

**BEYOND THE HIGH ROAD: A SCENARIO ANALYSIS OF THE
PROSPECTS FOR POLITICAL STABILITY OR INSTABILITY IN
SOUTH AFRICA OVER THE PERIOD TO 2024**

Frans Johannes Cornelius Cronje

**Thesis submitted for the degree Doctor of Philosophy in Political
Science at the Potchefstroom Campus of the North-West University**

**Promoter: Professor A Duvenhage
April 2013**

DECLARATION

I declare “**Beyond the High Road: A scenario analysis of the prospects for political stability or instability in South Africa over the period to 2024**” to be my own work, and that all sources used or quoted have been indicated and acknowledged, and that this thesis has not previously been submitted by me or by any other person for degree purposes at this or any other university.

Signature

Date

A WORD OF GRATITUDE

I must acknowledge foremost Professor Andre Duvenhage for his support and enthusiasm for this thesis. I am grateful to John Kane-Berman, Clem Sunter and Louis van der Merwe among many other South Africa analysts and scenario experts for listening to my ideas and providing advice. Many of them do not know how useful they have been. I must thank Simone Roos, Carol Archibald and Arina Muresan for their technical support, language editing, and source checking. Finally without the support of Carolyn, Billy and Willem this thesis could not have been completed.

ABSTRACT

Despite the widely hailed success of South Africa's transition from apartheid to democracy it was apparent by the mid-2000s that beneath the veneer of stability lay a country facing serious social and economic challenges. The employment and labour market participation rates were uniquely low among emerging markets. Protest action against the state had reached levels last encountered in the volatile 1980s and early 1990s. The budget and current account deficits had reached unsustainable levels. By its own admission the government realised that the country was not recording GDP growth rates necessary to make dramatic inroads into poverty, unemployment and inequality levels.

A number of analysts and commentators therefore came to question the future stability of South Africa's political system. Trade unions and some Cabinet ministers routinely described unemployment as a "ticking time bomb". The Chairman of the Institute of International Affairs wrote in *Business Day* that he could predict when South Africa's "Tunisia Day" would arrive. The respected *Economist* newspaper ran a front page feature on what it called South Africa's "downhill slide". Former President FW de Klerk warned that South Africa was approaching a precipice. Clem Sunter, South Africa's most renowned scenario planner, upped his prospects that South Africa may become a failed state. Global ratings agencies downgraded South Africa citing the fear that government policy could not meet popular demands.

Amidst such speculation it is vitally important that the prospects for instability be investigated and determined, not via opinion or speculation, but rather against a sound body of theory. This task is complicated by the fact that the feared instability may only occur at a point in the future. The theory must therefore be applied via a methodology capable of overcoming the weak track record of political science in accurately anticipating major shifts in political systems.

This problem statement will be addressed by showing that complex systems theory holds the key to a series of units of analysis via which the stability or instability of any political system can be objectively determined, compared to any other political system, and tracked over time. Secondly that there are scenario planning methodologies that can overcome the uncertainty inherent in the futures of all complex systems and thereby the poor track record that political scientists have in anticipating dramatic future changes in the systems they study. When combined into a single complex systems/scenario model, these theoretical and methodological points of departure will allow the long term prospects for stability or instability of any political system to be accurately and objectively determined.

Key words: *complex systems theory; political stability/instability; emergence; political systems; scenario planning*

OPSOMMING

Suid-Afrika se suksesvolle oorgang van apartheid na demokrasie is in die algemeen wyd verwelkom. Dit was egter gou duidelik dat onder die oppervlak van politieke stabiliteit die staat met ernstige sosio-ekonomiese en sosio-politieke uitdagings te kampe het. In vergelyking tot ander ontluikende markte het Suid-Afrika onderpresteer in soverre dit werksverskaffing en deelname aan die arbeidsmark aanbetref. Diensleweringsproteste het ook ongekende hoogtes bereik en in opsigte herinner aan Suid-Afrika van die jare tagtig en vroeë negentigs. Selfs die regering het erken dat ontoereikende ekonomiese groei, soos gemeet in terma van BBP, nie daarin geslaag het om 'n beduidende verskil te maak ten opsigte van armoedeverligting, werkskepping en vlakke van ongelykheid in die samelewing nie.

Analiste en politieke kommentators het teen hierdie agtergrond die mate van politieke stabiliteit in 'n toekomstige Suid-Afrika begin bevraagteken. Vakbondleiers en selfs kabinetministers het sosiale vraagstukke en veral werkloosheid as 'n tikkende tydbom beskryf. Trouens die voorsitter van die *Instituut vir Internasionale Aangeleenthede* is in *Business Day* aangehaal rakende wanneer Suid-Afrika se "Tunisiëse Dag" sou aanbreek. Die hoog aangeskrewe *Economist* het op sy beurt 'n voorbladartikel gehad wat Suid-Afrika se "downhill slide" beskryf. Die voormalige Suid-Afrikaanse president FW de Klerk het weer gewaarsku dat Suid-Afrika op 'n afgrond afstuur terwyl Clem Sunter, Suid-Afrika se vermaarde scenario-beplanner, gesê het dat Suid-Afrika se kansse die afgelope tyd verbeter het om as 'n "mislukte staat" geklassifiseer te word. Suid-Afrika se internasionale kredietgradering is in onlangse maande ook afwaarts aangepas as gevolg van die onvermoeë van die regering om groeiende populisme en arbeidsonrus aan te spreek.

Teen die agtergrond van bogenoemde uitsprake is dit belangrik dat Suid-Afrika se vooruitsigte in terme van politieke stabiliteit/onstabiliteit wetenskaplik en teoreties ondersoek word. Uitgaande van die veronderstelling dat onstabiliteit in die toekoms sterker kan manifesteer moet 'n teoreties- metodologiese raamwerk ontwikkel word wat die relatiewe swak baanrekord van Politieke Studie as dissipline ten opsigte van die verstaan van die toekoms kan aanvul en om met groter akkuraatheid alternatiewe toekomste (scenario's) te kan identifiseer.

Met as fokus en probleemstelling politieke stabiliteit/onstabiliteit in 'n toekomstige Suid-Afrika is komplekse stelselteorie as vertrekpunt geneem en ontledingseenhede geïdentifiseer waarvolgens die tema aangespreek kan word. Deur scenariometodologie as metodologiese raamwerk te integreer met komplekse stelselteorie is 'n eiesoortige metodologies-teoretiese raamwerk binne die studie ontwikkel waarvolgens die toekoms van stabiliteit/onstabiliteit meer akkuraat en objektief ontleed kan word.

Sleutelwoorde: *komplekse stelselteorie, politieke stabiliteit/onstabiliteit; opkoms; politieke stelsels; scenario-beplanning*

TABLE OF CONTENTS

1. CHAPTER ONE: BEYOND THE HIGH ROAD: A SCENARIO ANALYSIS OF THE PROSPECTS FOR POLITICAL STABILITY OR INSTABILITY IN SOUTH AFRICA OVER THE PERIOD TO 2024	4
1.1 INTRODUCTION AND MOTIVATION	4
1.1.1. Progress in the economic environment	4
1.1.2. Progress in the social environment.....	5
1.1.3. Progress in the political environment	5
1.1.4. Challenges in the economic environment.....	6
1.1.5. Challenges in the social environment	7
1.1.6. Challenges in the political environment.....	8
1.1.7. The manifestation of risk.....	9
1.2. THE CENTRAL PROBLEM STATEMENT OF THE THESIS	10
1.3. STUDY GOALS.....	11
1.4. CENTRAL THEORETICAL STATEMENT.....	13
1.5. POINTS OF DEPARTURE	13
1.5.1. Theoretical points of departure	13
1.5.2. Conceptual points of departure	16
1.5.3. Methodological points of departure	18
1.6. LITERATURE REVIEW	20
1.6.1. Theoretical literature.....	20
1.6.2. Conceptual literature	21
1.6.3. Scenario literature	21
1.6.4. Quantitative literature	22
1.6.5. Additional qualitative literature.....	22
1.7. THE METHODOLOGICAL STEPS OF THE STUDY.....	23
1.8. CHAPTER DIVISION.....	24
1.9. CONCLUSION: THE SIGNIFICANCE OF THE STUDY	26
 2. CHAPTER TWO: MACRO-THEORETICAL POINTS OF DEPARTURE	 29
2.1. INTRODUCTION	29
2.2. THE ORIGINS OF SYSTEMS THEORY.....	31
2.2.1. Shortcomings of Newtonian thinking as an impetus for systems thinking	31
2.2.2. Early systems alternatives to Newtonian thinking	33

2.2.3.	Systems thinking as a paradigm shift away from Newtonian thinking	34
2.2.4.	Principles of systems thinking	35
2.3.	THE RISE OF COMPLEX SYSTEMS THEORY	36
2.3.1.	Non-linearity or emergence as the defining feature of complex systems	37
2.3.2.	A conceptual definition of a complex system.....	39
2.4.	THE CHARACTERISTICS OF COMPLEX SYSTEMS	40
2.4.1.	Actors as a characteristic of complex systems.....	40
2.4.2.	Emergence as a characteristic of complex systems	41
2.4.3.	Feedback as a characteristic of complex systems.....	42
2.4.3.1	<i>The conflict of positive and negative feedback in a complex system.....</i>	42
2.4.4.	A working definition of a complex system.....	43
2.5.	THE BEHAVIOUR OF A COMPLEX SYSTEM.....	44
2.5.1.	Stability in complex systems	44
2.5.2.	Instability in complex systems	45
2.5.3.	Periodic stability in complex systems.....	45
2.5.4.	Chaos in complex systems	45
2.5.5.	Evolution in complex systems.....	46
2.5.6.	Determining behaviour in complex systems.....	47
2.6.	CONCLUSION	49
3.	CHAPTER THREE: CONCEPTUAL POINTS OF DEPARTURE	51
3.1.	INTRODUCTION	51
3.2.	IDENTIFYING A POLITICAL SYSTEM	52
3.2.1.	Scholarly descriptions of political systems.....	52
3.2.2.	The authoritative assignment of valued things as a defining feature of political systems	54
3.2.3.	Defining a political system.....	55
3.3.	COMMONALITIES BETWEEN POLITICAL SYSTEMS AND COMPLEX SYSTEMS	55
3.3.1.	Commonalities of actors	56
3.3.2.	Commonalities of emergence	58
3.3.3.	Commonalities of feedback.....	60
3.4.	DEFINING A COMPLEX POLITICAL SYSTEM	62
3.4.1.	A working definition of a complex political system.....	63
3.5.	CLASSIFYING TYPES OF POLITICAL SYSTEMS	67
3.5.1.	Aristotle's typology of a political system.....	67
3.5.2.	Huntington's classification of a political system.....	68

3.5.3. Dahl's classification of a political system.....	69
3.5.4. Distinguishing between open and closed political systems.....	70
3.5.5. Distinguishing between effective and ineffective political systems	71
3.6. DETERMINING THE TYPE OF POLITICAL SYSTEMS.....	73
3.6.1. The presence of demand mechanisms.....	73
3.6.2. The availability of demand mechanisms	75
3.6.3. The effectiveness of a political systems	75
3.6.4. A model to determine system type	76
3.6.5. A typology of political systems	79
3.7. A COMPLEX SYSTEMS MODEL OF A POLITICAL SYSTEM	80
3.7.1. An explanation of the model	82
3.8. CONCLUSION	83
4. CHAPTER FOUR: METHODOLOGICAL POINTS OF DEPARTURE	85
4.1. INTRODUCTION	85
4.2. THE FAILURE OF POLITICAL SCIENCE TO ACCURATELY ANTICIPATE SIGNIFICANT POLITICAL AND ECONOMIC SHIFTS	87
4.3. EMERGENCE AS THE CAUSE OF FORECASTING FAILURES IN POLITICAL SCIENCE 88	
4.3.1. Revising the principle of emergence.....	89
4.3.2. The failure to incorporate emergence into political forecasting.....	90
4.4. USING SCENARIOS TO OVERCOME THE PROBLEM OF EMERGENCE	91
4.4.1. Historical influences in scenario planning.....	91
4.4.1.1 <i>The scenario experience of Shell in the 1960s</i>	92
4.4.2. Scenario planning as a methodology for studying the future complex systems 94	
4.5. DEFINING SCENARIOS	95
4.5.1. Scenario thinking via analogies.....	96
4.5.1.1 <i>The weather</i>	96
4.5.1.2 <i>Mountaineering</i>	97
4.5.1.3 <i>Wind tunnels</i>	98
4.5.2. A conceptual definition of scenarios.....	98
4.6. SCENARIOS, EMERGENCE AND THE PLURAL FUTURE	99
4.6.1. Variants of the future	99
4.7. FORECAST VERSUS SCENARIOS	102
4.8. A CRITICAL ASSESSMENT OF SCENARIO METHODOLOGY	107

4.9. THE UTILITY OF SCENARIOS	110
4.9.1. Scenario planning in South Africa	111
4.9.2. Practical applications for scenario planning	112
4.10. CONCLUSION	114
 5. CHAPTER FIVE: AN INTEGRATED METHODOLOGICAL-THEORETICAL FRAMEWORK FOR ANALYSIS	 116
5.1. INTRODUCTION	116
5.2. INTEGRATING SCENARIO PLANNING AND COMPLEX SYSTEMS THEORY	117
5.2.1. Commonalities between complex systems theory and scenario planning	119
5.2.2. Advantages of integrating scenario planning with complex systems theory ..	121
5.3. PRINCIPLES OF SCENARIO PLANNING	122
5.3.1. The three key principles of scenario planning	123
5.4. DIFFERENT METHODOLOGICAL APPROACHES TO SCENARIO PLANNING	126
5.4.1. A composite scenario methodology	127
5.5. INTEGRATING COMPLEX SYSTEMS THEORY AND SCENARIO METHODS INTO A SINGLE METHO-THEORETICAL MODEL	 132
5.5.1. Reviewing four-tier complex systems model	132
5.5.2. Reviewing the deductive scenario methodology	132
5.5.3. An integrated metho-theoretical model	133
5.5.4. The application of the metho-theoretical model	135
5.6. CONCLUSION	136
 6. CHAPTER SIX: THE SOUTH AFRICAN CONTEXT: DETERMINING THE BENCHMARK SYSTEM VARIANT	 138
6.1. INTRODUCTION	138
6.2. TIER ONE: SYSTEM CHARACTERISTICS	139
6.2.1. Actors	139
6.2.1.1 <i>Actors in the economic environment</i>	139
6.2.1.2 <i>Actors in the social environment</i>	142
6.2.1.3 <i>Actors in the political environment</i>	144
6.2.1.4 <i>Summary of major actors in the political system</i>	146
6.2.2. The Regime	147
6.2.2.1 <i>The right to equality</i>	148
6.2.2.2 <i>Political rights</i>	148
6.2.2.3 <i>Right to property</i>	149

6.2.2.4	<i>Socio-economic rights</i>	149
6.2.2.5	<i>Right of access to information</i>	149
6.2.2.6	<i>Right of access to courts</i>	150
6.2.2.7	<i>Summary of the regime</i>	150
6.2.3.	Demand mechanisms	151
6.2.3.1	<i>Elections</i>	151
6.2.3.2	<i>Courts</i>	152
6.2.3.3	<i>Chapter Nine Institutions</i>	152
6.2.3.4	<i>Political Parties</i>	154
6.2.3.5	<i>Public protest</i>	154
6.2.3.6	<i>The media and civil society</i>	155
6.2.3.7	<i>Summary of major demand mechanisms within the system</i>	156
6.2.4.	Output mechanisms	156
6.2.4.1	<i>The Reconstruction and Development Programme (RDP)</i>	157
6.2.4.2	<i>The Growth, Employment and Redistribution Programme (GEAR)</i>	159
6.2.4.3	<i>The Stellenbosch resolutions</i>	160
6.2.4.4	<i>The Accelerated and Shared Growth Initiative for South Africa (AsgiSA)</i>	162
6.2.4.5	<i>The Polokwane resolutions</i>	163
6.2.4.6	<i>The New Growth Path</i>	165
6.2.4.7	<i>The National Development Plan</i>	165
6.2.4.8	<i>Summary of output mechanisms within the system</i>	166
6.3.	TIER TWO: SYSTEM ATTRIBUTES	167
6.3.1.	Presence of demand mechanisms	168
6.3.2.	Access to demand mechanisms	169
6.3.3.	Effectiveness of the system in meeting demands	170
6.4.	TIER THREE: SYSTEM TYPE	172
6.5.	TIER FOUR: SYSTEM VARIANT	174
6.6.	CONCLUSION	183
7.	CHAPTER SEVEN: SCENARIO DEVELOPMENT: DETERMINING MAJOR TRENDS IN THE PESTEH ENVIRONMENT	185
7.1.	INTRODUCTION	185
7.2.	MAJOR POLITICAL TRENDS DRIVING THE POLITICAL SYSTEM	185
7.2.1.	Party political balance	186
7.2.2.	Missing voters	187
7.2.3.	Increasing public protest levels	189

7.2.4.	Internal party factionalism.....	191
7.2.5.	Political ideology and the NDR	192
7.3.	MAJOR ECONOMIC TRENDS DRIVING THE POLITICAL SYSTEM.....	193
7.3.1.	GDP growth and the impediments to it	193
7.3.2.	The tax base	195
7.3.3.	The changing structure of GDP and investment	196
7.3.4.	Policy clashes	197
7.3.5.	Corruption and financial mismanagement.....	198
7.4.	MAJOR SOCIAL TRENDS DRIVING THE POLITICAL SYSTEM.....	199
7.4.1.	Unequal access to resources and education.....	199
7.4.2.	Rising negative sentiment.....	201
7.4.3.	An active civil society.....	202
7.5.	MAJOR TECHNOLOGICAL TRENDS DRIVING THE POLITICAL SYSTEM	203
7.5.1.	Access to information	203
7.5.2.	Attempts to restrict the flow of information.....	205
7.6.	MAJOR ENVIRONMENTAL TRENDS DRIVING THE POLITICAL SYSTEM	205
7.6.1.	Rapid living standard improvements	206
7.6.2.	Increased urbanisation.....	207
7.6.3.	Rising welfare dependency	208
7.6.4.	Changing asset ownership patterns.....	209
7.7.	MAJOR HISTORICAL TRENDS DRIVING THE POLITICAL SYSTEM.....	209
7.7.1.	The historical denial of education	209
7.7.2.	Structural economic damage	210
7.7.3.	Long term inequality.....	211
7.8.	CONCLUSION	212
8.	CHAPTER EIGHT: SCENARIO DEVELOPMENT: IDENTIFYING THE SCENARIOS	214
8.1.	INTRODUCTION	214
8.2.	DETERMINING FEEDBACK FLOWS FOR THE DRIVING FORCES	215
8.2.1.	Driving forces and feedback in the political environment	216
8.2.2.	Driving forces and feedback in the economic environment	217
8.2.3.	Driving forces and feedback in the social environment.....	219
8.2.4.	Driving forces and feedback in the technological environment	222
8.2.5.	Driving forces and feedback in the living standards environment.....	223
8.2.6.	Driving forces and feedback in the historical environment	224
8.2.7.	A review of the driving forces	225

8.3. DETERMINING THE KEY DRIVING FORCES.....	228
8.3.1. Key Driving Force 1 – the future of the tripartite alliance	228
8.3.2. Key Driving Force 2 – access to demand mechanisms	229
8.3.3. Key Driving Force 3 – economic growth rates.....	230
8.3.4. Key Driving Force 4 – meeting the welfare demands of poor actors	231
8.3.5. Key Driving Force 5 – economic policy direction	232
8.4. RANKING THE KEY DRIVING FORCES	233
8.4.1. The impact and uncertainty of the five KDFs.....	233
8.4.2. The impact/uncertainty hierarchy	237
8.5. PRODUCING THE SCENARIO MATRIX	238
8.5.1. The scenario matrix	239
8.6. CONCLUSION	240
 9. CHAPTER NINE: SCENARIO DEVELOPMENT: DESCRIBING THE SCENARIOS	 242
9.1. INTRODUCTION	242
9.2. SCENARIO ONE: “OFF ROAD” (the closed, effective, stable system)	243
9.2.1. Key driving forces in scenario one.....	244
9.2.1.1 <i>The first Key Driving Force: The tripartite alliance retains political control of South Africa</i>	<i>244</i>
9.2.1.2 <i>The second Key Driving Force: The state restricts access to demand mechanisms.....</i>	<i>246</i>
9.2.1.3 <i>The third Key Driving Force: Economic growth and investment levels increase</i>	<i>247</i>
9.2.1.4 <i>The fourth Key Driving Force: Demands from poor actors are met.....</i>	<i>248</i>
9.2.1.5 <i>The fifth Key Driving Force: The reformists win the battle for macro-economic policy control</i>	<i>249</i>
9.2.2. Actors in scenario one	251
9.2.2.1 <i>The investment community takes advantage of higher growth and deregulation.....</i>	<i>251</i>
9.2.2.2 <i>The relative middle class grows and becomes more prosperous.....</i>	<i>252</i>
9.2.2.3 <i>The relatively poor find work and new economic opportunities</i>	<i>252</i>
9.2.2.4 <i>The ANC retains its parliamentary majority</i>	<i>253</i>
9.2.2.5 <i>Official political opposition fights for civil rights</i>	<i>253</i>
9.2.2.6 <i>The occurrence of protests decreases.....</i>	<i>254</i>
9.2.2.7 <i>The media and civil society lose their impact.....</i>	<i>255</i>
9.2.3. System variant change for scenario one.....	256

9.3. SCENARIO TWO: “NEW ROAD” (the open, effective, evolving system)	259
9.3.1. Key driving forces in scenario two	260
<i>9.3.1.1 The first Key Driving Force: The ANC’s popularity returns</i>	<i>260</i>
<i>9.3.1.2 The second Key Driving Force: South Africa remains a democratic success story</i>	<i>261</i>
<i>9.3.1.3 The third Key Driving Force: Growth and investment boom</i>	<i>261</i>
<i>9.3.1.4 The fourth Key Driving Force: The state meets demands for service delivery and welfare support</i>	<i>261</i>
<i>9.3.1.5 The fifth Key Driving Force: The reformists win the battle for economic policy control</i>	<i>262</i>
9.3.2. Actors in scenario two	263
<i>9.3.2.1 The investment community capitalises on a rapidly expanding and increasingly deregulated economy</i>	<i>263</i>
<i>9.3.2.2 Middle class prosperity improves</i>	<i>263</i>
<i>9.3.2.3 The relatively poor actors find work and see their living standards improve</i>	<i>264</i>
<i>9.3.2.4 The ANC retains control of South Africa</i>	<i>264</i>
<i>9.3.2.5 The ANC and the opposition drift together</i>	<i>265</i>
<i>9.3.2.6 The protest movement dissipates</i>	<i>265</i>
<i>9.3.2.7 The media and civil society exert great influence</i>	<i>266</i>
9.3.3. System variant change for the “New Road” scenario	267
9.4. SCENARIO THREE: “DANGEROUS ROAD” (the closed, ineffective, oscillating system)	269
9.4.1. Key Driving Forces	270
<i>9.4.1.1 The first Key Driving Force: The tripartite alliance breaks the rules and clings to power</i>	<i>270</i>
<i>9.4.1.2 The second Key Driving Force: Access to demand mechanisms is lost</i>	<i>271</i>
<i>9.4.1.3 The third Key Driving Force: Economic growth and investment stagnates</i>	<i>272</i>
<i>9.4.1.4 The fourth Key Driving Force: Demands for welfare support are not met</i>	<i>273</i>
<i>9.4.1.5 The fifth Key Driving Force: The interventionists win the economic policy battle</i>	<i>273</i>
9.4.2. Actors in the “Dangerous Road” scenario	274
<i>9.4.2.1 A hostile investment environment</i>	<i>275</i>
<i>9.4.2.2 Middle class lifestyles deteriorate</i>	<i>275</i>
<i>9.4.2.3 The living standards of the poor stagnate</i>	<i>275</i>
<i>9.4.2.4 The ruling party acts with impunity</i>	<i>276</i>
<i>9.4.2.5 Political opposition becomes ineffective</i>	<i>276</i>
<i>9.4.2.6 The state cracks down upon shows of mass dissent</i>	<i>276</i>

9.4.2.7 <i>The media and civil society are marginalised</i>	277
9.4.3. System variant change for the “Dangerous Road” scenario	278
9.5. SCENARIO FOUR: “TOLL ROAD” (the open, ineffective, chaotic system)	281
9.5.1. Key driving forces for the “Toll Road” scenario.....	282
9.5.1.1 <i>The first Key Driving Force: The tripartite alliance loses control</i>	282
9.5.1.2 <i>The second Key Driving Force: Actors control the system</i>	283
9.5.1.3 <i>The third Key Driving Force: Growth and investment levels disappoint</i>	284
9.5.1.4 <i>The fourth Key Driving Force: Welfare fails to meet demands</i>	284
9.5.1.5 <i>The fifth Key Driving Force: The interventionists have dominated economic policy-making</i>	284
9.5.2. Actors in scenario four	285
9.5.2.1 <i>Investors rebel against an increasingly restrictive investment environment</i>	285
9.5.2.2 <i>The middle class acts to bring policy change to the system</i>	286
9.5.2.3 <i>The poor rise up and drive the government from power</i>	286
9.5.2.4 <i>The ANC loses an election</i>	287
9.5.2.5 <i>The opposition governs South Africa</i>	287
9.5.2.6 <i>Protests become a primary form of political expression</i>	288
9.5.2.7 <i>An active media and civil society role drive change in the system</i>	288
9.5.3. System variant change in scenario four.....	289
9.6. THE PROSPECTS FOR STABILITY OR INSTABILITY	292
9.7. CONCLUSION	295
10. CHAPTER TEN: CONCLUDING PERSPECTIVES	297
10.1. INTRODUCTION: THE ACTUALITY AND MOTIVATION FOR THE STUDY	297
10.2. POINTS OF DEPARTURE.....	298
10.2.1. The theoretical point of departure	298
10.2.2. The conceptual point of departure	299
10.2.3. The methodological point of departure.....	300
10.3. THE METHO-THEORETICAL MODEL	302
10.4. THE SCENARIOS.....	307
10.5. MEETING THE RESEARCH OBJECTIVES OF THE STUDY.....	309
10.6. ANSWERING THE FOCAL QUESTION OF THE STUDY	311
10.7. IMPLICATIONS FOR SOUTH AFRICA	312
10.8. CONCLUSION: THE CONTRIBUTIONS OF THE STUDY.....	314
11. BIBLIOGRAPHY	317

TABLE OF FIGURES

Figure 1: Positive and negative feedback acting on a system	15
Figure 2: The computer corporation: An example of the workings of a complex system	44
Figure 3: Characteristics and behaviours of a complex system	48
Figure 4: Easton's model of a political system	57
Figure 5: Almond's model of a political system	59
Figure 6: The four characteristics of a complex political system	62
Figure 7: Diagram of the workings of a complex political system	64
Figure 8: Process and behaviour in a complex political system	66
Figure 9: Huntington's diagram of the workings of a political system	69
Figure 10: Dahl's system type diagram	70
Figure 11: Straight line spectrum between open and closed political systems	71
Figure 12: Open and closed political systems with tangential effectiveness line	72
Figure 13: Triangular systems type diagram.....	77
Figure 14: Four-tier model of a complex political system	82
Figure 15: Key historical steps in the evolution of scenario planning	94
Figure 16: The four tiers of the future	100
Figure 17: A spectrum of methods for looking at the future	105
Figure 18: The dangers of forecasting	108
Figure 19: An ideal metho-theoretical model for determining the future stability of a political system	118
Figure 20: Impact and uncertainty matrix.....	129
Figure 21: A basic scenario matrix.....	130
Figure 22: Metho-theoretical model for determining the prospects of future political system stability or instability.....	135
Figure 23: Triangular systems type diagram.....	173
Figure 24: Drivers of feedback into the current political system	179
Figure 25: A complex systems diagram of the benchmark system	180
Figure 26: Driving forces determining future system variants.....	215
Figure 27: Feedback acting on the current South African political system	227
Figure 28: Relative impact and uncertainty of the five KDF's selected by this study	237
Figure 29: Scenario matrix defining scenario possibilities	239
Figure 30: The impact on feedback of Key Driving Forces in scenario one	251
Figure 31: Pendulum diagram of actors for the "Off Road" scenario.....	256
Figure 32: Causality leading to system variant change for the "Off Road" scenario	258
Figure 33: Key Driving Forces for the "New Road" scenario	263
Figure 34: Major system actors for the "New Road" scenario	266
Figure 35: Causality leading to system variant change for the "New Road" scenario.....	268
Figure 36: Key Driving Forces in the "Dangerous Road" scenario	274
Figure 37: Actors in the "Dangerous Road" scenario	278
Figure 38: Causality leading to system variant change for the "Dangerous Road" scenario	280
Figure 39: Key Driving Forces for the "Toll Road" scenario	285
Figure 40: Actors in scenario four	289
Figure 41: Causality leading to system variant change for the "Toll Road" scenario	291
Figure 42: Scenario matrix of causality of systems variant change	294
Figure 43: Impact and uncertainty matrix.....	301
Figure 44: A basic scenario matrix.....	302
Figure 45: Metho-theoretical model for determining the prospects of future political system stability or instability.....	304

TABLE OF TABLES

Table 1: Key differences between the Newtonian and the systems paradigms	34
Table 2: Typology of political systems	80
Table 3: Key differences between scenarios and forecasts	105
Table 4: Commonalities between scenario planning and systems theory	120
Table 5: Actors' influence on positive and negative feedback in the current political system	178
Table 6: Four-tier model of the current South African political system	181
Table 7: Variant type of the current political system	182
Table 8: PESTEH driving forces and their impact on feedback	225
Table 9: The future of the tripartite alliance as KDF	228
Table 10: Access to demand mechanisms as a KDF	229
Table 11: Economic growth as a KDF	230
Table 12: Welfare and delivery demands as a KDF	231
Table 13: Economic policy direction as a KDF	232
Table 14: System variant change for the "Off Road" scenario	257
Table 15: Four-tier structure of a political system for the "Off Road" scenario	259
Table 16: System variant of scenario two	267
Table 17: Four-tier model for the "New Road" scenario	269
Table 18: System variants of scenario three	279
Table 19: Four-tier model for the "Dangerous Road" scenario	281
Table 20: System variants for the "Toll Road" scenario	290
Table 21: Four-tier model for the "Toll Road" scenario	292
Table 22: System variants for scenario one, two, three and four	293

TABLE OF GRAPHS

Graph 1: Incidents of major protest action 2004-2010	155
Graph 2: ANC and DA performance in all national elections since 1994	186
Graph 3: Party support in terms of eligible voters 1994-2009	188
Graph 4: Declining voter turnout	189
Graph 5: Incidents of major protest action 2004-2010	190
Graph 6: Performance of the ANC 1994-2009 in terms of eligible voters	191
Graph 7: BRICS economic growth rates 1994-2012	193
Graph 8: Performance of the South African school system	200
Graph 9: Households without electricity and with cellular phones	203
Graph 10: Household access to radio and television in South Africa	205
Graph 11: Change in number of people per LSM category 2001-2010	206
Graph 12: Changes in household access to services 1996-2010	207
Graph 13: Relationship between poverty levels and welfare grants in South Africa from 1996-2010	208
Graph 14: The black matric class from 1955-2009	210
Graph 15: Real GDP per head in South Africa from 1955-2010	211
Graph 16: Real GDP per capita income 1960-2007	212

TABLE OF ACRONYMS

ANC	African National Congress
ANC MP	African National Congress Member of Parliament
BEE	Black Economic Empowerment
BRIC	Brazil, Russia, India, China
BRICS	Brazil, Russia, India, China and South Africa
COPE	Congress of the People
COSATU	Congress of South Africa Trade Unions
CSIR	Council for Scientific and Industrial Research
DA	Democratic Alliance
DP	Democratic Party
FDI	Foreign Direct Investment
GEAR	Growth, Employment and Redistribution
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
IEC	Independent Electoral Committee
ILO	International Labour Organisation
IMF	International Monetary Fund
IFP	Inkatha Freedom Party
KDF	Key Driving Forces
LSM	Living Standard Measures
NDR	National Democratic Revolution
NDP	National Development Programme
NGP	National Growth Path
NPC	National Planning Commission
NNP	New National Party
OPEC	Organization of Petroleum Exporting Countries
PESTEH	Political, Economic Social, Technical, Environmental and Historical
PAIA	Promotion of Access to Information Act
RDP	Reconstruction and Development Programme
SAARF	South African Advertising Research Foundation
SABC	South African Broadcasting Corporation
SACSI	South African Civil Society Information Service
SACP	South African Communist Party
SAFLII	South African Legal Information Institute
SAHRC	South African Human Rights Commission
SAIRR	South African Institute of Race Relations
SASSA	South African Social Security Agency
SARB	South African Reserve Bank
SARS	South African Revenue Service
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
UNISA	University of South Africa

1. CHAPTER ONE: BEYOND THE HIGH ROAD: A SCENARIO ANALYSIS OF THE PROSPECTS FOR POLITICAL STABILITY OR INSTABILITY IN SOUTH AFRICA OVER THE PERIOD TO 2024

1.1 INTRODUCTION AND MOTIVATION

The stability or instability of the political system in South Africa is determined by trends in its economic, social, and political environments. Changes in these environments cause changes to the political system. For example, if the economy performs very badly then demands by the actors in the system for rising standards of living may not be met. If they have the means to do so, these actors may take steps to bring about changes to the system. Where the economy performs very well, and meets demands for rising standards of living, those same actors may seek to maintain the status-quo of the system. In the first 15 years after South Africa's 1994 transition to democracy progress was made in each of these environments. However, by 2012 a number of observers had expressed concern that despite this progress, the system was coming under increasing strain. This strain related to the apparent difficulty of meeting ever-increasing demands. In the eyes of certain observers, risks of future instability are growing in the system. The year 2024 will mark South Africa's seventh democratic national election – and is three national elections away from today. If a risk of instability exists within the system, it should manifest itself over the period between now and 2024.

1.1.1. Progress in the economic environment

On the economic front, South Africa recovered from the low growth and high debt and deficit levels racked up in the 1980s and 1990s to record a measure of economic recovery. For example, economic growth, after touching negative levels in the early 1990s, rebounded after 1994 averaging over 4% in the period between 2000 and 2008 and over 5% in the period 2004-2007 (South African Institute of Race Relations (SAIRR), 2009a: 91-92). Inflation came down from averaging double digits since the late 1970s to rates within the Reserve Bank's target range of 3% to 6% for much of the post-2000 period (SAIRR, 2009a: 89). The prime interest rate as much as halved from the levels it held preceding South Africa's transition (SAIRR, 2011: 121). Growth in gross fixed capital formation rebounded into positive territory after 1994 having sat at negative levels since 1982 (SAIRR, 2009a: 120). Despite weakening considerably

against the United States dollar in the period 2001/2002, the rand has maintained a measure of stability (SAIRR, 2009a: 135). Between just 2003 and 2006 the number of registered income taxpayers in South Africa increased from 3.7 million people to 4.7 million people (SAIRR, 2010: 150). As a proportion of the South African Gross Domestic Product (GDP), the budget deficit fell from -4.5% in 1994 to -1% in 2008 (SAIRR, 2009a: 170). Debt levels as a proportion of GDP fell from 38% in 1994 to 31% in 2008 (SAIRR, 2009a: 173). Average per capita incomes, in real 2000 rands, increased from just under R20 200 in 1994 to just under R26 000 in 2009 (Stats SA, 2010a: Internet Source; and SAIRR, 2009b: 7).

1.1.2. Progress in the social environment

This economic progress made possible significant state-led delivery efforts in the fields of basic social services, and the rollout of what is today arguably the largest social welfare programme in the developing world. In 1996, 64% of South African households lived in a formal house, 79% had access to piped water, and 47% used electricity to cook with. Fifteen years later 70% of households lived in a formal house, 90% had access to piped water, and 66% used electricity to cook with. What these indicators do not adequately convey is the scale of the actual numbers of services delivered. For example, the increase in the housing figure was a result of the construction of 2.9 million houses, mostly built by the government or through government grants. In terms of social welfare, the number of beneficiaries has increased from approximately 3.5 million in 2001 to over 14 million in 2010 (SAIRR, 2011: 610 and 590). Almost a third of black households came to get their single biggest source of income from the state (SAIRR, 2008: 230-231)

1.1.3. Progress in the political environment

Partly because of the successes recorded in the social environment the political context has seen the maintenance of high levels of political support for the ruling African National Congress (ANC) which have not dipped below 60% in any of the four national elections since 1994. This study will come to show how until recently, the ruling party has managed to display a façade of outward unity within the tri-partite alliance. The political opposition has to date been able to do little to challenge that alliance's political hegemony. At the same time, the study will cite much evidence for general respect for

the rule of law (with important exceptions), the maintenance of constitutionally guaranteed institutions such as Parliament, a Public Protector, and the South African Human Rights Commission (SAHRC), and the supremacy of the Constitution as the supreme law of the land. Considering the volatile and undemocratic nature of the pre-1994 dispensation these are all achievements worth celebrating.

There can be little doubt therefore that South Africa staged an economic, social, and political recovery after 1994. However, despite this positive picture there is evidence that the political system is coming under strain.

1.1.4. Challenges in the economic environment

Again on the economic front, and notwithstanding what has already been said, it is unlikely that South Africa will again benefit from as fortuitous a set of economic circumstances as those presented by a global commodity boom of the mid 2000s in an environment of declining interest rates, low household debt levels, and a gradually weakening rand - as was the case in the early to mid-2000s. International financial crises have dampened international credit markets. Domestically, household debt to income ratios now exceeds 80% - up from 50% in the early 2000s (SAIRR, 2011: 130-131). As a result consumer spending, which accounts for 60% of GDP, is unlikely to boost economic growth to the extent it did in the early to mid-2000s (SAIRR, 2011: 115). It is questionable therefore whether growth levels could come to exceed the 4% of GDP of the period 2000-2008. As pointed out by the finance minister in his mid-term budget policy speech of 25 October 2012, growth levels may average under 3% for the short to medium term (Politics Web, 2012a: Internet Source). Lower growth and resultant lower revenue takes have seen debt levels increase. South Africa's 2012 budget deficit of 4.2% of GDP was considerably higher than that of several prominent emerging markets such as China, Russia, Brazil, Chile, and Mexico (*Economist*, 2 March 2013). Likewise in 2012 a report by the UN Global Investment Trends Monitor suggested that foreign direct investment into South Africa may have fallen by as much as 43% over the previous twelve months even as it rose in other emerging markets (United Nations Conference on Trade and Development (UNCTAD), 2012: Internet Source). At the same time in July 2012 the governor of the Reserve Bank, Ms Gill Marcus, was quoted in *Business Report* warning that the depreciating currency was becoming a significant inflationary risk (*Business Report*, 2012: Internet Source).

Hence, by 2012 the relatively buoyant growth, declining debt and deficit levels, and stable inflationary outlook that had characterised the economic environment were being called into doubt. Furthermore, critics have expressed uncertainty around the contradictory nature of economic policy adopted by the administration of President Jacob Zuma (Politics Web, 2012b: Internet Source). For example, the New Growth Path (NGP), crafted by the economic development minister, Mr Ebrahim Patel, promotes the state's direct participation in, and direction of, the economy (NGP, 2011: Internet Source). However, the National Development Plan (NDP), drafted by the planning minister, Mr Trevor Manuel, questions the central thesis of the NGP and favours a private sector investment-led growth model (National Planning Commission (NPC), 2011: Internet Source).

1.1.5. Challenges in the social environment

The implications of lower GDP growth and investor uncertainty will be felt most directly in the social sphere of the political system. Despite the government's welfare and service delivery efforts, the country maintains an extremely high level of unemployment averaging close on 25%. Among young black people the figure rises to above 50% (SAIRR, 2009a: 222 and 236). Only in the period 2004-2007, when the economy recorded growth levels of over 5% of GDP, did the country record a sustained decline in the number and proportion of unemployed people (SAIRR, 2011: 254). Taking a measure of poverty as an income of approximately R900 a month, in 1996 50.6% of black African people, 17.0% of coloured people, 6.3% of Indian people, and 2% of white people lived in poverty. Twelve years later, in 2008, 49% of Africans lived in poverty, so too did 16.9% of coloured people, 6.4% of Indian people and 3.6% of white people (SAIRR, 2009a: 303). Also important in terms of the social context is inequality, with its well-documented relationship to instability. The formal measure of inequality is the Gini-coefficient. This indicator ranks the extent of inequality within any society on a score of between 0 and 1. A score of 0 would indicate complete equality where every person in a particular society earned precisely the same amount. A score of 1 would indicate complete inequality where one person in the society earned all the income for that society. In 1996 South Africa scored 0.63 on this measure. In 2009 this score had increased to 0.66 (SAIRR, 2009a: 283) indicating growing inequality. Despite the post-

1994 economic recovery South Africa continued to face serious employment and equality challenges.

By 2012 a number of commentators had begun to sound alarm bells about continued high levels of poverty, unemployment, and inequality. For example, in June 2012 the minister of mines, Ms Susan Shabangu, told a meeting of investors in South Africa that youth unemployment in the country was a ticking time bomb (Mine Web, 2012: Internet Source). The same expression had previously been employed by the head of the Congress of South African Trade Unions (COSATU), Mr Zwelinzima Vavi, at a conference in 2012 (Eye Witness News, 2012: Internet Source). Perhaps most alarmingly, in February 2011 the chairman of the South African Institute of International Affairs, Mr Moeletsi Mbeki, wrote in *Business Day* that, "I can predict when SA's 'Tunisia Day' will arrive. The year will be 2020, give or take a couple of years as happened recently in Tunisia" (*Business Day*, 2011: Internet Source). Mr Mbeki was here referring to the unexpected and violent North African uprisings of 2011, which led to the collapse of governments in Tunisia, Egypt, and Libya while destabilising the whole North African region. Similarly in November of 2012, Mr John Kane-Berman, a veteran observer of South Africa, suggested in a speech that the South African political system was approaching a tipping point (Kane-Berman, 2012: Speech). In a speech to a private meeting of business and think-tank leaders in October of 2012, South Africa's former President, Mr FW de Klerk, also described South Africa as approaching a tipping point and warned that it might fall over a precipice if certain poor policy options are chosen (Steward, 2012: Email communication).

1.1.6. Challenges in the political environment

These observations and predictions did not exist in a vacuum, as by 2012 early signs of dissatisfaction with the performance of the South African government were manifesting themselves in the political sphere. For example, despite still maintaining electoral support figures of close on 66% in national elections, ANC voter support, calculated as a proportion of potential voters, had fallen from 55% in 1994 to 38% in 2009 (SAIRR, 2009a: 718-719). In the 2009 national election more people chose not to vote than voted for the ANC. This indicator must be read alongside rising protest action trends in poor communities. These protests, which the media have dubbed 'service delivery protests', are a new phenomenon in post-1994 South Africa. In 2010, local government

research put the number of such protests at over 100 (SAIRR, 2012a: Internet Source; and SAIRR, 2012b: 812). Many of these were accompanied by violence, often directed at members of the ruling tripartite alliance. For example, in 2012 angry mineworkers outside Johannesburg stoned the car of COSATU leader Zwelinzima Vavi after he had addressed a meeting of striking workers and urged them to return to work (Citizen, 2012: Internet Source). Furthermore many citizens were increasingly motivated to take action against the state (Times Live, 2012a: Internet Source). For example, in July of 2011, in what was not an uncommon occurrence, the house of a local government councillor was burned down over what the media described as a protest about rising electricity prices (Times Live, 2012b: Internet Source). By some estimates as many as 50 councillors had been killed in political conflicts in South Africa in the five years to 2012 (Metro Newspaper, 2012: Internet Source).

1.1.7. The manifestation of risk

Therefore despite the post-1994 recovery, by 2012 a major risk was beginning to manifest itself in the political system. This was whether the system would be able to meet the demands for rising standards of living that actors in the system had placed upon it. This is not to say that no progress has been achieved since 1994 but rather - to quote the veteran ANC Member of Parliament (ANC MP) and former Rivonia treason trialist, Professor Ben Turok - that "it is consistent with revolutionary theory that people are inspired to struggle when their living standards improve" (SAIRR, 2012a: 22). The successes recorded since 1994 have driven new expectations and South Africa's fundamental problem is therefore a question of whether these rising demands can be met. Related to that question is what happens if the system cannot meet those demands.

There is now much quantitative evidence in low growth, investment, savings, and employment levels and in increasing protest levels to suggest that these demands are not being adequately met. In addition, a number of economic indicators suggest that the system may not have the resources to meet those demands in years ahead. If the system is not adequately meeting the demands of its actors, and if it will not for the foreseeable future have the resources to do so, then the system is surely at risk of instability in whatever form that may take. This is certainly the opinion of respected commentators such as Moeletsi Mbeki, FW de Klerk, and John Kane-Berman. It is also

the opinion of international ratings agencies such as Standard and Poor's and Moody's who in 2012 downgraded South Africa's credit ratings, citing the risk of populist pressure undermining sound fiscal policy (World News, 2012: Internet Source). It is also now the opinion of respected international observers such as *The Economist*, which in October 2012 commented on what it called South Africa's "sad decline" while reporting that much of the rest of Africa was on the ascendency (Economist, 2012: Internet Source).

