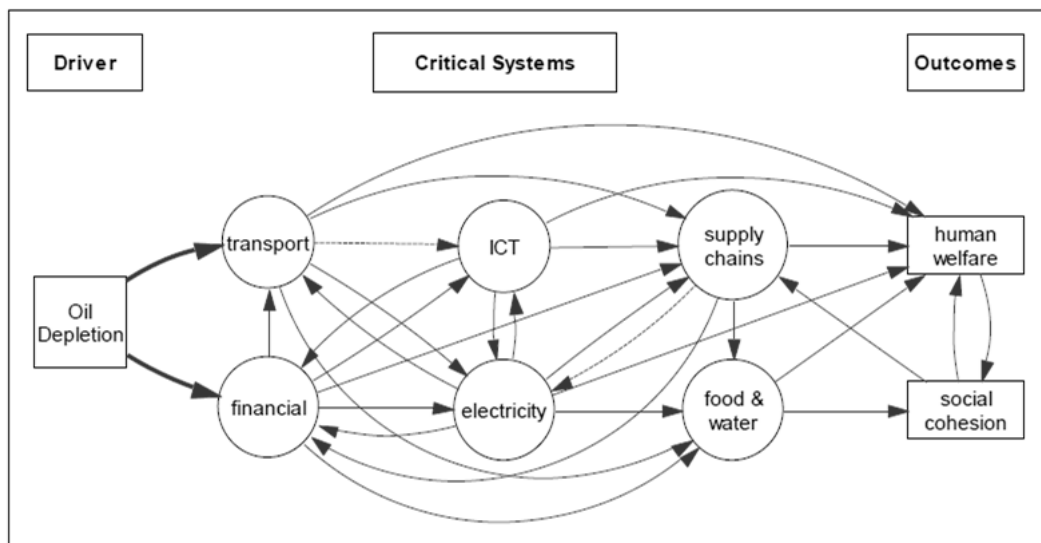


Figure 4.11: Major critical systems links (Wakeford, 2012:190)

Key: Bold arrows – primary causative force; solid arrows – short-term impact transfer; dotted arrow – medium/long-term impact transfer)

Figure 4.1 schematically represents the links between some of the major critical systems working in the South African economy, thus showing their impacts on human welfare and social cohesion. Figure 4.1 further illustrates the systemic nature of risks facing South Africa and the dependence that each subsystem has on another. For example, any shortages in energy supply or global oil scarcity will have a direct impact on the financial and transport subsystems. Transportation has an effect on energy generation, supply chains and food supply, while the financial system affects all other critical systems in figure 4.1 by facilitating economic investments. The energy system similarly enables all other systems' functioning and any major crises in one of the interconnected subsystem will be transmitted to the other subsystems, reverberating through the whole socio-economy (Simms, 2008).

This section illustrated the systemic nature of subsystems within the South African socio-economy and how complex the functioning of each unit increases as a result of the interconnections that are present. Now that operation of the whole system has been illustrated, the next section will discuss the each major system and their risks as presented in the NDP.

4.4.1 Economic risks

Chapter 3 identified the major global economic risks facing countries like South Africa and the need for deep restructuring of capitalist systems that threaten economic growth in emerging economies.

The NDP (2013:31) recognises that the next few decades will experience unprecedented change including an explosion in urbanisation, innovations with the ability to revolutionise science and technology and economic power rebalances between developed and developing countries. These developments offer South Africa many opportunities. However, without proper management and execution of leadership, these rapid changes also pose a number of uncertainties and risks.

According to the NDP (2013:31), on the one hand, proper management of these developments will enable the interconnectedness of globalisation to bring about enormous benefits in the country's strategies to reduce poverty and achieve social integration. On the other hand, a failure to prevent the financial, social and technological threats related to globalisation poses major risks, such as those experienced in the global financial crises of 2008.

South African Economic Landscape

Following the last two decades of transformation as a democracy, the country now stands before a new 20-year phase of economic development that will focus on the poorest of South Africans. The plan selects a holistic approach which covers rural development, infrastructure, education, healthcare, social protection and, most importantly, employment creation that will reduce poverty. The plan's approach to economic advancement in South Africa deals primarily with raising employment and economic growth, also mentioning the distribution of that growth to previously marginalised citizens.

The NDP (2013:41) aims for an average gross domestic product (GDP) of over 5% and by 2030 a GDP per capita at double the present level, with accelerations in export growth, rising income levels above the poverty line for all, falling inequality and a reduction in unemployment from 25% to 6%.

The plan's reliance on GDP as a measuring stick for its progress may be limited or inappropriate altogether with growing evidence in the shortcomings of GDP targets as a measure of the well-being of a country's population, especially the poor (Chainey, 2018). Nobel Prize-winning economist Joseph Stiglitz finds that GDP is a poor indicator of progress. Chief economist at the World Economic Forum, Jennifer Blanke, further states that for governments around the world GDP has been a fixation but it is actually a partial, short-term measure, whereas the world requires a much more responsible and wide-ranging instrument that informs the way countries build their future economies (Chainey, 2018).

Policymakers' use of GDP as a measuring stick may present an adaptive challenge to leadership. The reason for this is that any initiatives that claim to promote the well-being of its citizens through inclusive economic growth will require a measurement that accurately reflects an improvement in the well-being of the country's marginalised. Shifting the way leaders in government and policymakers view these challenges as well as the measurements they choose to use presents an adaptive challenge, which will be discussed later in the study.

Whichever measurements are used to measure progress towards goals, it remains clear that the first half of the 21st century presents enormous opportunities for the South African economy. Challenges and risks will also emerge from internal dynamics and external developments.

The NDP recognises that the South African economy is too small to affect global directions and outcomes, but having in place leaders with knowledge, expertise, understanding and the ability to anticipate international drivers of change will make the difference between economic failure or success (NDP, 2013:241).

Domestic Economic Challenges

The weakness in the South African economy, and its inability unable to produce enough jobs, has been attributed to distorted patterns of ownership and economic marginalisation caused by apartheid policies which reinforced racial exclusion with regards to employment. South Africa is now one of the most unequal societies in the world, carrying high levels of poverty and all the risks associated with poverty (NDP, 2013:37). The high level of unemployed youth also points to more structural issues in the economy, which the NDP (2013:38) describes as being in a low-growth and middle-income trap caused by four features:

- Low goods and services consumption
- Large number of workers unable to find work
- Low savings
- Poor skills profile

Apartheid sanctions and induced isolation have resulted in uncompetitive goods and services markets with high profit margins but low levels of investment or innovation. These uncompetitive markets prevent entry of new entrants and skew the economy towards high-skill and high-productivity sectors (NDP, 2013:38). Another issue lies in the country's low savings, which makes it over-reliant on foreign capital flows, further reinforcing the economy's oligopolistic nature where foreign investors focus on high-profit firms.

The NDP (2013:79) further recognises the systemic nature of these problems and does not underestimate the need for a more adaptive solution. The plan further explains that these issues have no straightforward and easy solution because liberalising labour markets without solving other features could bring higher profit without an increase in investments, employment or innovation.

Whether internationally or domestically, the South African economy faces a number of risks and opportunities in the 21st century. Dealing with these risks and taking the opportunities that are presented will require a change in the way government and policymakers think about the targets and measurements used in the NDP or any other initiatives. This presents an adaptive challenge, which will be discussed later. The next major risks which will be discussed are the environmental risks identified in the NDP

4.4.2 Environmental risks

Many South Africans live in poverty, rendering the country particularly at risk to environmental risks such as climate change, environmental degradation, resource extraction and resource depletion. It is thus vital for South Africa to increase societal and economic resilience to

climate change. This will require a systemic approach of cooperation and collaboration between the various sectors of society.

Due to the country's urgent challenges relating to its high levels of poverty, inequality and unemployment, the NDP (2013:198) recognises a need for decoupling economic activity from environmental degradation and carbon-intensive forms of energy consumption. Past patterns of resource exploitation and unequal distribution of economic benefits have left poor communities marginalised, while the environment continued to be degraded. The plan thus aims to find new ways of using its natural resources while remaining economically competitive.

At the time of writing, leaders of the South African Democratic Alliance are coming under pressure for mismanaging a major water crisis in the City of Cape Town located in the Western Cape Province. The impact of climate change on weather patterns and the resulting drought in Cape Town serve as a warning for the rest of the country about the risks that climate change presents even to major cities.

A leadership approach that is ready to deal with the complex and wicked problems caused by unforeseen extreme weather and its impact on the rest of society, must be sought to handle the problem in an integrative manner. For example, shared responsibility across the different spheres of government, civil society, private enterprises and weather research institutes is necessary to coordinate efforts in handling future weather crises. The NDP (2013:240) calls for "strong leadership" across society without defining what this leadership comprises. However, perhaps even more important, is a model of leadership capable of addressing complex and interconnected risks, such as climate change as the shared task of those involved.

The complex risks associated with climate change also threaten South Africa with significant environmental costs that will ultimately hit the poor the hardest, limiting efforts at poverty and inequality reduction. Extreme weather also has the potential to limit food production and water availability and to influence patterns of migration.

The global scope of climate change will require global solutions in order to reach possible solutions to the problem. This requires leadership that identifies both the scope of climate change and the need for cooperation from a global community of leaders.

Figure 4.2 indicates that the mean temperatures over the last two decades were all higher than the 1961 to 1990 average.

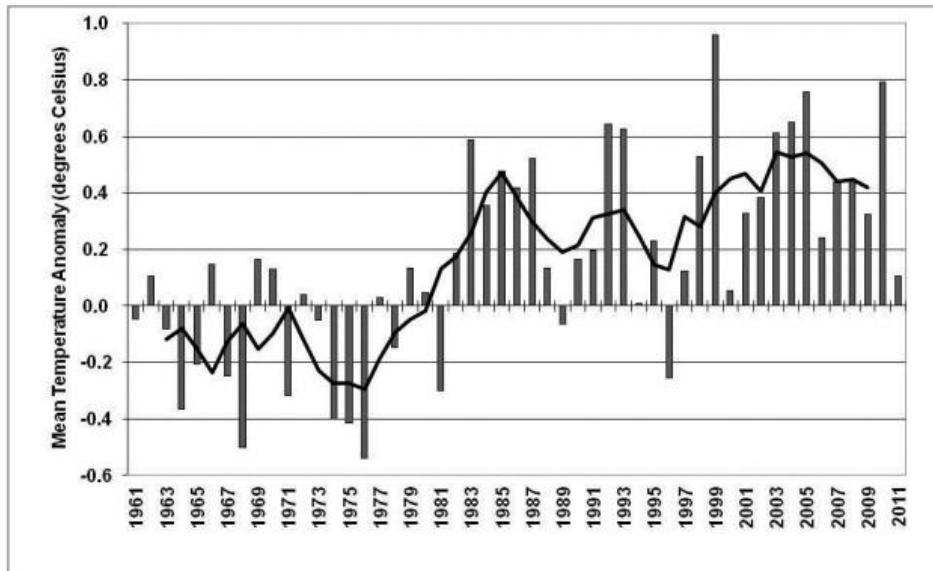


Figure 4.12: Annual mean temperature in 27 South African climate stations (DEA, 2014)

South Africa's vulnerability to oil scarcities

Risks associated with resources depletion have potential to cause spill-over effects into a wide range of areas in South Africa. Wakeford (2012:187) states that oil scarcity may render South Africa vulnerable because its energy, social, macroeconomic, transport and agriculture systems are highly dependent on energy flows. Moreover, South Africa is a highly energy-intensive country with a dependence on imported oil for two-thirds of petroleum fuel (Wakeford, 2012:187). Oil depletion accordingly, threatens to bring economic and social vulnerabilities which will require proactive policy response by leaders within government.

Leaders in public and private sectors should understand the risks associated with environmental challenges discussed in this section and the risks associated with the spill-over effects into other systems if they are to be effective in mitigating and managing such complex environmental challenges. The next section will consider how South Africa manages the risks in a rapidly changing technological system.

4.4.3 Technological changes

In chapter 3, the realities of technological advances were explored in terms of the transformational power that new technologies are bringing to the globe as well as the associated risks. According to the NDP (2013:33), mitigating the risks associated with technological change and maximising the benefits will depend on the quality of leadership and governance. This involves the rules, norms, laws, institutions and mechanisms for the development of each technology.

In South Africa, the technological realities facing some of the most developed worlds are not yet evident, but as progress continues to be made, many of the risks associated with technological disruptions such as cyber risks and online misinformation threats, will become more prevalent and dominant in the minds of leaders across society.

Current technological landscape in South Africa

Studies conducted on digitisation during 2016 found that from the total South African population which consists of 54.7 million people, 26.85 million of them were actively using the internet, although by the time of writing this number could be considerably greater (Kemp, 2016:390).

Although digitisation continues to rise in the country, there remains a number of bottlenecks that are limiting the amount of benefits being reaped from technological advancement in Information Communication Technologies (ICTs). Padayachie (2010:36) found that governmental policies that were not followed through successfully have been at the centre of ICT deployment challenges across the country. The result was a need for support primarily from the private sector and other stakeholders to roll out ICT infrastructure.

Gillwald, Moyo and Stork (2012:5) further argue that ineffective policy implementation since the 1990s have resulted in an uncompetitive market structure and weak institutional arrangements which degraded South Africa's international ICT indices. It can be argued that leadership in government was unable to plan for the introduction of widespread ICT. This is evident from the country's high cost of broadband and the monopolistic nature of state-owned enterprises that have bottlenecked the distribution of high-speed internet across South Africa.

Despite these limitations to ICT development, South Africa, when compared to other BRICS nations, is one of the top economies with a firm level of technological absorption (Menell, 2015:1). In terms of technological readiness, South Africa has also grown to one of the top technologically advanced countries.

Cyber security threats in South Africa

Cyber security is emerging as a challenge for national security all around the world, including South Africa. It is dramatically increasing in frequency and sophistication. South Africa is considered to be one of the major targets of cyber-attacks, which cost the country an estimated R5 billion annually (Fripp, 2014).

These attacks have also been targeting a number of major state actors. In May 2014, for example, a public sector cyberattack targeted state infrastructure in South Africa when a hacktivist hacked personal details of 16 000 whistle-blowers in the South African Police Service (SAPS) on the institution's computer database. The details of the targets were posted online and the hacker stated that it was in response to the Marikana shooting in 2012 where police killed 34 miners during a strike.

Another large-scale financial attack occurred in November 2014 when the Directorate for Priority Crime Investigation (DPCI) made a number of arrests following attempts to hack into the Gautrain Management Agencies account, placing an estimated R800 million at risk (Griffiths, 2017:38).

Griffiths (2017:43) states that cyberattacks on financial institutions such as banks and businesses threaten not only economic security, but national security as well. It is therefore imperative to note that cyber security is becoming a growing issue in South Africa and must be prioritised as a growing risk.

It is, however, disconcerting that instead of arming itself against cyber risks, South Africa's existing official documentations actually add to its weakness. With limited official policy on cyber security and the National Cyber Security Policy Framework only slowly being passed in late 2015, it is apparent that more urgent steps should be taken by leaders in public and private sectors. (Griffiths, 2017:3)

4.4.4 South Africa's geopolitics

Chapter 3 assessed the movement of the rest of the world into a new geopolitical phase that is resulting in new risks in the form of economic disruptions, military tensions and changes in the way that international relations are being conducted. The rise of state-centred politics and power shifts in favour of strong states will inevitably leave smaller states and countries at the mercy of the political interests of stronger state agendas.

These events may pose risks to South Africa, which is a smaller state in comparison to the major global players that shape international agendas and policies. The following section will map out South Africa's position in the world as presented in the NDP, and outline the subsequent need for leadership in navigating the associated geopolitical risks.

South Africa's status in the world

It has been argued that as a middle-income country, South Africa has punched above its weight diplomatically (NDP, 2013:237). With over 150 embassies around the world, it has enjoyed permutations of power and influence with international affairs. South Africa has, however felt a decline in its power and influence in world affairs, losing a large amount of moral authority as a power source which it enjoyed in the period following the 1994 elections.

A key milestone for the country post 1994 has been its entry into the Group of Twenty Finance Ministers and Central Bank Governors. This achievement confirmed that regardless of the country's smaller economic power, it was able to play a significant role in the systems of international, political and economic governance. Thanks to its entry into this group, South Africa was also invited into the Group of Seven for international meetings of the world's political leadership that effectively decides on international affairs (NDP, 2013:237).

It is in these positions that South Africa requires leadership capable of negotiating in international affairs and play a more active role. The reality, however, has seen a decline in its position in the Group of Seven and its ability to voice itself with regard to international affairs. It could be argued that leadership and specifically, complex adaptive leadership, would prevent cases such as these, where South African diplomacy is rendered less effective

in voicing global strategies with major global powers. The NDP (2013:237) notes that the country's foreign relations have become increasingly ineffective and is sliding down the scale in terms of global competitiveness and moral standing. This decline, it argues, is in part due to the end of the "golden decade" in African diplomacy from 1998 to 2008.

South Africa's role in the BRICS Group

Another important milestone in the development of South Africa's international relations is its entry into the BRICS alliance. With a full membership status in BRICS, it is recognised as playing a role in the economic emergence of Africa, despite the country's relatively small size when compared to other BRICS nations.

The NDP suggests that despite its small size, South Africa has the potential to play a leading role by acting as an integrator between BRICS nations and other African states. The caliber of South Africa's leadership may play a vital role in how it handles negotiations within BRICS by taking advantage of the country's areas of advantage, both locally and regionally. This is reiterated by the NDP's call for South African diplomats to work closely with leaders in business, industry, research and academic institutions to facilitate relationships with BRICS counterparts (NDP, 2013:238).