Perhaps most significantly from a scenario perspective is that in 2012 South Africa's most respected scenario planner, Mr Clem Sunter, adjusted his own scenarios for the future of South Africa downwards saying that the odds of the country dropping out of the premier league of nations had increased significantly (Sunter, 2012: Speech). Sunter's (1987: 10) opinion carries much weight, as in the 1980s and 1990s his high road/low road scenarios played an important role in allowing decision-makers to understand the tipping point that South Africa was then rapidly approaching. This understanding further allowed them to grasp the implications that their future decisions would have in setting South Africa along either of Sunter's two roads (Schwartz, 1991: 202). South Africa undoubtedly took the high road option as evidenced by the economic, social, and political recovery cited above. However, as Turok suggests, the living standards improvements that this heralded led to new and increasing demands and these have not been met. The high road has therefore seemingly petered out into a new tipping point of how to meet these rising expectations. In view of the extent and calibre of critical opinion about the future stability of South Africa, the study will move beyond opinion, and beyond the high road, to determine against a sound theoretical framework what the prospects for system stability or instability are for South Africa over the period to 2024.

1.2. THE CENTRAL PROBLEM STATEMENT OF THE THESIS

This study needs to determine the long-term prospects for stability or instability within the South African political system. It therefore requires a theoretical framework with which to measure, compare, and track stability or instability in political systems, and a methodology with which to apply that theoretical framework to the future.

Here the study confronts two problems. The first is to determine an objective definition of stability and instability that can be applied to a political system. Terms such as stability and instability are used very loosely in describing the outward features of a political system. For example, it is common to hear analysts use the terms in response to an outbreak of protest action within a political system. However, such a subjective assessment would not do for an academic study of this nature. Rather it is necessary to determine a sound theoretical framework against which terms such as stability and instability can be defined and measured over time. Where successful this theoretical framework will offer up a number of units of analysis with which the relative stability or instability of one political system can be compared to another, and the stability or instability of a single system tracked over time. The study will find this framework in complex systems theory. The second problem confronting this study relates to the future itself. The field of political science has a poor track record of anticipating shifts in the systems it studies. Few of the major shifts in global political systems of the past 50 years, including the fall of the Soviet Union and the recent North African uprisings, were anticipated with any degree of accuracy. The study will show that the reason for this rests in the very complex systems theoretical basis of this study. Specifically it will show that the emergent¹ property of complex systems makes them immune to forecasting methods. Studying their futures therefore requires a methodology capable of overcoming the great uncertainty inherent in that emergent property. Hence having identified a complex systems theoretical framework against which to determine stability or instability in political systems, this study must identify a futures methodology capable of accounting for the vast uncertainty inherent in the emergent component of the theory.

1.3. STUDY GOALS

The goal of this study is to determine the prospects for the stability or instability of the South African political system by 2024. In meeting its primary goal the study will have to meet the following secondary goals:

- The first will be theoretical and is to determine a theoretical framework against which stability or instability can be measured and defined. The study will argue that

¹ Emergence is discussed in extensive detail later in this study. It is a property of complex systems that causes small changes in their original circumstances to introduce massive shifts in their future circumstances.

complex systems theory is that framework and that the balance of positive and negative feedback within a complex system determines its stability.

- The second will be conceptual and is to define a political system. Here the study will demonstrate that such a system is one that generates rules that govern the behaviour of actors in the system.
- The third will be to show that a political system is a complex system. This will allow the theoretical framework of stability and instability to be applied to political systems. Here the study will show that political systems and complex systems share the same characteristics. It will therefore be possible to conclude that stability or instability within a political system takes place for the same reasons that it would in any complex system.
- The fourth will be to determine various types of political systems. This is necessary in order to show what may happen if a political system destabilises and changes. The study will demonstrate that there are four types of political systems based on whether they are open or closed and effective or ineffective.
- The fifth will be to integrate the theoretical and conceptual points of departure above into a model against which system type and stability can be determined. This model will conclude in 20 units of analysis that can be used to distinguish the stability or instability of one system from another and to track changes in the stability or instability of a single system over time.
- The sixth will be to identify a methodology via which that model can be applied to the future of a political system. The study will propose the adoption of a scenario methodology via which to overcome the uncertainty inherent in the emergent property of complex systems.
- The seventh will be to integrate the theoretical and conceptual components of the study with the methodological in order to develop a single joint methodological-theoretical, or metho-theoretical, model with which to determine the long-term prospects for the stability or instability of the South African political system in the period to 2024.
- The eighth will be applying that metho-theoretical model to the South African political system. This will result in a description of the type and behaviour of the current system as well as that of a number of plausible future scenario systems – each according to the 20 units of analysis developed earlier in the study. By

comparing the current system to these scenarios the model will demonstrate the prospects for system stability or instability in the period to 2024.

1.4. CENTRAL THEORETICAL STATEMENT

Political systems are complex systems where stability or instability results from the balance of negative and positive feedback exerted by system actors. Their emergent property means that small changes in the feedback they receive cause dramatic changes in their future circumstances. The future stability or instability of a political system cannot therefore be forecast but must be studied via a scenario methodology capable of overcoming the uncertainty inherent in that emergent property.

1.5. POINTS OF DEPARTURE

1.5.1. Theoretical points of departure

In order to address the problem of how to define stability and instability this study will turn to complex systems theory. This is the theory that studies the behaviour of large groups of actors whose interaction produces results greater than the sum of their parts (Morel and Ramanujam, 1999: 279-281; and Thietart and Forgues, 1995: 19-21) Such systems feature three characteristics:

They are firstly systems made up of a large number of inter-reacting actors (Levanti, 2011: 31; and Snowden, 2011: 141). For example a political system will include actors ranging from political parties, to investors, to activist groups, to the media and civil society. In addition every individual person is an actor in a political system and such systems can easily feature several million actors.

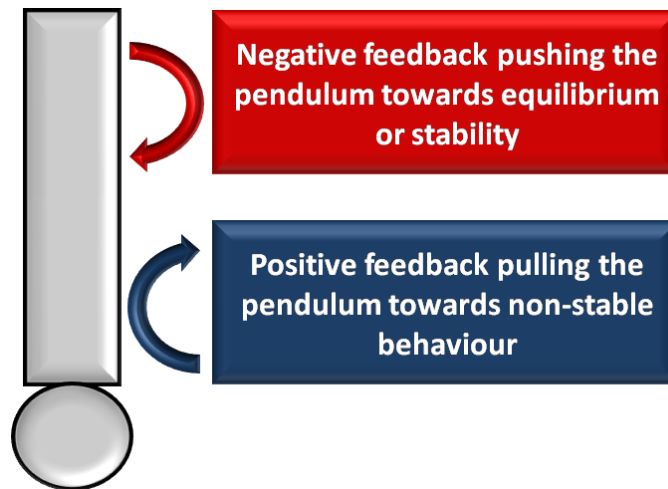
Secondly they have what is called an emergent characteristic (Kondraske, 2011: 236). This means that the interaction of its actors produces a result greater than the sum of their actions (Morel and Ramanujam, 1999: 279-281). Such a system is therefore the antithesis of a Newtonian system where the whole is the sum of its parts. In the case of a political system an example of emergence could include the policies made by a government. These are the result of the interaction of various actors over time. The adoption of a particular policy cannot be ascribed to the actions of each actor in isolation from the rest.

Thirdly such systems are directed by feedback mechanisms (Ellis and Herbert, 2011: 34). These are the demands that the actors place on the system in pursuit of their goals. There are two types of feedback. The first is negative feedback, which seeks to dampen the effects of change on the system (Jennings and Wattam, 1998: 31). There is nothing pejorative in the term negative. It means simply that this type of feedback seeks to keep the system in its current state. For example, voters returning a government to power may be an example of negative feedback. The second type of feedback is positive feedback (Rhee, 2000: 487). Nothing positive or good is implied by the term positive feedback. These are simply demands that actors place on the system in an effort to change it. For example, a campaign by activists to change the policy of a government would be an example of positive feedback, as would a terrorist attack against a government.

The study will show how in any system these two types of feedback are in constant struggle. Depending on whether positive or negative feedback predominates, a system will show any one of five forms of behaviour (Thietart and Forgues, 1995: 19-21; and Kiel and Elliot, 1996: 5).

The first of these is equilibrium or stability (Ward, 1995: 630). In such a state, the dominance of negative feedback causes the system to remain largely in its original condition. This effect can be demonstrated via the diagram below of a pendulum hanging under a clock. Where the pendulum hangs motionless it is at equilibrium. However, where positive feedback overwhelms the system this will have the effect of pulling the pendulum away from its equilibrium position and thereby precipitating change in the system. Where that occurs one of the four other system behaviours will be observed.

Figure 1: Positive and negative feedback acting on a system



The second such behaviour is instability (Stacey and Parker, 1994: 26). In this case the dominance of positive feedback reinforces change in the system at an exponential rate to the point at which the system destabilises and undergoes change. Such change will depend on the type of system and this study will identify 20 different political system variants that can be used as units of analysis in order to show the effects of unstable behaviour in a political system.

The third behaviour is periodic stability (Kiel and Elliott, 1996: 5). Here the presence of both positive and negative feedback causes the system to continually fluctuate between a stable and unstable state. In the case of a political system the example may be made of a liberation movement struggling against a dictatorial regime. Where the regime clamps down on the liberation movement, that movement is unable to pull the regime's pendulum away from equilibrium. However, where the liberation movement finds a new means to introduce positive feedback into the system it ushers in a period of instability before the regime can clamp down on the movement again. The system therefore oscillates between periods of stable and unstable behaviour.

The fourth is that the system may display chaotic behaviour (Jennings and Wattam, 1998: 195; and Stacey, 1996: 57). In this state the interaction of actors in the system produces behaviour that appears to be random and therefore cannot be accurately predicted or forecast. It is an important principle of chaos research that even where cause and effect cannot be observed, such cause and effect are still occurring (Morel and Ramanujam, 1999: 279-281; and Kiel and Elliott, 1996: 5). For example where a

dictatorial regime is unseated after decades in power, and various new actors struggle for access to power and resources in that political system, this could be an example of chaos in a political system. Analysts would find it very difficult to relate cause and effect to rapidly changing events in the system. However from a complex theory perspective they would know that such cause and effect must exist even where it cannot be seen.

Finally, and intriguingly, the system may display a self-organizing, adaptive, or evolutionary behaviour (Rhee, 2000: 487; and Morel and Ramanujam, 1999: 281). This occurs where a system, under its own power, takes steps to prevent being overwhelmed by positive feedback. For example, a government may realise that its inability to meet the demands of actors is introducing such volumes of positive feedback that the political system will destabilise and change. That government therefore implements a series of policy reforms that allows it better to meet the demands of actors in the system. In response to their demands being met these actors introduce negative feedback into the system bringing it to equilibrium or stability.

1.5.2. Conceptual points of departure

In order to apply the framework above to a political system it will be necessary to demonstrate that a political system is a complex system. This can be done by showing that the three characteristics of a complex system apply to a political system.

The study will cite David Easton (1957, 1965, 1968 and 1990), Robert Dahl (1973 and 1984), Gabriel Almond (1965), and Harold Lasswell (1958), in identifying a number of characteristics via which to define a political system. These include that like complex systems, political systems feature a very large number of actors. Secondly, like complex systems, this interaction has an emergent characteristic as the interaction produces policies and rules governing the system that could not be explained by the actors acting in isolation from one another. Thirdly, that by placing demands on the system in pursuit of resources, actors exert negative and positive feedback on the system. By demonstrating the same characteristics as any complex system, it follows that stability or instability within a political system must occur for the same reason – a balance of feedback. Hence, by studying the actors in a political system and the feedback they produce, it should be possible to determine the stability or instability of the system.

Before a model can be proposed according to which this behaviour can be studied, it will first be necessary to determine what happens when a system destabilises and changes. The fact that a system can destabilise leading to change suggests that there must be different types or variants of systems. This study must therefore identify an analytical framework wherein system type or variant can be determined. Therefore, in addition to the system characteristics, which are common to all political systems, there must be certain attributes according to which one type of system can be distinguished from another. The study will show how Aristotle identified six different types of political systems ranging from systems governed by kingships to benevolent individuals (Dahl, 1984: 64). It will show how considerably more recent efforts at determining political system type ranged from the relatively closed praetorian systems and hegemonies identified by Dahl (1973: 191) and Huntington (1968: 25) to the more open and democratic civic polities or polyarchies. However, the study will argue that classifications based on the relative openness or closedness of a system are inadequate as they ignore the effectiveness of a system in meeting the demands of its actors.

The study will therefore determine political system type according to three attributes. The first is whether there is a proliferation of mechanisms within the system via which actors can place demands on that system. Such mechanisms will include elections and the media, for example. The second is whether there is free access to these mechanisms. For example, are actors able to freely participate in electoral processes? The third attribute is whether the system is effective in meeting the demands of its actors based on indicators such as employment levels, educational standards, incomes increases, and personal safety. Positive feedback exerted by actors in the system will cause changes to occur to these attributes which will in turn lead to change in the type of political system. This change could relate to the system becoming more or less effective and more or less open. Negative feedback will maintain the system status quo. It follows that this study will identify four possible types of political system based on whether a system is open or closed and effective or ineffective. For example, there will be open effective or ineffective systems and closed effective or ineffective systems. As complex systems each of these four system types will at any point in time demonstrate one of the five behaviours possible for any such system. Hence with four system types each demonstrating one of five possible behaviours a total of 20 possible system

variants will be identified. Where a system is at equilibrium its variant will not change. However, where a system is dominated by positive feedback its variant must change.

1.5.3. Methodological points of departure

Based on its theoretical and conceptual points of departure the study will propose a model with which to determine the variant of any observed political system. The study must, however, go further than determining the variant of the present, observed, system and determine the variant of political system likely to emerge in the period to 2024. This is a task complicated by the relatively poor track record of political science in anticipating dramatic shifts in the systems it studies.

The study will cite a number of authors including Schwartz (1991: 55), Kennedy, Perrottet, and Thomas (2003: 4-5), and Ringland (2006: 14-15) to show that many of the most significant changes in political systems were not predicated with any degree of accuracy at all. It will also cite Ratcliffe (2002: 19) and Ralston and Wilson (2006:3) to show that there is a degree of incredulity at the suggestion that it is possible to anticipate the future with any degree of accuracy. However, the study will argue that to surrender the discipline of political science to its past failures at forecasting, or to incredulity that future events may be accurately anticipated, would be to concede that political scientists should not consider future events in the systems they study. This would clearly not be satisfactory for a discipline that is often asked to comment on possible future developments in political systems.

Rather than abandon any hope of studying the future, this study will cite Wack (1985a: 73) to argue that failures in forecasting relate more to inadequate methodologies than to the inherent unpredictability of the future. Specifically it will cite Marren and Kennedy (2010: 11) and Schoemaker, (1995: 25) to argue that a reliance on forecasting methods that seek to extrapolate known trends into a single description of a future point in time and space explains the failure of political scientists to anticipate future shifts in the systems they study. The study will show that the reason for this is that such methods ignore, or are ignorant of, the emergent property of political systems as complex systems. This point is a crux of the study and one of its key academic contributions.

The study will also show that Schwartz (1991), Schoemaker (1995), Mercer (1995: 34), and Fontela (2000: 11) suggest futures methodologies in scenario planning which seek

to produce a range of possible scenarios for the future of the same system. The study will demonstrate that these approaches are capable of overcoming the uncertainty inherent in the emergent property of complex systems. The study will go on to adapt such scenario methodologies to the unique circumstances presented by political systems. It will then apply one such methodology to the theoretical (complex systems) and conceptual (political systems) points of departure of the study. The result will be the single metho-theoretical model via which to determine the long-term prospects for stability or instability in political systems. The application of this model to the South African political system will conclude the study.

The author works for an organisation that provides economic and political research and scenario planning services to over 150 South African corporations, multinational investors, and foreign governments, and publishes some of the most wide-ranging social, economic, and political information on South Africa. He is directly involved in scenario planning with many of these corporations. This experience has motivated this study, which will draw heavily on the experience and feedback gained through this work. There is no adequate methodology, in his experience, that can be applied to South Africa to gauge the risks of future instability. The reason is that no adequate units of analysis to measure instability exist and that forecasting methods ignore emergence in complex systems. The integration of complex systems theory and scenario planning methods into a single model via which the prospects for political stability or instability can be determined is therefore a unique theoretical and methodological contribution.

The scenario components of this study do not require the re-inventing of any wheels and will follow very closely established deductive scenario planning methods as described by Schwartz (1991), Schoemaker (1995), Mercer and Wilter (2002: 34), and Fontela (2000: 11). The conventions underlying this methodology are that it is possible to use uncertainty as a unit of analysis to accurately identify plausible descriptions of the future. It is a research methodology that responds to the problem that traditional forms of forecasting such as trend extrapolation have critical weaknesses. These revolve around the fact that such forms of forecasting are based largely on actual trends which are then extrapolated into forecasts (Marren and Kennedy, 2010: 11; Wack, 1985a and 1985b: 73; Schoemaker, 1995: 25; and Saunders, 2009: 11). The risk, as the world's perhaps most distinguished scenario theorist, Pierre Wack (1985a

and 1985b), points out, is that these forecasts are often correct. However, Wack argues that they are only correct because observed data trends usually change very slowly and rarely dramatically. When the trends change very quickly, or when there is a sudden fundamental shift in balances of power, the trend that the forecast relied on is broken and the forecast fails. Unfortunately it is precisely when trends change quickly or fundamentally, for example through a period of political instability, that the accuracy of a particular forecast becomes most important. Scenario methodologies overcome this problem by identifying numerous plausible futures and not just a single most probable future (Saunders, 2009: 19; Fontela 2000: 10; and Millet, 2003: 16). The purpose of scenario planning is therefore not to describe a single probable future but to rather illustrate all plausible futures. The reasons are twofold. The first is that identifying a single most probable scenario exposes that scenario to the same weaknesses as those of traditional trend extrapolation. The second, this study will show, is that by identifying all plausible futures the users of scenarios are able to overcome the problem of emergence and direct their planning operations to prepare for the numerous plausible alternative outcomes inherent in the emergent property of any complex system. While they may not correctly identify a single future they will not be taken by surprise by an alternative future.

1.6. LITERATURE REVIEW

Sources of information will include both primary and secondary sources. In addition, the methodology of this study is to merge theoretical, conceptual, and methodological qualitative sources into a single metho-theoretical model and then to incorporate a number of quantitative sources in operationalising that model. The study therefore straddles the divide of qualitative and quantitative social research as evidenced by the literature review below.

1.6.1. Theoretical literature

The first category is the theoretical literature on complex systems. Here there is significant literature relevant to the natural sciences and also in fields such as anthropology and sociology which are indirectly relevant to the study. Thietart and Forgue's **Chaos Theory and Organisation (1995)**, Lansing's **Complex Adaptive Systems (2003)**, Chen and Stroup's **General Systems Theory: Toward a Conceptual**

Framework for Science and Technology (1993) are examples. Then there is the systems literature directly relevant to political science such as Kiel and Elliot's **Chaos Theory in the Social Sciences (1996)**, Lazlo's **The Systems View of the World (1972)**, and Easton's **A Systems Analysis of Political Life (1965)**. Two things become apparent from a review of the literature. The first is a relative dearth of complex systems literature applied to political systems. The second, and a problem for the social sciences, is that much of the material written for the natural sciences is of such an abstract and advanced mathematical nature that it may explain the relative absence of complex systems theory in political analysis.

1.6.2. Conceptual literature

The second category of literature is that dealing with the structures and types of political systems. Here leading scholars in this field such as Easton (1965), Huntington (1968), Dahl (1978), Lansing (2003), and Almond (1965), will be consulted. However, the study will show that there are a number of shortcomings in this literature. Very little of the literature has been integrated with the theory of complex systems, partly as many of the seminal works were written before, or in the very early stages of the rise of systems theory itself. There is very little specifically relevant to political stability in South Africa. Nothing could be found merging the concept of political stability with complexity theory and scenario planning methodology. Nothing could be identified dealing with the questions of emergence in political systems.

1.6.3. Scenario literature

The third category is the literature on scenario planning models and methodologies. This literature is found mainly in journals, chiefly in the field of management and business, and also in a number of books. Pierre Wack's now famous 1980s articles in Harvard Business Review, **Scenarios: uncharted waters ahead (1985a)** and **Scenarios: shooting the rapids (1985b)**, are examples. These will be supplemented with more recent journal material such as Stephen Millet's **The future of scenarios: challenges and opportunities (2003)**, Emilio Fontela's **Forefront: bridging the gap between scenarios and models (2000)**, Stephen Saunders's **Scenario Planning: a collage construction approach (2009)**, and Gill Ringland's **Innovation: scenarios of alternative futures can discover new opportunities for creativity (2008)**. Leading

books in the field include Peter Schwartz's **The Art of the Long View (1991)**, and Clem Sunter's **The New Century: The Quest for the High Road (1992)**. A review reveals that there is very little at all in this field relevant to the study of political systems, very little could be identified referring to both scenario planning and complex systems theory, nothing was identified specifically integrating scenario planning with complex systems theory against a background of political instability. Nothing could be found explicitly connecting emergence with scenario planning – arguably the most significant contribution of this study.

1.6.4. Quantitative literature

The fourth is the chiefly quantitative literature identifying key economic, social, and political indicators for South Africa. This literature will include for example the **Quarterly Bulletins** of the Reserve Bank, the **Household** and **Income and Expenditure** surveys conducted by StatsSA, and the annual reports of the Departments of Housing and of Social Development and Welfare. The study will also consult international reports such as the World Bank's **World** and **African Development Indicators** reports, UN **Human Development Reports**, the Economist Intelligence Unit's various **Country Reports**, and reports of international rating agencies. The study will also consult private sector reports and forecasts such as those produced by South Africa's commercial banks and by private research groups such as MarkData. The various **South Africa Surveys** and **Fast Facts** reports of the SAIRR will be particularly closely consulted for their unique ability to track long term socio-economic trends.

1.6.5. Additional qualitative literature

The final category of literature is that identifying the evolution of the political system in South Africa after 1994. This literature will include a review of media reports and opinion articles back to 1994. Finally a number of books written since 1994 assessing the progress of South Africa's democracy will be consulted. These will include titles such as Jeremy Gordin's **Zuma: A biography (2008)**, Anthea Jeffery's **Chasing the Rainbow: South Africa's move from Mandela to Zuma (2010)**, RW Johnson's **South Africa: The First Man, The Last Nation (2004)**, Tony Leon's **On the Contrary (2008)**, and Andrew Feinstein's **After the Party (2007)**. In general though, while providing a range of well-researched descriptive views of South Africa, and offering certain

forecasts of the future, few if any works of this nature have been subject to the same rigorous theoretical and methodological foundations as this study. For example, none of the literature reviewed tied concepts such as stability to as theoretically sound a framework as that presented by complex systems theory.

1.7. THE METHODOLOGICAL STEPS OF THE STUDY

In merging qualitative and quantitative components this study will follow a number of steps. The initial methodological steps of the study will be as follows and are directed at constructing a metho-theoretical model:

- Determine a theoretical framework against which stability or instability can be measured and defined.
- Produce a definition of a political system.
- Demonstrate how this definition qualifies a political system as a complex system and then produce a definition of a complex political system.
- Demonstrate that there are different types of complex political systems and identify these different types.
- Produce a model integrating the theoretical and conceptual steps above that can be applied to determine the type and behaviour, or what will be called variant, of any given political system.
- Identify a scenario methodology via which to apply the model developed above to the future of a political system.
- Integrate that methodology with the theoretical and conceptual components of the study into a single metho-theoretical model via which the long term prospects for stability or instability in a political system can be determined.

The methodological steps of the remainder of the study will relate to operationalising this model via the incorporation of a number of quantitative sources as follows:

- The first step here will be to determine the type and behaviour, or variant, of the current political system in South Africa. This description will serve as a benchmark against which scenarios of plausible futures can be compared in order to determine the prospects for long term stability or instability.

- The second step is to determine all the major trends or driving forces that could determine future feedback flows into the system in the years ahead of the 2024 election and hence the stability of the system.
- The third step will be to distil these driving forces into a more manageable number of Key Driving Forces (KDFs) or those trends that will have a definitive impact on future feedback flows. These will then be ranked for their likely impact on future feedback entering the system and the uncertainty associated with that feedback. The most important and uncertain trends will become the axes of a matrix suggesting up to four possible future scenarios for the South African political system.
- The fourth step will be to write very detailed descriptions of the roles of the KDFs in determining system type and the major actors in directing either positive or negative feedback into each of the scenarios. From those descriptions it will be possible to determine both the system type and to account for the relative balance of feedback in each scenario. This will allow the study to reach conclusions about the likely system variant of each scenario. These conclusions can be compared to the benchmark system. Differences in system variant over time will reveal the answer to the question of what the prospects for system stability or instability are in the period to 2024.

1.8. CHAPTER DIVISION

Chapter 1: Introduction and motivation

This chapter is an overview of the actuality, points of departure, contribution, methodology, and structure of this study.

Chapter 2: Macro-theoretical points of departure

This chapter sets out the theoretical points of departure of the study. It defines complex systems and provides a detailed analysis of the characteristics and behaviours of such systems.

Chapter 3: Conceptual points of departure

This chapter is the conceptual point of departure of the study. It defines a political system and demonstrates that such a system is a complex system. It concludes with a model of how stability or instability can be determined in a political system.

Chapter 4: Methodological points of departure

This is the methodological point of departure of the study. It demonstrates that efforts to forecast the long-term futures of political systems have rarely been successful. It argues that this is due to political scientists' lack of awareness of the emergent characteristic of such systems. The chapter shows that in order to overcome the uncertainty inherent in that emergent property it is necessary to adopt a scenario methodology for the study of the long-term future of any political system.

Chapter 5: An integrated methodological-theoretical framework for analysis

This chapter integrates the theoretical and conceptual points of departure of this study with the methodological. The chapter produces a metho-theoretical model according to which the long term prospects for stability or instability in a political system can be determined.

Chapter 6: The South African context: determining the benchmark system variant

This chapter commences the operationalisation of the metho-theoretical model. It produces a description of the type and systems behaviour of the current political system. This description serves as a benchmark against which the scenarios of future political systems can be compared. Those comparisons will reveal the prospects for system stability or instability in the period to 2024.

Chapter 7: Scenario development: determining the driving forces

This chapter continues the operationalisation of the metho-theoretical model in identifying those trends most likely to have an impact on future feedback entering the South African political system.

Chapter 8: Scenario development: identifying the scenarios

This chapter reduces those trends to a set number of driving forces and then to a more manageable number of Key Driving Forces. Following the scenario methodology adopted by this study, these are then ranked and placed on a scenario matrix in order to suggest four possible scenarios for a future political system.

Chapter 9: Alternative scenarios: determining the prospects for system change

In this chapter each of the four scenarios suggested on the matrix will be described according to its system variant. In other words it will be determined how the Key Driving Forces change the system type for each scenario and how the actors respond to that system type by directing different balances of positive and negative feedback into the system. These scenarios can then be compared to the benchmark system described in chapter six. Differences between the type and behaviour of the benchmark system and the scenario systems will reveal the prospects for political stability or instability in South Africa in the period to 2024.

Chapter 10: Concluding perspectives

This chapter will review the points of departure of the study, the metho-theoretical model proposed by the study, the contribution of this model, and the findings of the study in terms of the prospects for stability or instability in the South African political system.

1.9. CONCLUSION: THE SIGNIFICANCE OF THE STUDY

The first academic contribution of this study will be to produce a framework of twenty units of analysis according to which political systems can be differentiated from each other and changes in a single system studied over time. Specifically this framework will incorporate political system effectiveness in addition to the more commonly used open or closed nature of a political system as a key determinant of system type. The complex systems basis of this definition will show how the feedback exerted by actors in a system will cause that system to change from one of these twenty variants to another. Hence by studying feedback political scientists should be able to accurately diagnose the reasons for changes taking place within political systems.

However the study's second academic contribution will be its most significant. This will be to demonstrate that political systems are complex systems and that as complex systems their emergent property means that their futures can never be forecast. The study will show that past failures at anticipating shifts in political systems rest on this very point. Only via overcoming the uncertainty inherent in that emergent property can planners hope to accurately anticipate the future of the political systems they study.

Its third contribution will be to show that there is only one methodology, in scenario planning, that is able to overcome the uncertainty inherent in the emergent property of all complex systems. Any futures research in the field of complexity science must therefore be conducted from a scenario perspective.

Its fourth contribution will be to integrate these theoretical and methodological contributions into the development of a unique methodological-theoretical (or metho-theoretical model) that merges the complex systems theoretical basis of this study with its scenario based futures methodology. While this model will be operationalised on a political system, it can as easily be applied to studying the future of any complex system. The model is an advance for complex systems theory as it will allow complexity researchers to determine the likely futures of the systems they study. Hence it frees complexity research from being applied mainly to current, observed, environments and allows it to explore long-term futures. Likewise the model is a great advance for the practice of scenario planning as its complex systems basis allows scenario planners to justify the outcomes of the scenarios they produce against a sound body of theory. Rather than relying on speculation, or subjective opinion, in describing such scenarios, these planners can now make use of complexity theory to corroborate the outcomes of their scenarios.

A fifth, and closely related, contribution for political science is that the metho-theoretical model holds a number of policy-making and governance advantages. These are chiefly that the model allows policy-makers to accurately anticipate the likely long-term implications of policies they adopt in their current environments. Likewise by adjusting policy in the current environment the model will reveal the likely long-term results of possible policy shifts. This has significant governance and human development implications as policy makers will be directly confronted with the likely results of the decisions they make – long before those results are felt in the systems they govern.

Chapter One: Beyond the High Road: A scenario Analysis of the prospects for stability or instability in South Africa over the period to 2024

This may, we can hope, aid in bringing about better political and policy decision making that improves levels of human development in political systems everywhere.

This final contribution can be extrapolated outside of the field of political systems. Economists, business people, and military planners could all adapt the model to their own unique circumstances in order to gauge how decisions they make in the current environment are likely to influence the long-term future. The complexity aspects of the model will show them how the systems they work in are likely to behave in response to policy change while the methodological aspects will allow them to anticipate that behaviour deep into the future. Likewise again, by adjusting policy ideas in the present environment they could test the likely long-term implications of possible policy change and therefore make better economic, investment, security and other strategic decisions.

2. CHAPTER TWO: MACRO-THEORETICAL POINTS OF DEPARTURE

2.1. INTRODUCTION

The task of seeking to determine the long-term stability or instability of the South African political system is complicated by the fact that terms such as stability and instability are often used very loosely in response to observed behaviour such as protests, armed conflicts, and periods of great political uncertainty. In the case of South Africa service delivery protests, conflicts within the ruling tripartite-alliance, and high levels of unemployment and inequality are regularly described as features or drivers of instability.

However, such subjective and imprecise use of the terms explains why they are often seen as subjective, pejorative, and controversial. For example, if a political system sees the rise of a new radical political movement some analysts may conclude that the system is at risk of instability. Other analysts may however disagree that the movement poses any threat to the system's stability. Likewise if a new government adjusts its monetary or fiscal policy some analysts may say that a degree of instability has resulted within the system. However others may disagree arguing that such changes are to the benefit of the system and hence its long-term stability. Opinions on the stability of a system that are based purely on certain observed changes within the system are therefore problematic. This is particularly so as change occurs constantly within political systems. A political system will feature many different changes on a daily basis. Yet no analyst would suggest that the system underwent a series of daily adjustments to its stability or instability. It follows therefore that basing our understanding of stability or instability on the subjective analysis of a limited number of outwardly observed changes within any particular system will invite critique and contrary opinions.

It is not possible as an academic study to base conclusions about political stability or instability purely on subjective observations of events within a political system. Rather it is necessary to identify a sound theoretical basis upon which diagnosis of stability or instability can be substantiated. The chief research goal of this chapter is to identify that theoretical basis. Having met this research goal it will be possible in the following chapter to apply the theoretical basis to the concept of a political system in order to propose a model against which political stability or instability can be diagnosed.

Chapter Two: Macro-theoretical points of departure

In meeting its primary research goal this chapter will have to answer four research sub-goals:

- The first research sub-goal will be to set out the origins of systems theory. This will ensure that readers have a basic grounding of knowledge upon which to appreciate why the theory is such an appropriate perspective from which to study stability or instability and later why scenario planning is an appropriate methodology with which to apply the theory to the future. Here it will be shown that systems theory arose in response to the failings of Newtonian science in explaining the behaviour of very complex phenomena - such as political systems.
- The second research sub-goal will be to explain the rise of complex systems theory, as a distinct branch of systems theory. Here the chapter will define a complex system and demonstrate that complex systems theory is targeted at the analysis of extremely complex phenomena made up of a vast number of actors or participants, as is true of a political system.
- The third research sub-goal will be to identify the characteristics of a complex system. Three such characteristics will be revealed. In the following chapter this study will show how those same three characteristics are visible in a political system and thereby demonstrate that complex systems theory is an appropriate methodology with which to study political systems.
- The fourth research sub-goal will be to show how those same characteristics determine the behaviour of a system as stable or unstable and then to define stability and instability within systems. Here it will be argued that complex systems behave in five distinct ways, one of which is stability and four of which relate to forms of non-stable behaviour including instability. These behaviours will in the later chapters of this study become the scenario outcomes for the future of the South African political system.

This chapter will therefore adopt a qualitative methodology in developing a theoretical groundwork underpinning the study. This theory will in the following chapter be applied to a political system in order to propose a complex systems model against which the stability or otherwise of a political system can be determined. It is upon this model that the final conclusions of the study will rest.

2.2. THE ORIGINS OF SYSTEMS THEORY

In order that users of that complex systems model are fully able to appreciate its value it is necessary that they grasp what gave rise to thinking in terms of systems in the first place. Thinking in terms of systems grew out of the failure of Newtonian science to adequately explain the workings of complex phenomena (Syvanteck and Brown, 2000: 69). The Newtonian worldview held that all matter obeyed a set of mechanistic laws (Kiel and Elliot, 1994: 12). Chen and Stroup (1993: 449) and Von Bertalanffy (1950: 164-165) show how Newtonian thinking held that by breaking any phenomenon into its smallest component parts a researcher would be able to gain an insight into the workings of the whole.

2.2.1. Shortcomings of Newtonian thinking as an impetus for systems thinking

The implication of this Newtonian view was that complexity was an illusion that could be overcome by reducing any group of interacting elements into its component parts. In other words, it was an approach to scientific enquiry that held that the whole is no more complex than the sum of its parts (Laszlo, 1972: 14-15). This paradigm was effective in explaining the workings of relatively simple relationships of cause and effect (Simon, 1990: 7). However, more complex phenomena could not be broken down into their component parts and were merely assumed to be obeying the same laws as more simple phenomena (Laszlo, 1972: 14-15; and Syvanteck and Brown, 2000: 69).

A number of authors including Lazlo (1972) and Chen and Stroup (1993) make use of biological systems such as a tree in explaining this Newtonian principle. The Newtonian paradigm postulates that the life of a tree could be explained by disassembling it into its smallest component parts down to the molecular level. The workings of each component part could then be studied. From that study it would be possible to understand the workings of the tree and how it was able to grow, live, and change over time. Newtonian thinking would therefore have held that the complexity we encounter in South Africa's current political system was simply an illusion. If, as researchers, we were able to break the system down into its component parts, even beyond the level of individual actors, and study these in isolation we would gain a perfect understanding of cause and effect within the system. However, by the early 20th century it was becoming apparent to researchers in fields such as physics and biology that this was not the case

(Syvanteck and Brown, 2000: 69; and Chen and Stroup, 1993: 449). The phenomena these scientists were studying were more complex than could be explained by Newtonian thinking (Simon, 1990: 7).

Chen and Stroup (1993: 449) show how studies in thermodynamics, for example, indicated that there were certain phenomena that constantly exchanged matter and energy with the environment around them. This exchange influenced the behaviour of those phenomena, which could therefore not be explained by breaking them down into their component parts. They also make the point that studies in biology showed that plant life, such as that of the tree, could not be explained by breaking a plant into its component elements and then reassembling it in order to explain the workings of the whole. Rather there were numerous other environmental and interactive factors at play that determined the life of plants and other living organisms.

By implication, as a system made up of a great many participants, the same may be true of a political system. If that is the case then political systems should not be studied by disaggregating them into their various components, studying each component in isolation from the others and from its broader environment, reassembling these participants, and then expecting to understand the workings of the political system. Rather it must be the manner in which the components interact with each other that causes the system to behave in one way or another. This questioning of Newtonian thinking required a new theory of science to explain the behaviour of complex phenomena (Simon, 1990: 7). It was necessary to find a theory that could explain the workings of phenomena where the relationship between their components, and the environment in which they existed, produced a whole that was greater than the sum of its parts.

Following from Chen and Stroup (1993) the tree is again a very good example to use. The interaction of the components of the tree (atoms, molecules, capillaries, leaves, roots) together with those of the environment around it (light, air, water, nutrients, climate) produced a result (growth, life, change) that could not be explained by any of these in isolation. Such phenomena could not simply be deconstructed, studied, and then reconstructed in order to glean an understanding of how they functioned. Rather scientific theory would need to cater for phenomena driven by a great number of elements that interacted with the environment around them. Likewise in the case of a

political system the interaction of individual people, voting blocks, political parties, investors, protestors, and so on produces outcomes such as policy frameworks, economic advancement, and conflicts. By seeking to disaggregate the political system into its various components, and study these in isolation, it would not be possible to explain how such outcomes came about.

2.2.2. Early systems alternatives to Newtonian thinking

A concrete step towards a theory that could explain such outcomes came in the 1950s when Ludwig Von Bertalanffy, drawing on work conducted since the 1930s, published *An Outline of General System Theory* (Chen and Stroup, 1993: 450). Von Bertalanffy (1950: 134) wrote that “science tried to explain phenomena by reducing those phenomena to an interplay of elementary units which could then be investigated independently of each other”. However he argued that in contrast to such an atomistic and deterministic approach it was increasingly important to understand the interactions of the elements of the whole item, which could not be done by studying those elements in isolation from each other. He argued that understanding the “dynamic interaction” of elements was a problem in all fields of science and that thinking in terms of systems offered some hope of a solution to those problems.

A second concrete step towards the adoption of systems theory was the publishing of *A Systems View of the World* by Ervin Laszlo in the early 1970s (Chen and Stroup, 1993: 450). Laszlo (1972: 6) built on Von Bertalanffy’s work to suggest that systems theory provided a mechanism with which to study events or facts as “wholes” with their own behaviours and relationships. Laszlo (1972: 11) wrote that “sets of interacting relationships came to occupy the centre of attention and these were of such staggering complexity – even within a physical entity as elementary as an atom – that the ability of Newtonian mechanics to provide an explanation had to be seriously questioned”.

He further cited the example of a large corporation where every employee from the most senior to the most junior could conceivably be replaced without the organisation losing its features (Laszlo, 1972: 6-19). This example reinforced the point that there were phenomena where the interaction of their components produced a result that could not be explained by examining each individual component in isolation. He argued that such a view, that considered the complex relations between things, constituted a

systems view of the world and was an antidote to the failure of Newtonian thinking to explain complex relationships between things.

2.2.3. Systems thinking as a paradigm shift away from Newtonian thinking

In effect therefore the rise of systems thinking was akin to the Kuhnian paradigm shift in the approach that a number of scientific and academic disciplines took to the phenomena they studied (Levanti, 2011, 31). It is important to note that paradigm shifts are not the focus of this study and are merely referred to in order to indicate how systems theory arose in response to shortcomings in Newtonian thinking. Such Newtonian thinking was widely held to offer solutions to real problems of science in a manner that Kuhn would describe as 'normal science' or a period during which a specific theoretical approach was widely accepted (Renwick-Monroe, 2001: 155-156; and Chen and Zhang, 2006: 490). However Kuhn argues that such a period of normal science is followed by a scientific revolution during which the tenets of the dominant paradigm are questioned (Renwick-Monroe, 2001: 155-156; and Mouton and Marais, 1990: 145-150). This occurs when the scientific community encounters new problems that cannot be resolved by the paradigm (Bird, 2000: 20).

The complex phenomena such biological systems encountered in the early 20th century precipitated the questioning of the Newtonian paradigm. Kuhn argued that such questioning of a paradigm eventually offers up a new scientific approach which, if widely adopted, becomes a new paradigm and ushers in a new period of normal science (Bird, 2000: 20). In this case that paradigm was a systems paradigm that discarded the reductionist view of the Newtonian paradigm and replaced it with complexity. On the table below the four key components of this paradigm shift are set out.

Table 1: Key differences between the Newtonian and the systems paradigms

NEWTONIAN REDUCTIONIST PARADIGM	SYSTEMS PARADIGM
The whole is the sum of its parts.	The whole is greater than the sum of its parts.
Complexity is illusory and can be overcome by reductionist analysis.	Complexity is real and cannot under many circumstances be properly understood.
Analysis of a complex phenomenon can be undertaken by dismantling its components and regarding them in isolation.	A complex phenomenon must be considered as a whole and cannot be deconstructed and reformulated in order to be understood.
Behaviour is determined by mechanistic rules of	Relationships of cause and effect are non-

NEWTONIAN REDUCTIONIST PARADIGM	SYSTEMS PARADIGM
cause and effect.	linear and may lead to exponential results.

2.2.4. Principles of systems thinking

Two important principles, identified by Laszlo and Von Bertalanffy, therefore emerged from this shift and came to underpin the future of systems thinking. The first was that a system is made up of a number of interacting parts. Secondly, this interaction produces a whole greater than the sum of its parts. It is upon these two principles that the later advances in systems thinking would be based.

More than three decades after Laszlo a study of systems literature will reveal that those advances led to examples of systems ranging from stock markets to ant-colonies, ecosystems, living organisms, traffic patterns, economies, consumer behaviour, and the weather. These phenomena have in common a great many interacting elements that cannot be broken down, studied in isolation, and reformulated in order to understand the workings of the whole. Rather they need to be studied as wholes where the interaction between the individual elements is not driven by simple rules of cause and effect but produce exponential and sometimes surprising results.

The same is by extrapolation true of political systems. Political systems are composed of a great many participants or actors ranging from voters and politicians to investors and courts of law. It follows too that these actors interact with each other. There can certainly be no argument that this interaction produces outcomes, such as policies, that could not have been achieved by these actors operating in isolation. The early suggestion is that systems theory may have a degree of utility for the study of political systems.

To fully appreciate that utility it is necessary to build on what has already been argued in this chapter and to show how these early steps in systems thinking culminated in the rise of complex systems theory. This is the branch of the theory that will be applied to the South African political system throughout the remainder of this study.

2.3. THE RISE OF COMPLEX SYSTEMS THEORY

Despite the progress made in systems thinking in the first half of the 20th century, relatively simple systems driven by a small number of linear variables dominated early systems analysis (Laszlo, 1972: 6). The reason was not primarily that systems were thought to be linear, but rather that limited computational ability forced systems theorists to consider at best two and three variable systems (Simon, 1990: 7-8). Hence it became increasingly important for systems theory to be further developed to explain phenomena in both the social and physical sciences that were driven by an immense number of variables. Laszlo writes that this process was followed in many branches of enquiry from economics to biology. He argued that there was nothing, for example, in economics to explain an increase in share prices on “the basis of personalities of stockbrokers and the public”. Likewise there was no theory in biology to explain the existence of a living organism by looking only at the behaviour of atoms and molecules.

Therefore, there was a growing demand for systems theory to be applied to systems, such as political systems, that featured a staggering array of diverse actors or participants. It is this demand that led to the rise of complex systems theory (Harrington et al., 1999: 54; Levanti, 2011: 31 and 34; and Snowden, 2011: 141). Critically therefore complex systems theory is not a different theory to systems theory but is a branch of systems theory devoted to the study of particularly complex systems.

Ethiraj and Levinthal (2004: 161) make this point when they define a complex system as one where the nature and magnitude of the interaction of the system components is particularly difficult to infer. By this they mean that there are so many participants or actors making demands on the system that determining cause and effect is probably impossible. A number of authors (Jennings and Wattam, 1998: 28; Daft, 2010: 235; Cleary and Malleret, 2006: 200-201; Doyle, Radziki and Trees, 2008: 270; and Syvante and Brown, 2000: 69) likewise describe a complex system as one based on a large set of interdependent decisions.

This would clearly be true of a political system. There are, for example, an immense number of participants constantly making diverse and at times contradictory demands on political systems. Where one actor, for example an investor, demands a more competitive exchange rate for his exports, this may prompt another actor, such as a

consumer watchdog, to demand a weaker exchange rate to reduce the costs of an imported product. These contradictory demands are made simultaneously and in response to each other. Multiplied millions of times a day across every conceivable sector of the political system, they make for an immensely complex system.

Ethiraj and Levinthal (2004: 161) argue that as a result of such complexity, complex systems come to display highly nonlinear behaviour in response to changes in one or more of their component parts. By non-linearity is meant that the relationship between cause and effect produces an exponential result (Stacey, 1996: 288; Morales-Matamoros et al., 2010: 71; Jennings and Wattam, 1998: 191-192; and Ward, 1995: 629). By exponential is meant that the demands of the various actors cannot simply be added together to determine a particular outcome for the system. Rather these divergent demands need to be multiplied together. By multiplying rather than adding demands together their impact on the system will obviously be very much greater. This is also often referred to as the emergent property of a complex system (Kondraske, 2011: 236; Morales-Matamoros, et al., 2010: 72; Ford, 2008: 177; Earnest, 2008: 7; Levanti, 2011: 33; and Ward, 1995: 63).