4.4 CONCLUSION

Chapter 4 continued to contextualise complex adaptive challenges, only this time within South Africa by reviewing the NDP. In order to do this, the following objectives below, were met.

The first objective was to provide an outline to the NDP, highlighting some of the main priorities of the plan. The plan recognises the complex nature of some of its main obstacles in reaching its targets and the need for leadership in all key areas of development. There is, however, little mention of what kind of leadership the NDP lists as a requirement, refereeing to strong leadership in a broad sense.

The second objective was to list and discuss the major risks facing South Africa, as found in the NDP. Economic, environmental, technological and geopolitical risks were all found to be

connected in some way. Each area requires a leadership approach that is capable of dealing with such complexities.

Economic risks, for example, present an adaptive challenge for leaders who may need to change the way they think about measuring economic progress. Environmental risks also require leaders to understand the far-reaching spill-over effects caused by climate change or energy shortages throughout the socio-economic sector. The rise in cyber risks is a new challenge with which leaders are presented. Leaders will soon have to come to the realisation that cyber security must be enforced and sponsored.

With regards to geopolitical challenges, it was found that South Africa requires leaders that are capable of negotiating its position within regional blocs, such as BRICS, if the country is to have any say in current and future global affairs.

Finally, in order for the NDP to reach its targets in its efforts to reduce poverty and create a better South Africa for its citizens, it cannot treat the major complex risks identified, as a technical or tame leadership issue. Instead, what is required is to identify and apply the appropriate leadership response which is capable of dealing with such complexities in the South African socio-economic system.

The following chapter intends to address this by categorising the risks identified in this study according to the nature of the challenges that they present, in order to provide the appropriate leadership response for dealing with specific issues.

CHAPTER 5

RISKS CLASSIFICATION

5.1 INTRODUCTION

The previous two chapters identified major global risks facing the world in the 21st century, with specific reference to the South African context. These risks present challenges to global leaders and policymakers around the world because of their rapidly changing nature. This requires those in leadership positions to be able to adapt quickly to the fluctuating environment.

In chapter 3, some of the leadership responses to risks found in economic, environmental, technological and geopolitical systems were discussed. It became evident that a gap is present in leadership approaches used to handle some of the complex challenges in modern times. The objective of this chapter is therefore, to provide a suitable categorisation for the aforementioned risks to better contextualise them, and in so doing, to understand what the most applicable leadership approaches would be for dealing with these challenges.

In order to reach this objective, two main objectives are set out for the remainder of this chapter. Firstly, an overview is to be provided of the evidence-based categorisation of technical versus adaptive challenges (Heifetz et al., 2009:20) and wicked/complex versus tame problems (Grint, 2008:3), to be used in the remainder of this chapter. Secondly, by using these evidence-based categorisations, the major risks identified in chapter 3 and 4 will be categorised as complex adaptive challenges

5.2 METHOD OF CATEGORISATION

In this section, the methods of categorising global risks will be selected and justified by providing an evidence-based argument for the methods chosen.

5.2.1 Distinguishing adaptive and technical challenges

The global risks reviewed throughout this study present significant challenges to leadership due to their interconnected and fluctuating nature. These challenges require some form of categorisation in order to find the most effective strategies with which to address them. Heifetz et al. (2009:20) present a fitting approach that may be applied to such risks by distinguishing between technical and adaptive challenges. As mentioned in chapter 2, technical challenges may be complex and critically important, but they have a ready solution that can be implemented through the current know-how.

Growing interdependencies between countries caused by globalisation has led to a sensitive and fluctuating global arena with newer challenges for which there are no current solutions or know-how with which to address them appropriately. This is where adaptation becomes important for policy makers and leaders.

Heifetz et al. (2009:23) continue to illustrate that technical challenges can be resolved through the organisations' authoritative expertise, structures, procedures and ways of doing things, while adaptive challenges can only be addressed by changing people's priorities, beliefs, attitudes, habits and loyalties. Adaptive challenges require going beyond authoritative expertise to mobilise discovery, tolerate losses and generate new ways to thrive in uncertain environments.

For example, an adaptive challenge for an electronics company may be facing a competitive environment in which it can no longer compete by using traditional business models that have been successful in the past. To treat this as a technical problem, the organisation might prescribe reshuffling expenditures in order to improve the company's earnings. Such a technical solution will fail to address a fundamental issue facing the organisation, thus not improving its chances of surviving in a competitive and changing environment. Adaptive leadership in turn will identify that the business needs to change its overall culture or business model in order to survive. This is not easy, as it requires leadership to change the way they think and relinquish old ways of doing things (Heifetz et al., 2009:23).

Table 5.1 illustrates the difference between technical and adaptive challenges as well as the different approaches that each takes in handling an issue. Where technical challenges aim to provide straightforward solutions to solvable crises, adaptive challenges require framing

the issue by asking key questions. Adaptive challenges also require leaders to question norms in an attempt to create change.

Task	Technical	Adaptive
Direction	Provide challenge definition & solution	Identify adaptive challenge; frame main question and issue
Protection	Protect from external threats	Disclose external threats
Order		
Orientation	Orient people to roles	Disorient current roles
Conflict	Restore order	Expose conflict
Norms	Maintain norms	Challenge norms

Table 5.1: Distinguishing technical and adaptive tasks (Heifetz et al., 3009:28).

5.2.2 Distinguishing wicked and tame challenges

Chapter two presented key literature on alternative leadership thinking by Grint. Grint's (2008:3) categorisation of leadership challenges proves useful, as he makes a distinction between what he refers to as wicked and tame problems.

By categorising global risks as wicked problems, one acknowledges that conventional approaches which are scientific in their application, and more straightforward, will not suffice. Wicked problems reside in a complex system constituting interactions and dependencies between the various elements within the system.

Using the wicked problems perspective, it is possible to categorise the complex leadership challenges found in the globalised world. An example includes poverty alleviation initiatives such as those found in the NPD, which aims to eliminate poverty- a potentially wicked

problem. According to the wicked problems perspective, poverty presents a wicked problem because in attempting to eliminate it, leaders may discover that additional issues begin to emerge. Solving a wicked problem such as poverty will therefore need to consider its impact and relationship to other factors such as job creation, education, public health service provisions and more.

Grint (2008:3) also presents tame challenges, similar to Heifetz' technical classification, as a problem for which there already exists a straightforward solution, such as applying treatment for a medical condition. Tame problems, are useful in that they provide a ready solution which can be applied immediately to address a problem, but they come short when faced with some of the complex challenges discussed in this study.

The following section will categorise the risks identified in chapter 3 and 4 according to the categorisation methods provided above.

5.3 CATEGORISING GLOBAL RISKS

By making use of a combination of the adaptive and complex or wicked categorisations outlined in the preceding section, the current section intends to provide a strong argument that the leadership challenges identified throughout this study are of a complex adaptive nature and therefore require a complementing leadership focus.

5.3.1 Economic risks

In chapter 3, the global economic imbalances that threaten anti-establishment political movements and backlashes against globalisation were identified (WEF, 2017). Deep fractures within the global economy have been followed by calls for the application of fundamental reforms to market capitalism, which presents global leaders with highly complex tasks.

The WEF (2018b:9) recognises that these fundamental reforms are required to tackle the heart of global inequalities. This will require leaders to begin questioning capitalistic financial systems that have failed within the last few decades. Any recommendations for fundamental reforms cannot approach economic imbalances as technical or tame challenges. Technical

and/or tame challenges would imply that leaders possess the necessary know-how in addressing the global economic imbalances facing major economies today. In fact, the 2008 global financial crisis is evidence that leaders do not possess the answers to emerging global economic risks, especially not those amplified by globalisation.

It is therefore safe to dismiss these economic risks as technical or tame problems and, as a result, any leadership approach that aims to respond to these challenges should not treat these risks as technical or tame challenges.

Calls for fundamental reforms of market capitalist financial systems and rallying of economic policy against global inequalities require serious questioning of economic policymaking processes and international principalities that have been in place in recent decades. This questioning challenges the way global leaders think and can therefore be categorised as an adaptive challenge. Adaptive challenges require those in authority to change values, thought processes, culture and behaviour, targeting a much deeper need for change (Heifetz et al., 2009:23). In fact, any attempts to achieve fundamental change in market capitalism within a fragile global economy will present adaptive challenges to all those in authority that rely on outdated ways of running their economies.

The leadership responses to economic risks explained in chapter 3 provide an indication of a high degree of complexity related to these challenges. There is little room for tame approaches which provide a straightforward solution to economic development. The OECD (2015:9), for instance, views leadership within economics as not only comprised of a few individuals, but rather a complex system comprised of public departments, businesses, individual firms and NGO partners. The OECD (2015:9) therefore calls for integration of multiple stakeholders within a country in order to achieve economic success. For this reason, any leadership response must be equipped to deal with complex challenges and a larger scope of actors.