2.3.1. Non-linearity or emergence as the defining feature of complex systems

Similarly, Thietart and Forgues (1995: 20-23) and Syvantek and Brown (2000: 69) provide a definition for a complex system, whereby the relationship between time-dependent variables is non-linear. They use a hypothetical organisation in making an example of the non-linear property of a complex system. This organisation contains a great many individual and other actors whose interaction causes that organisation to come into existence. Their example is a very good one. Within any organisation there are likely to be an immense number of participants. Each member of staff in the organisation is an individual participant in the organisational 'system'. Understanding the outputs of the organisation depends on studying these interactions, not the individual actions of each participant in isolation from the rest. Only then does it become possible to see how those actions leverage each other and produce a result that is greater than if the individual actions were simply added together.

The ultimate example of non-linearity or emergence in complex systems can be made with reference to the following equations. Consider a system made up of three actors.

Chapter Two: Macro-theoretical points of departure

For arguments sake assume that each actor contributes a value of 2 to the system. As a Newtonian system, where the whole was equal to the sum its parts, the system would look as follows:

$$2 + 2 + 2 = 6$$

This system would be a 6, as its parts were added together to determine the whole of the system. However, as a complex system the parts would be multiplied and not added together. Here the system would look as follows:

$$2 \times 2 \times 2 = 8$$

This system would be an 8. Now consider what happens if one of the actors contributes a 1 and not a 2 to the system. The Newtonian system would now look as follows:

$$2 + 2 + 1 = 5$$

However the complex system would change quite dramatically:

$$2 \times 2 \times 1 = 4$$

Therefore, a small change in the original conditions of the Newtonian system saw that system change from a 6 to a 5 – a significant but not dramatic change. However the same change in a complex system sees that system change drastically from an 8 to a 4. This is a simple but powerful example of the emergent characteristic of complex systems.

It is possible to make an example of how this would apply in a political system. An actor within the system could demand that the government implement a land reform policy to expropriate land and hand it to poor communities. That would be one demand placed upon the system. However, landowners may take that policy to court and argue that expropriation is illegal as the constitution in that society guarantees property rights. If the two demands were added together it would be obvious to an observer that land expropriation would probably not take place, as it was unconstitutional. However, in reality things would not be that simple as the media, lobby groups, protest movements, and populist politicians would all enter the fray. The result would be high degrees of antagonism, uncertainty, fear, anger, and mistrust within that political system. This may

lead to outcomes ranging from protests to disinvestment that could not have resulted from simply adding the two demands together and settling them in the courts.

2.3.2. A conceptual definition of a complex system

As a result of the vast complexity resulting from multiplying such a diverse range of demands together, Lansing (2003: 185) argued that in a complex system “the observer must usually give up the hope of understanding the workings of causation at the level of individual elements”. This is also true of political systems. It is quite possibly beyond the capability of even the best analysts to explain currency exchange rate fluctuations in a particular political system based on the interaction of each individual importer, exporter, and consumer. Likewise no political analyst could hope to explain uncertainty, protests, and disinvestment within property markets as a result of the interaction of individual property owners and land reform activists.

It follows then that what distinguishes complex systems from general systems is not theory or principle but rather the extraordinary complexity of the system being studied (Doyle, et al., 2008: 270; and Syvanteck and Brown, 2000: 69). Morel and Ramanujam (1999: 278-279) make the point that complex systems theory is therefore not a separate theory to general systems theory but rather a perspective to modelling particularly complex systems. They and Simon (1962: 468) describe the difference between complex systems and other systems as resting on the number of interacting elements. In addition Morel and Ramanujam add that the theory of complex systems arose more in response to the processing powers of computers being able to consider ever more complex systems, than as a move away from general system theory itself.

The question then arises of how complexity can be defined. At what point does a system qualify as a complex system?

Morel and Ramanujam (1999: 278-279) and Levanti, (2011: 34) argue that there is no accepted definition of complexity. They make the point that complexity in systems is difficult to define but easy to recognize. While somewhat unsatisfactory, this point is of some merit. The incredible range of actors and participants in complex systems is so great that they cannot easily be listed or quantified. It would be an impossible task, for example, to list every actor down to the individual level who made demands on the South African political system. For example, a tourist in China seeking to visit South

Africa on holiday would in some small way contribute to the demands placed on the South African system.

However, as Morel and Ramanujam point out, while the complexity of the South African political system may be impossible to quantify, it is perfectly apparent to any observer that it is an immensely complex system. Hence a system can be defined as a complex system by observation. For the purposes of this study:

As soon as more actors are observed in a system than can easily be quantified it becomes possible to identify it as a complex system.

In order to apply the theory that gave rise to this definition to a political system it is necessary to move beyond the conceptual level and explain the mechanical detail of how complex systems operate, how feedback is directed in such systems, and how this influences the behaviour of a complex system. In other words it is necessary to identify a number of defining characteristics of complex systems. Without such characteristics in place it will not be possible to practically apply the theory to political systems.

2.4. THE CHARACTERISTICS OF COMPLEX SYSTEMS

A review of complex systems literature suggests that all complex systems feature the same three characteristics:

2.4.1. Actors as a characteristic of complex systems

They are **firstly**, systems made up of a large number of interacting elements (Morel and Ramanujam, 1999: 279-281; Cilliers, 1998: 3; Levanti, 2011: 31; and Snowden, 2011: 141). These elements are the forces, participants, and actors that make demands on the system to cause it to behave in a certain manner.

For example within a hypothetical corporation that designs, manufactures, and sells computers all the employees, clients, service providers, competitors, the financial system within which the organisation functions, the demands of its potential client base, and the external regulatory environment interact to produce the particular features and outputs and profits (or losses) of the corporation. Within a political system the land reform activists, their funders both foreign and domestic, their supporters in local

political parties, the government officials who make land policy, the land owners and farmers, their legal advisors, and the courts would all be actors or participants within the political system.

2.4.2. Emergence as a characteristic of complex systems

Secondly, the interaction of participants must produce a result that is greater than the sum of its parts (Jennings and Wattam, 1998: 191-192; Allen et al., 2006: 299; Kondraske, 2011: 236; Morales-Matamoros et al., 2010: 72; Ford, 2008: 177; Earnest, 2008: 7; Levanti, 2011: 33; Ward, 1995: 631; and Morel and Ramanujam, 1999: 279-281). In other words, the system must have what is described as an emergent characteristic (Lansing, 2003: 185; Harrington et al., 1999: 54; and Cilliers, 1998: 3). The non-linearity or multiplying of demands highlighted and explained in earlier sub-sections of this chapter underpin this emergent property. This is admittedly a complex idea and requires some more explanation.

Another way of considering the emergent property of complex systems is to think of the outputs of the system being disproportionate to the inputs or individual events taking place in the system. Lansing (2003: 185) and Syvanteck and Brown (2000: 69) deal with the question of emergence by making the point that in complex systems the interaction of the various elements produces non-linear effects that may be impossible to track. Morel and Ramanujam (1999: 278) describe these outputs as 'patterns, which are due to the collective behaviour of the components of the system'. They give the example in physics of the temperature of a gas being a response to a large number of molecules colliding to illustrate the emergent property of a system. The interaction of the molecules causes a temperature rise, which could not be explained, or achieved, by each individual molecule acting in isolation from the rest. A political system could be regarded in the same way as a mass of voters, businessmen, lobbyists, politicians, law-makers, social activists, workers, judges, and journalists constantly colliding with each other as they make divergent demands on the system. The result of these collisions becomes the policy frameworks, growth levels, and conflicts that characterise the system.

2.4.3. Feedback as a characteristic of complex systems

Thirdly, a complex system must be directed by feedback mechanisms (Ellis and Herbert, 2011: 34; Rhee, 2000: 487-490; Doyle et al., 2008: 270; Duggan, 2008: 60; and Harrington et al., 1999: 54). This feedback can be regarded as the demands that participants within the system place on the system. There are two types of feedback:

- The first is negative feedback that dampens the effects of change on a system (Thietart and Forgues, 1995: 19-21; Earnest, 2008: 7-8; Rhee, 2000: 487-490; Jennings and Wattam, 1998: 31; and Duggan, 2008: 60). There is nothing pejorative implied by this term. These negative feedback forces will act to promote the stability of the system and to maintain its equilibrium or status quo (Stacey and Parker, 1994: 26). For example a legal resources centre may act to promote the rule of law in a constitutional democracy. In promoting the maintenance of the rules of the system this centre would be a source of negative feedback.
- The second type of feedback is positive feedback (Earnest, 2008: 7-8; Rhee, 2000: 487; Duggan, 2008: 60; and Thietart and Forgues, 1995: 19-21). Nothing beneficial to the system is implied in the word positive. This is simply a type of feedback that promotes change in the system (Stacey and Parker, 1994: 26). For example a terrorist movement may seek to undermine confidence in a government. The terrorists would then be a source of positive feedback entering the political system.

2.4.3.1 The conflict of positive and negative feedback in a complex system

Positive and negative feedback are in continuous conflict within any system (Duggan, 2008: 60; and Harrington et al., 1999: 54). Where positive feedback overwhelms the system then the system itself may change (Earnest, 2008: 7-8; Rhee, 2000: 487; Duggan, 2008: 60; and Ward, 1995: 629). However, as long as negative feedback dominates the system it will maintain equilibrium and will not change.

For example within the corporation that manufactures computers, market demand for a new device is an example of negative feedback that would ensure the stability of the organisation. Should the market reject the new device this would be an example of positive feedback. It would prompt change within the organisation failing which the organisation might destabilise. An example of feedback can also be made of the land

reform activists who demand the expropriation of property. As long as these activists fail to convince the government and the courts to change the property rights rules within the system those rules will continue to reflect the existing property rights status quo. Landowners will seek to maintain that status quo. Hence the reform activists become drivers of positive feedback in the system while the landowners become drivers of negative feedback.

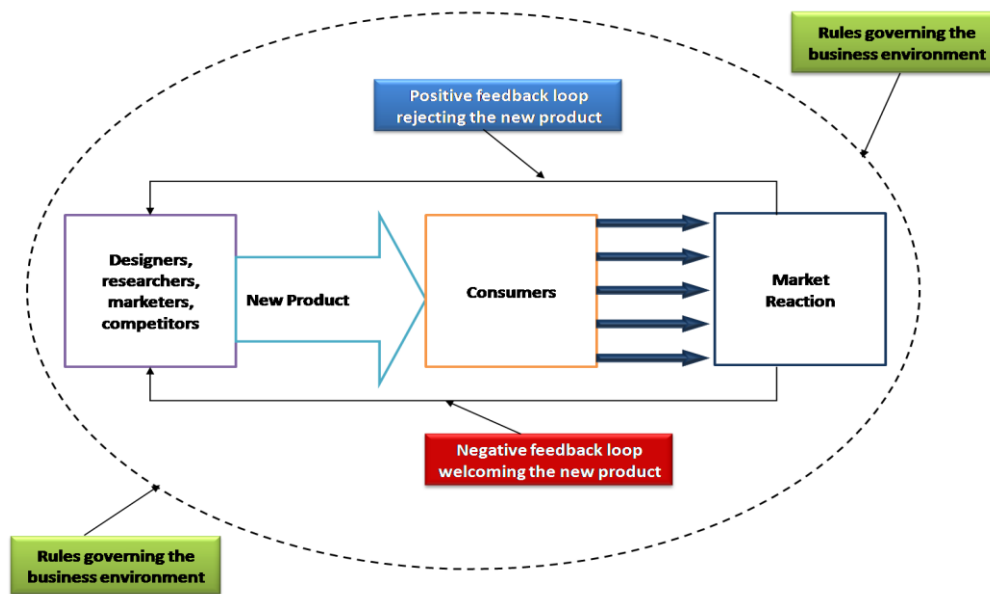
2.4.4. A working definition of a complex system

Following from these three characteristics of a complex system such a system can be defined as:

Any system comprising an innumerable number of participants, whose participation results in outputs greater than the sum of their parts, and the behaviour of which is driven by opposing forces of positive and negative feedback. Actors in the system interact with each other in how they place demands on the system. Those demands become sources of negative and positive feedback on the system. Where negative feedback predominates the system remains stable. However where positive feedback predominates non-stable behaviour may occur.

The diagram below illustrates the computer corporation as a complex system according to this definition. It shows how interaction between designers, marketers, and competitors sees a new product launched into the market. Consumer reaction to the product, illustrated by the feedback loop arrows to the top and bottom of the diagram illustrate how that reaction is able to stabilise or destabilise the corporation.

Figure 2: The computer corporation: An example of the workings of a complex system



The question that emerges from the definition and diagram above is how the feedback received by the system determines its behaviour. The answer to that question holds the key to the focal question of this study.

2.5. THE BEHAVIOUR OF A COMPLEX SYSTEM

Some of the answer to that question rests in what has already been argued in this chapter. The chapter has shown, as in the diagram above, that where positive feedback dominated the system it would become unstable and change but where negative feedback dominated it would remain stable and would not change. In reality, however, things are somewhat more complex with systems being able to demonstrate any one of five different patterns of behaviour in response to the feedback they receive.

2.5.1. Stability in complex systems

The **first** behaviour is equilibrium or stability (Ward, 1995: 630; Allen et al., 2006: 299; Heath and Ressler, 2011: 77; Snowden 2011: 141; and Thietart and Forgues, 1995: 19-21). In such a state, negative feedback dominates the system and causes it to remain stable (Stacey and Parker, 1994: 25; and Kiel and Elliott, 1996: 5). This means that the system's behaviour is unlikely to change and that the system will therefore remain in the state in which it was originally observed. For example for as long as a government is able to meet the demands of all its citizens they are likely to inject overwhelming

negative feedback into the system by returning that government to power in an election. Similarly, in a dictatorship as long as dissent and political opposition is suppressed, and actors are unable to inject positive feedback into the system in the form of protests or lobbying for change, the political system will remain a dictatorship.

2.5.2. Instability in complex systems

The **second** possible behaviour of a complex system is instability (Jennings and Wattam, 1998: 195; and Thietart and Forgues, 1995: 19-21). In this case the dominance of positive feedback causes change of the system (Stacey and Parker, 1994: 26). For example, if radical political elements in a constitutional democracy protest and overthrow the government then a predominance of positive feedback in the political system may see it change to some other form of political system. In a dictatorship, if a rebel movement overthrows the dictator and schedules elections then the system will also have undergone a period of instability leading to a change of system.

2.5.3. Periodic stability in complex systems

The **third** is that of periodic stability (Thietart and Forgues, 1995: 19-21). Here the presence of shifting amounts of both positive and negative feedback causes the system to continually fluctuate between a stable and unstable state (Kiel and Elliott, 1996: 5). In the example of a constitutional democracy, periodic stability might arise in response to a radical terrorist group threatening the constitutional status quo. However, before changes occurred in the system the leaders of this group are arrested and jailed. Shortly thereafter new leaders emerge and again threaten the status quo. These are then also arrested and so the cycle continues. Periods of rising positive feedback would be followed by periods of negative feedback. A similar process could be observed in a dictatorship as freedom fighters come close to overthrowing the state, only to be repelled and having to regroup and launch a new campaign.

2.5.4. Chaos in complex systems

The **fourth** is that the system may display chaotic behaviour (Millet, 2003: 6; Ward, 1995: 629; Jennings and Wattam, 1998: 195; and Stacey, 1996: 57). In this state, the interaction between the system's various elements produces behaviour that appears to

be random and therefore cannot be accurately predicted or forecast (Ward, 1995: 629; Thietart and Forgues, 1995: 19-21; Morel and Ramanujam, 1999: 279-281; and Kiel and Elliott, 1996: 5). Here the emergent characteristic of a complex system becomes extremely important, as it allows small changes in the original state of the system to have an exponential effect, over time, on the future behaviour of that system (Morales-Matamoros et al., 2010: 72; Ford, 2008: 177; and Lansing, 2003: 185). In chaotic circumstances the complex nature of the interaction of numerous system elements makes it impossible to trace connections between cause and effect in the system. However, despite appearing to be chaotic, the behaviour of the system remains deterministic (Millet, 2003: 6; Ward, 1995: 629; and Jennings and Wattam, 1998: 195). This is an extremely important point. Even in a state of apparent chaos the behaviour of the system is not simply random but as Kiel and Elliott (1996: 5) point out: the result of a “deterministic equation” – or a set of variables that act to produce a certain result. Thus, even though a causal relationship between the system elements cannot be identified, such a causal relationship does exist. This understanding they describe as “an essential foundation of knowledge for the chaos researcher”.

The examples here could be of radicals overthrowing a constitutional democracy, or freedom fighters a dictatorship, only to plunge the political system into a period of disorder during which the various factions that overthrew the system fight amongst each other. In such a system, modern day Somalia might qualify, it becomes difficult to determine who is in power and how that power is exercised.

The four behaviours above suggest a rather limited choice of system behaviour. Systems can be either stable or unstable or somewhere in between. The fifth system behaviour allows a system to evolve in response to the feedback mechanisms acting upon it.

2.5.5. Evolution in complex systems

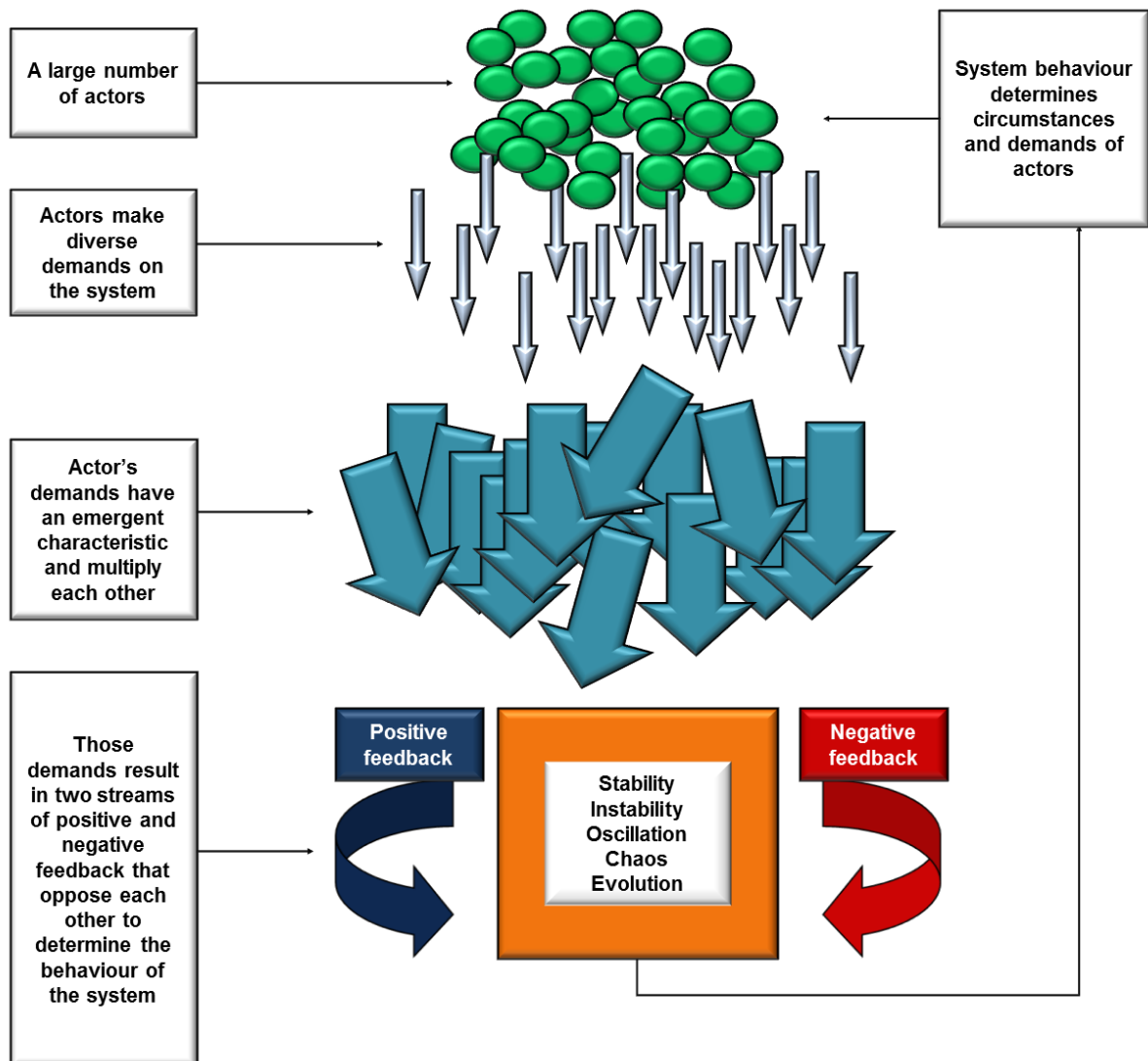
The **fifth** behaviour that a complex system may display is a self-organising, adaptive, or evolutionary behaviour (Rhee, 2000: 487; and Morel and Ramanujam, 1999: 280-281). This is the process whereby the system, under its own power, becomes increasingly more organised. Morel and Ramanujam identify evolution as the ultimate form of self-organisation.

In the constitutional democracy the government may realise that if it does not do more to meet socio-economic demands it may be overthrown. Hence it launches a period of reform that staves off the risk of instability by reducing the danger of positive feedback entering the system. Likewise in the dictatorship the state further cracks down on civil-rights activists and the media to reduce the risk of positive feedback leading to systems change.

2.5.6. Determining behaviour in complex systems

The diagram below shows that at any point in time, a complex system will demonstrate one of these five behaviours. The diagram shows the actors in the system as the myriad of dots at the head of the diagram. These make demands on the system represented by the slender arrows running out of the group of actors. As an emergent system these demands multiply with each other resulting in exponentially greater results than if the demands were added together. These demands act as sources of negative and positive feedback which in turn determine the behaviour of the system. The behaviour in turn determines the circumstances of the actors, which causes them to make new demands. This is a continual process.

Figure 3: Characteristics and behaviours of a complex system



While stability and what must now be called non-stability are very different types of behaviour, it is important that they be considered collectively in one diagram. The reason is that a change in the balance of feedback received by the system will see a change to the behaviour of the system. For example a stable system is dominated by negative feedback. If that changes, and positive feedback comes to dominate in the system, then that system may destabilise. It may also come to show oscillating, chaotic, or evolutionary behaviour. Likewise, where an unstable system begins to produce a predominance of negative feedback the system may stabilise. By studying the feedback produced within the system a researcher should be able to categorise the system as showing one of these five behaviours. A predominance of negative feedback will always result in the first of the five behaviours, stability. However, a predominance of positive

feedback will result in any of the remaining four non-stable behaviours. An analysis of feedback is therefore the key to determining the stability or instability of a system which can now be defined as follows:

Stability occurs whenever the actors within a system introduce sufficient negative feedback to balance or overwhelm the positive feedback acting on the system. However, where positive feedback dominates the system this will have the effect of driving the system away from equilibrium into one or another form of non-stable behaviour.

In the case of the South African political system it would be possible to determine its stability or non-stability via a thorough analysis of the most important and influential actors or participants in the system, focused on whether their demands are being met by the system and therefore whether they are directing positive or negative feedback into the system. If such an analysis revealed a predominance of positive feedback it would be possible to conclude in an objective fashion, and supported by established theory, that the system was unstable or at risk of some form of non-stability. In having reached this understanding the main research goal of this chapter has been achieved as it is now possible to objectively identify the behaviour of a system as stable or non-stable, to determine the cause of that behaviour, and to argue that such behaviour may lead to a change of system.

2.6. CONCLUSION

The chief research goal of this chapter was to determine a non-subjective or non-pejorative definition of stability or instability and to house that definition within a theoretical framework that could be applied to a political system at a later stage. The chapter argued that such a definition could be extrapolated from complex systems theory which held that stability or instability originated from the relative degrees of negative and positive feedback acting on a particular system (Duggan, 2003: 60; and Harrington et al, 1999: 54).

The theory held that where a critical mass of participants sought to change a system, that system would be non-stable (Syvante and Brown, 2000: 69). This was regardless of the direction of the change or whether it was to the benefit of the system or its participants. Similarly, where a critical mass of actors sought to maintain the status quo,

this would result in a stable system regardless of whether it was an ethical or fair status quo and regardless of the means used by the actors to maintain that status quo. The chapter therefore found that determining the stability or otherwise of a political system could be done by identifying all the most influential actors in the system, determining whether they were drivers of positive or negative feedback, and then arguing which form of feedback was dominant.

The implications for the study of stability and instability within political systems are significant. If this theoretical basis can be applied to a political system then it will no longer be necessary to base analyses of political stability or instability on outwardly and subjectively observed features such as financial crises or violent revolutions. Rather a far more objective and theoretically sound assessment of political stability or instability can be made by studying feedback patterns and then accounting for the balance of positive or negative feedback at work within a political system. Therefore statements about the relative stability or instability of a certain political system can now be described as the product of sound and impartial scientific method. Conclusions based on such an approach will carry significantly more credibility and academic weight than those based on the outwardly observed features of such a system. The complex systems theoretical basis of this study therefore means that its eventual conclusions about the stability or instability of the South African political system cannot be open to argument or contrary opinion unless that opinion is grounded in a rejection of complex systems theory itself. However where the theory is accepted as sound the conclusions to which it inevitably leads must, by necessity, also be sound.

With this theoretical framework in place the next chapter of this study must apply the theory to political systems. A model will then be produced according to which it will be possible to determine the behaviour of a political system.

3. CHAPTER THREE: CONCEPTUAL POINTS OF DEPARTURE

3.1. INTRODUCTION

Having determined that stability in complex systems results from a balance of feedback it would follow that if a political system were a complex system, then stability or instability within a political system would occur for the same reason. The chief research goal of this chapter is therefore to apply the theoretical framework developed in chapter two to the concept of a political system in order to propose a model against which the stability or instability of a political system can be determined.

Reaching this chief research goal will require meeting five research sub-goals:

- The first is to define a political system in such a manner that it can be distinguished from other sorts of systems. Here the question must be answered of what it is about a political system that allows it to be classified as such and not, for example, as a biological or meteorological system.
- The second, following from the definition above, is to show that a political system qualifies as a complex system. It will be necessary here to show that a political system features the characteristics common to all complex systems.
- The third research sub-goal will then be to define a complex political system in terms of these characteristics. This will involve applying the definition of a complex system developed in chapter two to the definition of a political system developed under the first research sub-goal above. This will result in a working definition of a complex political system that will be applied throughout this study.
- The fourth research sub-goal will show that a general definition of a complex political system may accommodate many different types of such systems. It is therefore necessary to determine those different types in order that the later scenario components of this study can show what the results of system instability may be for the South African political system. In other words, if the South African political system changes then from *what* to *what* may it change.
- The fifth research sub-goal will follow from the fourth. It will show how to determine the type and behaviour of a political system. Here it will identify three attributes according to which political system type can be determined and show how the balance of feedback acting on the system causes those attributes to change.

Collectively these five research sub-goals will allow the chapter to propose a complex systems model which will demonstrate how the actions of actors within the political system determine its type and behaviour or what this chapter will identify as its variant. In total the model will propose 20 such variants meaning that it will be able to diagnose political system type and behaviour in a uniquely high degree of detail. Developing this model is an important step for the study, as the model will later be integrated with a scenario methodology. This will lead to a hybrid metho-theoretical complex systems/scenario model via which the long term prospects for the stability or instability of the South African system will ultimately be determined.

3.2. IDENTIFYING A POLITICAL SYSTEM

Before it can be argued that a political system is a complex system a more basic problem presents itself. This is the problem of the grounds upon which a political system is identified as a political system and not, for example, as a social or biological system.

Chapter two cited examples of stock markets, organisations, ant-colonies, and plants as complex systems (Laszlo, 1972: 6). Despite all being complex systems, these are very different types of systems and are identified as economic systems, social systems, or biological systems and so forth. It is necessary therefore to identify why it is that we refer to some systems as political systems. There has to be some unique feature of these systems that allows us to distinguish them from other types of systems. A good starting point is to refer to established descriptions of such systems and to draw from these a set of characteristics which would define any political system.

3.2.1. Scholarly descriptions of political systems

Gabriel Almond's structural-functionalist descriptions of a political system are an example. Almond (1965: 184-191) and Faure and Kriek (1984: 544-545) describe a political system as a system containing a number of features including political socialization and recruitment, interest articulation, interest aggregation, political communication, rule-making, rule application, and rule aggregation. The latter three functions suggest something unique and important about a political system that this chapter will argue may distinguish it from other types of systems - the ability of the

system to generate rules and enforce these on participants within the system. This particular feature is prominent in other established definitions of such systems.

For example Harold Lasswell's (1950: 233-250) behaviouralist approach sees him argue that politics is the practice by which decisions are taken about *which* participants in a political system receive *which* benefits, *when* they receive them, and by *what method* they receive them. He goes on to argue that politics is therefore also the practice of deciding who is denied benefits and when and by what methods those benefits are denied. Following from Lasswell, if politics is the business of deciding who will receive and who will be denied benefits, then certain rules and procedures must be generated by the political system upon which such decisions can be based and enforced

David Easton's structuralist definition of a political system contains the same inference. Easton (1957: 383-387) describes a political system as a system in which values are authoritatively assigned. By values he means any asset or idea which actors within the political system would identify as being valuable to them. He argues that a political system responds to the demands made by actors within the system via decisions and policies that allocate valued things. As soon as a system is encountered that does not demonstrate the ability to assign valued things with authority then we can confidently say that we are outside of the bounds of a political system and are observing some other type of system.

Samuel Huntington's conservative institutionalist approach reaches a similar conclusion. Huntington (1968: 9 and 196) argues that that a political system depends in part on the degree to which "arrangements for maintaining order, resolving disputes, [and] selecting authoritative leaders" must be adhered to. His emphasis on authority in leadership of the political system lends support to Almond, Lasswell, and Easton's inferences of the same point. Where these arrangements fail, he says the system decays and may fall into disorder or collapse. It follows from Huntington that in order to exist at all a political system needs authoritative leadership.

3.2.2. The authoritative assignment of valued things as a defining feature of political systems

The authoritative assignment of valued things is therefore a common thread that runs through a diverse range of descriptions of political systems. This authoritative characteristic draws even more support from Robert Dahl. Dahl (1978: 194) makes the pluralist argument that a great number of actors contest resources in a political system. Therefore not all actors in the political system can access resources in response to every demand they make on the system. As a result he argues that mechanisms have to exist within the system to regulate demands and determine access to resources. Dahl (1984: 9-10) argues that it is therefore imperative that in order to regulate demands and access to resources a certain binding regulatory framework must be in place within a political system. It is further implicit that to be effective such a framework must carry a degree of authority.

Almond, Lasswell, Easton, Huntington, and now Dahl's descriptions of political systems therefore have two closely related features in common that distinguish such systems from other types of systems. The first is the capacity to generate rules that govern the behaviour of the actors in the system and specifically their access to resources. However, rules without enforcement would be meaningless. Therefore the second feature of a political system is the ability to enforce the rules that it creates and to make them binding on a significant number of the actors within the system. These two features distinguish political systems from biological, meteorological, economic, social and other types of complex systems and are therefore the key to a definition of a political system.

Critics of such a definition may, however, point out that laws are common to a host of biological, physiological, and economic systems. For example the laws of gravity and supply and demand exist within physical and economic systems. However, while there may be laws of nature that govern biological systems these are not laws that resulted from the interactive decision-making processes of actors or participants within the system. Neither do such systems have to enforce their laws. The participants within these systems really have no choice in whether they obey the laws. For example, in economic systems the law of supply and demand is not the product of an agreement between participants in the stock market. It is more akin to a natural law.

There may of course be some systems, such as social systems, where the lines distinguishing them from political systems may not be quite as clear. For example, in a herd of animals the alpha-male or female may enforce certain rules within the herd. But such limited exceptions should not be of any great concern. The definition of a political system should be flexible enough to accommodate any complex system wherein the actors make rules and the rules are enforced. There is no reason that the idea of political systems should be restricted to human society. The idea is in fact quite attractive of considering that troops of monkeys may be examples of lower grade political systems.

3.2.3. Defining a political system

Distinguishing a political system from any other variety of system therefore depends on being able to identify mechanisms or interaction that lead to the allocation of values and resources to the participants within the system. Where such an arrangement or attribute is visible, and carries a degree of authority, the system may be described as a political system.

For the purposes of this study a conceptual definition of a political system is any system in which the interaction of actors, in pursuit of demands, leads to the development of binding rules and procedures, determining which of those demands are met.

This resolves the problem of how to conceptually define a political system but it does not help in addressing the research sub-goal of defining a political system as a complex system. Hence, with the definition of a political system in place it is now necessary to go on and to argue that a political system is a complex system. Only then will it be possible to argue that stability and instability in political systems occurs as a result of the balance of negative and positive feedback at work in such a system.

3.3. COMMONALITIES BETWEEN POLITICAL SYSTEMS AND COMPLEX SYSTEMS

Chapter two established that a complex system has three characteristics. These include:

Chapter Three: Conceptual points of departure

- A large number of elements or actors, which interact with each other (Levanti, 2011: 31). These are the participants in the system and can take any form from people, to atoms, to organisations.
- An emergent characteristic (Allen et al., 2006: 299; and Kondraske, 2011: 236) whereby the system generates a result that is greater than the sum of its parts. The heat of a gas was cited as an example.
- Feedback loops that determine the behaviour of the system (Hurtado, 2010: 30; and Ellis and Herbert, 2011: 34). Positive feedback (Earnest, 2008: 7-8) would seek to change the system whereas negative feedback would promote its status quo (Jennings and Wattam, 1998: 31). Where positive feedback dominates the system it will show non-stable behaviour and change (Ward, 1995: 629). However where negative feedback dominates the system it will remain in the state in which it was originally observed (Allen et al, 2006: 299).

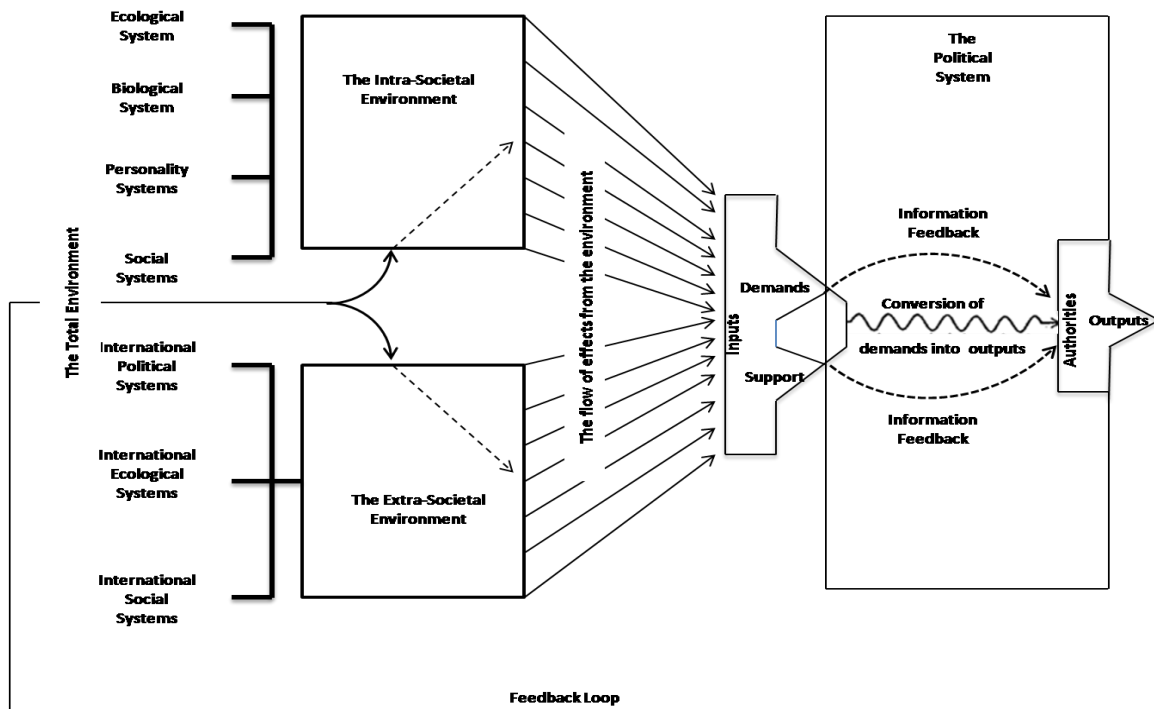
Following from these three characteristics this study defined a complex system as any system comprising an innumerable number of participants, whose participation results in outputs greater than the sum of their parts, and the behaviour of which is driven by opposing forces of positive and negative feedback. In order to be classed as a complex system a political system would need to demonstrate the same three characteristics.

3.3.1. Commonalities of actors

It is encouraging therefore that regarding the first characteristic, a political system does feature a great number of participants. David Easton (1965: 29-31; 1968: 75; and 1990: 4) for example identifies an environment populated by actors wherein the system operates as one of its main characteristics. Specifically Easton (1965: 30) holds that every political system exists in a total environment. This environment is made of what he describes as an “intra-societal environment” of ecological, biological, personality, and social actors and an “extra-societal environment” of international political and social actors.

A diagram of the Easton (1965: 30-32) model follows below:

Figure 4: Easton's model of a political system



Easton, 1965:30

Easton's intra- and extra-societal environments are broad enough to include a great range of participants. For example within the intra-societal environment it is possible to identify actors ranging from the government, political parties, law courts, civil society, businesses and investors, the media, and individual people. The extra-societal environment would, for example, include foreign governments, foreign investors, and foreign civil society groups, and the foreign media.

It follows from Easton that every individual living in the system is an actor in that system based on the demands they place on the system, the opinions they air, the movements or groups they join, the value they add to the economy, the goods they purchase, the sports teams they support, the children they raise, and the other participants they interact with. Nor does a participant need to live permanently within the system in order to participate in it. For example a foreign tourist making a decision to visit or not visit the system makes an impact upon it. So too obviously does the reporting of a foreign journalist, the trade, defence, and security decisions of foreign governments, and the investment decisions of multinational corporations. Beyond individual actors or participants in the system there are organisations, companies, political parties, civil

society groups, regulatory authorities, militaries, police forces, courts, legislatures, and churches. These are all examples of actors or participants within the system. These exist both within and outside the system but they all make an impact on the system by making demands on the system.

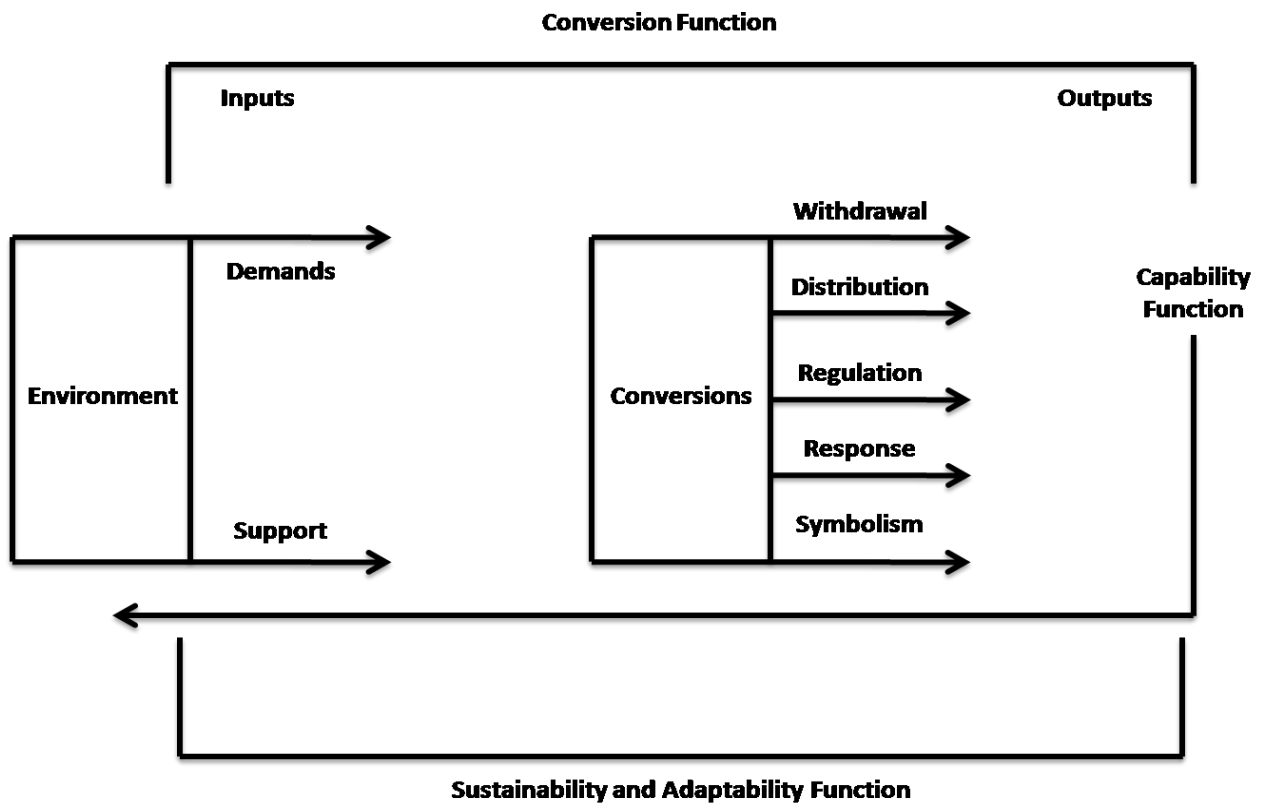
It is impossible that such a great range and diversity of actors could be quantified. In chapter two it was argued that complexity could be defined as a point at which it became difficult to list all the actors at work within a system. Therefore it must follow that a political system meets the first characteristic common to all complex systems.

3.3.2. Commonalities of emergence

In order to qualify as a complex system, it must be demonstrated that these participants in the political system interact to produce a result that is greater than the sum of their parts. This would be the proof that it shared the second, or emergent, characteristic of all complex systems.

This emergent characteristic can be identified in the regime or set of rules governing such a system. Easton's diagram shows how actors in the system interact with each other via injecting both supports and demands into the political system in pursuit of their interests and that this places stress on the system (Easton, 1965: 57-67). He further argues that the system seeks to overcome this stress via outputs of which policies and laws are common examples. In other words, Easton argues that the interaction of actors results in policies, rules, and laws which determine access to resources within the system. Similarly, Almond (1965: 192-212) describes a political system according to three functions that emphasise the interaction of actors in the system. The first is the capability function that determines the distribution and allocation of resources. The second is the conversion function that determines the relationship between the inputs and outputs of the system. The third is a system's sustainability function which recruits new actors into the system and, critically in terms of emergence, socialises those actors into complying with the rules of the system. A diagram of Almond's political system model follows below:

Figure 5: Almond's model of a political system



Source: Almond, 1965:212

The diagram shows how the interaction of actors in placing demands and support on the system determines access to resources within the system, which leads to new forms of interaction via the conversion and sustainability functions. Both that the system generates means of allocating resources, and that it socialises actors into accepting those means, is the proof of emergence as this is not a result that could be explained by the actors acting in isolation from each other. Likewise Dahl (1973: 4-5) argues that there is no society in which all the interest groups share the same political opinions. Different actors interact in competition with each other in making demands on the political system. It follows from Dahl that mechanisms exist to determine access to valued things. These mechanisms imply a set of overarching rules, procedures, and guidelines that determines those mechanisms.

All three authors therefore suggest the presence of an overarching set of system rules, or what is commonly referred to as a regime, resulting from the interaction of actors in the system. Krasner (1982: 185) defines such a regime as “the set of principles, explicit or implicit, norms, rules, and decision making procedures”. Haas (1983: 191-193)

defines the principles described by Krasner as “beliefs of fact, causation, and rectitude”. Norms he defines as “standards of behaviour defined in terms of rights and obligations”. Procedures he defines as “the prevailing practices for making and implementing collective choices”. A number of other authors have provided similar definitions. Sengupta (2004: 5101) refers to a political regime as “the entire constitutional framework of a country”. Siverson and Starr (1994: 149) describe a regime as the “rules by which government is accomplished”. Gale (1998: 252) defines a regime as “a set of mutual expectations, rules and regulations, plans, organisational energies, and financial commitments”.

These rules originate from the interaction of the actors within the system. There is no other way to explain their nature and existence. In the South African political system these rules reflect what the Constitution allows. That Constitution itself is the product of extensive interaction of a diversity of actors over the period of South Africa’s constitutional negotiation. In addition, those rules continue to be tested and adjusted, both through policy and law-making on the part of the government and constitutional challenges on the part of a range of other actors in the system. It follows therefore that the regime applicable to any political system, just as in the case of South Africa’s Constitution, is a product of the dynamic interaction of actors and could not have come into operation through each actor acting in isolation from the rest. Such a regime is therefore the ultimate manifestation of the emergent characteristic of a political system.

3.3.3. Commonalities of feedback

Having qualified on the first two measures of what it takes to be a complex system a political system now needs to qualify on the third measure, of being driven by feedback, in order to qualify as a complex system. Feedback has been defined in chapter two as the demands that participants in a complex system place upon the system. Hence, if there is evidence that the actors within a political system make demands on that system, and that some of these seek to maintain its status-quo while others seek to change it, then it can be concluded that a political system is indeed a complex system.