From these observations, it is evident that tame and technical solutions are inadequate to deal with economic challenges facing leaders today. Although they do provide fast solutions to problems for which there are prescribed answers, they fail in dealing with deeper economic weaknesses. Instead, complex and adaptive challenges are evident throughout the economic risks facing leaders in recent decades. They were found to be increasing together with globalisation as an increase in the number of actors involved in economic affairs cause a higher degree of interdependence in the financial system.

The following subsection will therefore categorise these challenges as complex adaptive in nature and will continue to argue for such a representation for the remainder of the major risks in this study.

5.3.2 Environmental risks

The second major risks reviewed in this study were environmental risks and the current leadership responses to them. The WEF (2017a:16) lists climate change, extreme weather and water crises as high-priority interconnected risks. These risks have a high level of interconnectedness within the environmental system, as well as negative spill-over effects into the other major global risks.

The challenge for global leaders when attempting to address these environmental risks are made more difficult by the increase in complexity caused by the systemic nature of these challenges. For instance, dealing with climate change requires initiating policy that gains political commitment to address climate change and environmental degradation on both a local and international level. Another factor to consider includes the economic implications of any such action against climate change, where the private sector and governmental departments either stand to support or oppose such initiatives, depending on the financial impacts.

It is thus clear that these challenges cannot be treated as only technical in nature due to their high level of interdependence with the other global risks. Instead, they must be treated as complex and wicked because any attempt to address one of these environmental risks may either be impacted or have an impact on other risks within the whole system. Grint (2008:11) explains that, in the face of such complex challenges, it is best to assume that no one possesses the solution in isolation. Instead, the problem lies within the system and is caused and solved not by any single aspect of that system.

Environmental risks also present adaptive challenges, because they force leaders all around the world to change their attitudes to the high-priority environmental risks, especially as these risks worsen each year. Heifetz (2014:3) refers to such adaptive work as dealing with loss, because it forces leaders to choose between two values – both of which are important to them. Political pressures can force leaders in government to succumb to providing for the

needs of its voters in the form of job creation, service provision and spatial development, even at the expense of environmental protection initiatives.

Categorising the above challenges as technical or tame will fall short of providing a complete model of leadership capable of understanding and combatting these environmental risks. The environmental research on leadership covered in chapter 3 reflects the emphasis within the field on the individual's role in environmental leadership and the resulting shortcomings. It is for this reason that these environmental risks will be categorised as complex adaptive challenges.

5.3.3 Technological risks

The technological risks reviewed in this study will also be categorised as complex adaptive challenges, as they present leaders in the modern world with newer problems caused by rapid technological development. One of the dominant threats identified among technological risks was cyberattacks which have been increasing drastically in both scale and sophistication.

Cyberattacks present a wicked problem because these attacks have the power to shut down private and public operations which are all highly dependent on technological infrastructure. The effects of such attacks will have the potential to cause spill-over disruptions in all other major risk areas. Initiatives headed by Interpol and governments across the globe are centred on collaborative initiatives that help address these types of wicked challenges in cyber security.

Dealing with technological disruptions likes these can benefit from what Grint (2008:4) refers to as a “clumsy” solution to wicked problems, as an initiative that incorporates multiple approaches and participants across different sectors of society. These clumsy solutions consist of different views and practices from the egalitarian, hierarchical and individualist cultures, and when combined offer an alternative approach to dealing with complex issues such as technological disruptions. These types of initiatives are vital for leaders in the public and private sector to pool their resources, intelligence and ideas into combating cyber risks (Samans, 2018).

In addition to collaborative efforts, leaders in private and public sectors have to treat the aforementioned technological disruptions as adaptive challenges where they undergo drastic changes in their values and practices within their respective organisations (Heifetz et al., 2009:23). Once more, this kind of adaptive work will force them to make a sacrifice between the ways they have operated in the past and adapt to new ways by taking advantage of technological development instead of being overrun by it.

5.3.4 Geopolitical risks

Finally, geopolitical risks identified throughout this study fall into complex adaptive categories due to the ineffectiveness of tame and technical solutions in addressing these challenges. Major geopolitical power struggles between major states and the resulting deterioration in inter- and intrastate trust are all a product of a fragile and complex geopolitical system, as discussed in chapter 3.

The complexities of current geopolitical risks cannot be addressed through technical know-how or scientific methods. Instead, they will require multipronged approaches or, as mentioned earlier, clumsy solutions in dealing with wicked problems. Indeed, the negative spill-over effects of geopolitical risks are widespread throughout all other major risks and are affected by all these other major risks. Climate change resulting in forced migration patterns is one cause of geological instability and the economic risk associated with failing financial systems is another example of geopolitical pressures, resulting from other major risks (WEF, 2018b).

Categorising geopolitical risks as adaptive enables a more appropriate mentality to address these leadership challenges. Many of the geopolitical risks discussed present leaders with adaptive work, which requires a much more flexible approach to working within a geopolitical environment in which national policy also affects international affairs within an increasingly globalised world. New foreign policy implementation by the US which prevents entry of foreign immigrants, is an example of a major shift in political values which are confronted with pressures of revision and change.

5.4 CONCLUSION

The goal of this chapter was to categorise the major risks discussed in this study in order to help understand what the best leadership approaches would be to deal with them.

In order to achieve this, the two objectives were met. Firstly, an overview of the evidence-based categorisations provided by Grint (2013:3) and Heifetz et al. (2009:23) was presented. Grint's (2013:3) outlook on wicked problems was useful in describing the complex nature of most of the challenges to leadership discussed throughout this study. Complexities were found in all major risk areas, including economic, environmental, technological and geopolitical systems.

The overview continued with the Heifetz et al. (2009:23) categorisation of adaptive challenges to be used in the remainder of the chapter. Adaptive challenges were distinguished from technical challenges which make a case for more straightforward challenges to leadership but fall short when dealing with deeper requirements for fundamental change.

Secondly, the major risks reviewed earlier in the study were categorised as complex adaptive challenges by combining both complex/wicked (Grint, 2013:3) and adaptive (Heifetz et al., 2009) approaches. This categorisation was argued to be a suitable representation of the nature of the risks and leadership challenges covered in the reviews of the GRR and NDP.

Now that the major risks have been categorised, the next chapter will make a recommendation for the leadership approach most suited to deal with complex adaptive challenges in the 21st century.

CHAPTER 6

LEARNING LEADERSHIP FOR COMPLEX ADAPTIVE PROBLEMS

6.1 INTRODUCTION

This study has found that traditional views of leadership are becoming less relevant in a modern world characterised by complex global risks. It is for this reason that leadership theory requires some form of adaptation in order to face the complex adaptive challenges with which organisations are confronted today (Lichtenstein, Uhl-Bien, Marion, Seers, Orton and Schreiber, 2006:2). The previous chapter categorised these modern challenges as complex adaptive challenges. As a result, leadership approaches should be geared accordingly.

This chapter will provide the theoretical and practical implications for complex adaptive leadership, before recommending Learning Leadership (LL) as an effective approach to deal with complexity residing in adaptive and wicked problems (Schwella, 2014:90).

The following objectives are set out for the remainder of this chapter:

Firstly, the changes in leadership thought in the 21st century will be briefly discussed.

Secondly, the theoretical and practical implications of leadership in complex adaptive systems will be considered in order to present a case for alternative leadership responses.

Thirdly, Learning Leadership, as presented by Schwella (2014), will be recommended as an appropriate response to complex adaptive challenges due to its focus on the continuous learning and development of the leader and their followers.

Fourthly, six additional effective leadership attributes in complex adaptive systems will be presented and incorporated into a LL model.

Lastly, the chapter will be concluded by drawing conclusions from its findings and making recommendations for leadership literature concerning complex global challenges.

6.2 REFOCUSING LEADERSHIP THOUGHT

With 21st century leadership research seemingly undergoing a shift in focus away from centralised organisational structures, there is growing evidence that traditional top-down leadership theories are oversimplified (Osborn, Hunt, & Jauch, 2002). Such observations have been highlighted continuously throughout this study with reference to the shortcomings of traditional models of leadership when faced with complex global risks and challenges.

Meyer, Gaba and Colwell (2005:465) further argue that the assumption of leaders acting exogenously on an organisation to achieve their objectives is misguided in a world where organisations are highly complex and have a non-linear nature. Furthermore, there is a growing recognition that leadership which is effective in dealing with modern challenges and tasks is not necessarily part of a leader's charismatic, motivational or symbolic characteristics (Lichtenstein et al., 2006:2).

In order to propose a complex adaptive leadership approach, it is therefore necessary to understand that leadership does not entirely reside in the leader alone. Understanding what constitutes leadership is answered by complexity sciences as mentioned in chapter 2. Complexity sciences represent leadership as an emergent event and an outcome of interactions between agents. From this view, leadership is not only a symbol, skill or position, but rather emerges from complex interactions (Lichtenstein et al., 2006:2).

Forming an appropriate approach of leadership that addresses the complex adaptive challenges listed in the previous chapters builds on the complexity leadership theory, which studies the role of leadership in expediting processes in organisations where interdependent actions among individual actors combine to form collective ventures (Drath, 2001; Meyer et al., 2005).

Understanding leadership from this perspective, where leadership takes place within a larger system, is imperative for prescribing any leadership approaches geared towards addressing complex adaptive challenges.

6.3 LEADERSHIP FOR COMPLEX ADAPTIVE CHALLENGES

Chapters 3 and 4 have listed the major risks facing leaders in the international South African systems, with reference to traditional Western approaches to leadership based on the assumption that leaders have an innate capacity to plan for the future, act rationally and control the outcomes of global risks. The intensification of global cyber risks and the inability of global leaders to respond quickly enough to these emerging threats dismiss any such assumptions found in traditional Western models (Drzik, 2018).

A new mind-set is beginning to emerge which recognises that social processes are far too complex and “messy” to be set in any single individual (Finkelstein, 2002:73-80; Marion & Uhl-Bien, 2001). Complex adaptive leadership draws on the complexity leadership approach which redirects focus away from the individual leader, while not reducing the importance of leadership as an organisational function. Instead, it views leadership as transcending the individual and being primarily a system phenomenon (Marion & Uhl-Bien, 2001; Hazy, 2006:58-77).

Complexity sciences (Marion, 1999) offers another fresh perspective on leadership for dealing with the global risks identified by considering the process of leadership within a framework of a complex adaptive system (CAS). The CAS does not define relationships hierarchically, such as in bureaucratic systems, but rather through interactions among heterogeneous agents in a network (Lichtenstein et al., 2006:2).

In a CAS, there are different individuals, groups and agents that interact by sharing common knowledge and goals through shared worldviews. Agents respond to internal and external pressures created by interdependencies resulting from conflicting constraints (Marion, 1999:397). It is these tensions which create system-wide emergent learning, innovation and adaptability, which are products of the interactions between agents as opposed to being caused by any specific acts of individual leaders (Marion, 1999:397).

The complex systems perspective offers a new leadership logic for the proposed complex adaptive leadership approach, because it helps with understanding leadership in reference to an emergent event as opposed to any single person. The interrelated risks found in the GRR require such a systems approach that draws on a form of “distributed” leadership among

major global leaders, which is not found in a single person, but rather in an interactive dynamic where a particular person plays a leader role as a participant or leader for a specific period and purpose (Brown & Gioia, 2002:397:420; Gronn, 2002:423-451).

In countries like South Africa, with a complex heterogeneous and multilingual society, it is crucial to appreciate the interactive dynamic in which leadership is executed in order to manage the complex adaptive challenges that it faces (Lefko-Everett, Nyoka & Tiscornia, 2011). The earlier review focusing on the NDP (2013) also identifies a call for a form of leadership which can assist its goals of socio-economic development and integration in a country with deep socio-economic fractures from its past.

6.4 LEARNING LEADERSHIP

Learning Leadership (LL) offers a novel approach to address complex adaptive challenges. Learning Leadership is an approach which emphasises the importance of continual learning throughout the leadership process by making use of Organisational Learning and Knowledge Management (Schwella, 2014).

In addressing complex adaptive challenges, one trend identified among leaders around the globe and in South Africa is that they are ill-equipped to face these issues using current knowledge and practices. In order to address this, LL can promote a mind-set of continual learning and adaptation throughout organisations facing complex adaptive challenges.

Learning organisations are defined by Senge (1990:30) as organisations that are continually learning and growing and where people are learning how to learn together. This focus on leadership does not simply continue to draw on strong individual-centred approaches, which stress the infallibility of a leader's knowledge and competency. Instead, by incorporating the element of learning, the leader is freed from having to know all the answers and is thus allowed to learn and develop.

This is important because organisations that do not promote continuous learning among leaders, but expect them to offer complete knowledge, inspiration (Bass, 2005:375) and answers to their followers, are at risk of what Senge (1990:35) refers to as learning disabilities

such as: leaders wrongly believing that they themselves are their positions and being disillusioned to taking charge of events that are beyond their area of responsibility.

6.5 CONSTRUCTING A LEARNING LEADERSHIP MODEL

The following section will present key attributes as found in alternative leadership approaches throughout this study, which can be used to construct a more robust model for LL.

6.5.1 Systems thinking

Systems thinking acknowledges that it is not sufficient to view isolated parts of the system. Instead, by having an overall picture of how the system operates and how the different parts interact, it is possible to achieve change more effectively (Senge, 1990:37).

The literature discussed on complexity leadership theory, complex systems and adaptive leadership have provided key insight into the need for systems thinking, which considers all participants in the process of leadership. Systems thinking enables the leader to see their position within an organisation as a piece in a larger system, while understanding the flows of interaction among leaders, followers and all who are part of the process of leadership.

Systems thinking in no means diminishes the role of the leader. Instead, it can be a crucial characteristic for leaders to be able to see the system in its entirety, allowing them to be more effective when faced with the complexities that reside in an interactive system. Heifetz and Laurie (1997:47) refers to this ability as “getting on the balcony” where leaders are able to see patterns within their organisations as if they were standing on a balcony without being swept away in all the action. Systems thinking requires a leader to appreciate the history of their organisation, understanding current trends and leading followers into future changes.

The call for strong leadership by the WEF and the NDP seeks to rediscover the appropriate leadership approach for the global risks referred to in this study. Mending global fractures and achieving socio-economic integration require high degrees of global collaboration and partnership in public and private realms, all of which are dependent on good and effective leadership.

In order for leaders to remain effective in such complex environments, systems thinking may aid them in understanding the process of leadership in such complex environments, allowing them to act as facilitators.

6.5.2 Team learning

Team learning is vital to the modern organisation, because teams, not individuals, are the fundamental learning units (Senge, 1990:34). Team learning argues that teams have the ability to learn and that the collective intelligence of the team exceeds individual intelligence.

A LL approach can benefit from team learning by incorporating a shared sense of responsibility in the learning process. In doing so, it is neither the leader nor the follower's responsibility to learn, but rather the responsibility of both, allowing learning to take place as a team initiative. This is especially beneficial to public, private and international endeavors such as the NDP, where a collective effort is required from all of society in finding solutions to complex issues such as poverty, inequality, environmental degradation, and geopolitical instability.

The NDP's recommendation for strong (NDP, 2013:1) in relation to leadership should be cautious of promoting a Great Man (Carlyle, 1993:2) approach to leadership which relies solely on heroic leaders capable of driving the plan forward. Instead, seeking leadership that recognises the importance of team learning when dealing with complex adaptive problems is essential.

6.5.3 Building a shared vision

Too often organisations and companies build their visions around the charisma of a leader or in response to a temporary crisis. Senge (1990:36) instead argues for a discipline that translates an individual vision into a shared one, fostering genuine commitment instead of compliance. Therefore, the NDP is particularly in need of a leadership approach that promotes a shared vision among South Africans. This is found in the plans opening statement which states that South Africa belongs to all its people and that creating a better future is a collective responsibility (NDP, 2013:1).

LL can benefit from fostering a shared vision, as leaders continue to relinquish their own agendas and instead embark on a process of learning and discovering a vision covering a much larger scope. Schwella (2013:88) provides insight into putting this into practice by referring to the transformational schools approach of continually creating and sharing a powerful vision for the organisation. By incorporating this insight, LL can be recommended as an approach to complex adaptive challenges, that is continually building a vision which goes beyond the individual leader to include the organisation or society at large.

6.5.4 Collective intelligence over individual genius

In a similar stance to building a collective vision, Grint (2013:14) emphasises the importance of collective intelligence, instead of individual genius. Success and failure, Grint (2013:14) argues, are often attributed to the individual leader. The more significant the success or failure, he argues, the more people tend to attribute it to the individual leader.

By delinking events to individuals, it is possible to identify the value of collective intelligence in bringing success to leadership initiatives. The WEF (2018b) stresses the importance of a more collective intelligence approach to deal with the global risks by initiating partnerships among international organisations, governments and private institutions. Grint (2013) further states that wicked problems demand a collective response within a system and not individuals, where the community must take responsibility without displacing the responsibility upon an individual leader. In fact, the very nature of complex risks require a collective form of action, if they are to be addressed.

6.5.5 Facilitation

Facilitation by leaders in the face of complex tasks is another attribute that can help develop a LL model. Without diminishing the role or position of the leader, facilitation in complex environments actually implies a greater scope for leadership influence, where the leader can direct the flow of a larger amount of activities within the organisational system.

Schwella (2013:88) finds that in the social learning approach, leaders can create more space for learning and experimentation when they are less authoritative and more facilitative. The reason for this is that organisations may face problems which are so complex that there are no readily available answers for them. Facilitation is crucial when faced with complex environments, because it can be used to influence different interactions within the leadership process as opposed to only leader-follower interactions.

Facilitation, however, does not make the task of leadership easier. Instead, it makes it more challenging, because it requires a greater deal of systems thinking (Senge, 1990:37) pertaining to each leader's sphere of operation. It may, however, provide a much more effective approach to leadership within complex environments, as it reduces the weight of responsibility placed on individual leaders to fulfil time-intensive and energy-intensive leadership tasks. This means that the expectation resting on leaders to provide all the correct answers and solutions to followers is less, as they become facilitators within a larger system which distributes responsibilities more evenly.