There is substantial evidence of such feedback in operation within political systems. A reading of Almond, Easton, and Dahl above establishes that while many of their ideas were conceived before the rise of complex systems theory, the concepts of positive and

negative feedback are implicit in their arguments. For example, the Almond diagram uses the terms demands and support to illustrate actor input in the political system. By substituting Almond's use of the term demands for positive feedback, and his use of the term support for negative feedback, it is possible to argue that Almond is indirectly describing characteristics of a complex system.

Dahl (1973: 5) too indirectly described characteristics in political systems akin to positive and negative feedback. He writes that in political systems, not all actors place the same demands on the system. Rather the diversity of actors leads to a diversity of contradictory demands. From a complex systems perspective the argument he makes is that no system will be dominated purely by positive or negative feedback. Governments, he argues, cannot respond to all these demands and therefore require mechanisms to choose which demand they will respond to. He continues that governments therefore require mechanisms to decide which demands they will respond to in order to secure the longevity of a political system. In other words the government responds to that feedback via outputs that should be expected to be directed towards introducing negative feedback into the system and so ensuring the longevity of the government.

Finally Easton (1965: 30) expressly uses the term feedback in demonstrating how actors respond to the outputs of a political system. Where actors are satisfied with such outputs they would lend more support to the system – akin to negative feedback. However, where they are disappointed with the system's outputs they would make what Easton describes as demands on the system – a form of positive feedback.

Electoral outcomes are an obvious example of feedback in a political system. Lobby groups, such as the land reform activists, that seek certain policy concessions are a second example. A third example can be found in the phenomenon of public protest via which a group of actors demand that a government, corporation, or other actor acts in a certain way. There are a great many more examples. For example, when an investor commits money to a project in the political system he would first demand a stable investment environment and then demand a return on that investment. Likewise, when an investor withdraws an investment he is making a demand on the system to say that it should become a more competitive investment environment. Further examples could

stretch to the extremes of political interaction such as civil war or terrorism. These are all examples of how actors direct feedback at the system in pursuit of their demands.

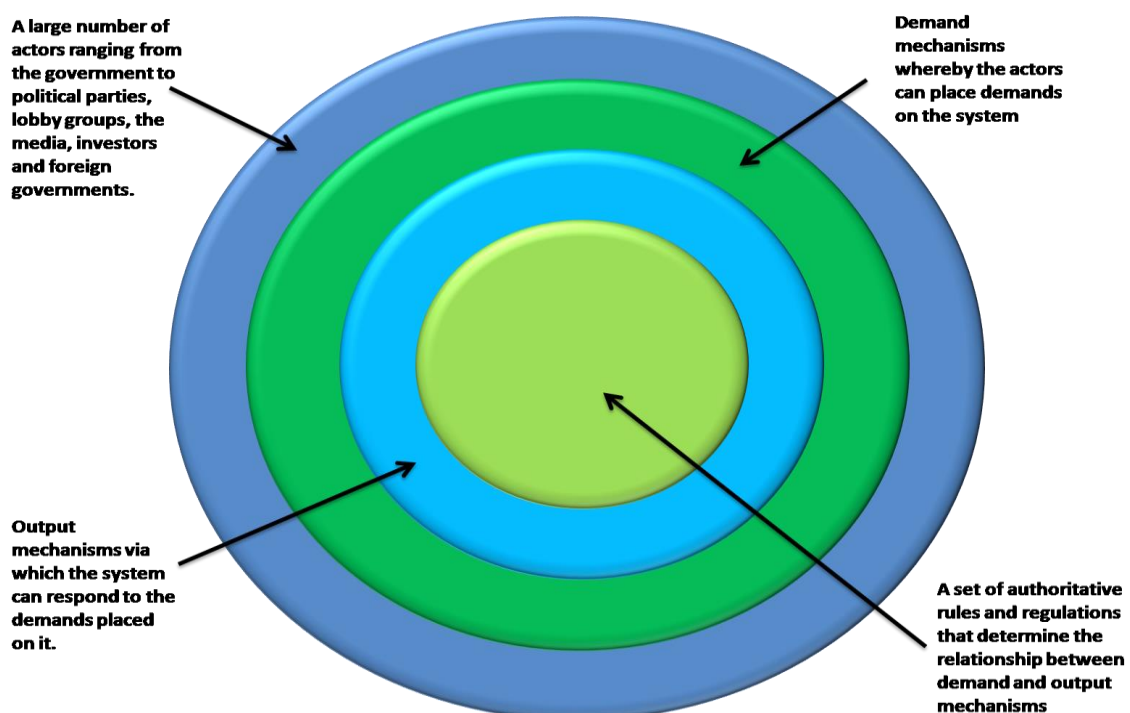
This feedback will also have negative and positive elements. For example, when an electorate returns a government to power, that would be an example of negative, system stabilizing feedback. However, when an investor withdraws investment this would be an example of positive feedback that will promote change in the system.

In having qualified on all three characteristics common to complex systems this means that stability or instability within political systems can be studied from a complex systems perspective. However, before that can be done it is first necessary define a complex political system as a basis upon which to build the model of stability and instability within complex political systems.

3.4. DEFINING A COMPLEX POLITICAL SYSTEM

While a political system shares the same three characteristics as all complex systems the unique manner in which the regime determines rules and procedures within a complex political system suggests that such a system actually has four characteristics. These are captured on the diagram as shown below:

Figure 6: The four characteristics of a complex political system



The outer circle represents this **first** characteristic as a wide array of actors or participants who can be positioned both inside and outside the system. The actors have interests and act to meet those interests by placing demands or feedback onto the system. The **second** characteristic is represented by the second circle and is a series of mechanisms that these actors use to place those demands or feedback onto the system. These mechanisms would include elections, independent organisations, courts and the like. These mechanisms can differ greatly from one system to the next. Depending on the type of feedback carried by these mechanisms, they may promote either change or equilibrium in a political system. The **third** characteristic of a political system, represented by the third circle, is the output mechanisms via which the system responds to the demands placed upon it. These can often be identified as the policies of the government and should be expected to promote negative system-stabilising feedback. The **fourth** characteristic, at the centre of the diagram, is unique to political systems. It is an overarching set of rules or procedures that can be described as the regime of the system and determines the nature of the demand and output mechanisms and how accessible these are to actors within the system. This regime is a constantly-evolving product of the interaction of actors in the system.

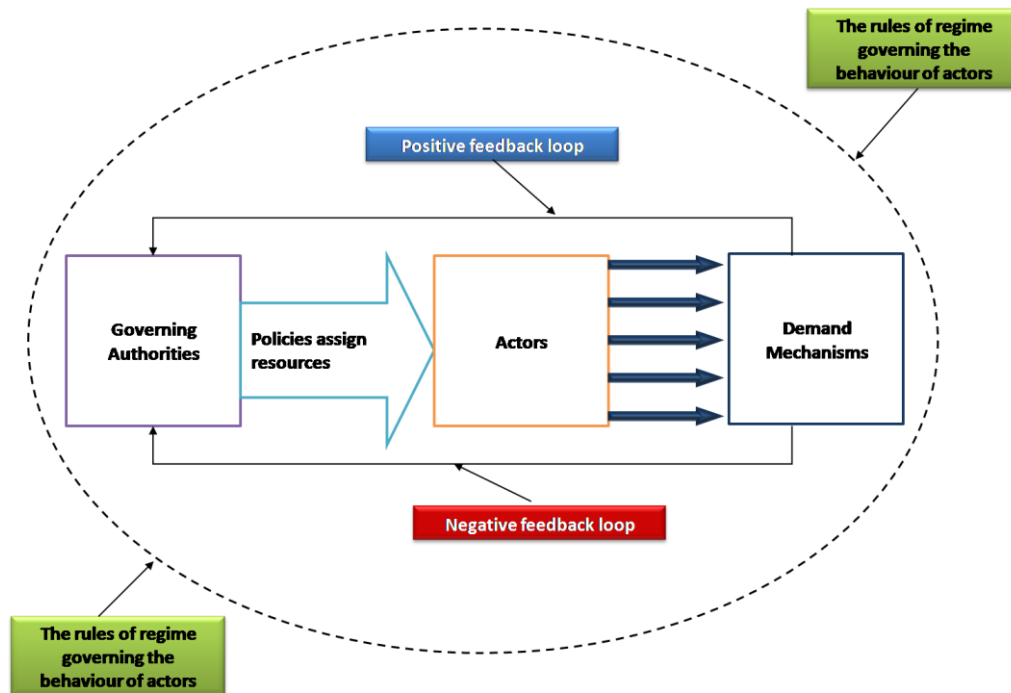
3.4.1. A working definition of a complex political system

From these four characteristics it becomes possible to define a complex political system as follows:

A system featuring an innumerable number of participants, who pursue demands via feedback mechanisms, that result in the authoritative assignment of resources according to a set of constantly evolving rules and procedures, and the stability of which is determined by a balance of feedback.

A diagram of a complex political system is set out below to reflect this definition:

Figure 7: Diagram of the workings of a complex political system



The diagram shows the governing authorities as a box on the extreme left of the system. The broad arrow leading out of this box represents the outputs or policies of the system and how these assign resources to actors in the system. The actors in the system receive these outputs and each group of actors reacts to them by placing new or different demands on the system via feedback or demand mechanisms. These feedback mechanisms then result in two feedback loops leading back to the governing authorities. The top loop promotes positive or systems-changing feedback. The bottom loop promotes negative feedback. The authorities in turn react to this feedback via outputs and this constant interaction drives the system. The dashed oval that surrounds the system represents the regime or rules under which it operates.

For example, in the South African political system the outputs of the government would include its land reform policies. Land owners and land reform activists would 'receive' these policies. They would respond to them via the feedback loops. Feedback from the farmers seeking to maintain the status quo would run along the negative loop while that from the activists seeking to expropriate land would run along the positive loop. These would run back into the government, which would then respond to them via policies. If the outputs or policies of the government promote increasing positive feedback, this will eventually overwhelm the negative feedback and the system will destabilise and

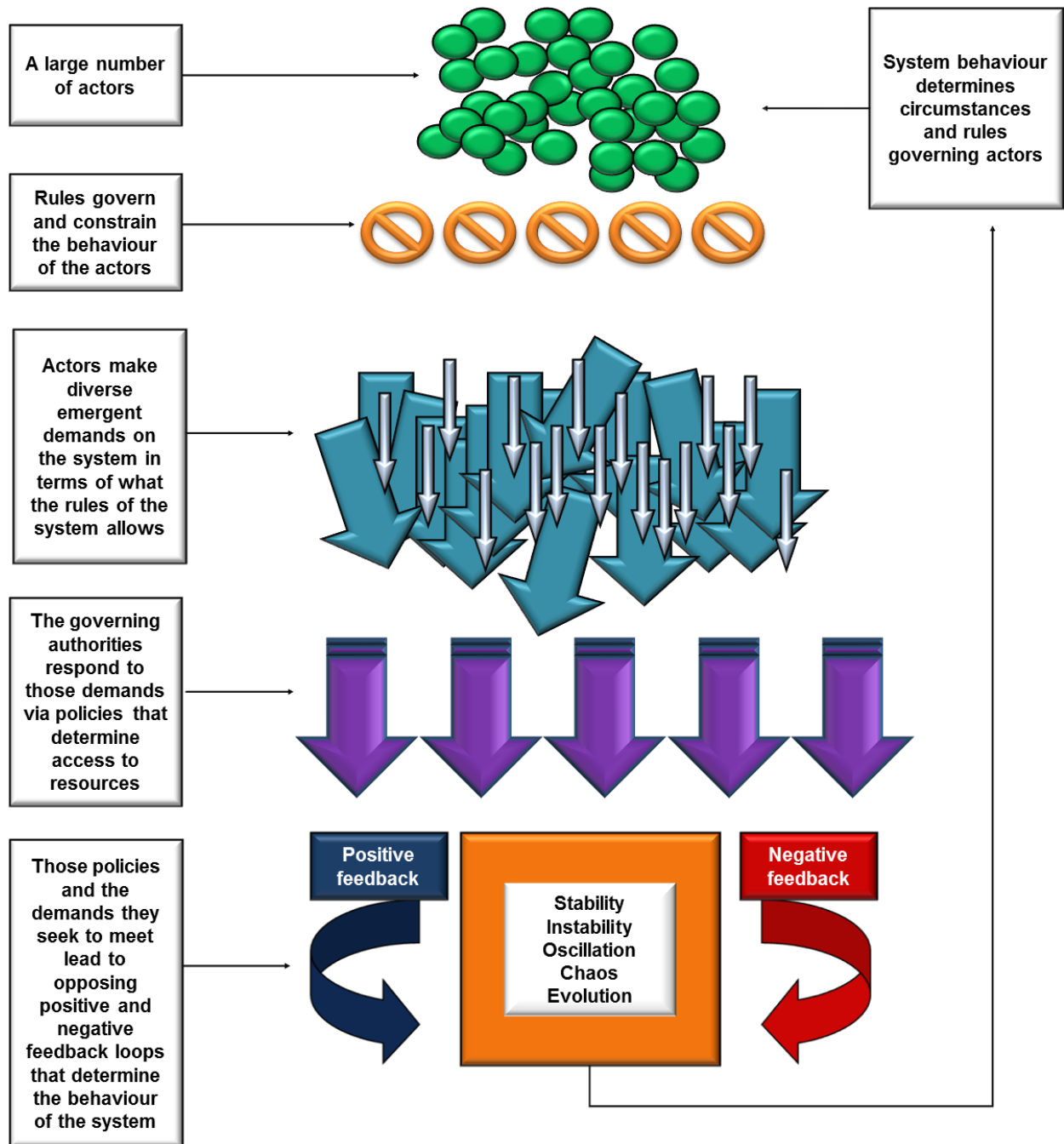
Chapter Three: Conceptual points of departure

change. However, if the policies manage to promote negative feedback then the system status quo will be maintained and it will remain stable.

This study will extrapolate this model beyond the example of land reform policy to incorporate all major areas of policy in seeking to determine the stability or instability of the political system. This will be done by first looking at the participants in the system to identify their demands and then looking at how the Constitution allows them to place those demands on the system and how the government responds to their demands via policies. By describing the resultant feedback as promoting either a predominance of positive or negative feedback, it will be possible to argue that the system will remain stable or may destabilise.

For example, the complex systems diagram presented in chapter two, as an example of the workings of a typical complex system, can now be amended to represent the workings of a complex political system. The diagram (below) shows the actors in the political system as the clustered dots at the head of the diagram. Their ability to make demands on the system is constrained by the rules of the system represented by the restricted signs below the dots. The diagram then shows how these demands are responded to by the governing authorities of the system in terms of the policies they make. These policies determine access to resources in the system. The response to those policies, by actors in the system, determines the balance of negative and positive feedback in the system and hence its behaviour. This behaviour in turn determines any change within the system and hence the circumstances confronting those actors and therefore the demands they make. This cycle is in constant operation.

Figure 8: Process and behaviour in a complex political system



Where negative feedback dominates the system it will remain stable and will not change. However, the diagram above shows that a predominance of positive feedback will result in non-stable behaviour and systems change. However, it has not yet been explained what change for a political system could entail. This study therefore needs to produce a classification of political system types in order to be able to indicate the likely consequences of unstable behaviour confronting the South African political system in the period to 2024.

3.5. CLASSIFYING TYPES OF POLITICAL SYSTEMS

That the system may destabilise and change raises the question of from *what* to *what* can a system change. There must therefore be different types of political systems. This study has already shown that a complex system changes as a result of a predominance of positive feedback leading to system instability (Earnest, 2008: 7-8). It has also been shown in this chapter that change in a political system will occur for the same reason. Hence, where a political system is seen to demonstrate a predominance of positive feedback it must be expected that it will destabilise and change. If, for example, the South African political system is later shown to be unstable the scenarios will have to indicate how such instability may cause the system type to change. To answer the question the study needs to develop a series of units of analysis or measurement with which to measure political change. Ideally such units of analysis should have the capacity to distinguish one political system from another, as well as the ability to track the change process within a political system over time.

One idea might have been to use the four characteristics of a political system to determine its type. However, this would not work as these characteristics are common to all political systems and yet there are many different types of political systems. There are closed autocracies such as North Korea. There are communist dictatorships such as Cuba. There are constitutional democracies such as the United States. While each of these will feature each of the four characteristics identified as common to all political systems they clearly differ in terms of the type of system they represent. Identifying the four characteristics of a political system does not help in determining the type of system. It is necessary to find a framework of analysis, over and above those four system characteristics, with which to determine political system type.

3.5.1. Aristotle's typology of a political system

A number of authors have sought to provide such frameworks over a period of literally thousands of years. Aristotle, for example, identified six types of political systems (Dahl, 1984: 64). These included a kingship or a system ruled by one benevolent individual. Second was an aristocracy or a political system governed by a small number of virtuous individuals. Third was an oligarchy ruled by a small number of wealthy individuals. The fourth was a tyranny, which was the opposite of a kingship. The fifth was a democracy.

The sixth was a polity as a combination of the better elements of both an oligarchy and a democracy, in which the extremes of those two systems were moderated.

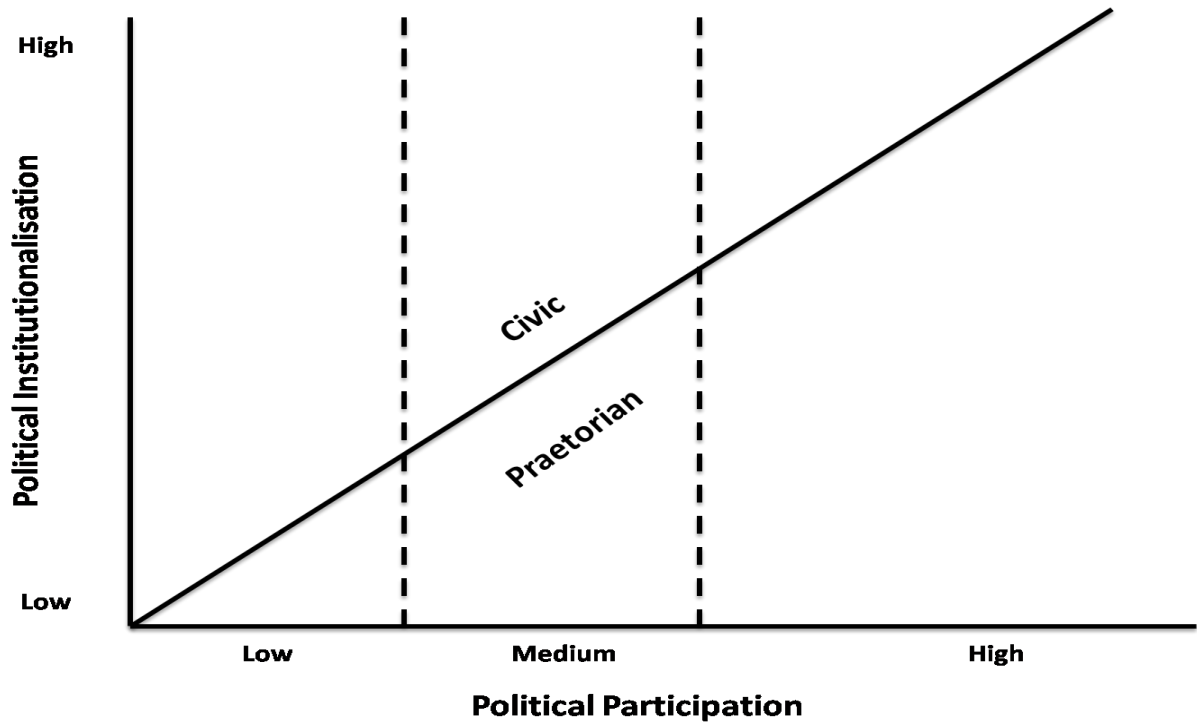
3.5.2. Huntington's classification of a political system

A considerably more recent attempt at providing such a classification is that of Samuel Huntington. Huntington (1968: 1-8 and 25) identifies two factors as important in determining the type of a political system. The first is the extent to which actors seek to participate in political affairs. The second is the ability of institutions to handle that participation. Societies with high levels of participation relative to institutionalisation² he defines as praetorian systems. Huntington (1968: 196-198) argues that these systems lack effective political institutions capable of managing group political contact. In such a system there is very little evidence of social forces or politics for the public good. Politics in such a society may be as crude as "a struggle among personal and family cliques". Increased political participation in such a society therefore increases social tensions. Huntington argues that in praetorian systems stability "varies inversely with political participation" to the point where the polity disintegrates, creating political chaos. These systems are shown on the lower section of the following diagram:

² In terms of institutionalisation Huntington (1968: 12-24) argues that participants make demands on the political system in as far as the political institutions allow. He argues that the extent to which participants can make such demands on a political system depends therefore on the degree to which it is institutionalised and defines institutionalisation as "the process by which organisations and procedures acquire value and stability". He also argues that the effectiveness of these institutions is further informed by the "degree of support" they enjoy from within the political system. Hence only where a demand mechanism has value and stability in the society and the support of that society can it be effective in articulating the demands of participants in the political system. He cites four criteria to determine this degree of institutionalisation. These are the "complexity, autonomy, adaptability, and coherence" of its organisations and procedures.

- Complexity means the degree to which specialized organisation exists. In other words the degree to which the demand mechanism is specialized to deliver a particular type of demand. For example a court is specialized in delivering certain kinds of demands while the media will be specialized in a different way.
- Autonomy refers to the extent to which these institutions act independently of a particular interest group. In the case of the media or the courts this would require these two forms of demand mechanism to exist independently of the executive, for example, or of powerful interest groups. Where this does not happen and the independence of the courts, for example, is eroded there are many examples of how these become less effective as demand mechanisms.
- Adaptability implies the ability to adapt to a changing environment. Protests are a very good example in the South African context. Whereas such demand mechanisms were used extensively during apartheid they have recently re-emerged as a mechanism to direct demands at the democratic government.
- Coherence means the extent to which the actions of different organisations and institutions are coordinated and leverage each other to ensure a maximum level of effectiveness. For example if participants in the political system were able to use the courts and the media collectively to pursue their land reform demands this would qualify as a coherent set of demand mechanisms.

Figure 9: Huntington's diagram of the workings of a political system



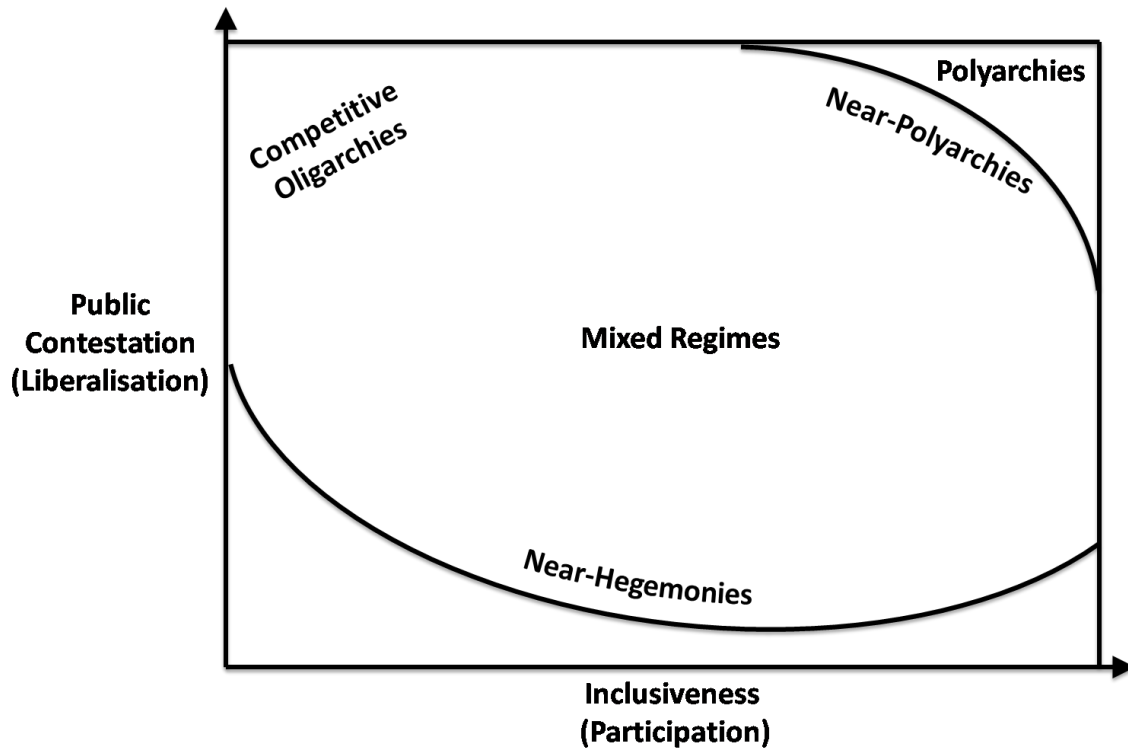
Source: Huntington, 1968:79

The upper section of the diagram shows that Huntington defines societies with high levels of institutionalisation relative to participation as ‘civic polities’ (Huntington, 1968: 80). These systems are the opposite political extreme of the praetorian system. Furthermore, Huntington (1968: 197) argues that in such a system political leaders “expand their loyalties” beyond a single social group to the political institution as a whole. In civic polities more political participation strengthens stability in the polity and reduces tensions.

3.5.3. Dahl’s classification of a political system

Dahl (1973: 2-3) suggests three types of political systems. He proposes a scale with two axes against which the type of political system can be plotted. The first axis measures the extent to which institutions such as elections or courts are openly available and publicly employed to contest the behaviour of the government. The second measures inclusiveness, which Dahl defines as the extent to which adults are able to participate in the political life of the society. A diagram of the Dahl (1973: 3) classification follows below:

Figure 10: Dahl's system type diagram



Source: Dahl, 1973:3

The first type of system identified by Dahl, that should be found in the lower left quadrant of the diagram, is a hegemony (1978:191) where public opposition to the government, its policies, and ideologies is strongly suppressed and organised dissent prohibited. The second he defines as a political system that employs the fewest constraints on political opposition, organisation, or representation - these systems he calls polyarchies. The diagram shows that in Dahl's polyarchy there are both high levels of political participation and the mechanisms for such participation to take place. The third type of political system is a mix of both polyarchy and hegemony or what he calls an "intermediate system or mixed regime". If an intermediate system has more attributes of a polyarchic or hegemonic system, then the diagram shows that he terms it a near-polyarchy or near-hegemony.

3.5.4. Distinguishing between open and closed political systems

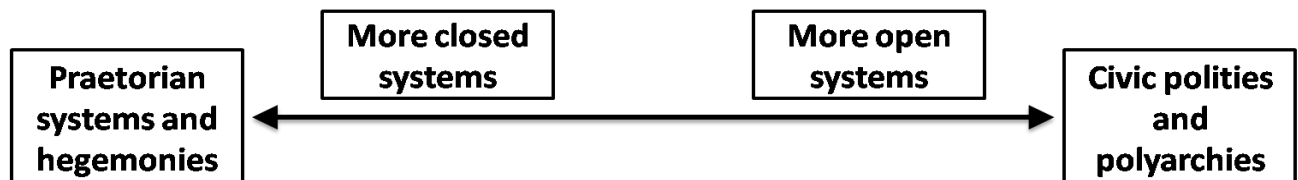
Dahl's and Huntington's models distinguish between two generic forms of political systems. The first is the closed undemocratic system (the praetorian system or hegemony) and the second is the open democratic system (the civic polity or

polyarchy). From Dahl and Huntington it is possible to define closed and open political systems as follows:

A closed political system is one with limited or severely restricted access to demand mechanisms. An open political system can be defined as one in which there is a proliferation and broad access to such mechanisms.

These definitions present a straight line spectrum from least to most open or democratic and have placed societies at some point along this spectrum. Where a particular system fits on this spectrum depends on the extent to which its actors seek to participate in politics and the extent to which this is permitted.

Figure 11: Straight line spectrum between open and closed political systems



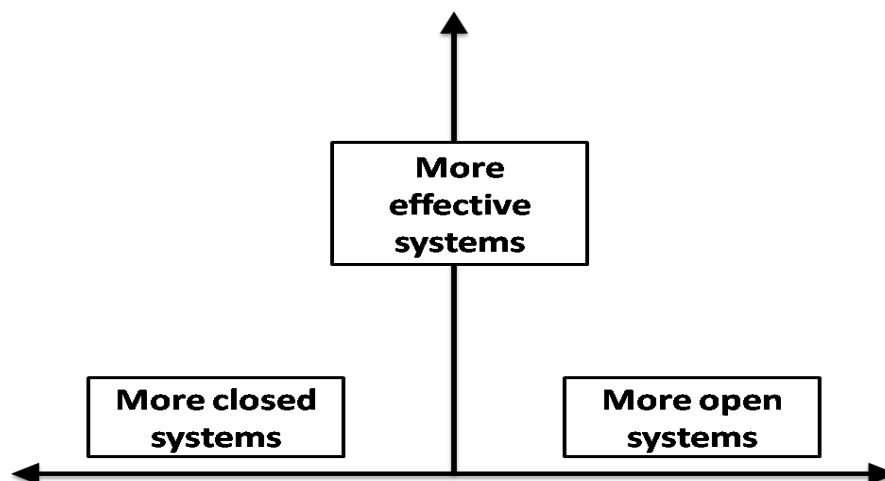
3.5.5. Distinguishing between effective and ineffective political systems

There is however a third element, in addition to the open or closed nature of the system, that is important in determining the type of political system. This is the extent to which it is effective in meeting the needs of its actors. Critics might hold that this distinction cannot arise as economic development should automatically lead to political openness.

However, Huntington (1968: 1-2 and 32-39) challenges the premise that economic and political development are mutually reinforcing. He rather argues that economic advancement may spark political decay. He argues that this may happen where the increased demands for participation in political affairs resulting from economic advancement are not matched by the degree of institutionalisation. The inference is that order and stability carry a higher degree of importance than political freedom in determining the effectiveness of a political system. To emphasise this point Huntington quotes Walter Lippmann writing in the *New York Herald Tribune* of 10 December 1963 that "There is no greater necessity for men who live in communities than that they be

governed, self-governed if possible, well governed if they are fortunate, but in any event governed". It would follow from Huntington that even closed undemocratic societies, the antitheses of the liberal democracy, may be highly institutionalised and may act in the public interest. The converse would also be true that liberal democracies may fail to act in the public interest. Huntington's argument has over the past decade been strengthened by the presence of the Chinese political system that is closed and undemocratic but has made significant progress in improving the living standards and incomes of actors within that system. There are other prominent examples such as South Korea in the 1970s, which was a closed political system but demonstrated phenomenal economic performance and secured a vastly improved standard of living for its people. Other examples would include Hong Kong and Singapore. The existence of such political systems questions the importance of the liberal economic ideal, of open democratic government, as a prerequisite for economic development. If economic development can be taken as an indicator of the ability of a political system to meet some of the demands of its actors, then even relatively closed systems can be effective systems. A straight-line spectrum between open and closed political systems is an inadequate model to use in determining the type of political system. Rather a third, tangential line should be added to that spectrum to measure the relative effectiveness of the system.

Figure 12: Open and closed political systems with tangential effectiveness line



In being a closed but effective political system, China needs to be classified as a different type of system from North Korea, which is a closed but ineffective system.

Likewise since 2008 a number of open societies, most notably democracies in Western Europe and North America, have been dogged by financial crises as they failed in meeting the demands of their actors. Greece, for example, needs to be classified as a different type of system from Germany even though both are open democracies. There are therefore examples of relatively effective closed systems and relatively ineffective open political systems. What this suggests is that as a political system destabilises and begins to change, that change could take place in terms of the system becoming more open or closed and/or more effective and ineffective. This realisation is the key to determining the units of analysis necessary to distinguish one system from another and to measure change within political systems.

3.6. DETERMINING THE TYPE OF POLITICAL SYSTEMS

As political systems can therefore be distinguished from each other both in terms of being *open* or *closed* and *effective* or *ineffective* it is necessary to be able to measure this openness or closedness and effectiveness or ineffectiveness in order to determine the type of a political system. That in turn requires that these features be presented as a set of measurable attributes of which this study will suggest there are three.

3.6.1. The presence of demand mechanisms

Following from the work of Dahl and Huntington above, the most important attribute of whether a system is open or closed is whether it features a proliferation of feedback mechanisms via which actors can direct feedback into the system. In a political system elections are an obvious example of such a mechanism. Actors can vote in an election for a particular candidate or party based on the interests that the actor would like to see advanced. If they vote to return a government to power they may be introducing negative feedback into the system. If they vote a government out of power they will be promoting change in the system. Feedback mechanisms within a political system therefore include any mechanism via which participants in the system can seek to change the system or maintain its stability. Such mechanisms could therefore include everything from law courts to the media and the investment decisions of corporations.

It is tempting to think of these feedback mechanisms as being present mainly in what might be described as democratic societies. This is certainly true of what might be described as conventional feedback or demand mechanisms, such as elections, courts,

and the media. However even in relatively dictatorial societies, those that seek to prevent the proliferation of demand mechanisms, there will always be a certain level of access to what might be described as unconventional demand mechanisms. Mass political protest or civil disobedience campaigns are an example of these mechanisms. Extremist groups may resort to violence and terrorism in order to direct feedback into the system. Foreign governments may use mechanisms such as trade embargoes, sanctions, or aid in order to place demands on a political system.

Despite being unconventional, each of these mechanisms may rank relatively highly on Huntington's (1968: 14) four measures of institutionalisation, namely "complexity, autonomy, adaptability, and coherence". Civil disobedience campaigns may be extremely complex. By virtue of operating outside the bounds of what the state may allow, they are wholly autonomous. To exist at all, they must be able to adapt to an often hostile and certainly restrictive environment. To be effective, they obviously demand a high level of coherence. Further, where they exist on a large scale, they undoubtedly carry a high degree of public support. A reading of 20th century history will show how effective these unconventional demand mechanisms have been in prompting political change in those systems where more conventional mechanisms were unavailable.

Demand-mechanisms therefore include any mechanism via which an actor is able to exert feedback on the political system in order to pursue his or her interests in that system. If these are present in a system then it may be an open system. If these are restricted then it is more likely to be a closed system. Hence the proliferation of feedback mechanisms is the first attribute necessary to determine the type of political system. However, to be classed as an open society requires more than a proliferation of demand mechanisms. What is also important is that these are freely accessible to the great majority of actors in the system. For example, some societies feature feedback mechanisms that are only accessible to a small elite in that society. South Africa's neighbour Zimbabwe is a case in point. It has a judiciary, media, and even elections. Yet no informed analyst would describe it as an open society. The reason is that its institutions would perform poorly when measured against Huntington's criteria for institutionalisation. The judiciary in Zimbabwe is far from independent, the media is often state-controlled, and there is much informed speculation that the government

cheats in order to win elections (Freedom House, 2012: Internet Source; and Guardian, 2008: Internet Source).

3.6.2. The availability of demand mechanisms

The second attribute of a political system is therefore whether feedback mechanisms are equally accessible to a significant majority of actors in the system. In an open political system, feedback mechanisms such as elections, courts of law, political parties, and the media will apply equally to most actors in the system. In less open societies, there may be limits on access to such mechanisms or these may often serve a small ruling clique or elite. Whether these demand-mechanisms are accessible to a majority of actors will hinge on the prevailing regime within the political system.

However, even in closed systems there will still be other feedback-mechanisms via which actors can exert pressure or make demands on the political system. In extreme cases these mechanisms may include violence and terrorism. However, lobby groups, foreign diplomatic pressure and investor boycotts are all feedback mechanisms. Thus even in closed, undemocratic systems, a significant number of actors may still have limited means of directing feedback into the political system.

It is also tempting to think that open societies are effective societies and that closed societies are ineffective in meeting demands from actors. However, it was shown that contrary to classical liberal, political and economic thought, there are now examples of closed societies that are very effective in meeting the demands of participants in their political systems. The example was made of China. Hence, in addition to there being open and closed political system types, each of these types can be further disaggregated in terms of whether they are effective or not in meeting the demands of their participants.

3.6.3. The effectiveness of a political systems

What then is the measure of effectiveness? To be universally applicable, the measure must be an objective standard and must rest on indicators common to the great majority of political systems. Secondly, the measure must be applicable to all types of political systems at all levels of political and economic development and advancement. Here there are a number of universal indicators with which effectiveness can be determined

as they reflect demands that are common to actors across a range of types of political systems. It is plausible, for example, that actors across a range of political systems would regard their income, living standard, health, security, and education status as indicative of the effectiveness of the political system they were a part of. These are socio-economic demands that would be common to the great majority of actors across all political systems. Hence, a quantifiable and universal measure of effectiveness can be found in measuring the relative socio-economic status and socio-economic trends as they apply to actors in different political systems. Systems that demonstrate relatively higher status and/or progress in improving these indicators could be classed as being relatively effective. Systems demonstrating relatively poor indicators and little prospect of an improvement in indicators could be classed as ineffective systems.

While it is often implied that open political systems are innately effective in meeting the demands of their actors the measure of effectiveness proposed above means that socio-economic status is accorded greater priority than individual liberty or human rights in measuring the effectiveness of a political system. The implication is that this definition allows for closed states to be effective and for open states to be ineffective. This position would be in line with Huntington (1968: 80) arguing that effectiveness hinges on institutionalisation. Of course, this is not to say that a liberal democratic system of government cannot be highly institutionalised or effective. Rather it is to say that even relatively closed systems of government can be effective in meeting the demands of their actors, even in cases where those actors have only limited mechanisms with which to articulate those demands.

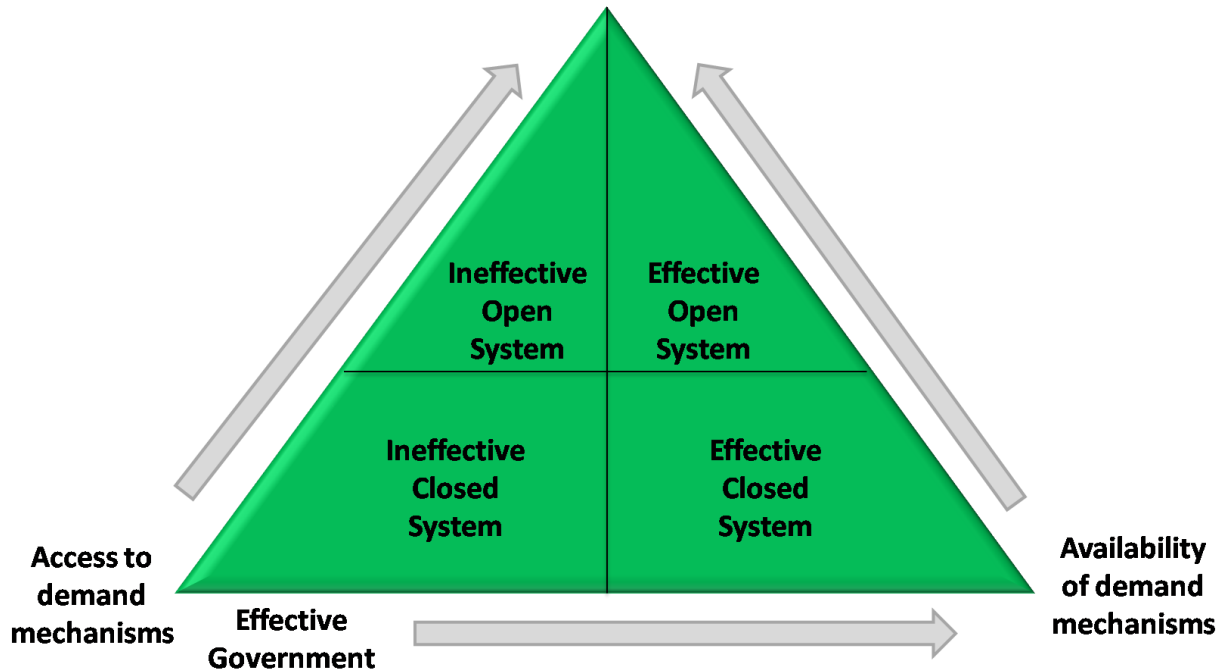
Effectiveness therefore becomes a third attribute in gauging the type of political system. Such effectiveness is not dependent on whether it is praetorian or civic polity after Huntington or a polyarchy or hegemony after Dahl. It is dependent solely on its performance in meeting socio-economic demands.

3.6.4. A model to determine system type

These three attributes can be used to determine the type of a political system as set out in the diagram below. The diagram is built around three axes. Each of these axes represents one attribute of the system. By determining the position of a political system on each axis its type may be determined as one of four different types. The four types

suggested by the diagram therefore become four initial units of analysis that allow one political system to be distinguished from another.

Figure 13: Triangular systems type diagram



For example, on the diagram the first type of system (in the lower left corner) is the ineffective closed system. In this system there are limited demand or feedback mechanisms and equally limited access to the mechanisms that do exist. That government is also relatively ineffective. North Korea would be an example of such a political system. The second is the effective closed system. As in the first system this system features limited demand mechanisms and there is limited access to the mechanisms that do exist. However, it differs from the first system in that it is effective in meeting many of the socio-economic demands that its actors place upon it. China and South Korea of the 1970s would be examples of such political systems. The third is the ineffective open system. This system features a proliferation of demand mechanisms. These are accessible to most actors. However, despite this, the government is ineffective in meeting the socio-economic demands of its actors. It may be argued that the United States during the sub-prime crisis showed elements of such a system when unemployment and debt levels rapidly accelerated. Political critics of the ANC often represent South Africa as such a system. The fourth is the effective open system. This system also features strong demand institutions and these are freely

accessible to most actors in the society. The system is also highly effective in meeting the socio-economic demands of its actors. Present-day South Korea or Canada or Germany would be examples of such a system.

The diagram is clear that in order to be classified as an open system, there should be both a proliferation of demand mechanisms and widespread access to such mechanisms. It is not good enough simply to demonstrate the one or the other. Hence a system with a proliferation of such mechanisms but with limited access to these is still a closed system. Likewise, a system with limited formal demand mechanisms but growing access to mechanisms such as civil insurrection must still be classified as a closed system.

The feedback received from actors in the system will determine changes along each of the three axes of the diagram. By tracking changes along these three axes a researcher would be able to diagnose and explain the reasons for change taking place within the system. For example if the feedback received by the system causes it to become more effective, then change will be observed along the effectiveness axis. Likewise if the government responds to increasing positive feedback by cutting off access to feedback mechanisms or doing away with those mechanisms entirely, then change will be observed along the two demand mechanism axes. Change could also be observed along all three axes simultaneously.

That feedback may bring about change to the political system raises the question of whether there are certain types of system that are particularly vulnerable to change. It is worthwhile here to refer briefly to literature on state strength and weakness in order to place the triangular model within that prominent political debate. Certain definitions of state weakness, failure, and collapse originate from the ability of the state to meet the demands of its actors. Rotberg (2004: 1-10), for example, describes weak states as those unable to deliver “positive political goods to their actors”. Such a definition would easily be reflected in the left two quadrants of the triangle that describe states unable to meet actor demands. He also describes failed states as those unable to exert authority over their actors. This definition could not relate to the lower quadrants of the model as here the state has so eroded demand mechanisms that it can govern with impunity. This latter definition could only possibly relate to the upper two open quadrants of the model where system actors have the means to exert demands that overcome the

absolute authority of the state. Any definition³ of a weak state that relies both on its inability to meet actor demands and its inability to exert control over those actors could only apply to the upper left quadrant of the diagram. In this quadrant the state fails to meet actor demands and those actors have the means to remove it. This obviously places the state in a position of weakness that may lead to the collapse of that state.

Hence, any effort to track the diagram back to notions of state weakness and collapse should distinguish clearly between states that fail to meet actor demands, and states that fail to exert authority preventing actors from expressing those demands. Only where both these conditions are met would the diagram reveal the presence of a truly weak state suggestive of a very high likelihood of instability leading to dramatic future change.

3.6.5. A typology of political systems

However, such an open, ineffective, and unstable system is in fact only one of 20 different variants of political systems. With four possible types of political systems each able to show one of five possible forms of system behaviour, any analysis of political system change could conclude in any one of 20 possible combinations of system type and behaviour. The final scenarios that will be published in this study will each conclude with one of these twenty possible system variants. For example combination 6, on the table below, would describe an effective and closed system in a stable state. Combination 17 would describe an effective and open system that was unstable.

Four of these combinations namely, 1, 6, 11, and 16, represent stable systems. These are systems dominated by negative feedback and will not change type unless a change in the feedback they receive is observed (Earnest, 2008: 7-8; Rhee, 2000: 487-490; and Jennings and Wattam, 1998:31). However, all the other systems demonstrate non-stable behaviour. They are therefore dominated by positive feedback and will be vulnerable to a change of system type (Rhee, 2000: 487; and Syvantek and Brown, 2000:69). This could see them change from their current variant to any other variant.

³ Other definitions of state weakness and collapse, such as that of Doornbos (2005: 174-176), relate to the system itself ceasing to exist. Where this is taken to embody the political system as a whole such a definition is wholly at odds with the diagram above as the diagram's systems theory foundation shows that the system itself cannot cease to exist. It can only change from one form of openness and effectiveness to another.

For example an unstable effective and open system, such as that represented by variant 17, could conceivably change to become a stable, closed, and ineffective system such as that of variant 1.

Table 2: Typology of political systems

TYPE	STABLE	UNSTABLE	OSCILLATING	CHAOTIC	EVOLVING
Ineffective closed	1	2	3	4	5
Effective closed	6	7	8	9	10
Ineffective open	11	12	13	14	15
Effective open	16	17	18	19	20

By studying the four characteristics of any political system and identifying out of those its three attributes it will be possible to describe its type as open or closed and effective or ineffective. By adding to that analysis the feedback exerted by actors in response to the system type it will be possible to describe that system as one of these 20 variants. This is a complete set of possible types and behaviours for political systems. Hence, when this study later comes to categorise the behaviour and type of the South African political system it will have to do so according to one of these 20 units of analysis.

3.7. A COMPLEX SYSTEMS MODEL OF A POLITICAL SYSTEM

Diagnosing such behaviour requires a model that can be applied to the system in order to determine its behaviour. The components of such a model are now all in place. Specifically, this chapter has determined four characteristics of a political system. These included:

- A great number of participants,
- Demand mechanisms via which these actors exert feedback on the system,
- Output mechanisms via which the system responds to such feedback,
- A regime that sets the rules wherein all the system participants act.

However, as these characteristics are common to all political systems they are not sufficient to determine the type of political system. The chapter therefore went on to

Chapter Three: Conceptual points of departure

show how these characteristics determined three attributes against which the type of system could be determined. These included:

- a proliferation of demand mechanisms,
- universal access to those mechanisms,
- effectiveness in meeting socio-economic demands.

These three attributes in turn suggested four types of political systems. These included:

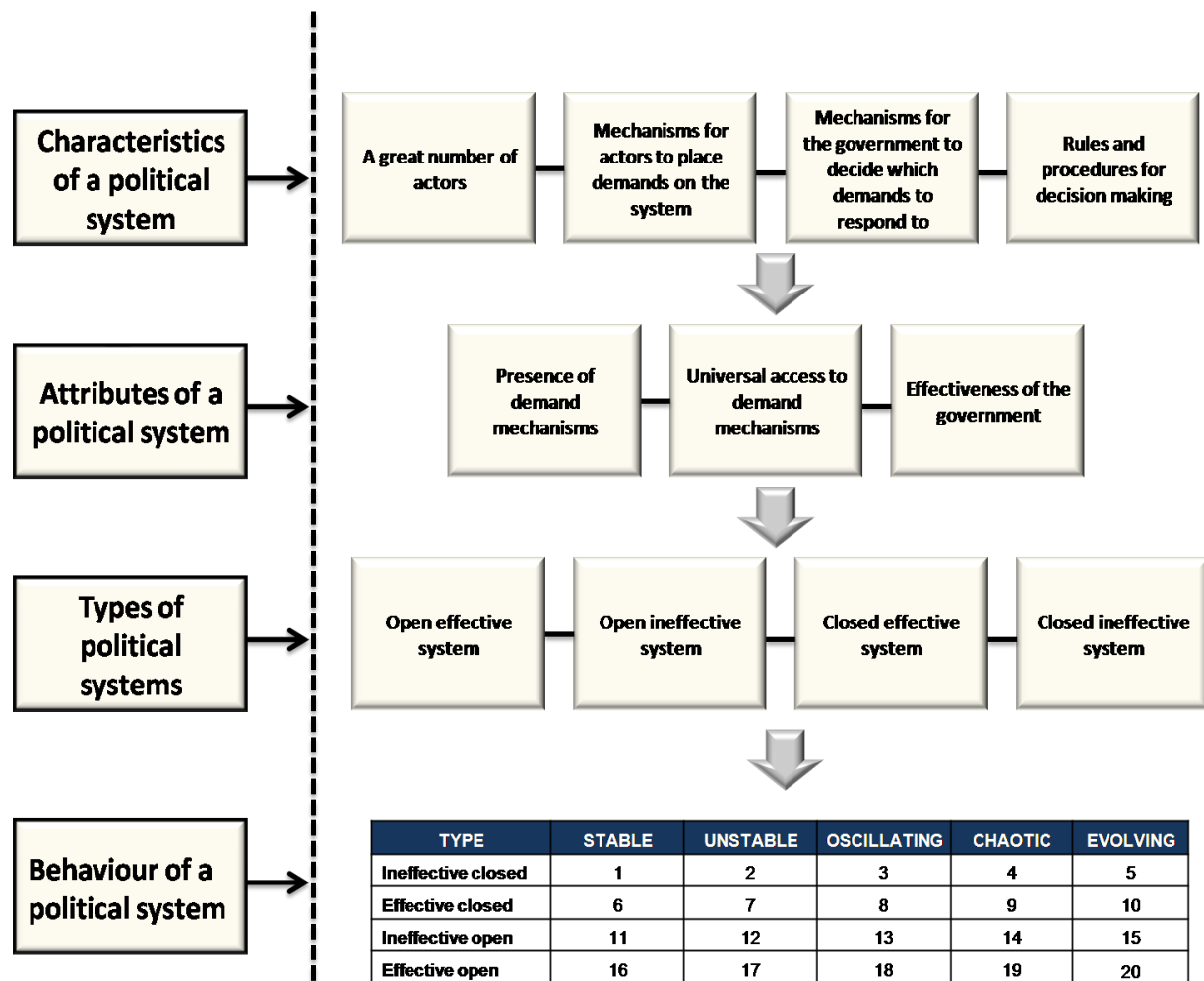
- Open effective systems.
- Closed effective systems.
- Open ineffective systems.
- Closed ineffective systems.

Each of these system types could demonstrate any of the five behaviours common to complex systems. These include:

- Stability.
- Instability.
- Oscillation.
- Chaos.
- Evolution.

Set out in the form of a diagram these characteristics, attributes, types and behaviours relate to each other as follows:

Figure 14: Four-tier model of a complex political system



3.7.1. An explanation of the model

The diagram represents a model of how system variant is determined for a political system. By following the four tiers of the model a researcher can determine both the type and behaviour of a political system:

- 1) The first tier is to determine the system characteristics. Here the researcher should identify the major participants in the system and their demands, the rules of the system, the feedback mechanisms available to the participants, and the policy mechanisms available to the government.
- 2) The second tier is to use those results to determine whether the system demonstrates a proliferation of demand mechanisms, whether these are freely accessible, and whether the policies of the government are effective in meeting demands.

- 3) The researcher must then use those results to determine which of the four types of political system applies best to the system being studied.
- 4) With that done the researcher must determine the balance of feedback in the system. This is done by studying all the major actors, their demands, their demand mechanisms, and whether the system is successful in meeting those demands. A system meeting the bulk of these demands is expected to be dominated by negative feedback. Such a system would be stable and would not change type. However, if it was shown that the system performs very poorly in meeting actor demands then it must be expected that positive feedback will dominate the system. Such a system is at risk of non-stable behaviour and this could cause its type to change.

This is a model that could be applied to any political system. It is the model that will be applied to the South African political system to gauge its type and stability. However, as this study is concerned with the long-term stability of this system the model will first have to be integrated with an appropriate futures methodology in order to form a single metho-theoretical model. The identification of that methodology, and its integration with the model, will happen across the next two chapters.

3.8. CONCLUSION

This chapter set out to apply the complex systems basis of this study to a political system. If this could be done then as a complex system the stability and instability of a political system must occur as a result of the balance of feedback. By studying feedback trends it would be possible to diagnose the stability or instability of a political system.

This required firstly a conceptual definition of a political system. The chapter therefore argued that a political system was any system which through the interaction of its participants develops binding rules and procedures on those same participants. Then by virtue of featuring a great number of participants, an emergent characteristic, and feedback mechanisms the chapter demonstrated that a political system was a complex system.

However, it argued that as these characteristics would be common to all political systems, there needed to be certain system attributes via which to tell different types of political systems apart and to track changes in a single system over time. This was

necessary in order to show what might become of a system that demonstrated non-stable behaviour. The chapter showed that these attributes could be identified via studying the presence of, and access to, feedback mechanisms in a system, and its effectiveness in meeting socio-economic demands. Such an analysis would allow a political system to be described as an open or closed and effective or ineffective system.

Then by studying the behaviour of its actors, in response to the system type they found themselves in, it would be possible to determine its stability. Where positive feedback predominated the system would demonstrate one of the four forms of non-stable behaviour. This would result in changes along any, or all, of the three axes of the triangular systems type diagram which would eventually bring about a change in the type of that specific system.

What remained was to propose how the above characteristics, attributes, types, and behaviours could be structured in a model via which to determine the stability or otherwise of a political system. This resulted in the four-tier complex systems model which concluded in describing 20 different variants of type and behaviour of political system. These variants now serve as units of analysis that can be employed to track instability and change within political systems and to tell different political systems apart.

The model is one which this study could now apply to the South African political system to determine its type and behaviour. However, this study wants to go further than that and determine not just the present, but also the future, behaviour of that system. This is because the demand is often made of political scientists not just to diagnose the present state of the political systems they study but also to indicate how such systems may behave and change in the future. This now requires that two things be done. The first, in the following chapter, will be to determine a methodology for studying the future of complex systems. Then in the chapter after that, this methodology will have to be integrated with the model above. The result will be a hybrid complex systems/futures metho-theoretical model which can be applied to any political system to gauge the prospects for its future stability or instability.

4. CHAPTER FOUR: METHODOLOGICAL POINTS OF DEPARTURE

4.1. INTRODUCTION

The four-tier complex systems model developed in the previous chapter could now be applied to the current South African political system. This study could then describe the type and behaviour of that system and then conclude having produced a new theoretical and analytical framework via which to diagnose stability or instability within any observed political system. However, this study wants to go further than determining the stability or instability of the current system. It rather wants to identify the prospects for that stability by 2024. The reason for this is quite practical. A number of groups ranging from governments to investors, civil society, and individual people are often tasked with making decisions about the future stability of the systems they work in. For example, one of the factors a corporation will consider when making a decision about a new multi-million dollar investment in South Africa is the stability of the political system they are investing in. This is particularly important in the current South African environment where high protest, unemployment, and inequality levels are routinely identified as risks to future stability. This study therefore needs to identify a methodology with which to apply the four-tier model to the future of the South African political system.

This is the chief research goal of this chapter and will require meeting eight research sub-goals:

- The first of these will be to demonstrate the need for a better futures methodology than the commonly used method of forecasting. Here it will be shown that the discipline of political science has a poor track record of anticipating major shifts in the systems its studies. This chapter will, for example, come to show that almost none of the most significant political developments of the past 60 years were anticipated with any degree of accuracy by political scientists.
- The second will be to demonstrate that the failure of political science to anticipate major political shifts relates directly to the complex theoretical basis against which this study has defined a political system. Specifically it will be argued that the emergent property of such systems makes it impossible to forecast their futures to a single point in time and space.

Chapter Four: Methodological points of departure

- The third research sub-goal will be to identify how independently of the rise in systems thinking in science and biology, but also in the second half of the twentieth century, corporate strategists and military planners identified the methodology of scenario planning in response to the vast uncertainty of the futures they encountered.
- The fourth will be to produce a working definition of what scenarios are. The term scenarios is often used very loosely and broadly in day-to-day language and this study will need to overcome that generality and ambiguity with a precise definition of exactly what scenarios entail.
- This fifth research sub-goal will be to show exactly how scenarios are able to overcome the uncertainty inherent in the emergent characteristic of complex systems and therefore how scenario methods can overcome past failures in anticipating future shifts in political systems.
- Having demonstrated the capacity of scenarios to overcome emergence, the sixth research-sub-goal will be to make explicit the differences between scenarios and forecasts. It will be shown that scenarios are not a variation on forecasts, but an entirely different methodological approach to the study of the future.
- However, this is admittedly a controversial approach and before proceeding to implement it, this study will have to overcome a number of common criticisms of scenario planning as a methodology. These relate in the main to scenario planning being an imprecise and subjective methodology. Overcoming these criticisms will be the seventh research sub-goal of the chapter.
- The final research sub-goal will be to demonstrate the utility of the methodology for studying the future. Here the broad range of applications of the methodology will be shown, including its long history of application in South Africa.

This chapter will then conclude that as a methodology, scenario planning is ideally suited to studying the future of complex systems. With this conclusion in place it will be possible, in chapter five, to apply the methodology to the four-tier model of a complex political system identified in chapter three. This will allow the study to propose a hybrid complex systems/scenario metho-theoretical model against which the long-term prospects for stability or instability in the South African political system can be determined.

4.2. THE FAILURE OF POLITICAL SCIENCE TO ACCURATELY ANTICIPATE SIGNIFICANT POLITICAL AND ECONOMIC SHIFTS

Political scientists devote much of their time to diagnosing and explaining changes within political systems. These diagnoses often deal with the past and the present. Here the diagnoses can draw on an intimidating arsenal of established theory such as that of Dahl, Huntington, Easton, and Almond. However, it is also common to hear political scientists being asked to comment on what may happen in the future of the systems they study. While many try to answer such questions, it is often apparent that they do so hesitatingly and without the benefit of the established methodology and theory that are applicable when dealing with present and past political developments. As a result efforts at studying the future of political systems have not been very successful. Many of the most significant economic and political developments of the past 50 years were predicted with only limited accuracy.

Ringland (2006: 14-15), for example, cites the 1966 example of 27 leading American scientists being asked for their predictions of what the world would need and want over the next twenty years. She writes that of the 335 forecasts, nearly every one was wrong, and that the forecasters had been overly focused on “state-driven mega projects” which after the 1960s had begun to decline.

Kennedy et al. (2003: 4-5) cite the dot-com crisis and the 9/11 terror attacks as examples of the failure of political and economic forecasting. In fact they warned in 2003 that the failure of a methodology to deal with future uncertainty would lead to similar future shocks. Just six years after that warning and despite all the resources poured into political and economic forecasting, there was little explicit and widespread warning of the 2009 global financial crisis, even though the diagnosis after the fact was relatively straightforward.

Along similar lines, Schwartz (1991: 55) cites the 1983 example of Royal Dutch Shell developing a scenario called the Greening of Russia. It held that Gorbachev, if he came to power, might lead significant political and economic reforms in Russia. However Schwartz, who worked for Shell at the time, writes that almost every Soviet expert and analyst confronted with that scenario said it was wrong. He records that even the

Central Intelligence Agency of the United States responded to the scenario saying, “You really don’t know what you are talking about”.

Most recently, and therefore most significantly for contemporary political science, the dramatic political events that took place across Tunisia, Egypt, and Libya in 2011 took a great many scholars, diplomats, and journalists by surprise. As was the case with the collapse of the Soviet Union, the circumstances that gave rise to these upheavals were diagnosed in great detail but only after the fact. These were arguably the two most significant political events of the last fifty years, but the scientific discipline that deals with political events was unable to forecast when and how they would happen.

The ‘after the fact’ analyses of both the recent middle-eastern democracy movements and the end of the Cold War were done in great detail. Critically, much of that analysis was based on trends that were already in evidence long before the political events and changes occurred. This is significant as it suggests that the information necessary to anticipate these upheavals was available but was not adequately identified, analysed, and interpreted.

It would appear therefore that a weakness within the discipline of political science is the inability of practitioners to use the information at their disposal to accurately assess and predict how future trends may unfold. Ralston and Wilson (2006: 4) write, for example, that “we are constantly reminded of our inability to project” by the failure of forecasters to accurately predict indicators as fundamental as GNP. The seriousness of this shortcoming is exacerbated by the fact that many people outside of the discipline demand or expect forecasts from political scientists. Overcoming this weakness would obviously be a significant advancement for political science. However, doing so successfully must be predicated on properly understanding why efforts at forecasting have been so singularly unsuccessful.

4.3. EMERGENCE AS THE CAUSE OF FORECASTING FAILURES IN POLITICAL SCIENCE

Schoemaker (1995: 27-28) attributes the failure of forecasting to the over-prediction and under-prediction of change. He argues that many analysts tend to discount the pace of change and therefore under-predict the effects of change on their environment. Here he cites the difficulty of predicting 100 years ago the pace of technological development in

areas such as travel and IT. However, he also cites the over-prediction of the impact of trends such as robotics and artificial intelligence. While it makes sense that some forecasts have over- or under-predicted change this does not help in determining the root causes of the failure. Rather the question must be asked of what it is that caused the under- or over-prediction to occur in the first place.

It must also be noted that even answering such a question is complicated by a measure of incredulity at the suggestion that it may be possible to forecast events far into the future of a political system. Ratcliffe (2002: 19) argues that the future cannot be measured and that foresight is a matter of conjecture. Ralston and Wilson (2006: 3) warn of scepticism about any methodology that claims to be able to forecast the future. They cite mankind's efforts at divining the future, "from the Delphic oracle, through augury, tarot, and the crystal ball, to the methodologies of the professional forecaster" and write that these have all failed "to penetrate the veil between us and what is to come".

However, to be put off by such incredulity would be to surrender the discipline of political science to one that only studies known and observed political systems but dares not venture into analysing the future of such systems. This would clearly be unsatisfactory. Therefore despite the incredulity, it is necessary to persist in seeking a methodology with which to study the future of political systems even if this means abandoning the method of forecasting in favour of some other method of studying the future. The route to such a better methodology may lie in the complex systems definition of a political system presented in chapter three and especially the emergent component of that definition.

4.3.1. Revising the principle of emergence

As readers of this study will now know, emergence means that the result of the interaction of the inputs into a system is greater than the sum of their parts (Jennings and Wattam, 1998: 191-192; Allen et al, 2006: 299; and Kondraske, 2011: 236). Chapter two demonstrated how emergence works through the a series of equations that showed how a small change in the contribution made to a system by one of its actors could completely change the outputs and nature of the system.

The implication is significant. If systems were driven by simple linear Newtonian lines of cause and effect, where inputs into the system were added together to make its whole, then by identifying most of those inputs it would be possible to accurately forecast the future of a system. However, as the relationship between inputs in a complex system is non-linear, that cannot be done (Syvanteck and Brown, 2000: 69).

4.3.2. The failure to incorporate emergence into political forecasting

The failure of political and economic forecasting may result from exactly this point. Such forms of forecasts are based largely on known trends, which are then extrapolated into a single most probable description of the future (Marren and Kennedy, 2010: 11, Schoemaker, 1995: 25, and Van der Merwe, 2008: 218). Even though political communities have, since Easton in the 1960s, been regarded as systems, and in effect complex systems, the emergent property of these systems has not been properly accounted for. If it had, no political scientist would be as audacious as to try and provide a single most probable description of the future of the systems he studies. The uncertainty inherent in the emergent property of such a system is simply too great for such an approach to succeed other than by luck. The method of forecasting itself, in seeking to identify the single most probable outcome for a system, is therefore inappropriate to the long-term future of political systems. Its continued use explains the difficulty that the discipline has in accurately predicting the future of political systems. A new and better methodological approach is necessary if the discipline is to overcome its predictive weakness.

Wack (1985a: 73) makes exactly this point that despite the obvious failures of forecasting many corporations continue to forecast “because no-one has developed a better way to deal with the future’s [economic] uncertainty”. He goes on to argue that the answer to flaws in forecasting is therefore not to hire better forecasters. Rather he argues that the future is too fundamentally uncertain for any forecasting technique to be effective and that it is necessary to develop a methodology that embraces the uncertainty and “make it part of our reasoning”. He suggests therefore that the reason for forecasting failure is not that the future cannot be predicted but rather that a methodology needs to be identified that can overcome the uncertainty associated with any long-term future. Wack’s arguments are instructive as they suggest that rather than giving up the search for more effective means of predicting the future, it may be

advantageous to abandon the idea of forecasting entirely in favour of different methodologies.

4.4. USING SCENARIOS TO OVERCOME THE PROBLEM OF EMERGENCE

One such methodology is scenario planning which emerged over the same time period as the rise of systems and later complex systems theory. Chapter two of this study traced the origins of complex systems theory and showed how scientists in the middle of the twentieth century confronted increasing degrees of complexity in the systems they studied. The failure of Newtonian thinking to explain these systems saw the rise of a new scientific paradigm in systems theory. Over precisely the same period military planners were struggling to comprehend the implications of the long-term policy decisions they were taking – especially in a nuclear context.

4.4.1. Historical influences in scenario planning

That nuclear context was particularly important in developing futures methodologies in the aftermath of World War Two as this became an era in which errors in global forecasting could have devastating ramifications - especially as the period coincided with the new political confrontation between the Soviet Union and the United States. Schwartz (1991:7-9) makes this point when he writes that the war had seen significant advances in technologies ranging from aircraft to radar to nuclear weapons, which left a number of unanswered questions of how these new technologies would impact on the future. Taking that same line Ringland (2006: 13) quotes Kleiner (1996), writing that, “World War Two had been an extraordinary catalyst for the study of complex systems. Just as the war had mingled social scientists in unprecedented numbers, it had also assembled physicists, logicians, mathematicians, and physiologists to work on problems beyond any individual discipline. Then after the war they adopted similar decision techniques to the business arena”.

Awareness of the importance of such a multi-disciplinary approach left social scientists, military planners, politicians and the like with a host of questions about how the post-war world was likely to evolve (Millet, 2003: 17). These scientists and planners took to their future planning tasks amidst growing acknowledgment of the extraordinary complexity of the systems they were trying to forecast. They could therefore no longer

rely on Newtonian simplicity to explain the problems they encountered and this had implications for how they studied the future.

It was into this uncertain political environment that the Rand Corporation was born, to conduct research into new weapons systems especially for the United States Air Force (Schnaars, 1999: 7; Millet, 2003: 17; Ringland, 2006: 13; and Schwartz, 1991: 7). At much the same time, the Stanford Research Institute was being established at Stanford University to conduct future planning for both the government and corporate worlds (Ringland 2006: 14; and Ralston and Wilson, 2006: 9). A researcher at the Rand Corporation, Hermann Kahn, crafted a methodology of using expert analysis and research to write descriptions of how the nuclear future might unfold – written as if he were in that future (Millet 2003: 17; and Ringland, 2006: 13). These descriptions he called scenarios after the movie terminology for a detailed screenplay (Van der Heijden, 2005: 3).

Kahn went on to found the Hudson Institute in the 1960s, which produced a number of these new scenarios of how the Cold War world was likely to unfold, especially with regard to nuclear conflict (Millet, 2003: 17). The Hudson Institute began to attract corporate sponsorship from groups including General Motors, IBM, and Royal Dutch Shell (Ringland, 2006: 14-16). Ringland further explains that this caused private corporations to be exposed to much of the early scenario thinking that had originated in Kahn's work for the United States Air Force. General Electric, for example, came to adopt a planning methodology that included scenarios.

4.4.1.1 The scenario experience of Shell in the 1960s

However, it was not until the late 1960s that a series of events would occur that would cement the position and reputation of scenario planning as a tool for predicting the future of complex systems. These events commenced in the planning department of Royal Dutch Shell in 1967 and culminated in the 1973 Yom Kippur War. By the mid-1960s, Royal Dutch Shell realised that very long-term planning was necessary in the oil industry, beyond that available from traditional planning and forecasting methods (Wack 1985a 73-77, and Ringland, 2006: 20-22). This led Shell in the late 1960s to look ahead to the business environment in the year 2000 (Van der Heijden, 2005: 5).

According to Wack (1985a: 73-77), who led Shell's planning efforts, and to Ringland (2006: 20-22), this study indicated that "the predictable surprise-free environment would not continue" and identified the possibility of a shift in power balances from oil companies to oil producers that would lead to a significant increase in the price of oil. This was the same period during which the Organisation of Petroleum Exporting Countries (OPEC) was 'beginning to [flex] its political muscle', to quote Schwartz (1991: 7-9). The Shell study's conclusions were significant, as both oil pricing and supply had appeared to be predictable since the mid-1940s (Van der Heijden, 2005: 5). The result was that Shell produced two detailed scenarios about the oil price (Wack, 1985a: 73-74). Shell therefore broke with traditional forecasting methods in producing two versions of the future for the same global oil system. One of these suggested that the price would remain stable (Schwartz, 1991: 7-9). This was the globally accepted opinion. The other suggested that events could occur that would see the price of oil rise. Schwartz writes that Shell surmised that Arab oil-producing countries could and would demand higher oil prices. The question that could not be answered was when this would happen.

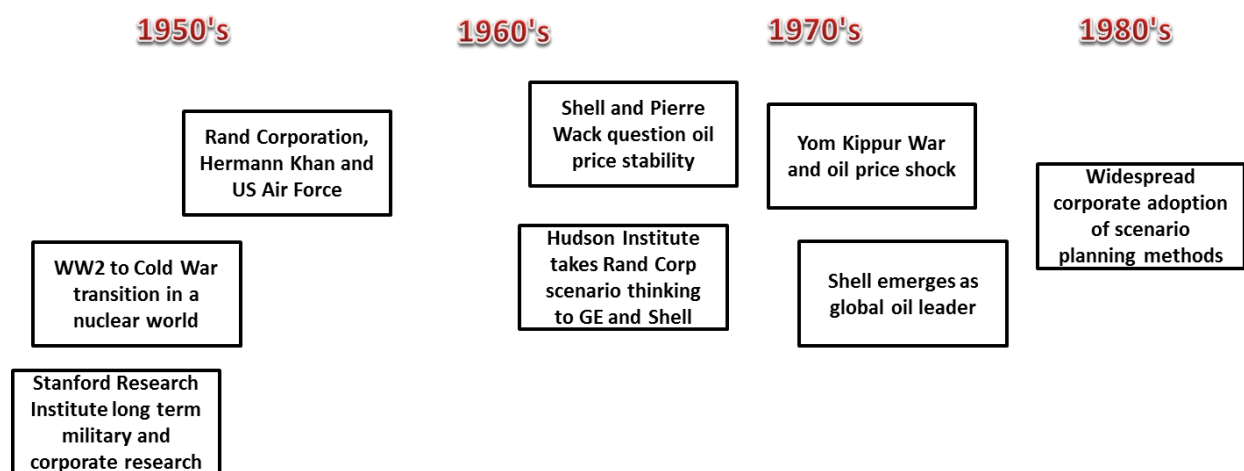
The 1973 Yom Kippur war between Israel and her Middle Eastern neighbours provided the impetus for the oil price to increase (Ringland, 2006: 21). This increase in turn changed the balance of power between mainly western oil companies and their mainly middle-eastern suppliers, just as Shell had suggested. The suppliers chafed at Western support for Israel. Ringland (2006: 21) and Schwartz (1991: 7-9) note that Shell and its directors, in having produced two versions of the future, were alone in considering such a once-unthinkable scenario. As a result they were better positioned than other global oil companies to respond to the price increases and this allowed the company to take a lead in the global oil business (Van der Heijden, 2005: 6). Van der Heijden also states that Shell put itself into a position that could not have been achieved via traditional forms of forecasting.

The significance of what had been achieved at Shell led to Ringland (2006: 15-21) noting that following the shock of events round the Yom Kippur war, a "significant fraction" of Fortune 100 companies went on to adopt scenario-based planning. Similarly, Saunders (2009: 19) writes that the 1970s saw scenario planning becoming a valuable strategic planning tool. Ringland in fact writes that "roughly three quarters" of

Fortune 100 companies adopted the approach after the oil price shock. Likewise Van der Heijden (2005: 18) cites a survey of 200 strategy planners within large corporations who identified scenario-based planning as the most common tool employed by business strategists.

The graphic below, adapted from Ringland (2006: 15), tracks these major events in the evolution of scenario planning from the 1950s to the 1980s, when the broader adoption of the methodology as a planning tool in business really took off:

Figure 15: Key historical steps in the evolution of scenario planning



Source: Adapted from Ringland, 2006:15

4.4.2. Scenario planning as a methodology for studying the future complex systems

A growing appreciation of the consequences of errors in prediction in the aftermath of the Second World War had therefore forced researchers and analysts to adopt a new methodological approach to study the future of the systems they specialized in. The growth of a scenario methodology therefore rejected the certainty promised by traditional forecasting methods in favour of a method of identifying a range of equally plausible future events for a single system. Future prediction therefore evolved from a process of seeking to identify one most probable future to a process of seeking to identify a range of equally plausible futures. The strength, and later success, of this methodology can be ascribed to one thing: that in its explicit embrace of uncertainty it

developed the inherent ability to overcome the uncertainty emanating from the emergent property of complex systems.

The failure of political science to anticipate events such as the Arab Spring therefore suggests two things. The first is that despite political systems occasionally being conceived of as complex systems, political scientists have yet to develop a full appreciation of the emergent property of those systems. If they had such an appreciation they would long since have discarded any notion that it is possible to forecast the future of a political system. Rather they would have settled for a scenario-inspired methodology that sought to overcome the emergent property of complex political systems by identifying a host of different prospects for the future of the same political system.

The second is that it is high time that the discipline begins to adopt models that feature a scenario methodology if it is to better anticipate dramatic shifts in political and economic systems. Just as such a methodology allowed Shell to anticipate global oil price shifts, scenario planning may be a key to overcoming the failure of political scientists in predicting the long term futures of the systems they study.

Possibly part of the reason scenario methodologies have not been widely adopted in political science is that they are often very poorly understood. Many confuse scenario planning with forecasting when these models exist at opposite ends of the spectrum of methodologies for studying the future. Furthermore, scenario models are criticized for being subjective and imprecise. Therefore, before a scenario methodology can be adopted for this study it is necessary to use the following sub-sections to clarify what scenarios are, how they differ from forecasts, what their weaknesses are, and where and how they are typically applied.

4.5. DEFINING SCENARIOS

Despite their prominence as military and corporate planning tools, scenarios remain very poorly understood. For example, the term scenario is used in everyday life to describe all manner of possible future situations. Very seldom do these 'scenarios' reflect an established methodology. In order to be adopted for this study, it is important that readers understand what scenarios are.

Fourie (2007: 97) quotes Van der Heijden (1996) in seeking to answer the question: “what are scenarios?” saying that the “assumption underpinning the methodology is that key elements or determinants of the future are present in the current reality and that there is a methodology to access and expose them”. Fourie (2007: 97) continues by saying that there must be drivers of the future environment present in our current environment and that the methodology of scenario planning must identify these drivers. In other words, scenarios seek to take the things we already know about a system and extrapolate how they may come to define its future.

4.5.1. Scenario thinking via analogies

This is an idea that can best be explored via a number of analogies:

4.5.1.1 *The weather*

Perhaps the best analogy is that of the weather⁴. Most people probably have a measure of confidence in the weather forecast on the evening news when it relates to the weather for the next day. If the forecaster says it will rain, a significant number of people will respond by taking umbrellas to work. If the forecaster says it will be very cold, people will dress appropriately the next day. They believe and have confidence in the forecast. Their confidence is such that they make a decision and behave in a particular way based on what the forecast says.

However, a smaller number of people will have the same measure of confidence in a two-day weather forecast. An even smaller number will have that same degree of confidence in a three- or four- or even five-day forecast. Eventually all people will reach their predictable horizon. This is the point at which they begin to have doubts about the accuracy of a forecast. Beyond this predictable horizon, they lose confidence in forecasts and the forecasts lose their value in terms of giving people the insights into the future they require in order to make decisions about future events. The reason is that the level of uncertainty around the forecast grows, as it is projected further and further into the future.

⁴ This is an analogy explained to the author by the director of the South African scenario consultancy, Centre for Innovative Leadership, Louis van der Merwe.

Consider then the example of the family who go on holiday to the coast for ten days. Among other things they pack an umbrella and perhaps some warm clothes. They do not do this because of a weather forecast that said it would rain and be cold. Ten days into the future is too far beyond their predictable horizon for them to have confidence in a forecast. They do not pack these items because they know it will rain or even because they suspect strongly that it will. They know that it could be hot, cold, wet, or dry and then weigh up what combination of these factors is plausible for their holiday. They then decide to take that umbrella because it is plausible that it could rain or be cold. What that family has unwittingly done is an exercise in scenario planning.

Scenario planning for possible weather conditions is relatively straightforward because the weather is at its most basic influenced by four factors in that it can be hot, cold, wet or dry or a combination of the above. Scenario planning when applied to political systems is infinitely more complex because a myriad of different social, economic, and political factors are at play. However, the principle applied by the family going to the coast is a good example of scenario planning. It also distinguishes scenario planning neatly from the process of forecasting as practiced by the weather forecaster on the evening news.

That evening weather forecast is an exercise of predicting an official future as a single point in a future space and time that the forecaster proposes will come to pass. Such single point forecasts are a useful planning tool within the predictable horizon of the issue being forecast. However, beyond that predictable horizon the value of the single point forecast declines. It is at this point, when it is necessary to look at the world beyond the predictable horizon, that scenario planning becomes an extremely useful methodology.

4.5.1.2 Mountaineering

Schoemaker (1995: 26) uses the analogy of mountaineering to describe scenario planning. He argues that a mountaineer can access a map showing him the constant elements of the peak he seeks to summit, such as altitude and geology. He argues, however, that such a map ignores the variable elements that the climber is likely to encounter such as weather and landslides. He argues that scenario planning incorporates these uncertain elements into a series of plausible states that would give

the climber more information than that available from a map. Likewise in the world of politics, economics, or business a series of scenarios would offer more information than that available from a static forecast.

4.5.1.3 Wind tunnels

A third analogy is drawn by Ringland (2006: 7), who compares scenario planning to wind tunnels. Wind tunnels seek to anticipate future real world behaviour of airplanes and motor cars. Just as a wind tunnel allows an aircraft designer to identify the likely future behaviour of his aircraft, scenario planning allows researchers to anticipate the likely real world behaviour of the phenomena they study. Scenarios could therefore be described as wind tunnels to the future. Just as the aircraft designer can expose his model airplane to a wind tunnel to see if it will fly, years before the actual airplane will ever be built, so political scientists can subject political systems to scenarios to see how these will behave under different plausible extrapolations of the future.

4.5.2. A conceptual definition of scenarios

As plausible extrapolations of the future, scenarios are therefore descriptions of how trends already evident in a system may combine over time. In other words, where a forecast would be a single most probable prediction for the future of a system, scenarios would be a series of equally plausible predictions for that same system. Scenarios, as a concept, can therefore be defined as:

A set of diverse but equally plausible descriptions of future events for the same system.

For example, a weather forecast will say that it will be cold and wet. However, a set of weather scenarios would say that it may be cold and wet, although if a certain front materialises it may simply be cold and not wet. In systems of extraordinary complexity, with emergent properties, this is an approach that would appear to be able to overcome the risks inherent in that emergent property. In doing so a scenario method may assist in overcoming the disagreements and conjecture that accompany efforts to forecast the uncertain futures of political systems.

4.6. SCENARIOS, EMERGENCE AND THE PLURAL FUTURE

For example arguing in public whether the *future* of the South African political system will be unstable may be a subject for conjecture and opinion – even where such a judgement originates from the four-tier complex systems model developed in chapter three of this study. Some in the ruling party may respond to such a judgement and argue that the future is extremely stable in that the ruling party will govern for a long time to come. Hence, judgements of future stability or instability, forecast to a single point in time, are likely to solicit a volume of contradictory opinion.

This is as it should be. The emergent property of the interaction of participants in pursuit of their demands means that small and seemingly insignificant changes in the current circumstances of the system will come to have major ramifications for its future (Morales-Matamores et al., 2010: 72; Ford, 2008: 177 and Earnest, 2008: 7). In other words the future of a complex political system must be seen as plural where a number of different long-term outcomes, and not a single definite future, are equally plausible for the same system.

4.6.1. Variants of the future

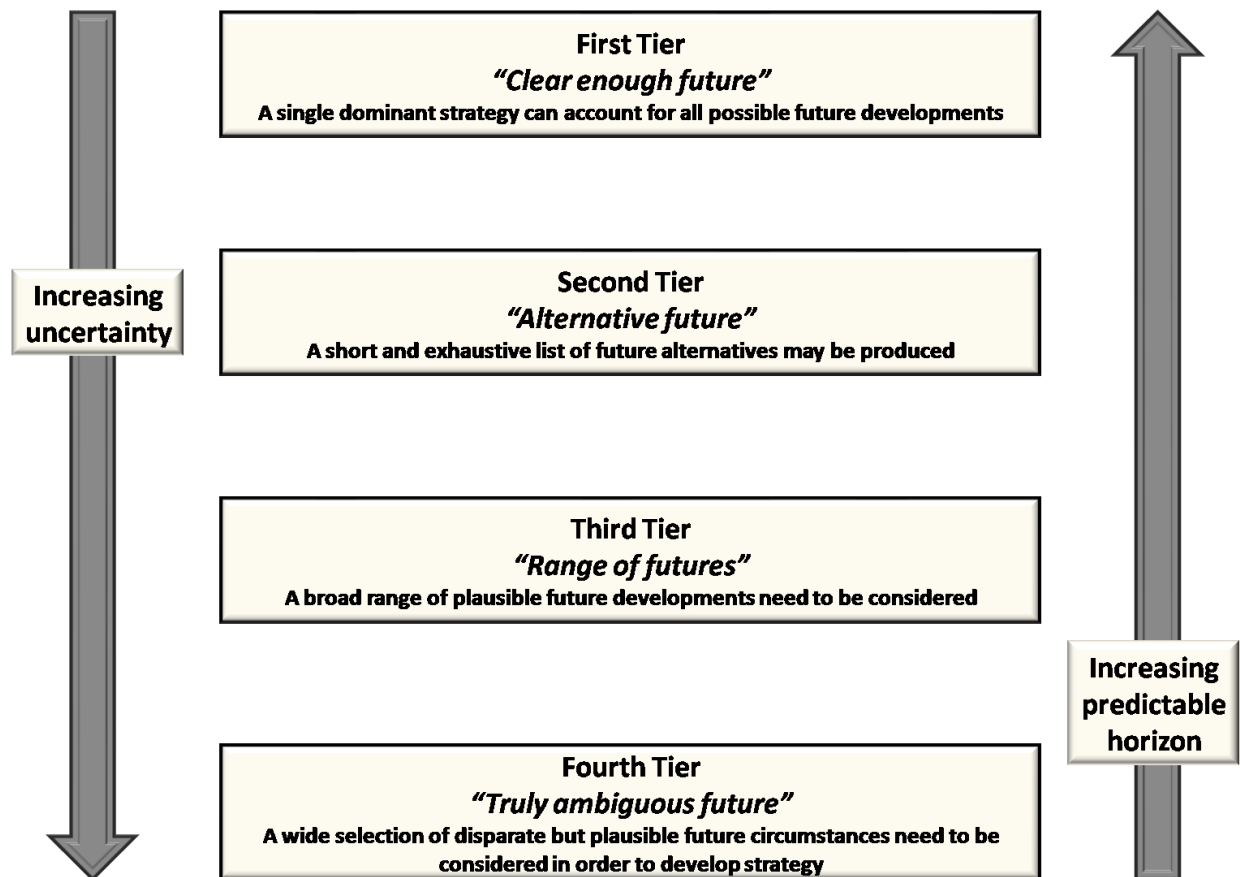
So great is this plurality when it comes to complex systems that the uncertainty of their futures can be classified as an entirely different variant or type of the future from that which would apply to more simple systems. Courtney (2003: 16), for example, argues that there are actually different variants, classes, or types of futures that are distinguished from one another by their relative uncertainty. He cites four such classifications:

- The **first** is the “clear enough future” (Courtney, 2003: 17). This future, he argues, is where the range of possible future outcomes is narrow enough that uncertainty does not matter. He warns that this does not imply that such a future is perfectly predictable but rather that it is predictable enough that a dominant strategy of choice would be suitable for all plausible outcomes.
- The **second** is the “alternate future” (Courtney, 2003: 18). This is a future where it is possible to identify a short and limited set of possible future outcomes. Here he cites the example of potential legislative or judicial changes.

- The **third** is what he calls “the range of futures” (Courtney, 2003: 19). This future is more uncertain than the “alternative future”, as it is not possible to identify a short list of *possible* outcomes. Rather it is necessary to develop a broad range of *plausible* outcomes. Courtney (2003: 17) cites unstable macro-economic conditions are an example of such a future.
- The **fourth**, and final, variant of the future is the “truly ambiguous future” (Courtney, 2003: 20). Here it may be difficult even to identify a range of future possible outcomes, and the impact of major economic or social discontinuities is an example of this kind of future.

The diagram below, which is based on Courtney’s (2003: 17-20) model, sets out these four tiers of futures. The arrow running down the left side of the diagram shows how uncertainty increases from tier one to tier four. The arrow running up the right side of the diagram shows how the predictable horizon increases as uncertainty decreases.

Figure 16: The four tiers of the future



Source: Adapted from Courtney 2003

While Courtney warns that some types of futures are more uncertain than others, Ralston and Wilson (2006: 3-4) warn that the future of most systems is growing increasingly complex. This they argue is due to the concept of “change in the character of change itself”. Here they cite the growing number of people working to change the world especially in areas of technological innovation and the “radical compression” of the time taken for these innovations to be developed. They argue that innovations in areas of information technology, nuclear power, biomedical advances, and nanotechnology “will have a more pervasive influence on human life than any other previous technologies in human history”.

Hence futures researchers need to be aware that not only are some futures more uncertain than others but that many futures are becoming increasingly uncertain all the time. Which type, variant, or classification of the future applies best to a system will therefore depend on what aspect of the system is being studied and over what timeframe the study is taking place. The very short-term future of a single actor within the political system, such as the role of a specific participant or demand mechanism, may qualify as a first or second variant future and be relatively simple to engage with.

For example, if this study sought to answer the question of whether the ANC would still be in power after the 2014 election, that would suggest a first or second variant future, as a range of possible outcomes could be listed. These would include it losing an election, being driven from power by protests, being eroded by infighting and decay, or being taken over by COSATU, for example. The point is that it would be possible to list a short number of possible outcomes for the party and to be sure that one of these will come to pass.

However, it is likely that as timeframes increase, and as concepts as complex as system type and behaviour are brought into the analysis, the emergent character of South Africa’s political system will mean that the type of future confronting this study is more likely to be a third and even fourth variant future. For example, determining whether South Africa will be an open or closed and effective or ineffective system by 2024 will require taking into account an immense number of internal and external social, economic, and political trends. Because these are taking place within a complex system, the concept of emergence means that even a small shift in any of these trends may have dramatic future effects on the South African system. Having to determine

whether that system will in addition be stable, unstable, oscillating, chaotic, or evolving will require assessing a vast range of demands, feedback, and outputs of a vast number of actors over a period of ten years in order to determine which of the 20 different variants of system type and behaviour will come to pass.

It is certain therefore that the future as it applies to the stability of the South African political system by 2024 is not a first-tier future that can easily be predicted. It is also too complex to qualify as a second-tier future that can be determined in a short list of possible outcomes. Hence, the South African political system by 2024 may be a third tier or variant future for which a range of equally plausible future developments has to be determined. However, it may also be a fourth-tier future that needs to be studied as a wide and disparate range of plausible developments.

As a third or fourth variant future, South Africa's political future is therefore not easily predicted. That future must still be crafted, based on how the participants in the system interact with each other over the next decade, how that interaction influences the balance of positive and negative feedback entering the system, and how the government reacts in trying to promote negative over positive feedback. All of these events and interactions must still take place. It follows that the future of this system is too uncertain to be forecast to a single point in time, but must rather be presented as a spectrum of equally plausible future possibilities.

There is, of course, a considerable degree of difference between an approach that seeks to forecast a most probable single point in the future and one, which seeks to develop a series of plausible future scenarios. While this may now be apparent at a general level it is necessary to make the differences between these two approaches explicit.

4.7. FORECAST VERSUS SCENARIOS

The fact that a scenario approach arose in response to perceived shortcomings in forecasting suggests a number of differences between these two approaches. These arise from the fact that forecasts are applicable to relatively simple systems, dominated by linear relationships of cause and effect such as those suggested by Newtonian mechanics. Scenarios, which arose as a methodology during a similar time period as complex systems theory, are more applicable to complex systems. However, the author

knows from experience that users of scenarios tend to conflate them with forecasts and vice-versa. It is useful therefore to set out clearly a numbered set of differences between these two approaches. Five such differences are evident:

The **first** is that scenarios are not forecasts or predictions of what will happen in the future (Van der Heijden, 2005: 3; and Schwartz, 1991: 6). Forecasters try to predict a single point in the future that they argue will come to pass. Scenarios seek to describe a number of alternative plausible future environments (Marren and Kennedy, 2010: 11; Saunders, 2009: 19; and Fontela, 2000: 11). The advantage of the scenario approach is that it allows the users of scenarios to consider a fuller range of plausible risks and opportunities than would be provided in a single forecast of the future.

For example, a forecasting approach could conclude that South Africa will be a stable, open, and efficient system by 2024. However, a scenario approach would suggest that while this may be one possibility, a number of other system types and behaviours may be equally plausible.

The **second** is that forecasts are often seen to vary around a “midpoint base case” (Ralston and Wilson, 2006: 16-19). This means that they tend to vary around a single common theme. Scenarios are very different in that each scenario needs to be structurally different in order that the set of scenarios cover a spectrum of plausible future events. In this way scenarios are able to reduce the vulnerability of their users to surprising external events. This is a common weakness of single-point forecasts. For example, such a forecasting approach could see the future of the South African political system varying around policy decisions taken by the ANC. A scenario approach would force the study to consider what would happen if the ANC was no longer around.

Thirdly, forecasts tend to be “snapshots” of a particular endpoint in time (Ralston and Wilson, 2006:16-19). Scenarios differ in presenting a narrative of an evolution of events to a point in time. Here they have the strength over forecasts of considering the full range of forces that may influence a future environment. This forces the users of scenarios to consider the integrated nature of the environment they study and the dynamic nature of that integration. Again using the example of the South African political system, it would not be much use to investors or governments to say that in ten years-time the system will be stable or unstable. They need to know how and why the

system will become stable or unstable and need to identify the many steps leading to those behaviours across the full intervening period between the present and the forecast.