Facilitation may be especially useful in enacting the targets listed in the NDP, which assign extensive responsibilities to leaders to execute plans with success. Public leadership tasks such as promoting expansion in the global market share in foreign and domestic markets, regional development in infrastructure and strengthening public service capabilities (NDP, 2013) require careful planning and strategic facilitation in order to see these goals met.

6.5.6 Strategic thinking

Addressing complex adaptive challenges effectively requires a strategic mindset in leadership. Strategic leadership offers a number of key qualities that can assist this process. The Centre for Creative Leadership's Richard Hughes and Katherine Beatty (2011) define strategic leadership as individuals and teams who act, think and influence in ways which promote sustainable development.

Together with systems thinking (Senge, 1990:37) and Heifetz's (1994) approach of "getting on the balcony", strategic leadership offers an effective attribute that can be applied to deal

with challenges of a complex nature. In order for LL to be strategically effective, the following qualities are taken from the strategic leadership school:

- The impact should be broad in scope:

By emphasising a broader scope in Learning Leadership, it may impact areas outside of the leaders' own functional areas and even beyond the organisation. In order to apply this strategic scope requires viewing the organisation as an interconnected and interdependent subsystem.

- The impact should be felt over long-term periods:

Without disregarding the importance of short-term leadership tasks, strategic leadership requires the leaders to plan further into the future for the long-term success of their organisation. The very nature of complex global risks cannot be studied without careful long-term planning and requires leadership to respond appropriately.

- The impact should involve significant organisational change:

The final recommended approach from the strategic leadership school is to view the leadership process as resulting in significant organisational change. In dealing with complex adaptive problems, a change in one part of the system often has effects in all other parts of that system. For example, leaders in the environmental spheres who execute policies to reduce environmental degradation must be made aware of the consequential economic costs and potential job losses involved (Hughes & Beatty, 2011).

6.6 CONCLUSIONS

This chapter opened with four objectives.

Firstly, the change in focus of leadership thought occurring in the 21st century was observed with special reference to the decrease in confidence in centralised leadership approaches. Leadership research is beginning to discover the importance of different interactions in the leadership process without attributing leadership success to only the individual leader's role.

Secondly, the complex challenges born from an increasingly interconnected global environment call for an understanding of complex adaptive systems and a leadership

response which is effective in the face of such complexities. The complexities leadership school provided key insight into constructing a leadership approach that can tackle complex adaptive challenges.

Thirdly, in response to these complex adaptive challenges, LL was presented as an appropriate leadership response to the leadership requirements found in the GRR and the NDP, because of its emphasis on continual learning by all those involved in the leadership process.

Fourthly, key attributes were discussed and recommended to incorporate into the LL model. These attributes were systems thinking, strategic thinking, shared vision, collective intelligence, team learning and facilitation. Each of these attributes were found to provide a more robust model of leadership in the face of complex challenges.

The final chapter of this study will conclude by reviewing the preceding chapters, presenting the study's findings and making recommendations.

CHAPTER 7

STUDY REFLECTIONS, CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

The preceding six chapters considered and categorized complex adaptive challenges created by a globalised world characterised by increasing interconnectedness, volatility and rapid change. The final chapter of this study aims to reflect on these chapters, discuss the study's findings and make recommendations for future research in leadership for complex adaptive challenges.

7.2 CHAPTER REFLECTIONS AND FINDINGS

The purpose of chapter 1 was to present the problem statement of the study which was as follows: Individual centred and Great Man (Carlyle, 1993:2) leadership approaches are inappropriate in dealing with complex global risks.

In response to this, a different approach to leadership was called for, namely one which would be effective in a world characterised by increasing integration, rapid technological change and the resulting complexities which have emerged.

Chapter 2 established a foundation of key literature in leadership research by covering a historical overview, which captured the development of the field since the turn of the century, before reviewing mainstream leadership approaches and styles that have helped shape leadership thought and practice in the 21st century.

By capturing the dominant leadership approaches, it was found that these ways of conducting leadership where the emphasis is placed on the individual's leadership traits and heroism are inappropriate in an age of modernisation and complexities. Instead, what became increasingly evident was the need for an alternative leadership approach that transcends

individual capabilities and move to a more systems-based leadership, capable of dealing with complex challenges.

Chapter 2 further presented key literature on complex adaptive systems and alternative leadership approaches explored further in chapters 3 through 6.

Chapter 3 contextualised many of the complex adaptive challenges that leaders face in the 21st century by reviewing the WEF's GRR, documenting the major global risks in the economic, environmental, technological and geopolitical realms. From this review, it was evident that the complex nature of the major global risks calls for an alternative leadership approach from traditional centralised models. This was especially evident in each of the leadership responses to the major risks, which indicated that leadership research is still centred on individual leaders with a lack of recognition for the systems in which they operate.

Chapter 4 continued to contextualise the complex adaptive challenges by focusing on the South African context and the NPC's response to South Africa's biggest challenges in the form of the NDP. A review of the NDP highlighted the complex nature of poverty and inequality and the need for leaders in the public and private sectors to adopt a form of complex adaptive leadership.

Chapter 5 further strengthened the argument for complex adaptive leadership by categorising the risks and challenges in chapters 3 and 4 as complex adaptive challenges. It was argued that these challenges cannot be treated as so-called tame (Grint, 2013) or technical (Heifetz, 2014) challenges. Instead, they require a complementing leadership response for dealing with complex and systemic risks.

After categorising these risks, chapter 6 provided additional literature to provide a framework for a leadership approach capable of dealing with complex adaptive challenges. The framework identified an emerging shift in 21st century leadership thought away from a traditional centralised mentality to a systems approach to leadership practice.

With the necessary framework in place, Learning Leadership (Schwella, 2014) was recommended as a response to the complex adaptive challenges identified in this study. Learning Leadership was argued to be an appropriate response to challenges of a complex and systemic nature, because it encourages leaders to learn continuously and adapt to fast-changing systems. The chapter concluded by providing an additional six key attributes for

Learning Leadership that will help leaders in their endeavours to address complex adaptive challenges.

The study has reached its objectives and in doing so it has managed to make a strong case for new leadership thinking, while also discovering a number of potential answers to complex adaptive challenges. The next two sections will provide recommendations and concluding thoughts for future research, respectively.

7.3 RECOMMENDATIONS FOR FUTURE RESEARCH

The study found that complex risks cannot be addressed effectively with traditional approaches to leadership that fail to consider the entire system in which the leadership process takes place. It is for this reason that leadership research should continue to study the complex interactions between leaders, followers and all others involved in the leadership process.

By incorporating a systemic approach to leadership for complex adaptive challenges, more appropriate leadership responses can be included in initiatives such as the NDP. In doing so, the misdiagnosis of complex adaptive leadership challenges as technical or tame issues, can be avoided.

The study specifically focused on major risks found within the economic, environmental, technological and geopolitical realms, but further research should be conducted to break down each sector and analyse numerous institutions within each of them, thus providing an even more detailed picture of the complex challenges, and how they interact with one another.

Categorisations of the nature of leadership challenges as technical, tame and wicked/complex were provided in chapter 5, and further research should be conducted to distinguish different leadership challenges.

7.4 FINAL CONCLUSIONS

This study provided a persuasive argument based on theoretical findings for the need of a leadership approach that is appropriate for addressing complex adaptive challenges effectively. From the evidence of the novel difficulties that complex issues such as poverty and climate change present to leaders around the world, it was found that there is a lack of attention paid to leadership practice with regard to complex adaptive challenges.

Despite a growing base of theory on complex adaptive leadership approaches, it is still traditional views of centralised and individual leader-focused thought which dominates mainstream practice. This study has found that what is needed by global and South African organisations, is the recognition that complex challenges cannot be treated as tame or technical challenges.

It is therefore this study's view that the NPC and South Africa as a whole, should look beyond Great Man (Carlyle, 1993) leadership to pioneer its NDP in a more systemic approach to leadership, capable of addressing wicked and complex issues embedded in a South Africa still facing socio-economic fragmentation from its past. Complex adaptive leadership, and more specifically Learning Leadership, offers a practical solution to the gap in leadership for complex issues by recognising the leaders within a larger system and shifting their roles from providing solutions to asking correct questions, and from taking strong control of operations, to carefully facilitating the process of leadership in the most effective manner possible.

By incorporating Learning Leadership and other complex adaptive leadership approaches capable of addressing wicked challenges, global and South African leaders are offered more effective ways of addressing the major national and international challenges of the 21st century.

8. LIST OF SOURCES

Accenture. 2017. Cost of cyber crime study. *Security Investments*, 12-50.

Adams, T. 2010. A Conceptual framework for leadership development in the South African Police Service. Masters dissertation, Stellenbosch: Stellenbosch University. 35-36.