The **fourth** difference is that scenarios allow for a number of future trends whereas forecasts tend to rely on a single official future. Ralston and Wilson (2006: 15) make a point of emphasising the plural nature of the term scenarios, and argue that as the future is always uncertain, it is necessary to consider a number of plausible scenarios and not a single most probable one. However, by their very nature forecasts suggest that the future is predictable when it is in fact highly uncertain. Van der Heijden (2005: 4) argues that if planning must be based on what is predictable, and if the future is highly uncertain, then planning for the future is a waste of time. Rather he argues that it is important to focus on what is uncertain and to allow key uncertainties to reflect in different scenarios.

Hence, providing a forecast of the stability or otherwise of the South African political system would be to represent an artificially simplistic image of the system. Such a forecast would reveal an ignorance of its emergent property and contradict the theoretical basis of this study.

Finally, scenarios allow for continuous monitoring of the future environment (Ralston and Wilson, 2006: 20). Likewise, Van der Heijden (2005: 3) describes scenarios as aiding in understanding the changing structures within a society. The trends observed in any current environment can continually be tested against those described in each of a range of scenarios. This allows the users of scenarios to monitor which future trajectory they are on, and also to warn them of new or completely unanticipated trends. The utility of scenarios therefore commences on the day they are published. Forecasts on the other hand do not have the same utility over time, but rather depend on the trend they predicted coming to pass at a particular future point in time.

It follows that a scenario approach to the future of the South African political system would therefore require developing an in-depth understanding of the participants, feedback mechanisms, and output mechanisms at work in the system. These would be used to describe how the system will change over the full ten or more years of scenario. At any point in those years, users of the scenario could examine the environment

around them and see which scenario is reflected most closely in that environment. This would let the user know toward which scenario the system was moving. Hence, the approach would have utility over the entire period leading up to 2024 and not just in 2024 as would be the case for a forecast.

These key differences between forecasting and scenario planning are set out in the table below:

Table 3: Key differences between scenarios and forecasts

FORECASTING	SCENARIO PLANNING
Predicts a certain event at a point in time.	Describes a range of plausible future events.
Is structured around a central base case.	Describes a number of structurally different future outcomes.
Provides a snapshot of a single indicator at a point in future time and space.	Considers the evolution and structure of wholes over a period of time to various diverse points in space.
Implies that the future is predictable.	Accepts that the future is inherently uncertain.
Utility commences at a point in the future.	Utility commences in the present as a monitoring and tracking tool.

The table emphasises the point that scenarios are conceptually and fundamentally different from forecasts both in how they are structured and in what they seek to achieve. Where forecasts seek to predict a single event or set of events at a particular point in time, scenarios seek to provide a set of detailed but different descriptions of how whole environments may evolve over time. Scenarios and forecasts therefore find themselves at two extremes of a spectrum of methods for studying the future. Ringland (2006: 35) provides a useful graphic representation of this spectrum:

Figure 17: A spectrum of methods for looking at the future



Source: Ringland, 2006:35

The left side of the diagram represents the Delphi forecasting technique. This involves asking a group of experts for their forecast of a particular issue and then looking for convergence between the forecasts in order to predict a single future. In other words, it is a method that seeks to narrow down expert opinion to a single most probable forecast of the future. The emphasis here is on certainty and prediction. The users of such a method will be left with only one possible outcome to consider. If this outcome does not materialise they will have no other plan or strategy to fall back on. If the forecast were applied to the complexity of the South African political system, a misleading sense of accuracy and simplicity would result. Such an approach, if adopted by this study, would revolve around interviewing experts on their predictions for the stability of the political system and seeking common ground among those predictions until only one prediction remained (Ringland, 2006: 35). The other side of the diagram shows a scenario approach as a range of different descriptions of how the future may evolve. Here a number of different plausible futures are identified. The focus is on considering all plausible future environments and not betting on a single most probable future. Where the Delphi technique may have merit in studying a first-tier or variant future it is unable to handle the complexity of a second, third, or fourth-variant future. Scenario planning on the other hand is explicitly suited to studying futures that are inherently plural. It is therefore explicitly suited to studying the complexity of the South African political system. For example, where the Delphi approach sought to reduce its analysis to one narrow forecast for the stability of the South African political system, a scenario approach would seek to identify a number of equally plausible descriptions of the future type and stability of that system.

That this methodology seems ideally suited to studying the long-term future of any political system then raises the question of why it is not widely practised in political science and why, despite numerous high-profile failures, forecasting the future of such systems is still practised. Surely a methodology that could accurately predict the long-term future of political systems would long since have allowed political scientists to anticipate, if not the end of the Cold War, then at least the recent Arab Spring. The answer is that despite its obvious potential, the methodology suffers from criticisms that it is imprecise and subjective.

4.8. A CRITICAL ASSESSMENT OF SCENARIO METHODOLOGY

Critics of scenario methods may argue that in presenting a host of different but plausible extrapolations of the future, scenario planning is not very useful. How, for example, must an investor decide on whether to put up a multi-million dollar plant in a political system that a scenario planner says may or may not be unstable in a decade from now? Surely, the critics will argue, only a forecast can allow a corporate board to take such a decision.

One answer to the criticism is that when dealing with the emergent characteristics of complex systems long-term certainty is an illusion and cannot ever be achieved. The reason is that the future of such systems is still to be written and that small changes in the current circumstances of such a system may over time come to produce significant changes in the future.

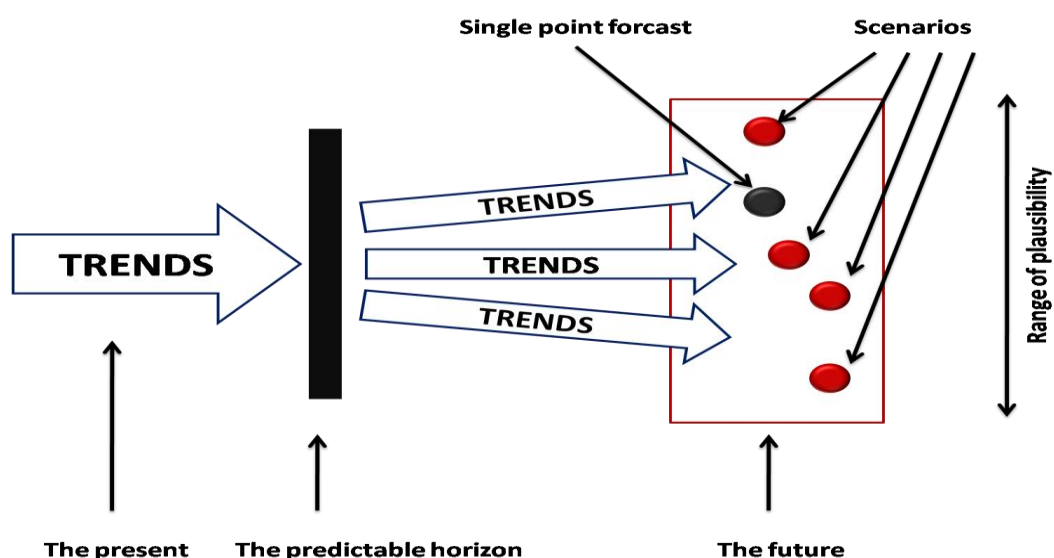
A second answer is to remind the critics that scenarios are not forecasts. Hence their utility does not hinge, as forecasts do, on whether they are right. Rather they seek to present a number of different descriptions of how the future may evolve based on how key events in the time leading up to the scenario interact with each other and how that interaction changes. These key events and interactions become a roadmap to the future. By studying these events, at any point ahead of the scenario horizon, the users can build a picture of the scenario towards which they are moving. In this sense scenarios have utility over and above that of forecasts, as they allow their users to respond to changes in the environment around them and to use these to develop an increasingly accurate sense of how the future is likely to turn out. Users of forecasts do not have that luxury and have to abandon the forecast and develop a new one if the environment changes significantly in the period towards that forecast's horizon.

Despite this, a craving for certainty may cause some planners to reject the scenario approach in favour of a forecasting approach. Many governments and businesses will demand a much higher level of certainty than can be offered by scenario planning. The author knows from his own professional work that many South African companies do this. However, in falling back on forecasting these groups expose themselves to the implications of emergence and hence the danger of developing a misleading picture of the future. While the temptation to achieve ever greater certainty about the future may

be significant, this is a temptation that should be resisted when dealing with complex systems. Ralston and Wilson (2006: 4) warn, for example, that the ever more complex nature of the future has seen a “corresponding decrease in the accuracy and utility of forecasting”.

The graphic below, adapted from Ringland (2006: 34), indicates the danger of relying on a single point forecast well beyond the predictable horizon. It shows the present environment as a trend arrow at the extreme left of the diagram. This arrow represents those trends which can be observed or forecast with a relative degree of certainty. However, these trends eventually run into the predictable horizon represented by the thick solid black stripe at the centre of the diagram. Beyond this horizon, trends can no longer be accurately forecast. The possible trends therefore go off in different directions as represented by the three trend arrows at the centre of the diagram. These three arrows run into a box which represents the future. Within this box there are five dots. One is a black dot and represents a single point forecast into the future. The other four are red dots and represent possible scenarios. It is possible that the trends beyond the predictable horizon may develop in such a way that they culminate at a point near the black dot. However, it is more likely that they will point into another section of the box representing the future. In having developed a range of scenarios, the scenario planner can anticipate all plausible trends.

Figure 18: The dangers of forecasting



Source: Adapted from Ringland, 2006

In the example of the South African political system, current trends might be of rising protests and voter desertion of the ANC. This may lead forecasters to argue that by 2024 the ANC will have been overthrown and the country run by a new opposition party. You could make that argument in public in South Africa today and some people might agree with you, especially when they observe the protests and the poverty around them, together with the infighting of the ANC.

Hence, if a planner is to reject scenarios in favour of forecasting, this is a possible forecast he may make. The danger of course is that the ANC may respond to the political threats to its future by introducing reforms that boost GDP growth levels, employment, and incomes. Ten years into the future, South African may emerge as an increasingly prosperous lower middle-income economy led by an even stronger ANC.

If a company had chosen not to invest in South Africa based on the flawed forecast, it may have lost a lot of revenue. That is the price it would have had to pay for the certainty it sought. However, if it had been allowed to consider a range of plausible scenarios it would have been in a position to make an informed risk-versus-reward decision about opening a new plant in South Africa. Neither methodology would have given complete certainty but the forecast could easily have turned out to be completely wrong, whereas the scenario methodology would have provided choice around a short number of options. If the company in question had paid close attention to the political environment on the way to 2024 the scenarios would have served as an accurate route map and by the late 2010s the company would have been able to achieve ever-higher degrees of certainty about what 2024 would actually look like.

This is an outcome beyond the realm of forecasting. Forecasting, by seeking to identify a single official future is unable to anticipate uncertain behaviour. Secondly, in seeking a most probable future, forecasting may tend to disregard evidence that points away from that future. Even where the evidence questioning an official future becomes incontrovertible, the forecaster is in effect at a loss, having no alternative to fall back on. Hence any assumptions based on that forecast must be abandoned and the forecasting process recast from the beginning.

Taking a scenario approach to the future of the South African political system would appear, in theory, to offer considerable advantages over a forecasting approach. The

scenario approach sees the future as plural, and in seeking to identify a number of equally plausible outcomes, has the ability to overcome the futures challenge inherent in the emergent property of complex systems. However, it is not good enough that these advantages are simply theoretical. To confirm the case for adopting a scenario methodology, it is necessary to demonstrate that such a methodology has an established track record in being applied to real world situations.

4.9. THE UTILITY OF SCENARIOS

That scenario planning originated in military planning and came to prominence as a corporate planning tool may suggest that its utility is restricted to these disciplines. However, a review of where and how it has been used shows that even where it may have been incorporated in a specific context it was delivering a result that was equally relevant to political scientists.

Ringland (2006: 30-31; and 2008: 22-27) for example cites a diverse array of case studies including:

- Levi-Strauss looking at the implications of the deregulation of the US cotton industry.
- KRONE using scenarios to consider the implications of copper cable being replaced by other forms of communications infrastructure.
- Erste Allgemeine Versicherung making use of scenarios to make expansion plans for Central Europe in anticipation of the fall of the Berlin Wall.
- Unilever employing scenarios to expand into Russia and China.
- Electrolux using scenarios for Europe in the context of global warming.

While these examples emerged from the corporate world the scenarios themselves were directed at a diverse range of challenges, from market regulation to political change to the environment. Scenarios are therefore applicable to a very wide range of policy or political problems. Their use is not restricted to any single group of challenges. South Africa is a case in point.

4.9.1. Scenario planning in South Africa

South Africa has a rich history of the use of scenario planning to shape public opinions and influence policy-makers especially during the volatile transition years of the 1990s. The first and perhaps the most prominent of these South African examples were the high road/low road scenarios produced by Anglo American in the late 1980s and early 1990s. The scenarios were conducted internally for Anglo American by a team including Pierre Wack, and were also released publicly where they sparked significant debate about the future trajectory of the country. Schwartz (1996: 202), for example, credits them with influencing the decision to release Nelson Mandela. These scenarios set out what Galer (2004: 370) described as “a general vision for the country within the world economy”. Through the late 1980s and early 1990s these scenarios were presented to over 230 audiences and close on 30 000 people (Sunter, 1987: 10).

Also in the early 1990s Nedcor and Old Mutual developed a set of scenarios which were published in 1992 as “*South Africa: Prospects for a successful transition*” (Segal, 2007: 2). These were more detailed than the general overview presented in the High Road/Low Road scenarios and dealt with the specific conditions that would be necessary for a successful transition (Galer, 2004: 369-371).

Also in the 1990s, an indication of the uncertainty of this period, a third set of privately funded scenarios were produced at the Mont Fleur hotel in South Africa (Segal, 2007: 2). These brought together a group of 22 politicians, academics, and business people (Kahane, 1992: 1) and produced four scenarios which were published in *The Weekly Mail* newspaper in 1992. As with the projects carried out by Nedcor and Anglo American these scenarios emphasised the danger of South Africa not reaching a negotiated settlement upon which to conduct a transition to democracy.

It would be another two decades before the next major scenario exercise was conducted in South Africa. In 2010 Nedbank and Old Mutual sponsored a new scenario planning exercise to look into the future of South Africa. Thirty-five South Africans from a host of professional and different ideological backgrounds participated in constructing these scenarios (Dinokeng Scenarios, 2012: Internet Source). The exercise produced three scenarios, which highlighted the dangers of a disengaged civil society falling victim to an interventionist state.

4.9.2. Practical applications for scenario planning

The South African examples exemplify what Schwartz (1991: 3-4) identifies as a major use for scenarios in allowing their users and readers to take a long view of a very uncertain world. The South African scenarios allowed significant numbers of people to understand the very long-term implications of decisions taken in what in the 1990s was an extremely uncertain environment. Schwartz also cites a number of specific uses for scenarios from decision-making in big businesses to making personal decisions such as getting married. Most importantly, he cites their utility in being able to address issues around difficult decisions that would otherwise be “missed or ignored”.

Courtney (2003: 17) unsurprisingly, considering his concept of four tiers or variants of the future, argues that scenario approaches have increasing utility depending on the relative uncertainty of different variants of futures. In his first variant, of relatively certain futures, a scenario approach is unnecessary. In this variant of the future it is possible to forecast a particular outcome. In the second variant, of alternative futures, a short and exhaustive set of different outcomes could be produced. In the third variant, of a range of futures, he argues that three to five scenarios covering a range of plausible outcomes must be developed. In the fourth, and truly unpredictable, future he argues that the scenarios would have to support sets of integrated assumptions that might be true of the future in order to support different strategic outcomes. Both the third and fourth variants of the future are applicable to South Africa’s long-term political stability and it is useful therefore that Courtney explicitly identifies a scenario approach as appropriate in dealing with such uncertainty.

Van der Heijden (2005: 4-7) identifies a number of more precise uses for scenarios as planning tools. The first of these is testing decisions for robustness. Here he argues that testing a decision against two or three scenarios ensures a far more robust decision than one tested against a single forecast. The second is that in being forced to consider multiple scenarios the users of scenarios are exposed to ideas, risks, and opportunities that they might not have considered under a traditional forecasting approach. The third is the ability of scenarios to identify a far broader context of factors influencing a single future event. For example, the Shell experience of the late 1970s forced executives to consider events outside of historical oil supply and demand in determining the future price of oil.

This third use will certainly apply in the case of this study. The broad spectrum of actors at play in the South African political system are just one example of the expansive context that will have to be taken into account in determining South Africa's future stability.

Schoemaker (1995: 27) also identifies a number of circumstances ideally suited to scenario planning. These include where uncertainty is high relative to predictive ability, where a number of costly surprises have occurred in the past, where an industry has experienced significant change, and where there are strong differences of opinion with a number of those opinions carrying merit.

Van der Merwe identifies an equally wide range of applications for scenario planning. He lists eight such applications, ranging from decision scenarios used to test the robustness of a decision to leadership coaching scenarios to help people with personal strategies (Van der Merwe, 2008: 225-226). One of the applications he identifies is particularly relevant to this study. This is the use of scenario methods to promote scenario thinking. He describes this as a perspective that sees the future as plural and unpredictable "beyond a confidence horizon for predicting". Such thinking, he argues, can be used to make decisions relevant to "national and global policy". This study seeks to do exactly that. It seeks to identify the possible future behaviour of a political system well beyond any predictable horizon.

There is a final point on the utility and usefulness of scenarios that extends beyond the environments or circumstances to which they are applied. Wack (1985b: 139) warns that the utility of scenarios which simply enumerate different plausible outcomes is limited. He argues that decision-makers do not like facing alternatives and yearn for certainty "even where they have had their fingers burned from relying on past forecasts". He argues that scenarios that enumerate different futures are first-generation scenarios. Second-generation scenarios, he argues, go beyond simple enumeration and seek to change the perceptions of decision-makers. Such second-generation scenarios have greater utility as they are able to inspire changes in the behaviour of decision-makers beyond making them aware of alternative outcomes.

Scenario planning has been successfully adopted across a very wide range of social, economic, and political applications. It is therefore a methodology applicable to any

future environment beyond its predictable horizon. Nor is the utility of the scenarios restricted to their ability to describe such future environments, but also to change the perceptions of decision-makers in the current environment about how future trends may unfold. That the practice has perhaps been most extensively used in the corporate sector should therefore not detract from its utility in the social sciences and in this specific case within the field of political science. The nature of the long-term problems engaged by political scientists are in principle the same as those engaged by corporate planners especially where they relate to the second, third, and fourth-tier futures of complex systems extending well beyond predictable horizons.

4.10. CONCLUSION

This chapter set out to identify a methodology to apply the four-tier complex systems model of the behaviour of a political system, presented in chapter three, to the future of the South African political system. This was a challenge beset by difficulties. This chapter warned for example that any effort to study the future of political systems had to contend with political science's poor track record of anticipating future change in political systems. The recent example of the Arab Spring was a particularly poignant failure of political forecasting. In addition, any effort at studying long-term futures also has to contend with a measure of incredulity at the idea that long term futures could be studied at all.

However, rather than accepting that the future could not be studied with any level of accuracy, this chapter argued that previous failures to anticipate dramatic changes within political systems may have resulted from forecasting methodologies incapable of accounting for the emergent property of complex systems. Forecasting that sought to identify a specific future point in space and time for a political system was very vulnerable to failure when confronted with the implications of emergence.

Hence, the challenge to this chapter was to identify an alternative methodology that could account for the extreme uncertainties confronting complex systems. Fortunately for this study military planners, confronted with the implications of forecasting failures in a nuclear world, had fifty years ago developed a new futures methodology in scenario planning that shot to prominence in the corporate planning world. This was a method of looking at the future that differed from traditional forecasting methods in that it sought to

identify numerous plausible descriptions, and not a single most probable description, of the future of a system. In seeking to identify numerous futures for the same system it developed the intrinsic capacity to overcome the uncertainty inherent in the emergent property of complex systems. This chapter acknowledged that despite the virtues of this methodology, many planners would nonetheless crave the greater measure of certainty promised by forecasting. The chapter therefore demonstrated, in defence of a scenario methodology, that applying a traditional forecasting technique to the future of a complex system could be dangerously misleading.

All the building blocks to complete this study are now in place. Stability and instability have been defined via complexity theory. Political systems have been shown to be complex systems. A complex systems model has been constructed against which the stability or instability of a political system can be measured. A methodology now exists via which that model can be applied to the future. That application of the methodology to the model will take place in the next chapter and will result in a hybrid complex systems/scenario metho-theoretical model of the behaviour of a political system. Thereafter it will be possible to apply this hybrid model to the current South African political system in order to gauge the long-term prospects for its stability or instability.

5. CHAPTER FIVE: AN INTEGRATED METHODOLOGICAL-THEORETICAL FRAMEWORK FOR ANALYSIS

5.1. INTRODUCTION

As its first step towards determining the prospects for stability or instability of the South African political system this study generated a theoretical framework in complex systems theory against which such behaviour could be diagnosed. It then applied this theoretical framework to a political system and thereby developed the four-tier complex system model that could be applied to any political system in order to gauge its stability or instability. At that point the study could have concluded in determining the stability of the current South African political system. It is, however, seeking to do more than that and to identify the prospects for future stability or instability. It therefore identified scenario planning as a methodology suited to studying the long term futures of complex systems. The next step for the study must be to integrate the theoretical, complex systems, basis of this study, with the methodological scenario approach. This would culminate in a single methodological-theoretical, or what this study will call metho-theoretical, model capable of determining the long-term prospects for the stability of the South African political system.

This is the chief research goal of this chapter and requires first meeting the following research sub-goals:

- The first will be to identify a number of commonalities between the methodology of scenarios and the theory of complex systems. Such commonalities will suggest that the integration of the metho-theoretical model is feasible and how such integration offers a number of advantages. These will relate to the way in which the integration allows both approaches to overcome their inherent weaknesses. Specifically the integration will allow scenario planners to determine the stable or unstable behaviour of the systems they describe in their scenarios. Likewise the integration will allow systems theorists to determine the long-term stability or instability of the systems they study.
- With the feasibility and desirability of such a metho-theoretical model in place, the second research sub-goal will be to identify the principles underpinning all scenario methodologies. Scenarios were described in only very general terms in the previous

chapter. A more thorough description, based on a clear set of principles, is necessary before the application of the methodology can proceed.

- With the principles underpinning scenario planning in place, the third research sub-goal will be to determine the most common scenario methodologies to arise from these principles and then to demonstrate which of these is the most appropriate for this study.

With these three research sub-goals completed the chapter will then be able to meet its chief research goal in proposing the integrated or hybrid complex systems/scenario metho-theoretical model. The remainder of the study will be devoted to operationalising this model and thereby determining the long-term prospects for the stability or instability of the South African political system.

5.2. INTEGRATING SCENARIO PLANNING AND COMPLEX SYSTEMS THEORY

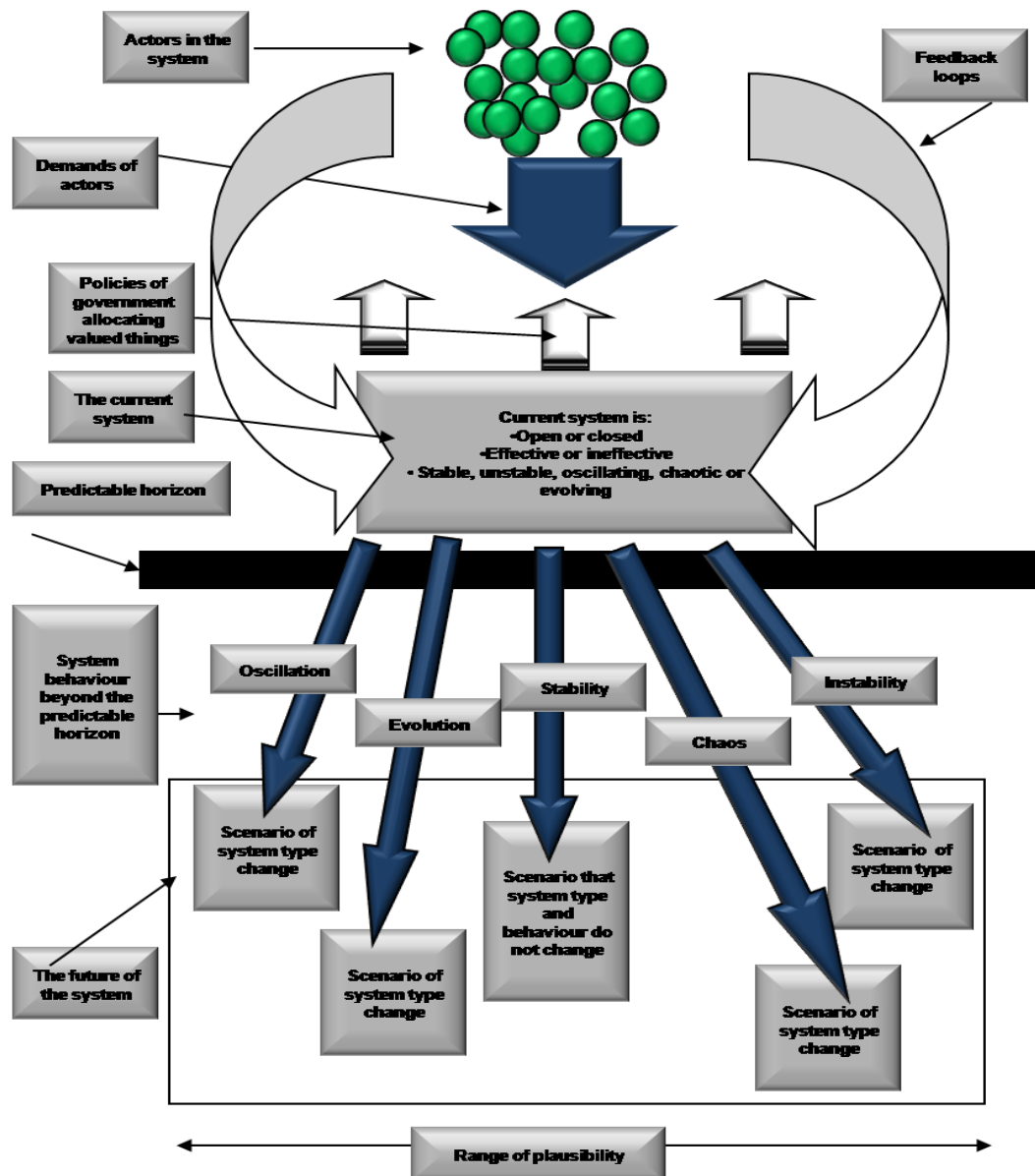
Although both scenario planning and system theory evolved separately since the 1950s they evolved in a world in which the influence of Newtonian reductionism was weakening in favour of an approach that considered the whole of things to be greater simply than the sum of their parts (Syvanteke and Brown, 2000: 69). Despite their common origins both approaches suffer from limitations that are potentially fatal to this study. For example, scenario planning allows a researcher to describe a series of alternative plausible future environments (Schoemaker, 1995: 27; and Van der Heijden, 2005: 4-7). Complex systems theory on the other hand allows a researcher to determine how a specific system is likely to behave (Hurtado, 2010: 30; Ellis and Herbert, 2011: 34; Rhee, 2000: 487-490; Doyle et al., 2008: 270; Duggan, 2008: 60; and Harrington et al., 1999: 54). What scenario planning cannot do is to determine how the system it describes will behave and why. What systems theory cannot do is to determine how the behaviour it describes will change in the future.

Systems theory is therefore trapped to a certain extent in the present, able only to diagnose the environment that it is able to observe. Ralston and Wilson (2006: 3) describe the crux of this limitation succinctly when they write that, "However good our futures research may be, we shall never be able to escape from the ultimate dilemma that all our knowledge is about the past and all our decisions are about the future". Scenario planning is trapped in the sense that while it can describe a future

environment it has no method of determining the behaviour of that environment. What is therefore necessary for this study to succeed is an integrated complex systems/scenario model. The scenario components of this model will describe a future system and the complex systems components will determine how those scenarios are likely to behave.

The diagram below, that merges the diagram of a complex political system published in chapter three with the Ringland diagram of scenarios beyond a predictable horizon published in chapter four, suggests how such a model may, ideally, work:

Figure 19: An ideal metho-theoretical model for determining the future stability of a political system



The diagram shows how actors in the political system make demands on the system that are met by policies of the governing officials. This process determines the current type of system as well as driving the two opposing feedback loops that determine its stability. However, this study is more concerned with future stability than current stability. The diagram shows how beyond the predictable horizon the behaviour of the system may be stable, unstable, oscillating, chaotic, or evolving. Each of these behaviours would change the future of the system across the full range of plausibility. Trying to forecast one such outcome would be guesswork. The diagram therefore shows how it is necessary to develop a broad range of scenarios across the realm of plausibility in order to anticipate all plausible future outcomes for the system.

However, in order to integrate the theory of complex systems with the methodology of scenario planning, it is important that there are sufficient commonalities between these two approaches. If there are no or very few commonalities between these approaches then it may not be practical to try and integrate them into one common model.

5.2.1. Commonalities between complex systems theory and scenario planning

Largely due to their common origins in the post-Newtonian world it is possible to identify three commonalities between the two approaches:

The **first** is that systems theory assumes that a system acts in a broader environment made up of a myriad of different influences (Levanti, 2011: 31; and Snowden 2011: 141). Along very similar lines scenario planning requires a thorough understanding of all the forces acting on a particular environment (Schoemaker, 1995: 26). It is significant, and can be ascribed to their common origins, that both approaches would emerge with a strong emphasis on the broader environment ahead of any analysis. Particularly this commonality reveals the declining relevance of the Newtonian paradigm on the rise of both approaches. A thorough and in-depth grasp of the broader environment is therefore common to both systems and scenario thinking.

Secondly, and perhaps most importantly, systems thinking incorporates the principle of emergence that the results or outputs of a system are always greater than the sum of its parts (Kondraske, 2011: 236; and Morales-Matamoros et al., 2010: 72). Along very

similar lines a number of common scenario methodologies⁵ build scenarios around a nexus of the most important and uncertain driving forces acting on an environment (Schwartz, 1991: 242). Scenario planners therefore seek to learn how the major driving forces in an environment will leverage or multiply each other in order to understand how the future of the systems they study may evolve. The idea that the behaviour of a system or environment is the product of an interaction of driving forces, and that this interaction leaves a result greater than the sum of its parts, is therefore common to both scenario and systems thinking.

Thirdly and finally, complex systems theory allows for a full spectrum of behaviours (Rhee, 2000: 487; and Duggan, 2008: 60) ranging from stability to instability, chaos, oscillation, and evolution. There is no systems behaviour that is not covered in this spectrum. Scenario thinking requires that any set of scenarios should represent a full spectrum of plausible future environments (Schwartz, 1991: 220-242). A good set of scenarios is therefore structured such that every plausible outcome for a particular system is accounted for. A third principle common to both approaches is therefore the importance of allowing for a full spectrum of behaviours or outcomes.

The table below sets out these three areas of convergence:

Table 4: Commonalities between scenario planning and systems theory

COMPLEX SYSTEMS THEORY	SCENARIO PLANNING
A system acts in a broader environment that is made up of a myriad of influences.	A full range of political, economic, social, technological, environmental, and historical influences in the broader environment must be considered in developing scenarios.
Systems have an emergent characteristic where their whole is greater than the sum of its parts.	Scenarios are built around the interface of different driving forces and how they act on each other to produce a result greater than any of the forces themselves.
Small changes in the original conditions of a system may lead to a wide range of different behaviours for the system.	It is necessary that scenarios display a full range of different but plausible future trends.

In addition to being feasible the integration of the two approaches is also desirable in the sense that such integration could allow their relative strengths to cancel out their relative weaknesses. Both approaches suffer from weaknesses that could be fatal to

⁵ These will be presented later in this chapter.

this study, however, in integrating the two approaches those weaknesses are overcome.

5.2.2. Advantages of integrating scenario planning with complex systems theory

For example a potential setback for this study would be if it could determine the stability or instability of the current South African political system, and produce scenarios describing future political systems, but not determine the stability or instability of those future systems. In such a situation determining the prospects for the stability or instability of the South African political system by 2024 could not be done. This would be the outcome if the theoretical complex systems aspects of this study stood in isolation from the methodological scenario aspects.

The reason is that there is nothing in the theory of scenario planning to determine how a particular scenario for a particular system will behave. There is also nothing in the theory of complex systems to predict how the system in question will evolve over a period of time. Such integration would therefore achieve something very useful in delivering a hybrid complex systems/scenario model that could determine the stability or instability of a system over a period of time beyond any predictable horizon. Despite this promise there may, however, be some hesitation at such an approach as it would seem to mix the 'soft' social science of scenario planning with the 'hard' science of systems theory. Scenario planning is sometimes seen as somewhat of a soft or social science while systems theory is seen as hard science. For example systems theoretical models are often presented in such a degree of complex mathematical detail that few social scientists feel comfortable around such models and even fewer may understand the mathematical equations that underlie them.

Fontela (2000: 10-12), however, argues the case for exploring the possibilities of integrating scenario planning with modelling techniques of how events in certain systems occur. He argues that because scenario planning is not concerned with deterministic forecasts of how events in a particular system are likely to unfold, many scenario planners tend to ignore deterministic models of how certain systems behave. He warns that such 'hard science' has induced negative reactions within parts of the social sciences community. However he goes on to argue that systems models are often more a case of 'subjective opinions dressed up as elegant mathematics' and not

in many cases hard science as such. The inference is that scenario planners should be more willing to integrate such models into their planning work.

Applied to the South African political system, such an integration could be done as follows:

- The four-tier complex system model of the behaviour of a political system will be applied to the current South African political system.
- That system will then be described as open or closed and effective or ineffective and stable or non-stable – in other words as one of the 20 variants of system type and behaviour described in chapter three.
- Next via an appropriate scenario methodology, a number of scenarios describing the South African political system by 2024 will be developed.
- The complex systems model of the behaviour of a political system will be applied to the environment described in each scenario.
- The result will be a set of scenarios describing system type and behaviour, or variant, for the South African political system of 2024. Each of these can be compared to the benchmark system variant and the differences in the two over time will reveal the prospects for stability or instability in the period to 2024.

The great strength of this integration is that it allows the study to overcome the problem identified by Ralston and Wilson (2006: 3) of our knowledge being about the present while our concerns are about the future. However, such integration requires a single appropriate scenario methodology, quite possibly one that is already in operation, with which the four tier model may be applied to the future of a political system.

5.3. PRINCIPLES OF SCENARIO PLANNING

A useful place to commence the search for such a detailed methodology is to try and identify principles that underpin scenario planning methods. As Ralston and Wilson (2006: 3) point out, much of what passes for scenarios in public life is nothing more than assumptions based on the limited knowledge and pre-conceptions of individuals. True scenarios must therefore be based on an established set of principles, which in turn support an accepted set of methodologies. A review of scenario planning literature since the 1970s suggests that there are three key principles.

5.3.1. The three key principles of scenario planning

The **first principle** is that traditional forms of forecasting such as trend extrapolation have critical weaknesses. Such forms of forecasting are based largely on known trends, which are then extrapolated into forecasts (Marren and Kennedy; 2010: 11; Schoemaker, 1995: 25; Saunders, 2009: 11; and Van der Merwe, 2008: 218). The world's perhaps most distinguished scenario theorist, Pierre Wack (1985a: 73), points out that these forecasts are often correct. However, he argues that they are only correct because known trends usually change very slowly. When the trends change very quickly or the original trend that the forecast relied on is broken, the forecast fails. This is, however, precisely the moment at which an accurate forecast would have been most useful. Scenario methodologies overcome this problem by identifying numerous plausible futures, and not just a single most probable future (Saunders, 2009: 19; Fontela, 2000: 10; and Millet, 2003: 16).

Here the example can be made of the recent political upheavals in Egypt, Libya and other parts of the Middle East and North Africa. The suddenness with which young people in those countries turned on their leaders, and in the case of Egypt and Libya overthrew them, took the world by surprise (Dodge, 2012: 64 and 67). Trends established over decades in those countries had been that their governments were fairly well entrenched in power. In exactly the same way that many oil companies in the 1970s were unprepared for the oil price-shock, so many governments and corporations were unprepared for the rapid shift in North African and middle-eastern power balances. In political science no single university department or think-tank can today make the claim they had forecast both the nature and the timing of recent events in the middle-east and North-Africa. The reason is that these were events that could not be forecast. The state of Egypt today is so far removed from the Egypt of the last 20 years that trends over those 20 years could not possibly have led to a single point forecast to indicate the overthrow of the Mubarak regime. However, had a scenario approach been taken to events in that region there is a likelihood that governments, think-tanks, and politics departments at universities would have been able to anticipate a major power shift in that region.

The **second principle** is that uncertainty is something that can be used as a unit of analysis (Wack, 1985a: 73; and Schoemaker, 2002: 5). Many traditional forecasting

methods rely on empirical and quantifiable data and trends (Marren and Kennedy, 2010: 11). Many of the users of forecasts demand such data. There is as a result a reluctance to try and assess, measure, and account for the possible impact of things that are very uncertain. However, there are a number of scenario methodologies in operation today that succeed in using known trends and data to identify important uncertainties about the future and to structure those uncertainties in such a manner so as to use them in identifying a select number of plausible futures. In very general terms these methodologies⁶ identify the key trends in any current environment. They then group those trends into a limited number of driving forces (Schwartz, 1991: 243). These driving forces are then ranked by importance and, critically, by their level of uncertainty. The most important and the most uncertain driving forces can then be plotted on a matrix to offer up a number of alternative futures. The author of the scenario can adopt all methods of research and analysis to describe the most plausible futures in great detail. Van der Heijden (2005:16) describes scenario planning's explicit approach towards uncertainty as the thing that distinguishes the method from "other more traditional approaches to strategic planning".

The **third** underpinning is that it is important to identify numerous plausible futures, and not just a single most probable future (Saunders, 2009: 19; Fontela; 2000: 10; and Millet, 2003: 16). These futures should cover the full spectrum of plausibility. The purpose of scenario planning is therefore not to describe a single probable future but rather to illustrate all plausible futures. The reasons are threefold. The first is that identifying a single most probable scenario exposes that scenario to the same weakness that applies to single point forecasting. The second is related to the first in that by identifying all plausible futures the users of a set of scenarios may not necessarily correctly identify a single future but neither will they be taken by surprise by an alternative future. The third is that in the case of the future of complex systems there is no single pre-determined future. The emergent characteristic of such systems means that small changes in their current conditions may result in extreme changes in their futures. Studying the futures of emergent systems therefore requires producing a spread of possible future outcomes for the system as opposed to a single forecast.

⁶ They are reviewed in much greater detail later in this chapter

In a review of Schwartz's *"The Art of the Long View"* (1991) Stewart Brand summarizes this third principle very succinctly as follows, "[scenario planning] ensures that you are not always right about the future but even better that you are almost never wrong about the future". Admittedly, critics of such a statement would argue that it is a 'cop-out'. Predict every possible future scenario and yes, indeed, you will not be wrong about the future. But such a critique is to misunderstand how scenarios are developed. Scenario planners are not seeking to cover every conceivable set of events. In fact many scenarios produce only two or three possible futures. Rather what the planners are seeking to do is to produce a divergent set of descriptions of the future that are all bound by the condition that they remain within a range of plausibility.

Here a second criticism of the practice can be made that determining the range or spectrum of plausibility is a very subjective decision. It is indeed a subjective decision although it is also a decision that needs to be based on very sound research into trends and driving forces. In fact one of the leading scenario methodologies is known as the deductive or objective approach (Fourie, 2007: 98) due to its explicit approach to incorporating sound social, economic, and political research. The team or individuals producing the scenarios apply their knowledge and research in order to make an informed decision. Many proponents of forecasting who demand a measure of certainty and a high degree of objectivity in their forecasts may reject such an approach as still being overly subjective. However, their only alternative would be to accept the repeatedly proven failures and inaccuracies of single point forecasting over the subjective inputs into the scenario process. In addition, if they are studying complex systems, such a desire for certainty would cause them to overlook the emergent characteristic of such systems. A more enlightened approach would therefore be to accept the uncertainty inherent in long-term futures and account for it by adopting a methodology that incorporates such uncertainty in order to make its users aware of the full range of plausible future outcomes.

It is upon these three principles that all scenario-planning methodologies are based. There are a number of these approaches but this study will have to select just one of these, based on it being the most appropriate for determining the future stability or instability of the South African political system.

5.4. DIFFERENT METHODOLOGICAL APPROACHES TO SCENARIO PLANNING

While all scenarios share the same underlying principles there are a number of different methodological approaches to scenario planning. These can be divided into two rough categories. The first is the deductive or objective approach (Saunders, 2009: 19-20; Ralston and Wilson, 2006: 22; and Fourie, 2007: 98). This is an approach that commences with research and analysis into trends in the broader external environment. Out of this research a number of scenarios are built. Ralston and Wilson (2006: 22) indicate that this approach regards the external environment as largely outside the scope of influence of the business or decision around which the scenarios are being developed. Fourie (2007:98) describes this methodology as effective for quick results in relatively narrowly focused work.

The second is the inductive approach (Saunders, 2009: 19). Ralston and Wilson (2006; 23) argue that normative, incremental, or inductive scenario approaches assume that the business, for example, for which the scenario is being developed can influence its external environment to a significant extent. Whereas the deductive approach commences with broad research into trends in the external environment, the normative approach commences with a business's own vision of how its future will unfold and then challenges that vision with questions around future trends and events. Fourie (2007: 99) argues that this approach, while extremely thorough, is also time-consuming and expensive.

In deciding which approach is most applicable to political systems, and specifically the future of the South African political system, the question of influence over the external environment should be paramount. It is quite unlikely that all but the biggest multi-national corporations and most powerful governments are able to exert effective and direct influence over their environments. Here Ralston and Wilson (2006: 23) indicate that there is acceptance that events in the broader external environment are largely beyond the influence of even the largest corporations and most powerful countries and economies. In the great majority of cases, that political environment or system will be outside the scope of influence of the party conducting the scenarios. In the case of the South African system the economic, social, and political events that will determine the future of feedback into the system, and hence its stability, are largely outside the scope of influence of the system itself. The system has limited influence over the political

opinions of individual actors in the system. It can exert no influence over global economic circumstances. It cannot control the socio-economic aspirations of various actors or groups for improvements in their standards of living. Therefore for the reason that the broader environment giving rise to the scenarios is largely outside the direct control of the political system, a deductive approach would appear to be the most appropriate approach for the study of political systems.

They also demonstrate that there is a difference in the analytical and intuitive approaches to scenario planning. The analytical approach relies on formal research models and the like whereas the intuitive approach relies more on qualitative insights into the future. In effect, however, the debate about which approach is the most effective should not arise. Both Millet (2003: 19) and Ralston and Wilson (2006: 23) argue that modern scenario methods have come to rely on the value and importance of a combined approach. Millet argues that formal quantitative research can benefit greatly from the intuition of expert analysis. The result is what Ralston and Wilson describe as a “balanced approach” to scenario planning and what Millet describes as the “composite approach”.

5.4.1. A composite scenario methodology

It makes sense therefore for this study to follow very closely the deductive or objective scenario planning methodology described by Schwartz (1991), Schoemaker (1995 and 2002), Mercer (1995: 34), and Fontela (2000: 11) and to balance very carefully the analytical and intuitive approaches. Following from all the above authors, but specifically from Schwartz, such a methodology could be structured across the following five steps:

Step one is to determine the focal question that the scenarios will seek to address. This is the question of what the prospects for stability or instability of the South African political system are in the period to 2024.

The **second step** will identify the Key Driving Forces (KDFs) that could have a bearing on the focal question of the study. This will be done by reviewing the Political, Economic, Social, Technological, Environmental and Historical (PESTEH) trends that could have a bearing on system stability or instability. Such a PESTE analysis is a scenario approach that follows from the work of scenario practitioners such as Van der

Merwe (2008). Schwartz (1991: 242) proposes a similar method to identifying driving forces to include a checklist of all the PESTEH components, less the historical. He describes this process of identifying KDFs as “an effort to identify the forces behind the micro environment”. He further urges practitioners to divide these KDFs into those that are predetermined and those that are very uncertain.

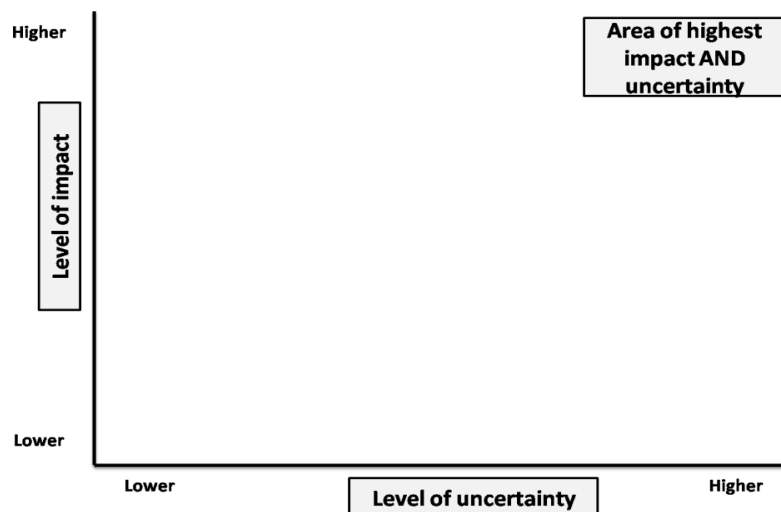
Step two will therefore provide a thorough description of current PESTEH trends that could have a bearing on feedback entering the study. This will become the foundation of knowledge upon which the scenarios will rely. There will, of course, be a great number of driving forces or significant trends in the environment and these will have to be distilled into the more concise number of Key Driving Forces or trends that are likely to have a deterministic impact on the future of the system.