Antonakis, J. & Sivasubramaniam, N. 2003. Context and leadership: An examination of the nine-factor full-range leadership theory using the Multifactor leadership questionnaire. *The Leadership Quarterly*, 14(3):261-295.

Antonakis, J., Cianciolo, Anna, T., Robert, J & Sternberg. 2004. Leadership: Past, present, and future. *The Nature of Leadership*. 3-15.

Bam. 2018. *SIGS*, Leadership and leadership development, *bam.ac.uk*. [online] Available at: <https://www.bam.ac.uk/sigs-leadership-and-leadership-development> [Accessed 8 Aug. 2018].

Bass, B. M. 1985. Leadership and performance beyond expectations. *New York: Free Press*, 55-73.

Bass, B.M. 1990. From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18(3):19-31.

Bass, B.M., 2005. Transformational leadership theory. JB Miner. *Organizational behavior I. Essential theories of motivation and leadership*. 361-385.

Biggs, R., F. R. Westley, & S. R. Carpenter. 2010. Navigating the back loop: fostering social innovation and transformation in ecosystem management. *Ecology and Society*, 15(2): 9. [online] Available at: <http://www.ecologyandsociety.org/vol15/iss2/art9/> [Accessed 18 Jun. 2018]

- Bohatch, T. 2018. *What's causing Cape Town's water crisis?* GroundUp News. [online] Available at: <https://www.groundup.org.za/article/whats-causing-cape-towns-water-crisis/> [Accessed 9 Sep. 2018].
- Brown, M.E. & Gioia, D.A. 2002. Making things click: Distributive leadership in an online division of an offline organization. *Leadership Quarterly*, 13(4):397-420.
- Burns, J.M. 1978. *Leadership*. New York. NY: Harx`per and Row Publishers, 112-145.
- Cahnman, W.J.1943. Concepts of geopolitics. *American Sociological Review*, 8(1):55-59.
- Caldara, D. and Iacoviello, M. 2018. Measuring Geopolitical Risk. *International Finance Discussion Paper*, 2018(1222):1-66.
- Carlyle, T., 1993. On heroes, hero-worship, and the heroic in history (Vol. 1). University of California Press, 2, 12.
- Chainey, R. 2018. Beyond GDP. World Economic Forum. [online] Available at: <https://www.weforum.org/agenda/2016/04/beyond-gdp-is-it-time-to-rethink-the-way-we-measure-growth> [Accessed 1 Jun. 2018].
- Chan, S. 2001. Complex Adaptive Systems. *Research Seminar in Engineering Systems*, 1.
- Chartered Management Institute, C. 2013. Understanding leadership styles checklist 256, Electronic Journal, 1.
- Ciulla, J.B. 2004. Ethics and leadership effectiveness. *The Nature of Leadership*. 302-327.
- Clampitt, P.G. & DeKoch, R.J. 2016. *Embracing Uncertainty: The Essence of Leadership*, 18. Routledge.

Davos WEF. 2018. [video] Available at:

https://www.youtube.com/watch?v=_345SdQ6Nq0&t=1936s [Accessed 13 Nov. 2018].

Department of Environmental Affairs (DEA). 2014. Climate Change. *Environment Outlook*.

Drath, W. 2001. The deep blue sea: Rethinking the source of leadership. San Francisco: Jossey-Bass & Center for Creative Leadership.

Drzik, J. 2018. Global Risks Report 2018. [video] Available at: https://www.youtube.com/watch?v=_345SdQ6Nq0&t=1521s [Accessed 14 Jun. 2018].

DuBrin, A. 2013. Principles of leadership. 7th edition. Mason, Ohio: South-Western Cengage Learning, 110-160.

Eden, D. & Leviatan, U. 1975. Implicit leadership theory as a determinant of the factor structure underlying supervisory behavior scales. *Journal of Applied Psychology*, 737-740.

Evans, L.S., Hicks, C.C., Cohen, P.J., Case, P., Prideaux, M. & Mills, D.J. 2015. Understanding leadership in the environmental sciences. *Ecology and Society*, 20(1):8-9.

FAO. 2003. Food and Agriculture organization of the United Nations, Electronic Journal, 26.

Fiedler, F.E. 1967. A theory of leadership effectiveness. New York: McGraw-Hill.

Fiedler, F.E. 1971. A note on the methodology of the Graen, Alvares and Orris studies testing the contingency model. *Journal of Applied Psychology*, 339-355.

- Finkelstein, S. 2002. Planning in organizations: One vote for complexity in F. Yammarino and F. Dansereua (eds.), *Multi-level Issues in Organizational Behavior and Processes*, 73-80.
- Flemes, D. & Wojczewski, T. 2010. Contested Leadership in International Relations: Power Politics in South America, South Asia and Sub-Saharan Africa. *SSRN Electronic Journal*, 8.
- Fripp, C., 2014. South Africa is second most targeted for Phishing Attacks. *Retrieved from IT News Africa website: <http://www.itnewsafrika.com/2014/04/south-africa-is-second-most-targeted-for-phishing-attacks>*. [Accessed 11 Aug. 2018]
- Gemmill, G. & J. Oakley. 1992. Leadership: an alienating social myth. *Human Relations*, 45(2):114-116.
- Gill, R. 2013. *Theory and practice of leadership*. London: Sage, 13-34.
- Gillwald, A., Moyo, P. & Stork, C. 2012. Understanding what is happening in ICT in South Africa. *Evidence for ICT Policy Action, Policy Paper 7*, 5.
- Glaser, B.G. and Strauss, A.L., 1967. *Discovery of grounded theory: Strategies for qualitative research*. Routledge, 57.
- Griffiths, J.L. 2017. Cyber security as an emerging challenge to South African national security. Doctoral dissertation, University of Pretoria, 3-43.
- Grint, K. 2008. Wicked problems and clumsy solutions: The role of leadership. *Public Leadership and Management, Warwick Business School*, 1(2):3-14.
- Gronn, P. 2002. Distributed leadership as a unit of analysis. *Leadership Quarterly*, 13:423-451.

- Hambleton, R., 2011. Place-based leadership in a global era. *Commonwealth Journal of Local Governance*. [Online] Available at: <https://learning-analytics.info/journals/index.php/cjlg/article/view/2410> [Accessed 6 Sep. 2018].
- Haslam, S.A., Reicher, S.D. & Platow, M.J. 2011. The new psychology of leadership: identity, influence and power. New York: *Psychology Press*, Taylor & Francis Group.
- Hazy, J.K. 2006. Measuring leadership effectiveness in complex socio-technical systems. *Emergence: Complexity and Organization*, 8(3):58-77.
- Heifetz, R A. 1994. Leadership without easy answers, Harvard University Press.
- Heifetz, R.A. & Laurie, D.L. 1997. The work of leadership. *Harvard Business Review*, 75(1):1-48.
- Heifetz, R., Grashow, A. & Linsky, M. 2009. The practice of adaptive leadership: Tools and tactics for changing your organization and the world. *Harvard Business Press*, 20-65.
- Heifetz, R.A. and Linsky, M., 2014. Adaptive Leadership: The Heifetz Collection. Harvard Business Review Press, 3.
- Hersey, P. & Blanchard, K.H. 1988. Management and organizational behavior: utilizing human resources. New Jersey: Prentice-Hall, 173.
- Hosking, D.M. 1999. Social construction as process: Some new possibilities for research and development. *Concepts and Transformation*, 4(2):71-132.
- Hughes, R.L. & Beatty, K.M. 2011. *Becoming a strategic leader: Your role in your organization's enduring success* (Vol. 27). John Wiley & Sons.
- Jones, A.M. 2005. The anthropology of leadership: Culture and corporate leadership in the American south. *Leadership* 1(3):179-181.

- Kates, R.W., Travis, W.R. & Wilbanks, T.J. 2012. Transformational adaptation when incremental adaptations to climate change are insufficient. *Proceedings of the National Academy of Science of the United States of America*, 109 (19): 7156-7161.
- Kellerman, B. 2004. *Bad leadership: What it is, how it happens, why it matters*. Boston: Harvard Business School Press.
- Keohane, R.O., 1980. *The theory of hegemonic stability and changes in international economic regimes, 1967-1977*. Center for International and Strategic Affairs, University of California, 68.
- Kemp, S. 2016. We are social: Digital in 2016. [Online] Available at: <http://wearesocial.com/uk/special-reports/digital-in-2016> [Accessed 5 Sep. 2018].
- Lake, D.A. 2006. American hegemony and the future of east-west relations. *Inter-national studies perspectives*, 7(1):23-30.
- Lake, D.A. 2007. Escape from the State-of-Nature: Authority and hierarchy in world politics. *International Security*, 32(1):47-79.
- Leadership Trust. 2018. Tailored leadership development for people, teams and organisations, *Leadership Trust*. [online] Available at: <http://www.leadershiptrust.co/tailored-programmes/> [Accessed 8 Aug. 2018].
- Lefko-Everett, K., Nyoka, A. & Tiscornia, L. 2011. SA Reconciliation Barometer Survey: 2011 Report. [Online]. Available at: <http://reconciliationbarometer.org/wp-content/uploads/2011/12/2011-SA-Reconciliation-Barometer.pdf>. [Accessed 22 Apr. 2012].
- Lichtenstein, B.B., Uhl-Bien, M., Marion, R., Seers, A., Orton, J.D. & Schreiber, C., 2006. Complexity leadership theory: An interactive perspective on leading in complex adaptive systems, *Institute for the study of coherence & emergence*, 2.

Likert, R. 1961. *New patterns of management*. New York: McGraw-Hill.

Longman Dictionary of Contemporary English. Essex: Longman, p. 433. 20 Werner J.

Lord, R.G., Foti, R.J. & De Vader, C.L. 1984. A test of leadership categorization theory: Internal structure, information processing, and leadership perceptions. *Organizational Behavior and Human Performance*, 34:343-378.

Lowe, K.B. & Gardner, W.L. 2000. Ten years of leadership quarterly: Contributions and challenges for the future. *The Leadership Quarterly*, 11(4):461-513.

Maccoby, M. 2000. Narcissistic leaders: The incredible pros, the inevitable cons. *Harvard Business Review*, 82(1):1-4.

Mann, R.D. 1959. A review of the relationships between personality and performance in small groups. *Psychological Bulletin*, 56:230-270.

Marín, A., Gelcich, S., Castilla, J.C., & Berkes, F. 2012. Exploring social capital in Chile's coastal benthic co-management system using a network approach. *Ecology and Society*, 17(1):13.

Marion, R. & Uhl-Bien, M. 2001. Leadership in complex organizations. *Leadership Quarterly*, 12:389-418.

Marion, R. 1999. *The edge of organization: chaos and complexity theories of formal social organization*, Newbury Park: Sage, 397.

Marschke, M. & Berkes, F. 2005. Local level sustainability planning for livelihoods: A Cambodian experience. *International Journal of Sustainable Development and World Ecology*, 12(1):21-33.

Meindl, J.R. & Ehrlich, S.B. 1987. The romance of leadership and the evaluation of organizational performance. *Academy of Management Journal*, 30(1):91-109.

- Menell, R. 2015. Innovation in the South African mining sector: shaping the industry globally. *South African Government News Agency*. [Online] Available at: <http://www.sanews.gov.za/south-africa/innovation-south-african-mining-sector-shaping-industry-globally>, 1 [Accessed 18 May 2016].
- Meyer, A., Gaba, V. & Colwell, K. 2005. Organizing far from equilibrium: Nonlinear change in organizational fields. *Organization Science*, 16:456-473.
- Mumford, M.D., Marks, M.A., Connelly, M.S., Zaccaro, S.J. and Reiter-Palmon, R., 2000. Development of leadership skills: Experience and timing. *The Leadership Quarterly*, 11(1):87-114.
- National Planning Commission (NPC). 2011. Diagnostic Overview, 6-32.
- National Development Plan (NDP). 2013. National development plan vision 2030: *Our future – make it work*, 1-447.
- National Treasury. 2011. *Confronting youth unemployment: Policy options for South Africa* [Online] Available at: <http://www.treasury.gov.za/documents/national%20budget/2011/Confronting%20youth%20unemployment%20-%20Policy%20options.pdf> [Accessed 9 Mar. 2012].
- Nye, J.S. 2004. Soft Power: The means to success in world politics. *New York: Public Affairs*, 5.
- OECD. 2015. Local Economic Leadership. Better policies for better lives, 5-57.
- Osborn, R.N., Hunt, J.G. & Jauch, L.R. 2002. Toward a contextual theory of leadership. *Leadership Quarterly*, 13:797-837.
- Olsson, P., Gunderson, L.H., Carpenter, S.R., Ryan, P., Lebel, L., Folke, C. & Holling, C.S. 2006. Shooting the rapids: Navigating transitions to adaptive governance of social-

ecological systems. *Ecology and Society* 11(1):18. [online] Available at: <http://www.ecologyandsociety.org/vol11/iss1/art18/>. [Accessed 9 April 2018].

Padayachie, R.L., 2010. eBarometer: Measuring the impacts of ICTs on development in South Africa. *Pretoria: South African Government National Department of Communications*, 36.

Patterson, K. & Winston, B. 2016. *Leading an African Renaissance*.

Pfeffer, J. 1977. The ambiguity of leadership. *Academy of Management Review*, 2:105-113.

Phys.org. (2018). Climate trends continue to break records. [online] Available at: <https://phys.org/news/2016-07-climate-trends.html> [Accessed 12 Nov. 2018].

Rich, M.J. & Stoker R.P. 2014. *Collaborative governance for urban revitalization: Lessons from empowerment zones*. New York: *Cornell University Press*, 44-45.

Rush, M.C., Thomas, J.C. & Lord, R.G. 1977. Implicit leadership theory: A potential threat to the internal validity of leader behavior questionnaires. *Organizational Behavior and Human Performance*, 20:94–109.

Samans, R. 2018. *Global Risks Report 2018*. [video] Available at: https://www.youtube.com/watch?v=_345SdQ6Nq0&t=1521s [Accessed 14 Jun. 2018].

Schwella, E., 2014. Knowledge based governance, governance as learning: The leadership implications. *International Journal of Leadership in Public Services*, 10(2), 84-90.

Senge, P., 1990. The fifth discipline: The art and practice of organizational learning. *New York*, 30-37.

- Simms, A. 2008. Nine meals from anarchy: Oil depletion, climate change and the transition to resilience. Schumacher Lecture, 2008. London: *New Economics Foundation*.
- Stogdill R.M. 1948. Personal factors associated with leadership: A survey of the literature. *Journal of Psychology*, 25:20-70.
- Strange, S., 1987. The persistent myth of lost hegemony. *International organization*, 41(4):551-574.
- Tannenbaum, R. & Schmidt, W.H. 1958. How to choose a leadership pattern: Should a manager be democratic or autocratic—or something in between? *Harvard Business Review*, 37(March-April):95-102.
- Treverton, G.F. & Jones, S.G., 2005. *Measuring national power*. Rand corporation Arlington national security research division, 2.
- Toplink.weforum.org. (2018). *TopLink*. [online] Available at: <https://toplink.weforum.org/knowledge/insight/a1Gb00000015LbsEAE/explore/summary> [Accessed 13 Nov. 2018].
- Val, C. & Kemp, J. 2012. Leadership Styles. *Pathways: The Ontario Journal Of Outdoor Education*, 24(3):29-30.
- Van Niekerk, P. 2014. An exploratory analysis of youth leadership development in South Africa: Theoretical and programmatic perspectives. *Commerce in the Faculty of Management Science at Stellenbosch University*, 13-46.
- Yukl, G. 1999. An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *The Leadership Quarterly*, 10(2):285-305.
- Quoteinvestigator (2018). It is not the strongest of the species that survives but the most adaptable – Quote Investigator. Quoteinvestigator.com. [online] Available at: <https://quoteinvestigator.com/2014/05/04/adapt/> [Accessed 9 Nov. 2018].

- Wakeford, J. 2012. Socioeconomic implications of global oil depletion for South Africa: Vulnerabilities, impacts and transition to sustainability, 154-190, 296.
- Walia, R., 2015. A Saga of Qualitative Research. *Social Crimonol*, 5(2), 124.
- Walker, L.O. & Avant, K.C. 1995. *Strategies for theory construction in nursing*. Third Edition. Cape Town: Appleton & Lange, 38.
- Walker, B., Barrett, S., Polasky, S., Galaz, V., Folke, C., Engström, G., Ackerman, F., Arrow, K., Carpenter, S., Chopra, K. & Daily, G. 2009. Looming global-scale failures and missing institutions. *Science*, 325(5946):1345-1346.
- Walters, C.J. 2007. Is adaptive management helping to solve fisheries problems? *Ambio*, 36(4):304-307. [online] Available at:[https://doi.org/10.1579/0044-7447\(2007\)36\[304:IAMHTS\]2.0.CO;2](https://doi.org/10.1579/0044-7447(2007)36[304:IAMHTS]2.0.CO;2) [Accessed 8 Nov. 2018].
- Warner, L.S. & Grint, K. 2006. American Indian ways of leading and knowing. *Leadership*, 2(2): 225-244.
- World Economic Forum (WEF). 2017a. The Global Risks Report 2017. 12th Edition. The Global Competitiveness and Risks Team, 12, 23.
- World Economic Forum (WEF). 2018b. The Global Risks Report 2018. 13th Edition. Insight Report. The Global Competitiveness and Risks Team, 3-60.
- Youtube. 2011. *Diagnostic Report of National Planning Commission*. [video] Available at: <https://www.youtube.com/watch?v=mXhPtMoaGa0> [Accessed 14 Aug. 2018].
- Zulu, L.C. 2008. Community forest management in Southern Malawi: Solution or part of the problem? *Society & Natural Resources* 21(8):687-703.