Step three then takes the PESTEH and KDF analysis further and will rank these KDFs according to two criteria. The first is the level of impact that the KDF in question is likely to have on the stability of the political system, and the second is the level of uncertainty surrounding that KDF (Schwartz, 1991: 243). The process is a relatively subjective one, and a criticism may be made here about the subjective nature of this decision-making process. There is admittedly no absolutely objective point of reference against which the scenario planner can determine what trend is likely to have a greater impact than another. However, there are four points that can be made in defence of the approach. The first is that the entire concept of scenario planning has emerged in response to the failure of objective trend analysis and single point forecasting. The second is that scenario planning welcomes the intuitive inputs of expert planners just as it welcomes the qualitative objectivity of trend analysis. The third is that if the research process under step two is comprehensive, then each of the KDFs that result from it will have such a deterministic effect on the future that selecting one over another in terms of impact may be impossible. Rather any of the KDFs may be identified as most influential or uncertain, and the scenarios that result will ultimately describe a system very similar to that if other KDFs had been selected. The ranking exercise therefore becomes more an exercise in structuring the scenarios than in seeking to identify a hierarchy of impact and uncertainty. The fourth point is to remind critics that each of the KDFs will be incorporated and described in great detail in each of the scenarios that follows. Hence

the ranking exercise is not one of dispensing with certain KDFs in favour of others but rather one of constructing a framework wherein each of the KDFs can be incorporated.

The ranking is conducted on a chart with two axes: the left hand axis measuring impact and the right hand axis measuring uncertainty. The result of the ranking is to produce a chart of all the KDFs showing their relative impact and uncertainty. The items in the top right area of the chart will be those with the greatest level of impact and associated with the greatest degree of uncertainty. The diagram below shows such a chart and its area of highest impact and uncertainty.

Figure 20: Impact and uncertainty matrix

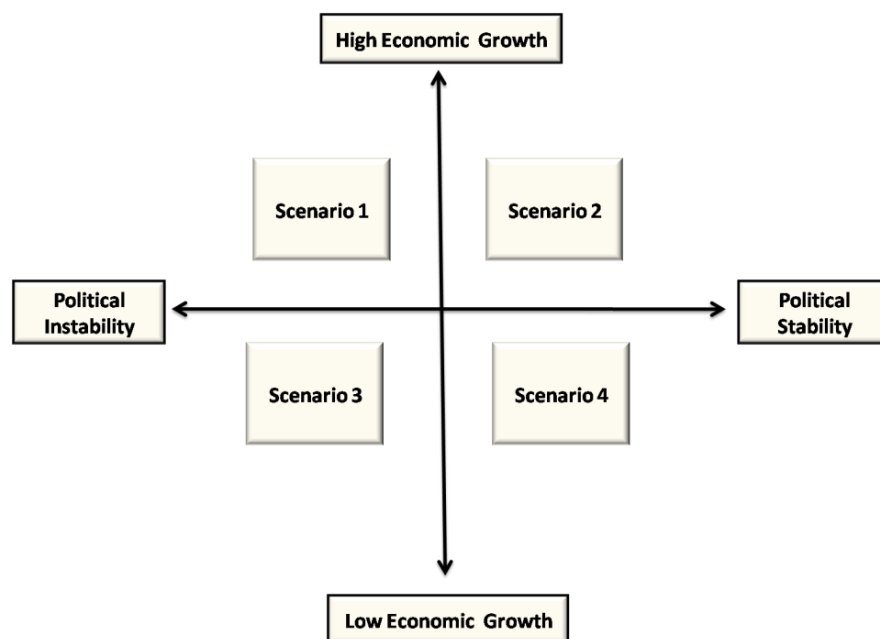


At step three, the structured nature of the scenario planning methodology starts to become visible as a major advantage of the methodology. Without such a structured analytical framework, it is difficult to imagine how any researcher could be expected to make ordered sense of, and integrate in his analysis, such a diverse range of driving forces as those required by the PESTEH analysis. It is quite likely that it would simply not be possible to bring so diverse a range of factors into any analysis. As a result, many researchers might be tempted to consider a smaller number of driving forces in order simply not to be overwhelmed by the vast amount of information that has a bearing on the broader environment of the system they are studying. However, by restricting oneself to a smaller number of driving forces the risk exists that an important driving force may be missed. Scenario planning therefore allows the researcher to consider a complete spectrum of information and trends that may have a bearing on the focal question they are researching. In political science, where the interplay of the

political, social, and economic determines the behaviour of a political system, such a structured method of analysis is very valuable. By the end of step three, all those factors in the economic, social, and political environments of the political system will have been brought into the analysis. They will have been assessed in terms of how great an impact they are likely to have on the future of the political system. They will also have been assessed in terms of how uncertain that impact is.

Step four will produce a scenario matrix based on the two most important and most uncertain KDFs identified under step three. These two KDFs become the axes of this matrix. For example, if economic growth and political stability were identified as the two most important and uncertain KDFs influencing the future of a system, then the matrix would be constructed with these two issues as its axes. Schwartz (1991: 243) argues that “the goal is to end up with just a few scenarios whose difference makes a difference to decision makers. If scenarios are to be successful learning tools, then the lessons they teach must be basic to the success of the focal decision”. The four quadrants of the matrix will deliver four possible future scenarios in response to the different combinations of driving forces. The diagram below is of such a matrix showing how it would suggest four possible scenarios.

Figure 21: A basic scenario matrix



Scenario one, for example, is that of a society with a high level of economic growth in an environment of political instability. Scenario two is that of a high level of growth in an

environment of political stability. Scenario three is that of a low level of economic growth in a politically unstable society. Finally scenario four is that of a low level of growth in a politically stable society.

The process of PESTEH research that commenced in step two has therefore evolved into a concise set of possibilities for the future. It would have been difficult to come to as concise a series of possibilities without the aid of the structured process in steps three and four. In fact if one presented all the research conducted in step two to any group of students or analysts and asked them, out of that research, to describe the long-term future of the society upon which that research was based, it could probably not be done. If it was, it would be based largely on guesswork and conjecture, the results of which would be difficult to substantiate. However, if those same students were offered a structured methodology such as that in steps two and three, the results of their assessment of the future could be considerably easier to substantiate.

At this point the full myriad of economic, social, and political factors determining the environment wherein a particular system exists will have been brought into the analysis. That analysis has been brought to a single point where a description of the future social, economic, and political environment can be published.

Step five will involve describing the scenarios. The scenarios suggested by the four quadrants of the matrix are four possible extrapolations of the future, based on the interplay of how the most important and uncertain KDFs come together. The step of writing up these scenarios involves returning to the full list of KDFs identified under step two. Schwartz (1991: 245) argues that each KDF must be incorporated into each possible scenario and that the practitioner should then “weave the pieces together to form a narrative”. This narrative would be a story or description of how the environment in each scenario would look based on the interplay of KDFs.

In other words, what will happen in this step is that each of scenarios one to four will be considered against the full set of KDFs identified under step two. For example, scenario two, of high growth in an environment of political stability, would be written up to say that levels of growth in the system had increased in the decade to 2024, that levels of investment in the country therefore also increased, and that levels of education had improved. This then becomes a story of the future. Scenario three, of a level of low

growth and political stability, would be written up to say that growth levels had fallen, investors taken flight, and skills left the country. All the other PESTEH factors identified under step two would of course also be incorporated. The net result would be a set of four detailed descriptions of the future.

5.5. INTEGRATING COMPLEX SYSTEMS THEORY AND SCENARIO METHODS INTO A SINGLE METHO-THEORETICAL MODEL

With the structured scenario methodology in place this study has reached a point where it can propose how to integrate the four-tier complex system model of a political system with this methodology. This is extremely complex work and it is sensible therefore to review both approaches one last time before they are integrated.

5.5.1. Reviewing four-tier complex systems model

The complex systems model of the behaviour of a political system featured four steps or tiers that had to be followed in order to determine the type and behaviour of a political system:

- 1) The first step was to identify and describe the characteristics of the system in terms of its participants, feedback mechanisms, output mechanisms, and the regime.
- 2) From these it will be possible to describe the system attributes in terms of availability of demand mechanisms, access to these mechanisms, and the effectiveness of the system in meeting socio-economic demands.
- 3) Those attributes will in turn allow the system type to be determined as an open or closed and effective or ineffective system.
- 4) It can then be argued whether the feedback at work in the system characteristics demonstrates a predominance of negative or positive feedback. The result would be a description of the current South African political system in terms of its type and behaviour – or variant.

5.5.2. Reviewing the deductive scenario methodology

The deductive scenario methodology presented earlier in this chapter followed five steps:

- 1) The first step was to determine the focal question that the scenarios sought to address.
- 2) The second was to assess all the driving forces that could have a bearing on that focal question.
- 3) The third was to rank those driving forces by their impact and the degree of uncertainty surrounding them.
- 4) The fourth was to use the most important and most uncertain driving forces as the axes of a matrix which would in turn offer up four possible alternative scenarios
- 5) The fifth step was to write descriptions of the environment suggested by each scenario.

The challenge now is to integrate the scenario methodology with the systems model and to propose a single hybrid metho-theoretical model with which to gauge the prospects for stability or instability in the South African political system by 2024.

5.5.3. An integrated metho-theoretical model

The following four steps present that integration:

Step one: Determine the current type and behaviour of political system.

This first step is to describe the current political system according to the four-tier model of such a system. This would require first describing the characteristics of that system in terms of actors, feedback mechanisms, output mechanisms, and the regime - in other words a description of the political environment. From these it will be possible to describe the system attributes in terms of availability of demand mechanisms, access to these mechanisms, and the effectiveness of the system in meeting socio-economic demands. Those attributes will in turn allow the system type to be determined as an open or closed and effective or ineffective system. It can then be demonstrated whether the feedback at work in the system characteristics, and giving rise to the system attributes, demonstrates a predominance of negative or positive feedback. The current system can then be described as one of the 20 possible variants of system type and stability identified in chapter three. This description serves as a benchmark against which the scenario systems can be compared.

Step two: Conduct a PESTEH analysis of the factors likely to influence the future political environment.

The second step is to conduct a PESTEH analysis of all the social, economic, and political factors that have a bearing on the future political environment in South Africa. This will result in a list of the driving forces or trends shaping the future feedback that may enter the political system.

Step three: Producing the scenario matrix

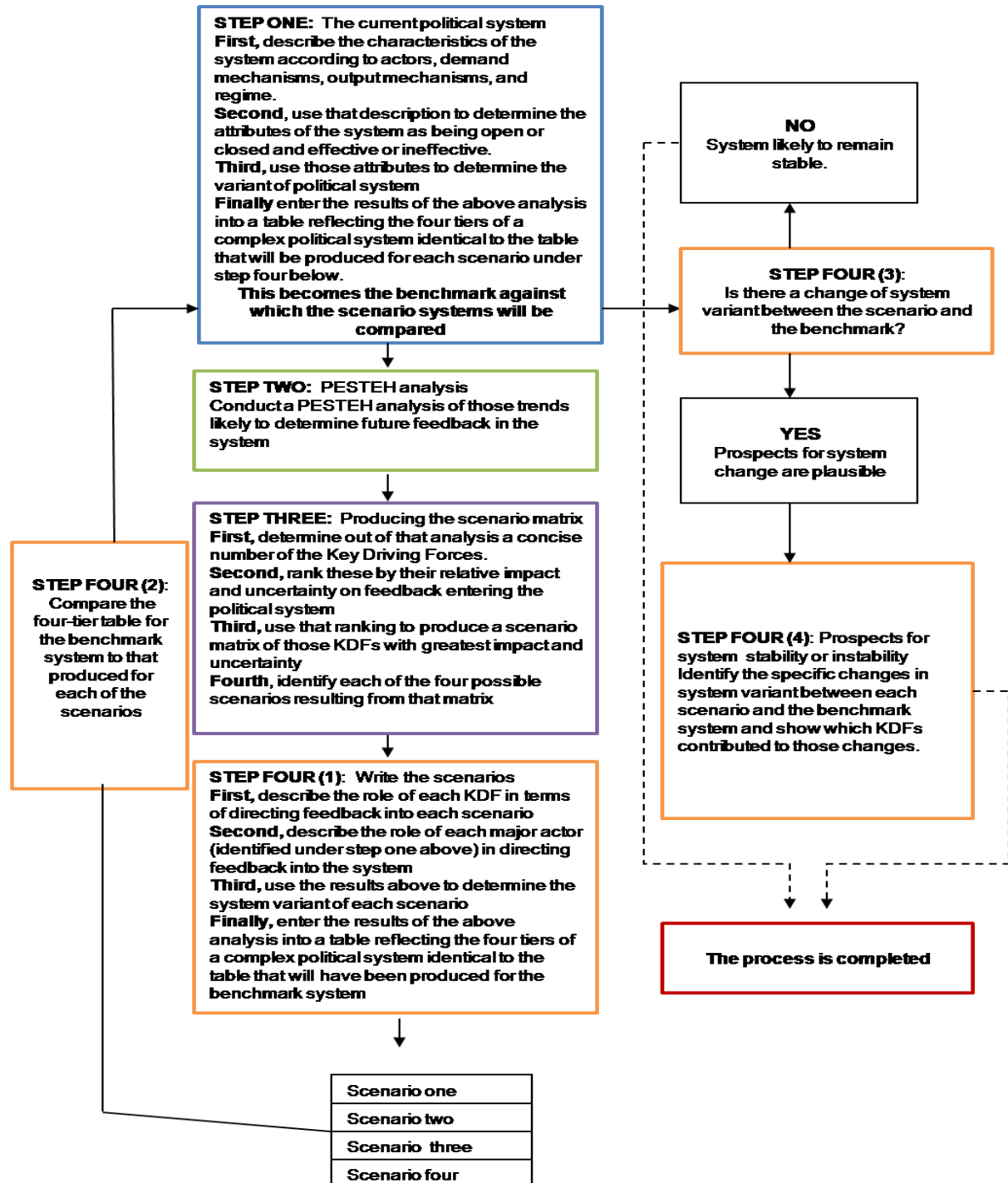
These trends must be condensed into a more manageable number of Key Driving Forces or KDFs. These will be trends having a deterministic or definitive effect on the future of feedback entering the political system and therefore its stability. Once identified, these KDFs must then be ranked according to two criteria. The first is what impact the KDFs in question are likely to have on the future stability or instability of the system. The second is to address the question of how uncertain the impact of each KDF will be. This ranking will take place on a ranking chart of the type presented in this chapter. These most important and uncertain KDFs must then be plotted on a matrix of the type presented earlier in this chapter. They will become the two axes of this matrix the result of which will suggest four possible scenarios for the system.

Step four: Writing the scenarios and comparing them to the benchmark system

The scenarios identified in step three need to be described in a high degree of detail right down to their system variant. This is so that they may be compared to the benchmark system produced under step one above. Each scenario must first be described in terms of the role of each KDF in driving changes along the three axes of the triangular system type diagram. Then each of the actors identified as a driver of feedback in the benchmark system must be described for each scenario in terms of the nature of feedback they are likely to introduce in that scenario. Those descriptions will reveal the effectiveness, openness, and balance of feedback – and hence stability of each scenario. Each scenario will therefore have been described as one of the 20 possible variants of system type and stability. Comparing the system variant of each scenario to that of the benchmark system will reveal the prospects for stability or instability confronting the system over the period to 2024.

A graphic of the four steps follows below:

Figure 22: Metho-theoretical model for determining the prospects of future political system stability or instability



5.5.4. The application of the metho-theoretical model

By applying the model above, it will be possible to answer the central question of this study, which is to determine the prospects for the stability of the political system to

2024. Change scenarios are all scenarios of non-stable behaviour. Hence, if all of the scenarios showed a change of system variant it would be possible to conclude that the overall prospects for system instability were high. Likewise if a scenario showed no variant change then it could be concluded that the prospects for system stability, under that specific scenario, were high. By studying the differences in system variant it would also be possible to show which attributes of the system are likely to change where its behaviour becomes unstable. For example, if the current political system were described as open, ineffective, and stable (a variant type 11) but one of the scenarios suggested a closed, effective, and unstable political system (a variant type 7), it would be possible to compare the specific differences in terms of access to and availability of demand mechanisms, output mechanisms or policies, and system effectiveness, to explain how and why non-stability leading to change will occur in the system.

5.6. CONCLUSION

This chapter sought to integrate complex systems theory and scenario planning methodology into a single metho-theoretical model with which to determine the long-term prospects for stability or instability in a political system. Specifically, it sought to integrate the four-tier complex systems model of the behaviour of a political system with the deductive scenario methodology developed in this chapter.

In proposing this model the chapter first demonstrated that there was a remarkable degree of synergy between scenario planning as a methodology and systems thinking as a theory. Much of this arose out of the origins of the two approaches in a world where the influence of Newtonian reductionism was diminishing whilst nuclear weapons highlighted the potentially devastating consequences of errors in global prediction. These synergies were important as they indicated that the integration of the two approaches was a feasible exercise. The chapter also showed that such integration was desirable as it overcame weaknesses inherent in the two approaches. Specifically these related to the fact that while systems theory can diagnose the behaviour of the systems to which it is applied, it has no mechanisms to determine their future behaviour. Likewise scenario planning can describe a future system, but has no theoretical basis to determine its behaviour. Hence, by integrating the two approaches it would be possible to propose a model with which to determine the future behaviour of a system.

Having established the feasibility and desirability of such a model the chapter went on to review the principles or underpinnings of scenario planning in order to identify an appropriate scenario methodology to apply to the four-tier model. The study argued that a deductive scenario planning methodology would be most appropriate on the grounds that it was built on the assumption that the system being studied, in this case the South African political system, would not exercise authority over its environment. The final step of this chapter was therefore to show how the detailed integration of this scenario method and the four-tier complex systems model could occur. What followed was an operational four-step approach that a researcher could follow in order to gauge the long term prospects for the stability or instability of any political system. This hybrid complex systems/scenario metho-theoretical model will be applied over the remaining chapters of this study in order to gauge the prospects for South Africa's stability or instability in the years to 2024.

6. CHAPTER SIX: THE SOUTH AFRICAN CONTEXT: DETERMINING THE BENCHMARK SYSTEM VARIANT

6.1. INTRODUCTION

The previous chapter proposed a hybrid or metho-theoretical complex systems/scenario model which, when operationalized on the South African political system, would provide an answer to the question of what the prospects for stability or instability in that system are in the period to 2024. The remainder of this study will be devoted to operationalising this model on the South African political system.

The first step prescribed by the hybrid model is to determine the type and behaviour of the current political system according to the four-tier complex systems model of such a system. Applying this four-tier model to the current South African political system is the chief research goal of this chapter. Meeting this goal will require meeting four sub-research goals, which relate to the four tiers of the model:

- The first of these will be to describe the characteristics of the South African political system including its actors, demand mechanisms, output mechanisms, and regime.
- The second will be to use these characteristics to determine the attributes of the system in terms of the presence of demand mechanisms, access to these mechanisms, and the effectiveness of the system in meeting demands.
- The third research sub-goal will be to determine the type of political system according to its attributes as either an open or closed and effective or ineffective system.
- The fourth research sub-goal will be to determine the balance of feedback within the system in order to describe its behaviour as stable, unstable, oscillating, chaotic, or evolving.

Meeting these four research sub-goals will see the chapter describe the current South African political system as one of the 20 possible variants of such a system. This result will later be compared to the variants suggested by the scenario systems. Differences between the scenario and benchmark systems will hold the answer to the prospects for system stability or instability.

6.2. TIER ONE: SYSTEM CHARACTERISTICS

This tier of the model relates to the four characteristics of a political system. These include **actors** which place demands or feedback on the system, **demand mechanisms** via which they place those demands or direct that feedback, **output mechanisms** via which the government responds to such demands or feedback, and a **regime** that governs the actors and determines their access to demand mechanisms and the government's access to output mechanisms. This subsection will describe each of these characteristics for the current South African political system.

6.2.1. Actors

Chapter three of this study demonstrated that a complex political system features an innumerable number of actors. These make demands on the system via feedback, which determines its stability. The chapter argued that because of the great number of actors within any complex system it will never be possible to quantify and describe in detail each and every actor. Rather it is necessary to identify those actors that exert the greatest degree of feedback and therefore influence over the stability of the system. It was also argued that the actors within a political system exist within economic, social, and political environments. These determine the actors' experience of the system and therefore determine the demands they place on the system. Of course many actors will exist across all three environments. However, it aids in overcoming the initial complexity presented by a political system to identify actors according to each of the economic, social, and political environments of the system.

6.2.1.1 *Actors in the economic environment*

Perhaps the most prominent group actors in the economic environment are, ironically, not active participants in that environment but rather the very great number of unemployed people. In 2011/12 South Africa averaged an unemployment rate of 25% (SAIRR 2012b: 267). This compared very badly to its partners in BRICS, which averaged unemployment rates of 6.7%, 7.5%, 10.8%, and 6.1% respectively (SAIRR 2012b: 267; International Labour Organisation (ILO), Internet: 2011; and *The Economist*, 16 April 2011). More importantly, the labour market participation rate, which determined what share of the population was employed or unemployed, was just 44% for women in South Africa in 2009 and 63% for men. In 2009 Argentina (data for Brazil

is not available), China, India, and Russia averaged participation rates of 78%, 82%, 83%, and 75% respectively (SAIRR, 2011: 223).

Largely as a result of very low levels of labour market participation and poor education the South African economy displays great inequalities between economic actors. In 2010, for example, whereas white South Africans had monthly median earnings of R9 500 the figure for black South Africans was R2 167 (SAIRR 2011: 284; and StatsSA, 2010: Internet). Also in 2010, of South Africa's 14.3 million households, only 1.1 million or 7.6% spent more than R10 000 per month and more than 7 million, or just under 50%, spent less than R1 799 per month (SAIRR 2011: 300; and Stats SA, 2009: Internet).

This resulted in a GINI coefficient of 0.631 in 2009, which compared very badly with the BRIC figures of 0.547, 0.401, 0.334, and 0.425 respectively (World Bank, 2012: Internet). It is not surprising therefore that the economic environment features large numbers of poor actors. On a poverty level measured as a per capita income of less than R1 315 per month, 39% of South Africans were classified as poor in 2010. This was virtually unchanged from the figure of 40.6% for 1996. The figure for black African South Africans was 47.4% while that for whites was 0.7% (SAIRR, 2012b: 308-312).

As a result of these inequalities very few actors were taxpayers. In 2010 there were 5.9 million individual taxpayers (SARS, 2011: Internet; SAIRR, 2012b: 174-179) out of a total population of 49.5 million people, including 32.3 million adults and 13.1 employed people (SAIRR, 2012b: 12-14 and 254). This meant that there was one taxpayer for every five adults and every two employed people.

Much smaller in number than the poor and the unemployed but arguably as influential are the business and investment actors whose decisions greatly influence the prosperity of the political system. Concerning therefore is that many of these regard the investment climate as uncertain and even hostile.

In the mining industry, for example, investor concerns were reflected in the fact that South Africa's ranking for attractiveness as a mining investment destination fell from 61 out of 72 countries and territories in 2010 to 67 out of 79 in 2011 (Fraser Institute, 2011; Internet). In October 2011 the CEO of Anglo Gold Ashanti said that miners were delaying capital investment into South Africa as a result of uncertainty around the

nationalisation of their mining operations (*Business Day*: 10 October 2011). Nor was the mining sector alone in expressing its concerns. In July 2011 the former governor of the Reserve Bank, Mr Tito Mboweni, warned that reckless economic policy debates within the ANC were deterring investment (*Business Day*: 18 July 2011). In November 2010 the chairman of the Gauteng Law Council, Advocate Johann Scholtz, warned that poorly functioning courts had forced investors to resort to arbitration processes to settle disputes (*Business Day*: 12 November 2010). In June 2011 the planning minister, Trevor Manuel, identified the failing education system as hampering economic progress (*Sunday Times*: 12 June 2012). Likewise in January 2011 the Production Management Institute warned that the poor quality output of the schools system could cause business to “grind to a halt” (*Engineering News*; 20 January 2011). On 25 November 2005 the *Sunday Times* quoted the then deputy president, Phumzile Mlambo-Ngcuka, saying that the “cost and complexity of regulatory compliance” was becoming an obstacle to investment (*Sunday Times*: 27 November 2005).

Partly as a result of investor sentiment in 2010 foreign direct investment accounted for just 1.9% all Gross Fixed Capital Formation (GFCF) (UNCTAD, 2011: Internet Source and UNCTAD, 2012a: Internet Source). This figure could be compared to one of 13% for Brazil, 13.6% for Russia, 4.5% for India, and 4.1% for China (UNCTAD, 2011: Internet). The growth rate of the economy has also underperformed emerging market peers. For the period 1994 to 2010 South Africa’s economy averaged growth of just over 3% of GDP (SAIRR, 2011: 103). This was half the rate recorded by the BRIC countries.

This assessment of the economic environment suggests that there are three distinct groups of particularly influential economic actors. The **first** are the private investment community. They are critical in driving future investment and therefore the pace of GDP growth and their decisions will determine the prosperity of the economic sector. Their demands are likely to include a stable investment environment, a skilled workforce, guaranteed property rights, a growing domestic market, and favourable trade terms. The **second** is the roughly 10% or so of relatively wealthy individual actors. It is very difficult to define such a group with precision. However, it is acceptable for this study to suggest that these actors would generally include the 10% or so of households who spend over R10 000 per month and the 15% or so of adults who pay income tax. This

group is an influential elite, which, as in the case of the investment community, can through their demands determine levels of prosperity within the economic sector. Their demands are likely to include maintaining their own prosperity, high quality services, personal security, and the freedoms characteristic of open political systems. The **third** group is the 50% of so of actors who live in poverty. Again defining such a group with absolute precision is probably not possible, although its members will generally include that 50% of households that spend well under R1 799 per month and the close on 50% of people not participating in the labour market. By their low standards of living, and great numbers, their demands are a major input into the political system. These demands are likely to include good education, access to labour markets, increasing prosperity, and personal security. The demands, feedback, and decisions made by these three groups of economic actors dominate the feedback emanating from the domestic economic environment and will therefore be the definitive determinant of the future of that environment.

6.2.1.2 Actors in the social environment

The social environment determines the health, life expectancy, education, and living standards levels of actors in the system. A review of these trends suggests the presence of two prominent actor groups that mirror the poor and wealthy divide between economic actors.

On the healthcare front, many actors saw their life expectancy levels fell rapidly after the 1994 transition. Life expectancy fell from 66 in 1995 to 51 in 2010 (Haldewang 2011: 2; and SAIRR, 2011: 52). This compared very badly to the BRIC countries, which in 2009 featured life expectancies of 73, 69, 64, and 73 respectively (World Bank, 2011: Internet). The reason for this can be tracked directly back to the HIV and AIDS policies of the Thabo Mbeki government, which the former ANC MP, Andrew Feinstein (2007: 249), described as “irrational and criminal” and responsible for thousands of unnecessary deaths. The policies saw the proportion of the adult population that was HIV+ increase from 0.8% to 10.9% between 1991 and 2010 (SAIRR, 2011: 560)

Of equal concern is that very few actors are well educated. In 2010 for example only 36% of adults had completed their school education and only 5.4% had any post school education (SAIRR, 2011: 444). Despite this overall weak performance of the school

system there are areas of progress within the education system. A small proportion of black actors have been enrolled in former white schools and research shows that they tend to achieve results on a par with their white classmates (SAIRR, 2010: 422-423). That in turn has allowed an increase in the number of black tertiary graduates. The number of black South Africans in higher education increased from 286 000 in 1995 to 547 000 in 2009. While 303 black South Africans had been awarded degrees in commerce in 1991 that figure had increased to 9 665 by 2009 (SAIRR, 2011: 503 and 512). However, despite such progress, in 2010 only 2.9% of black Africans older than 20 had any tertiary qualification as opposed to 20.8% of whites (SAIRR, 2012b: 426; and StatsSA, 2011: Internet).

The increase in the number of professionally qualified black South Africans has in turn seen the rise of a small black middle class. In 2011 38.4% of senior managers in the economy were black, according to a report published by the Presidency (SAIRR, 2012b: 240; and The Presidency, 2010: Internet). Also in 2011, it was estimated that 35% of the value of all bonds, houses, listed shares, money market holdings, and non-residential property was in black hands, 41% was in white hands, and the balance was owned by foreigners and the state (SAIRR, 2011: 273).

It could be expected that because of the poor healthcare indicators and poor educational performance, the living standards of actors within the social environment had deteriorated. Curiously this is not the case.

Over the period 1996-2011 both the number and proportion of actors with access to housing, water, and electricity increased tremendously. For example, the number of households living in formal houses increased by 5.2 million between 1996 and 2010 while the proportion of households living in such houses increased from 64% to 77% over the same period (SAIRR, 2011: 610). Increases of a similar magnitude were recorded for households with electricity and clean water. This service delivery success was in turn bolstered by the fact that in 2012 15.5 million actors, a third of the total, were receiving social welfare grants (SAIRR, 2012b: 583; and National Treasury, 2001: Internet).

A final point on the social environment relates to the demand for personal safety. In 2008 the BRIC countries featured murder rates per 100 000 of the population of 22,

14.2, 2.8, and 5.8 respectively. In that year the figure for South Africa was 36.5. The social environment was therefore characterised by particularly high levels of violence (SAIRR, 2011: 761; and UN, 2010: Internet).

It is possible therefore to identify in the social environment two key groups of actors. The **first** is the relatively small group of actors with good education, professional positions, and growing asset wealth. This would be largely the same 10% or so that were identified in the economic environment as being employed at a relatively high level and earning and spending relatively large amounts of money. The **second** is the much larger majority of actors who, despite seeing rapid improvements in their basic living standards, remain poor, badly educated, and increasingly dependent on welfare and service delivery funded by the minority of wealthier actors. These would include the 30% of all individual actors receiving social welfare grants and the roughly 50% who will fail to complete their schooling. As in the economic environment the demands placed by these actors on the political system will be significant in determining the feedback received by the political system, and therefore its long term stability.

6.2.1.3 Actors in the political environment

The ANC has been the dominant political actor in the system. In 1994 the ANC, contesting elections in alliance with the COSATU, and the SACP, won 62.7% of the national vote. That figure had increased to 65.9% after the fourth democratic national election in 2009. While the DA has seen its parliamentary support increase from just 2% to over 15% in 2009 that level of support remains at only 25% of that of the ANC. Other political parties have not managed to record significant support levels that could rival those of the DA and the ANC (SAIRR, 2011: 809).

However, despite the ANC dominance a number of political actors appear to be turning to protest action to make demands on the system. The number of service delivery protests increased from 10 in 2004 to 113 by 2012 (SAIRR, 2012b: 811). Many of these saw violent clashes, with communities burning or attacking government offices and property as well as representatives of the ruling party. Therefore, in addition to the tripartite alliance and the official opposition, a third important political actor is the growing protest movement that exists outside of the formal political environment.

Perhaps equally influential on the political environment have been the role of civil society and media actors. Both these actors play a very political role in South Africa and the country has a vast diversity of such groups. For example, a 2006 study found that 51.1% of South Africans were members of a church or other religious organisation (SAIRR, 2011: 831). It also found that 7.2% belonged to a political party, 3.9% to an environmental organisation, 4% to a professional organisation, 5% to a charitable organisation, and 4.7% to a labour union. In 2010 there were 3 057 000 members of 200 registered trade unions. In addition, in 2011 South Africa had 22 different daily newspapers, 27 major weekly newspapers, 630 consumer magazines and newspapers, and 470 community newspapers (SAIRR, 2012b: 662; OMD South Africa, 2011: Internet). The great majority of these were privately owned and edited.

As actors, these media and civil society groups exercise considerable influence over the political system. For example, in September 2009 the civil rights group AfriForum secured an order through the Pretoria High Court that the Pretoria City Council restore electricity to schools that had been cut off for non-payment of their bills (Afriforum 2009: Internet Source). In December 2010 the *Mail & Guardian* newspaper won a case in the Supreme Court of Appeal which ordered the President to give the newspaper a copy of a report commissioned by the government on Zimbabwe's 2002 election. The government had previously refused to release the report (*Business Day*: 15 December 2010). Likewise in July 2011 the Eastern Cape High Court ruled in favour of an application by the Centre for Social Accountability for access to official records relating to corruption perpetrated by members of parliament who had abused their travel vouchers (*Saturday Star*: 29 July 2011).

The extent of the influence of these groups was summed up in a report from *Business Day* (23 November 2011) which described how non-profit groups were "queuing up" to take the ANC to court wherever it overstepped constitutional bounds. In September 2011 Justice Zak Yacoob of the Constitutional Court told a meeting at Wits University that civil society was obliged to "examine proposed government and parliamentary conduct of every kind" (*The Star*: 15 September 2011).

Any assessment of actors in the political environment therefore comes down to an assessment of the role of four groups of actors. The **first** is the ruling party. Although it no longer has a sufficient majority to amend the Constitution, it carries a comfortable

parliamentary majority and a majority in eight of the nine provinces. However, the growing protest movement has raised questions over its future hegemony. The **second** is the Democratic Alliance, which now governs one province and has seen its support levels increase quickly. It is the most prominent and influential of all the opposition parties in South Africa, which jointly attract more than a third of all voter support at national elections. The DA therefore stands as the only current viable electoral threat to the ruling party. The **third** is the protest movement. Potentially made up of hundreds of thousands if not millions of relatively poor actors, its impact on future stability will be considerable. **Finally** there is civil society and the media, which also play an influential role in making demands on the system.

6.2.1.4 Summary of major actors in the political system

In total this analysis has uncovered seven different groups of actors. Through the demands they place on the system, these seven will determine the stability of the political system.

- 1) The first is the private business and investment community that will be instrumental in determining future economic growth levels.
- 2) The second is the 10% or so of highly skilled actors, which are active at a senior level in the economy and enjoy a relatively high standard of living. They represent the highly qualified skills base of the country as well as its consumer base and determine the size of the income tax base.
- 3) The third is the 50% of so of actors who live in poverty. They are for the most part poorly skilled and have probably not completed their schooling. As they tend not to be employed, they depend for the most part on welfare and service delivery to maintain their standards of living.
- 4) The fourth group is the ruling tripartite-alliance. This group firmly controls policy-making in South Africa, and therefore the output mechanisms via which the government seeks to meet the demands placed upon the political system.
- 5) The fifth is the political opposition, which represents the only current electoral threat to the alliance. It has grown quickly over a decade and represents almost 20% of voters.
- 6) The sixth is the growing protest movement. Greater in numbers than both the official opposition and the ANC voters, this is a group which has the numbers to

fundamentally change the political, and therefore the policy, landscape in the country.

- 7) The seventh and final group of actors is the media and civil society. Increasingly active in placing demands on the political system, this group is able to exert growing influence over the future stability of the political system.

These groups have all been selected because the demands they place on the political system will determine the stability of the system. This is not to say that there are no other influential actors, but rather that these are the dominant actors and that there are no other actors capable of overturning the collective impact that these seven actor groups will have on directing feedback into the system. With the dominant or deterministic actors identified, it is necessary to move to the second characteristic of a political system, which is its regime. This regime determines the rules under which these actors can place their demands on the system, as well as the extent to which the government is able to respond to those demands.

6.2.2. Regime

The four-tier model of a political system held that a second characteristic common to all political systems is a regime of rules that govern the behaviour of actors within the system. All the actors in the system must act in terms of what these rules and norms allow. In order to determine how actors may exert feedback within the system, it is necessary therefore to describe the key components of the regime. For example, in South Africa, while the ANC enjoys largely untrammelled authority to make and adopt policy, its efforts remain constrained by what the Constitution allows. This is a constraint that applies to all the actors listed above and therefore determines which demand mechanisms they use in pursuing their demands. The rules of the game, as it were, for the South African system have remained grounded firmly in its Constitution and particularly its Bill of Rights. Any assessment of the South African regime must therefore be an assessment of the key provisions of the Constitution. In the case of this study such an assessment must determine to what extent the regime promotes access to demand mechanisms. This is important in determining the boundaries within which the government may respond to demands and the limits within which the seven actor groups can place demands on the system. This will in turn determine the openness and effectiveness or type of political system. What follows below is an assessment of the

six most influential constitutional provisions determining availability of, and access to, demand and output mechanisms.

6.2.2.1 The right to equality

The first such provision is the right to equality. It is important, as it ensures that all actors have equal access to demand mechanisms and must be treated equally after placing demands on the system. Specifically the Constitution holds that everyone is equal before the law and has a right to equal protection of the law (Republic of South Africa, 1996: Chapter 2, Section 9). It describes equality as the “full and equal enjoyment of all rights” and stipulates that legislative or other measures may be taken to protect a person disadvantaged by unfair discrimination on grounds ranging from race and gender to religion and culture. The emphasis here is on unfair discrimination and not discrimination itself. This is because the Constitution further holds that discrimination such as affirmative action, that seeks redress for past wrongs, is not necessarily unfair. Dr Anthea Jeffery, a researcher at the South African Institute of Race Relations, has made a study of South Africa’s performance in terms of its commitment to constitutional principles. On the right to equality she states that these principles are generally upheld. She cites examples of the right to equality being upheld, such as the Constitutional Court upholding the rights of same-sex couples, striking down the forced implementation of pre-paid water meters in Soweto, and striking down areas of customary law such as the male right to control of property in a marriage (Jeffrey, 2010: 95).

6.2.2.2 Political rights

These rights directly inform the ability of actors within the system to organise themselves into groups when making demands on the system. These rights are also important, as they set the bounds within which actors seek to pursue their demands and the ideas that the actors may generate in pursuit of those demands. Broadly, these include the rights to religion, thought, opinion, expression, assembly and demonstration, regularly voting for a government, and forming and campaigning for political parties (Republic of South Africa, 1996: Chapter 2, Section 15-19). Jeffery writes, “The political rights of individuals have generally been upheld” and the rights to freedom of speech and assembly “have been strongly upheld” (Jeffery, 2010: 85). Likewise Habib and De

Vos (2002: 152-153) argue that political rights are generally upheld, although certain actors are unaware of their rights.

6.2.2.3 *Right to property*

In a society as unequal as South Africa this is a particularly significant right. It has the potential to protect the property and assets of the 10% minority of relatively wealthy actors while at the same time promoting greater access to property for the 50% majority of relatively poor actors. The property clause in the Constitution prevents the confiscation of property by the state and requires that compensation be paid for property that is expropriated, either for public purposes or in the public interest. However, the Constitution also describes equitable access to land and property as being in the public interest, and stipulates that the state should introduce measures to enable citizens to get such access. It also stipulates that the right to property cannot be used to impede the state's efforts to seek redress for past racial discrimination (Republic of South Africa, 1996: Chapter 2, Section 25).

6.2.2.4 *Socio-economic rights*

These range from the right to housing to rights to food, education, and social security (Republic of South Africa, 1996: Chapter 2, Section 26-29). They therefore specifically promote mechanisms via which the majority of relatively poor actors may place socio-economic demands on the system. Here the Constitution requires the state to take "reasonable legislative and other measures within its available resources to achieve the progressive realisation of these rights". In a society where as many as half of all actors live in relative poverty, this right is particularly significant in determining the demands placed by those actors on the system.

6.2.2.5 *Right of access to information*

This allows actors within the system access to information relevant to the demands they are likely to make on the system. In closed political systems, such information would not necessarily be available. Here the Constitution provides that any person may get access to any information held by the state, and that legislation must be enacted to this effect (Republic of South Africa, 1996: Chapter 2, Section 32). These rights are accessed through the Promotion of Access to Information Act (PAIA). Under the Act,

every department of the government must appoint an information officer and respond to requests for information within 30 days. The state may also refuse to grant requests on grounds such as national interest. Jeffery (2010: 106), however, cites a 2004 study of 96 PAIA requests. Of these 52% were not acknowledged at all and only 23% were answered.

6.2.2.6 Right of access to courts

The Constitution provides that any person has the right to have a dispute resolved by a fair public hearing in front of a court (Republic of South Africa: 1996, Chapter 2, Section 34 and 35). This is critically important, as it means that the actors within the system may expect that their demands are made and responded to in terms of what the law requires, and not in terms of edict or decree on the part of the government. Jeffery (2010: 89) writes that these rights have also generally been upheld. Likewise Friedman and McKaiser (2009: 11) suggest that both individuals and organisations use their access to courts freely.

6.2.2.7 Summary of the regime

It follows from the above analysis that the seven major actor groups identified in this chapter are governed by a regime that is generous in terms of the scope that it permits them in placing demands on the system. All the actors **firstly** have equal access to demand mechanisms. **Secondly**, they have the right to organise themselves into groups of actors in pursuit of their demands and may express a wide range of ideas and opinions in doing so. **Thirdly**, the property of actors in the system is protected against random seizure, while obligations exist for the government to seek more equal access to resources within the system. **Fourthly**, actors have an explicit set of socio-economic rights, which the government is obliged to pursue and see realised. **Fifthly**, the actors may demand any piece of information that may aid them in the pursuit of their demands. **Sixthly** and finally, they may expect that their demands are responded to in terms of what the law requires and not in terms of what the government may decree.

It is also the opinion of experts such as Friedman, Habib, and Jeffery cited above that with limited exceptions, these rules have generally been upheld. This is an important observation, as the rules, and the extent to which they are upheld, will determine the environment, resources, and mechanisms with which actors can make demands on the

system. The next characteristic of the system that needs to be determined is therefore what specific demand mechanisms result from these rights, and are accessible to actors within the system

6.2.3. Demand mechanisms

The third of the four characteristics of a complex political system is a set of demand mechanisms. These are the mechanisms that actors within the political system will use to make demands on that system in pursuit of their interests. These are therefore the vehicles via which feedback is directed into the system and therefore the vehicles that determine the stability of the system. They are also important in that the presence of, and access to, these mechanisms will later in this chapter determine whether the system is an open or closed type of political system.

There will in all likelihood be a great number of these within any political system. In fact it was argued in chapter three that any feedback entering the system was carried on some or other demand mechanism. As in the case of the innumerable number of actors within a political system, it is impractical to identify every demand mechanism within a political system. It is rather necessary to identify demand mechanisms on two grounds: The first is that they are prominent mechanisms within the system by virtue of their widespread use within the system. Secondly they allow actors to direct significant amounts of feedback into the system and are therefore critical in determining the stability of the system.

6.2.3.1 Elections

The first and most obvious mechanism that qualifies on these two grounds is the electoral system. In all, South Africa has experienced seven local and national level elections since 1994, contested by a broad range of political parties, and conducted in a manner that was widely regarded as free and fair. The national elections are conducted to choose South Africa's national government and nine provincial governments while the local level elections choose in the region of 250 local authorities (SAIRR, 2012b: 793; SAIRR, 2011: 816; and Independent Electoral Commission (IEC), 2012: Internet Source). National and provincial level elections are more important, as this level of government shapes the macro-education, -labour, -security, -economic, and - investment policy environments. Local authorities are tasked with less important

matters such as the licensing of dogs, which is noted in Schedule 4 and 5 of the South African Constitution (Republic of South Africa, 1996: Chapter 7, Section 156). They do, however, carry the responsibility for the reticulation for water and electricity and in this have an important service delivery function.

As a demand mechanism, elections attract high levels of free and fair public participation, with over 13.6 million people voting in the 2011 local government election, a 56.8% turnout of the voter demographic (SAIRR, 2012b: 799). This is probably the most important feedback mechanism, by virtue of the fact that it allows individual actors to choose the government and hence policies that they believe can best meet their demands.

6.2.3.2 Courts

It is via the courts that all actors from individuals to investors to the media and even the government can place demands on the system. Taking just the example of the Constitutional Court; since 1994 actors within the system have brought 565 cases to the Court (*City Press*, 19 February 2012). Of these 217, or 38%, related to civil rights matters. In 152 or 40% of the 379 cases that have been concluded the Court found that the matters referred to it were indeed unconstitutional, and found in favour of the plaintiffs. A prominent example is the Grootboom case that was heard by the Constitutional Court in 2009. In this case Irene Grootboom was evicted by the state from a shack she had been occupying without being offered alternative accommodation. She had taken her case to the Cape High Court, which had ordered the state to provide her with housing. The state appealed this order in the Constitutional Court. The court ruled that the state's housing policy was defective in that it failed to provide housing to those in desperate need and ordered the state to meet this obligation via policy (Jeffery, 2010: 110-111).

6.2.3.3 Chapter Nine Institutions

A third group of demand mechanisms are the Chapter Nine institutions. These are institutions established under chapter nine of the Constitution to entrench democracy in South Africa. There are a number of these, but three of them have proven to be particularly important in allowing actors to place demands on the system:

- 1) The first of these is the office of public protector, which has the power to investigate any action of any organ of state that is deemed to be improper. It may report on the impropriety and take remedial action (Republic of South Africa, 1996: Chapter 9, Section 182). Its current head, Adv Thuli Madonsela, has received widespread support from both the media and civil society for her efforts in rooting out corruption and maladministration within the state. In an editorial in 2011, *The Star* (8 August 2011) newspaper wrote, “Madonsela is prepared to go where her predecessor was not and in her willingness to investigate and expose malfeasance, no matter how high and mighty the perpetrators may be, she has earned some powerful enemies”. Two days later, an editorial in the *Sunday Times* (10 July 2011) was entitled ‘Protect our Public Protector’, and demonstrated the extent to which the public protector was winning the respect of the media. Both editorials came after the public protector had found evidence of irregularities in the lease agreement signed for a new police headquarters. Her recommendation of action against the police commissioner would later lead to his suspension.
- 2) The second of these is the South African Human Rights Commission (SAHRC). Its powers include monitoring and investigating human rights abuses and taking remedial action where necessary. For example, in July 2010 the commission lodged papers with the Bloemfontein Equality Court on behalf of cleaning staff at the University of the Free State whose rights to dignity had allegedly been violated by students of that university who had forced them to join a mock initiation ceremony (SAHRC, 2012: Internet Source). In 2010 the commission found the City of Cape Town responsible for rights abuses after the local council had allegedly neglected to enclose public toilets it had built for residents of local squatter camps (*Business Day*, 27 October 2010). Both examples are typical of the nature of the commission’s work as a demand mechanism for actors in the system.
- 3) The third of these is the office of the Auditor General, whose powers include auditing the financial statements of all national, provincial, and local authorities and organs of state. All its reports must be made public (Republic of South Africa, 1996: Chapter 9, Section 188). As is the case for the public protector, this office has also received numerous endorsements from opposition parties, the media, and civil society for the manner it has handled their demands. It has made findings of financial irregularity against a number of government departments across all three tiers of government, and has made these findings public. For example, in January 2012 *City Press* (22

January 2012) reported that the Auditor General had found and publicized the fact that government departments had wasted R21 billion in the previous financial year. The Auditor General further found that some provinces, including Gauteng and the Eastern Cape, has wasted more than 10% of their budgets on unauthorized, irregular, and wasteful expenditure. This was in line with previous findings that 34% of national government departments received qualified audits in 2009/10 (Auditor General of South Africa, 2010: Internet Source).

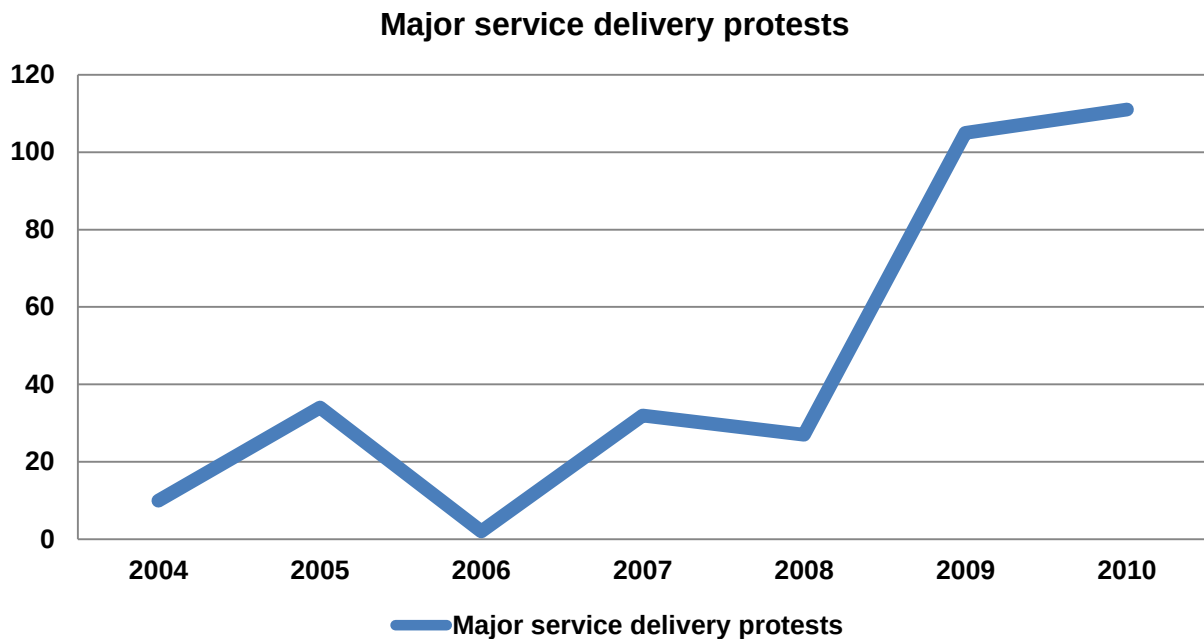
6.2.3.4 Political parties

A fourth demand mechanism is political parties themselves. Via the internal structures of the ANC and the DA, actors are able to exercise considerable influence over the policies adopted by the parties. For example the policy conferences of the ANC exert great influence over government policy. The most prominent example was the axing of Thabo Mbeki as head of the ANC at that party's 2007 Polokwane electoral conference, which led to his resignation as president of South Africa. In addition, parties have played an active role in pursuing their demands even outside of legislatures. In December 2011 the Supreme Court of Appeal found in favour of a case brought by the Democratic Alliance that the Director of Public Prosecutions was not a fit and proper person to hold that post (*Star*, 2 December 2011). Just eight months earlier, the DA had secured a political victory when the same court found that a meeting of the Judicial Service Commission, which decided not to pursue disciplinary action against the Western Cape Judge President, John Hlophe, was not properly constituted (*Sunday Independent*, 6 April 2011).

6.2.3.5 Public protest

However, not all demand mechanisms are as formal, or even legislated in the statutes, as is the case for elections or the chapter nine institutions. A prominent example is protest action which has accelerated very rapidly in South Africa. The graphic below shows how major incidents of protest action have picked up since 2004 (SAIRR, 2012b: 811).

Graph 1: Incidents of major protest action 2004-2010



These protests have regularly been accompanied by violence. In February 2012, for example, the police had to close the R538 between Hazyview and White River to traffic after service delivery protesters stoned passing vehicles (*New Age*, 15 February 2012). In January 2012 “several hundred protestors” attacked motorists on the R711 between Clarens and Fouriesburg, also over service delivery issues (*New Age*, 10 January 2012). In November 2011 residents of Pennyville outside Soweto “threw large concrete slabs on the [Canada Road] road and completely blocked it off”. Police later opened fire on the demonstrators to break up what was also described as a service delivery protest (*Star*, 16 November 2011). In September 2011 police in Ekurhuleni opened fire on protestors with rubber bullets, after a crowd of 500 people blocked roads and stoned cars outside Tembisa in another protest (*City Press*, 20 September 2011). These examples, drawn from a period spanning just six months, are typical of the protest phenomena.

6.2.3.6 The media and civil society

In addition to being prominent actors within the political system the media and civil society are a demand mechanism that enables actors to place demands on the system. This chapter has cited information on the fact that, including churches, more than half of South Africans belong to such an organisation. Data has also been cited on the vast

numbers and reach of newspaper, radio, and television media in South Africa. Numerous cases have been cited how actors have used such mechanisms to place demands on the system.

6.2.3.7 Summary of major demand mechanisms within the system

It is possible to argue therefore that the political system features six prominent demand mechanisms. The **first** are elections via which the individual actors in the system are regularly able to choose their government. The **second** are the courts that have been used extensively as a demand mechanism by political parties, civil society and the media, and individual actors in pursuit of their demands. **Third** are the chapter nine institutions with special reference to the public protector, human rights commission and auditor general. **Fourth** are political parties themselves which, especially in the case of the ANC, allow actors to exert considerable influence over the political system. A **fifth** influential demand mechanism is the right to public protest, which has been increasingly used by poor communities to place demands upon the government. The **sixth** is the media and civil society which serve as much as an actor as they do a demand mechanism for other actors to use in placing demands on the system, whether through the courts, in the media itself, or in public protest.

Once a demand is placed on the system via any of the demand mechanisms listed above the ruling authorities in the political system will respond to it. They do this via a variety of output mechanisms or what are commonly called the policies of the government. The extent to which these are met will determine the type of feedback actors exert on the system and ultimately therefore its stability or instability.

6.2.4. Output mechanisms

Once a demand is placed on the system, the government of that system must respond to the demand. Governments do so via output mechanisms or what are commonly called policies. These become the fourth and final characteristic common to all political systems. It was argued in chapter three that because of the diverse nature of demands, it is unlikely that the government will be able to meet all demands and will therefore have to prioritise some demands over others, subject to what the regime permits. This is a potentially fraught exercise, as actors who feel that their demands have not been met may quickly become drivers of positive feedback, which may lead to destabilisation

and change of the system. In the case of the South African political system, the government will seek to use policy to meet the demands of the seven major actor groups identified earlier in this chapter. Because of their diverse socio-economic and political standings they will place a very diverse set of demands on the political system. This explains why, rather than seeking to meet the demands of a single group of actors, the policy review that follows below shows that the ANC in government has consistently pursued three different lines of policy. Changes in policy over the period reflected shifts in emphasis between these three lines rather than the adoption of entirely new policy.

In South Africa's case there are two broad and related sources of policy formulation and implementation. The first are the internal processes of the ANC. Because of that party's large electoral majority these processes have been very influential over policy-making efforts in South Africa. This is particularly so where the theme of policy has swung towards the interventionist (a theme covered in some detail below) - a reflection of the party's adherence to the ideology of National Democratic Revolution (NDR)⁷. The analyses of output mechanisms that follow below will therefore pay some attention to policy proposals emanating from the ANC's own party congresses. A second, and closely related, source of output mechanisms can be found in the various policy frameworks adopted by the South African government since 1994. At times there has been a degree of tension between the government's efforts and the resolutions of the ANC – despite the ANC dominating the government. It is for this reason that the chronological evaluation of policy in South Africa tracks both ANC and government policy frameworks and proposals in a single analysis.

6.2.4.1 The Reconstruction and Development Programme (RDP)

The first macro policy framework was set out in the Reconstruction and Development Programme adopted after 1994. The White Paper on Reconstruction and Development (Republic of South Africa, 1994: Internet Source) emphasised twelve policy goals:

The **first** was achieving high and sustainable economic growth. The **second** was privatizing underutilized state assets. The **third** was liberalising trade policy to boost exports. The **fourth** was to increase employment via economic growth. The **fifth** was

⁷ A number of analysts regard the NDR as the ideological underpinning of much ANC policy making. Kane-Berman (2011) holds that the ideology has its origins in Lenin's theory of imperialism and dictates that the state should intervene directly in the economy in order to reverse colonial patterns of ownership and inequality.

reducing the budget deficit. The **sixth** was to finance the RDP via savings in other areas of government expenditure. The **seventh** was increasing capital expenditure by government. The **eighth** was forming a more effective civil service. The **ninth** was to reconstruct the environment wherein mainly black South Africans lived via the provision of housing, water, and electricity. The **tenth** was to de-racialise the economy via legislation and policy changes in areas such as affirmative action. The **eleventh** was to introduce competition policy to inhibit the over-concentration of economic power. The **twelfth** was to strengthen the bargaining position of labour. Amongst these goals it is possible to identify the three lines of policy.

The **first**, contained in points one to six above, was classic conservative macro-economic management directed at growing the economy. For example, the minister responsible for the RDP, Mr Jay Naidoo, wrote in the *Star* (31 August 1995) that financing for the RDP would be sourced from within the budget and not by borrowing money, and that growing the economy was one of the major programmes underpinning the RDP. In *Business Day* (28 October 1996) the finance minister in 1996, Mr Trevor Manuel, wrote that a “sound macroeconomic framework makes a comprehensive human development strategy possible”. The **second**, emphasised in point nine above, was for the state to directly intervene in raising the living standards of poor households via the provision of free and subsidized services such as housing, electricity, and water. The RDP minister wrote in the same article in the *Star* (31 August 1995) that “we want to build one million houses in five years”. Manuel reiterated this point in *Business Day* (28 October 1996), saying that “Government is progressively effecting a redistribution of resources in education and health in favour of under-serviced neighbourhoods”. The **third**, emphasised in points eight, ten, eleven, and twelve was strongly interventionist in using legislation and policy to change the complexion of management and ownership of the economy as well as to strengthen the bargaining position of labour. As early as October 1994 the then deputy minister of home affairs, Mr Penuell Maduna, told the University of South Africa (UNISA) Graduate School of Business that unless business embraced the principles of reconstruction and development, the government would be forced to introduce affirmative action in order to change society (*Business Day*, 6 October 1994). The 1994 RDP white paper held that the government would take steps to “discourage” financial institutions from discriminating in terms of race when it came to

the lending of money. Furthermore, the government intended to “regulate labour standards for small and medium enterprises” (Steyn, 1994:8).

6.2.4.2 The Growth, Employment and Redistribution Programme (GEAR)

Only two years after the launch of the RDP, the government produced a second policy framework: the Growth Employment and Redistribution policy (GEAR). GEAR emphasised the importance of the conservative macro-economic line of policy, possibly as concerns grew within the government that the economy would not reach the levels of growth necessary to fund the developmental and interventionist lines of policy. GEAR emphasised nine policy goals:

The **first** was the need for greater public investment in infrastructure. The **second** was reducing the budget deficit. The **third** was using interest rates to control inflation. The **fourth** was a relaxation of exchange controls. The **fifth** was faster trade liberalization. The **sixth** was tax incentives to stimulate more investment. The **seventh** was public sector wage restraint. The **eighth** was privatization of state-owned assets. The **ninth** was increased labour flexibility (GEAR, 1996: Internet Source).

GEAR therefore emphasised the conservative fiscal aspect of the RDP especially with regard to trade liberalisation, public sector wage restraint, and reducing labour market regulation. The *Sunday Independent* described it as a “broadly free-market economic policy” (*Sunday Independent*, 21 December 1997). The policy was certainly in line with resolutions taken by the ANC at its 1997 Mafikeng policy conference. These emphasised the importance of a “fast growing and developing economy” and the “promotion of investment for sustainable jobs”. While the conference resolutions also cited the importance of a redistribution of wealth, its emphasis lay in the “continuous link between growth and development” (ANC, 1997: Internet Source). This would however be the last ANC conference to emphasise the importance of the conservative macro-economic approach.

By 1999, three years since the adoption of GEAR and five years since the RDP, real GDP growth for South Africa since 1994 had been just 3.2%, 3.1%, 4.3%, 2.6%, 0.5%, and 2.4% which was well below what was necessary to make serious inroads into the poverty and unemployment levels (SAIRR, 2012b: 105-106). Hence, when it came to meeting the demands of the relatively poor 50% of actors, the government was in some

trouble. *Business Day* (7 June 2001) criticised GEAR stating, “It failed to realise rapid economic growth or any other of the promises in its title”. In fact the proportion of South Africans living on less than \$2 per day had increased from 12.1% in 1994 to 15.5% in 1999 (SAIRR, 2012b: 321). The unemployment rate had increased from 20% to 23.3% over the same period, during which the number of unemployed black African South Africans had increased from 1 637 000 to 2 751 000 (SAIRR, 2011: 254-256).

GEAR also ran into strong opposition from actors within the political system who objected to its conservative economic thrust. This was not surprising. As early as 1996 the then general secretary of COSATU, Mr Sam Shilowa, had accused the government’s macroeconomic strategy of forcing South Africa in “a direction diametrically opposed to the growth path of the RDP” (*Business Day*, 24 July 1996). The finance minister had been forced to argue as early as December 1997 that GEAR was not a contradiction of the RDP but rather a means to realise the RDPs development goals (*Business Day*, 23 December 1997). However, an editorial in the *Cape Argus* of 29 June 1998 stated that the SACP and COSATU had “denounced GEAR” and won some support from church leaders in doing so. Such criticism led to what *Business Day* (2 June 1998) described as a “vicious” attack by the then president Nelson Mandela on the ANC’s alliance partners. Despite Mandela’s defence of GEAR, the policy would continue to draw criticism from the ANC’s alliance partners. Three years after Mandela’s ‘attack’, *Business Day* (1 November 2001) held that “[Trevor] Manuel is increasingly feeling the heat from the left, as critics, including the ANC’s trade union allies, slate government for its religious commitment to fiscal discipline”. The *Saturday Star* (22 January 2000) subsequently warned of a “head to head clash” between the ANC and its alliance partners on policy. That clash came in 2002 with the ANC adopting a new set of policy priorities at its Stellenbosch policy conference, many of which contradicted GEAR.

6.2.4.3 The Stellenbosch resolutions

The resolutions adopted by the Stellenbosch conference emphasised five policy goals. The **first** of these was to tackle poverty and unemployment via a more comprehensive social welfare programme. The **second** was to reduce unemployment via a public works programme. The **third** was to review land ownership patterns with a view to discouraging foreign ownership of land. The **fourth** was to promote BEE as an

“economic requirement” of South Africa’s future. The **fifth** was to intervene directly into various industries in order to promote equity and black management and ownership within those industries (ANC, 2002: Internet Source). In other words the Stellenbosch conference emphasised the interventionist and developmental branches of policy.

Jeffery (2010: 7, 15, 30, 127, 195 and 249) notes that following this conference, the thrust of government policy became increasingly interventionist especially on the subject of racial transformation, and cites four examples of this interventionism: The **first** were 2002 changes to labour legislation which made it more difficult to outsource employment. Minimum wage legislation was introduced for domestic, agricultural, and trade and retail workers. Legislation also restricted the circumstances under which retrenchments could take place. Jeffery notes that this provision was intended to prevent private sector takeovers of inefficient public sector corporations. The **second** was the 2002 Mineral and Petroleum Resources Development Act which effectively nationalised South Africa’s mineral assets. The Act led to the mining charter, which in 2004 required mining companies to reapply for their mining rights, which were not guaranteed but could be granted for 30 years if the companies in question complied with various black economic empowerment stipulations. A partner at the law firm Webber Wentzel Bowens, Mr Peter Leon, wrote that the bill that gave rise to the Act had been regarded as an “ill conceived brew of ministerial excess” and was “at odds with the government’s promotion of a market economy” (*Business Day*, 26 April 2002). The **third** was the Promotion of Equality and Prevention of Unfair Discrimination Act 52 of 2002 (Republic of South Africa, 2002b: Act 52), which sought, as legislation, to prevent unfair income differentials and red-lining by commercial banks – the very thing that the white paper on the RDP had said it would discourage the banks from doing. The **fourth**, also in 2003, was the adoption of the Broad Based Black Economic Empowerment Act 53 of 2003, which would come to require businesses to meet various racial targets on ownership, management, procurement and employment (Republic of South Africa, 2003: Act 53).

However, the interventionist approach did not deliver results. Rates of economic growth remained pedestrian and South Africa recorded GDP growth figures of 4.2%, 2.7%, 3.7%, and 2.9% between 2000 and 2003 (SAIRR, 2012b: 103-105). The unemployment rate increased even further, from 23.3% in 1999 to 27.9% in 2004. The

number of unemployed black African South Africans increased from 2 751 000 to 3 681 000 over the same period (SAIRR, 2011: 254-257). The accelerated roll-out of welfare did, however, reduce the poverty rate measured at \$2 per day marginally from 15.5% in 1999 to 13% (SAIRR, 2011: 310).

6.2.4.4 The Accelerated and Shared Growth Initiative for South Africa (AsgiSA)

Largely in response to this poor economic performance in 2005 the government announced a fourth policy framework termed the Accelerated and Shared Growth Initiative for South Africa (AsgiSA). It emphasised seven policy goals: The **first** was the need for greater labour market flexibility via a review of labour laws. The **second** was investment in infrastructure. The **third** was ensuring a more competitive business environment especially for small and medium sized enterprises. The **fourth** was attaining a GDP growth rate of 4.5% by 2009 and 6% between 2010 and 2014. The **fifth** was to address the value of the rand. The **sixth** was a review of BEE policy. The **seventh** was to ensure a supply of skilled labour (AsgiSA, 2006: Internet Source).

In that document the then deputy president, Phumzile Mlambo-Ngcuka, said that “In the government’s investigations we found that the rate of growth needed to allow us to meet our social objectives is around 5 percent on average” and that “the environment for more labour-absorbing opportunities and activities must be considerably improved”. The emphasis had therefore swung back from the interventionist and developmental to the conservative economic, even going as far as proposing a review of interventionist and regulatory mechanisms such as BEE and labour market regulations that had followed the Stellenbosch conference. However, as was to be expected, the AsgiSA policy prompted strong resistance from both COSATU and the SACP. In September 2006 the minister of provincial and local government was heckled off the stage at a COSATU congress when he tried to explain the government’s economic policy (*Star*, 22 September 2006). The thrust of COSATU’s criticism was that adherence to fiscal discipline and what it saw as unequal growth had benefited the rich at the expense of the poor. While both Trevor Manuel and Thabo Mbeki, who were proponents of GEAR and AsgiSA, sought to defend the policy, the tumultuous political events of December 2007 saw Thabo Mbeki axed as president of the ANC and led to his resignation as president of South Africa.

6.2.4.5 *The Polokwane resolutions*

As had happened at the Stellenbosch conference, the ANC's 2007 Polokwane conference, at which Mbeki was axed, therefore came to adopt a series of resolutions that swung the thrust of policy away from the conservative economic towards the interventionist. These resolutions emphasised the following seven policy priorities: The **first** was a greater role for the state in directing investment and economic policy. The **second**, and related point, was a centralised state planning agency. The **third** was to intervene against the private ownership of land in order to ensure more equitable access to property. The **fourth** was to deploy members of the ANC to all sectors of the economy in order for the party "as the strategic centre of power" to exercise "leadership over society in pursuit of the NDR". The **fifth** was to regulate the foreign ownership of land. The **sixth** was to strengthen the role of parastatals in directing economic activity. The **seventh** was to further expand social welfare (ANC, 2007: Internet Source).

The policy pendulum had therefore swung back further in the direction of direct state interventionism than at any previous point since 1994. It was against this same background that the ANC drafted its 2009 election policy documents. In line with the Polokwane conference resolutions, the ANC here committed to eight policy goals (ANC, 2009: Internet Source).

The **first** was a strongly interventionist state that would direct economic activity. The **second** was the need to create employment via "a massive programme of expanded public works" and to increase unemployment insurance. The **third** was to promote more free services from government. The **fourth** was to accelerate land reform. The **fifth** was promoting the role of the state in investing in industry. The **sixth** was to "vigorously" implement further black empowerment and affirmative action policies. The **seventh** was to further tighten labour market regulation. The **eighth** was to introduce free National Health Insurance.

Hence it appeared as if the developmental and interventionist policy goals had largely taken the place of the conservative macro-economic policies. This was despite the fact that the post-AsgiSA economy had begun to show signs of the positive growth that the government had been pursuing since 1994. The economy had grown by 5.3%, 5.6%, 5.6%, and 3.6% since 2004, as South Africa capitalised on the tail end of the global

commodity boom (SAIRR, 2012b: 104). As a result, the absolute number of unemployed people had declined from a high of 4 843 000 in 2003 to 4 119 000 in 2007 – the first and only absolute and sustained decline in unemployment numbers since 1994 (SAIRR, 2012b: 254). The budget deficit had been reduced from a high of 5.1% in 1996 into budget surpluses of 0.7% and 0.9% in 2007 and 2008 respectively (SAIRR, 2012b: 171) – an extraordinary achievement for a developing economy. The surplus was recorded despite the fact that the government's developmental policies were reaching increasing numbers of people. For example, by 2007 the government had built 2.3 million houses for poor households (SAIRR, 2010: 578; and StatsSA, 2010b: Internet Source). The number of children receiving welfare grants had increased from fewer than one million to just under eight million over the decade to 2007 (SAIRR, 2010: 526). The proportion of South Africans living on less than \$2 per day had halved from 13% in 2004 to 6.7% in 2009 (SAIRR, 2012b: 321).

Hence while the post-AsgiSA economy had allowed the ANC to do better in meeting the demands of individual actors and investors than at any point since 1994, the Polokwane conference had seen the party abandon what was beginning to look like a winning policy formula. Admittedly, despite the progress, a number of obstacles to future growth were beginning to manifest themselves. Debt as a proportion of disposable income of households increased from 56.5% in 1994 to 81% in 2009 (SAIRR, 2012b: 132-133). As a result, savings as a proportion of the after-tax income of households had fallen into negative territory (SAIRR, 2012b: 132-133). A victim of the global financial crisis, the economy contracted by 1.5% in 2009 – its first negative performance since 1992 (SAIRR, 2012b: 104). The unemployment rate, while down from the 27.9% of 2004, remained stubbornly high at 23.5% and was therefore still higher than in 1994 (SAIRR, 2011: 256).

Perhaps recognizing some of the successes that followed from AsgiSA, the Zuma administration did not completely abandon the macro-economic conservatism of GEAR and AsgiSA. For example, Mr Zuma retained Trevor Manuel and Pravin Gordhan in his cabinet and gave them the influential portfolios of planning and finance ministers respectively. However, he also made room for proponents of a more centrally directed economy, such as Mr Rob Davies as minister of trade and industry and Mr Ebrahim Patel as minister of economic development. Mr Patel joined the government straight

out of the trade union movement, an arch-critic of the Mbeki government, to set about planning future economic policy.

6.2.4.6 The New Growth Path

Unsurprisingly then, the post-2009 government had by the end of 2011 produced two different and largely contradictory policy frameworks. The first of these was the NGP (NGP, 2011: Internet Source) that was published by Mr Patel in November 2011. It featured ten policy goals.

The **first** was for the state to take a leading role in directing investment and providing investment incentives. The **second** was to promote domestic investment. The **third** was promoting employment via the private sector. The **fourth** was promoting public sector investment in infrastructure. The **fifth** was targeting labour-absorbing industries for investment. The **sixth** was promoting small-scale agriculture. The **seventh** was reviewing BEE policy to focus on skills development and worker and community ownership. The **eighth** was increasing labour market regulation to protect vulnerable workers. The **ninth** was to resist the reduction of trade tariffs while promoting exports and combating illegal imports. The **tenth** included dirigiste interventions to cap management salaries at R500 000 per annum and to moderate pay increases for those earning between R3 000 and R20 000 per month. The remaining tenets included all the same commitments to promoting skills, reducing unemployment, curbing poverty, and providing better services that had been the mainstay of all government planning documents since 1994 (NGP, 2011: Internet Source).

Its emphasis was therefore largely on the interventionist state directing economic activity. Where it made mention of private sector job creation, this goal was contradicted by the goal of increasing labour market regulation. *Business Day* (2 December 2011) stated “business has been shocked by the document” and suggested that some in the government still needed to learn that “ideology does not work in the real world”.

6.2.4.7 The National Development Plan

However, within a month of the NGP the National Planning Commission, under Minister Trevor Manuel, produced a second policy document called the National Development Plan (NPC, 2011: Internet Source).

Its central tenets featured eight policy goals. The **first** was to question the capacity of the state to lead investment and job creation – and hence to directly question the premise of the NGP. The **second** was to maintain fiscal discipline and macro-economic stability. The **third** was to achieve sustained GDP growth of 5.4%. The **fourth** was reducing unemployment to 14% by 2020 and to 6% by 2030. The **fifth** was an overhaul of the civil service to improve efficiency and implementation. The **sixth** was the promotion of market competitiveness. The **seventh** was to reduce the cost of living. The **eighth** was to reduce impediments to investment. The **ninth** was employment creation via entrepreneurship and reduced regulation as well as a public works programme.

This policy plan therefore emphasised the conservative economic approach. The chief economist at Sanlam, Mr Jac Laubscher, commented in the *Financial Mail* (23 December 2011) that the NDP displayed “a remarkable willingness to face up to the hard realities facing South Africa” and that this challenges the NGPs “blind faith in the state”. Laubscher further reflected that the “NDP is clear in its vision that the private sector is the key role player in the economy”.

6.2.4.8 Summary of output mechanisms within the system

At first glance the government and the ANC have since 1994 pursued a bewildering array of policy plans. However, when these are dissected point by point, as has been done above, it becomes apparent that the actual policy position of the government is less complex. The point-by-point review reveals that three threads of policy have been pursued simultaneously with different emphasis on particular policy themes at particular times. This pattern is continuing into the Zuma era. In part this balancing act reflected the post-1994 government’s efforts to cater simultaneously to the demands of the seven diverse actor groups identified earlier in this chapter.

The **developmental policy** thread is directed particularly at the demands of the 50% or so of actors who are poorly educated, not active in the labour market, and dependent on welfare. The **growth policy** thread is directed at meeting the demands firstly of the private business and investment community and at the 10% or so of relatively well-educated and skilled actors. Meeting their demands is important in promoting the growth and tax revenues that are necessary in order to meet the demands of the 50%

or so of poor actors. The **interventionist policy** thread is aimed at ensuring that the investment and business community better allows the government to meet the goals of its developmental theme. Whether these policy measures have been successful in meeting the demands placed on the system will be determined during the review of system attributes below.

6.3. TIER TWO: SYSTEM ATTRIBUTES

Chapter three of this study showed that despite all political systems demonstrating characteristics such as those set out above there are many different types of political systems. For example, the United States and the Soviet Union both featured actors, a regime, and demand and output mechanisms. However, these could obviously not be described as the same type of system. The four-tier model therefore held that having determined the characteristics of a political system, it was necessary to identify certain attributes of the system which would allow for its type to be determined.

It was argued that there were three such attributes. The **first** was whether demand mechanisms were present in the system. The **second** was whether these were broadly available to actors within the system. For example, a relatively dictatorial system may have courts but these may serve the interests of only a small elite of actors within the system. Such a system should obviously not be classified as an open system. Therefore only systems featuring both a proliferation of, and broad access to, demand mechanisms could be classed as open political systems. Those without such mechanisms or with limited access to such mechanisms must be classed as closed systems. Chapter three also argued that a **third** attribute, the effectiveness of the system in meeting the demands placed upon it, had to be determined. This attribute required an objective measure of effectiveness that could be applied across political systems and could be measured, preferably in a quantitative manner. Chapter three therefore argued that living standards, employment, incomes, education, health, and security indicators and trends within a political system must be used to determine its effectiveness. The reason for this was that such indicators and trends are universally representative of the demands that actors would make of their political systems. The next section of this chapter will therefore determine South Africa's standing against each of these three attributes.

6.3.1. Presence of demand mechanisms

In terms of the first attribute, the presence of demand mechanisms, this chapter has identified six prominent demand mechanisms. These can now be assessed by the extent of their presence in the political system and whether they are broadly accessible to the seven actor groups identified in this chapter.

These six demand mechanisms represent a very diverse range of means for actors to place demands on the system. Via elections, they allow actors to choose the government they want regularly and directly. Via the courts, they allow actors to insist that the government and other actors act in terms of what the rules of the system provide. Beyond the courts, the Chapter Nine institutions serve as a second set of formal demand mechanisms via which actors can ensure that their government is held to account. It is worth pausing here for a moment to fully appreciate the implications of these specific demand mechanisms.

The first such implication is that the government of the system, and the policies of that government, must reflect the demands of actors in the system. In addition, if actors do not approve of those policies they can lobby for the government to change them, and if that does not occur, can change the government itself. The second implication is that the courts allow actors in the system to prevent their chosen government from acting outside of the rules of the system. Hence, once in power the government theoretically remains directly accountable to its actors. The same implication is true for the chapter nine institutions. Therefore just in these three demand mechanisms it is clear that actors in the system have the ability to allow their demands to shape the nature of both the government and its policy framework.

In addition the range and number of political parties serve as a fourth means for actors to place demands on the system. Where there is dissatisfaction with that process public protest action has taken off in recent years as an increasingly significant demand mechanism in the society. Finally, civil society and the media round off an impressive arsenal of means at the disposal of actors to place the demands they may make on the system. When it comes to determining the presence of demand mechanisms, there is really no conclusion to reach other than that the South African system features a broad range of powerful demand mechanisms.

6.3.2. Access to demand mechanisms

In addition to having a proliferation of demand mechanisms, it is essential that actors in the system are able to access these mechanisms. If access to such mechanisms is severely restricted then the system would have to be classified as a closed system. For example, it is theoretically possible that a political system demonstrated the diverse range of demand mechanisms identified above but that access to these was restricted to all but a small elite. Such a political system could not be classified as an open system. However, in the case of the South African political system this is not a concern.

The analysis of the system characteristics above cited numerous examples of the extent to which these mechanisms are regularly employed by a broad cross section of actors. For example in terms of elections it was shown that voter turnout figures, even at local level, have never dropped much below 60%.

Evidence was presented of over 500 matters being taken to the Constitutional Court by actors within the system, and of prominent victories across all courts for a wide range of actors. This amounts to over 30 matters a year since 1994, or two and half new matters every month. Considering the potential cost and legal expertise required to approach the court, this is a significantly high level of access to such an institution. Outside of the courts examples were cited of how a range of actors have successfully placed demands on the system via the office of the Public Protector, the Human Rights Commission, and the Auditor General. Without the costs and complexity of approaching the courts, access to these mechanisms was naturally greater than access to the courts.

Political parties have been a particularly influential mechanism used by actors to place demands on the system. With thirteen such parties in South Africa's parliament and free political association guaranteed by the Constitution, access to as well as participation in political parties was significant (IEC, 2012: Internet Source). The ANC for example reported in 2012 having over 1 million paid-up members (Iol News, 2012: Internet Source). There were also significant examples of how access to political parties as a demand mechanism had led to changes in the political system. The most significant example of this was of how ANC delegates at that party's 2007 electoral conference voted to recall Thabo Mbeki as president of South Africa (ANC, 2007: Internet Source).

Evidence was cited of the sharp increase in public protest, especially within poor communities, by actors dissatisfied with formal political processes. There can be no doubt that access to protest action as a demand mechanism is easy in the South African political system (SAIRR, 2012b: 811).

The same is true for access to the media and civil society. It was shown for example that over 50% of individual actors belonged to a civil society or religious organisation of some type (SAIRR, 2011: 831). Numerous examples were cited of how actors across all social and economic strata, and representing a diverse range of political and ideological views, had used civil society organisations and the media to place demands on the political system.

None of the above is unexpected, as the earlier analysis of the regime of the system, especially in regard to equality under the law, the right to organise politically, socio-economic rights, and rights to information and the courts, made extensive provision for actors to access such mechanisms. There is no conclusion to reach therefore other than that the South African political system allows widespread access to demand mechanisms.

6.3.3. Effectiveness of the system in meeting demands

Having determined the presence of, and access to, demand mechanisms, it is necessary to determine whether it is an effective or ineffective system. This determination can be reached via a quantitative review of the socio-economic standing of actors within the system and how these compare to comparable economies. For the purposes of this study that comparison has been drawn with fellow BRICS countries. The reason is that these provide a wide geographical spread of economies. They all confront socio-economic problems and represent a range of different types of government. They are also a group that the South African government feels it deserves to be a member of, and it follows that it should therefore be scrutinized against the performance of other members of this group.

Trends and indicators cited in this chapter have included that:

- 1) In terms of economic growth South Africa lags behind comparable emerging markets, such as its four Brazil, Russia, India, and China (BRICS) partners,

considerably. Data shows that South Africa underperforms BRICS growth rates by as much as 50% (*Economist*, 2 March 2013).

- 2) In terms of unemployment and labour market participation rates South Africa again lags behind its BRICS partners. Data cited in this chapter showed how the country's labour market participation rate sat a good 15 percentage points below BRIC averages. Demands for work have not largely been met in the South African political system (SAIRR, 2012b: 225).
- 3) In terms of education this chapter showed that only a third of actors had completed their schooling and that only 5% have tertiary qualifications. The education system therefore tends to meet the demands of a small elite within the political system (SAIRR, 2012b: 483 and Department of Education, 2010: Internet Source).
- 4) South Africa features one of the world's highest GINI-coefficients (SAIRR, 2012b: 305-306). This chapter provided comparative data to indicate that South Africa had considerably higher inequality levels than any other BRICS country (World Bank, 2012: Internet Source). Demands from poor communities for an equal distribution of resources within the political system have largely not been met.
- 5) Significant improvements in living standards have been recorded over the past decade. Data was cited showing that the proportion and absolute numbers of South Africans with electricity, water, and housing have increased sharply (SAIRR, 2012b: 596). Contrary to much public opinion in South Africa, a great deal has been done to meet demands for increasing living standards. However the policy applied in achieving those increases is largely welfare-based and failures in both education and labour markets mean that these improvements have caused perhaps as many as half of all individual actors in the system to become largely dependent on government.
- 6) In terms of personal safety South Africa's murder rate compared very poorly with those of both emerging and developed markets. For example, the country's murder rates were shown to be two or three and even four times as high as other BRICS member (UN, 2010: Internet Source; and SAIRR, 2011: 761).

South Africa performs very badly in terms of the first three measures of effectiveness. In terms of growth, employment, and education indicators it significantly lags behind comparable emerging markets. This would be fatal for the effectiveness of any political system, as these three areas are the building blocks upon which wealth creation and

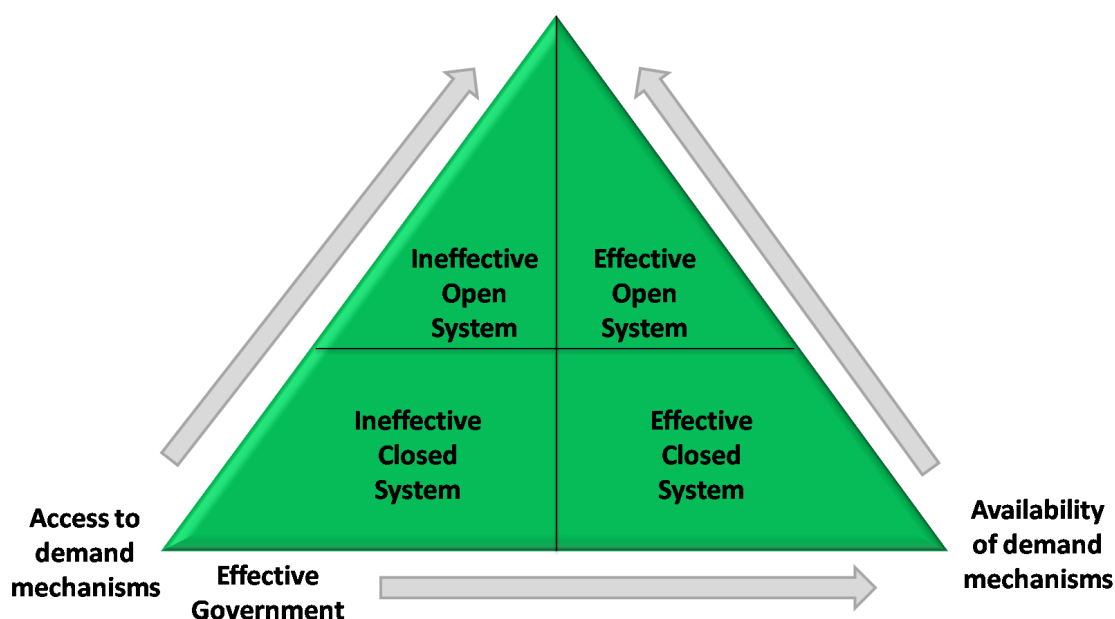
human development depend. Failure in these three areas should be sufficient to judge any political system as ineffective. The fourth area, of inequality, unsurprisingly sees South Africa perform poorly again. Surprisingly therefore, the political system performs well on the fifth indicator of improving living standards. It actually performs remarkably well here and this complicates a final judgment on the effectiveness of the system. It is, however, true that the progress recorded in improving living standards has in the main taken place via welfare programmes and the transfer of wealth from productive to less productive spheres of the political system. As a short term policy the value of such a trend might be important. However, in the case of the South African system, these transfers are not a short term policy. In the absence of education, employment, and economic growth they are the main, and arguably sole, initiative aimed at liberating poor actors from poverty. However, the best that these transfers can do is to alleviate and not eliminate poverty and inequality. They therefore offer no long-term solution. A political system that offers no long-term solution to such a prominent demand of so many of its actors can only be classed as ineffective in terms of its ability to meet the demands of its actors.

It is obvious then that in terms of determining whether the system has been effective in meeting the demands of its actors, the answer must be no. Even the significant increase in living standards has largely been achieved through welfare and state-led delivery efforts that are not necessarily sustainable into the future, and do not in any case present the poor with a long-term strategy out of poverty.

6.4. TIER THREE: SYSTEM TYPE

The three attributes determined above in turn determine the type of political system as an open or closed and effective or ineffective system. This open and closed and effective or ineffective nature of the system depends on its performance across the three axes of the triangular systems type diagram reproduced below:

Figure 23: Triangular systems type diagram



Republished

In the case of the South African system this chapter has demonstrated both a proliferation of, and broad access to, demand mechanisms. According to the diagram above the South African political system must be classified as an open system. However, in terms of economic growth, employment, security, equality, and education this chapter has shown that the system significantly underperforms comparable emerging markets. Nor, as argued above, does it have a policy framework capable of meeting the demands of actors to escape from poverty, unemployment, and inequality. It follows from the diagram above that the South African political system, although being a very open system, must be classed as an ineffective system.

In finding itself in the top left quadrant of the triangle the system therefore meets with this study's classification of a weak state in being unable to meet the demands of its actors while at the same time being unable to exercise control over the ability of those actors to make demands. This is a peculiar result, as the system is such an open one, with easy access to a range of demand mechanisms, that it might be expected to be a highly effective system. How can it be possible that actors have such freedom to determine the government and policies under which they live, but that the state and the system are so ineffective in meeting their demands?

One answer is that this situation will not last for long and that as a weak state dramatic change in its future variant may be imminent. This is consistent with findings in this chapter of changing feedback flows such as those represented in the growing protest movement. This is in turn theoretically consistent with the complex systems theoretical basis of this study that actors dissatisfied with the type of system they live in will exert positive feedback which will lead to a change in both system type and behaviour - which the scenarios in later chapters will reveal. If such positive feedback is already present in the system, and it already represents a truly weak state, then the odds of radical future system change may be very great indeed.

6.5. TIER FOUR: SYSTEM VARIANT

It was argued in chapter three that such weak states are particularly vulnerable to system instability leading to change because of the volumes of positive feedback that actors would be injecting into such a state. In the case of the South African system this chapter identified seven such actors. By determining what type of feedback these actors predominantly introduce into the system, it should be possible to argue whether it is currently a stable or unstable system. Determining whether an actor is a driver of positive or negative feedback is done by examining that actor in terms of the demands placed on the system, the extent to which those demands are met, and its ability to use demand mechanisms to respond to unmet demands.

The demands of business and investment actors are likely to include certainty over government policy, rapid economic growth, a skilled and productive workforce, sound infrastructure, and stable macro-economic indicators. In terms of government policy there is little certainty. Policy conflict within government, over whether to adopt a centrally directed economic model or a private sector-led growth model, is a prominent example. It has been demonstrated that growth levels in South Africa underperform comparable emerging markets. The South African education system has seen to it that much of the workforce is relatively unskilled while the labour regulatory environment arguably reduces the competitiveness of the workforce. While South Africa may house the most developed investment infrastructure in Africa, especially in terms of banking, communication, and auditing standards, much of the physical infrastructure in terms of roads, ports, and electricity supply capacity is in need of an upgrade. The business community therefore finds that important demands such as policy certainty, growth,

skills, and physical infrastructure are largely not met. It is likely therefore that the business community would like to bring about changes in all these areas and in this regard is predominantly a driver of positive feedback.

The second group of actors are the highly skilled and relatively wealthy ten percent of actors in the system. Their demands relate to maintaining their economic and business interests including property rights, expanding those interests, and experiencing a high degree of personal security and civil liberty. Their interests would also include promoting a general rise in living standards in the society - partly out of a sense of social justice and also out of a sense of self-preservation. They are likely to be particularly influential drivers of negative feedback when it comes to maintaining the constitutional settlement of 1994 which guaranteed property rights and civil liberties. It is no surprise, therefore, that many of the civil society and other groups that oppose measures such as proposed information legislation appear to have a strong middle class status. This group of actors can therefore be counted on to resist strongly efforts to radicalize economic policy, undermine property rights, or erode civil liberties such as rights to information and free speech. However, they are likely to be drivers of positive feedback when it comes to policies around growth, education, and employment which collectively have retarded human development levels in South Africa – as long as those policies do not threaten their own circumstances. Their overall impact on feedback is therefore difficult to discern. They will drive certain changes in the system but resist others. However, their self-interest in defending their current living standards, and conditions and thereby the broader constitutional framework of the country, suggests that these actors are predominantly drivers of negative feedback.

The third group of actors include the 50% or so who live in relative poverty, are badly educated, are unemployed, and have limited access to the formal economy. Their demands are for education, employment, and rising prosperity. In their case these demands are generally not being met other than through welfare. It is likely, therefore, that they must become increasingly significant drivers of positive feedback. There is much evidence of this in the current political system. The increasing number of protests is one example of this positive feedback in operation. A second example is the rising radical sentiment with almost a third of adults in one opinion poll expressing support for the racist and radical economic policy suggestions of Julius Malema (Financial Mail,

2012: Internet Source). These poorer actors are generators of exclusively positive systems-changing feedback.

The fourth and fifth groups of actors are the ruling party and the political opposition. Their demands on the system are in the main to remain in power or to seize political power in the country. In the case of the ANC it will be acutely aware of the rise in protest action as a response by the 50% of poor actors to the government's inability to meet their demands. The question is whether its response to these problems sees it become a driver of positive or negative feedback. Much of the answer lies in its current behaviour. In response to the inequalities and protests that now characterise the system, the party has entertained a number of systems-changing policy ideas. These include changes to the property rights in the country through initiatives such as the Green Paper on Land Reform (Department of Rural Development and Land Reform, 2011: Internet). In response to rising protests and media and civil society criticism the party has floated policy ideas such as the proposed media tribunal and Information Bill, which would undermine free speech and access to information in South Africa (Human Rights Watch, 2011: Internet Source). Elements in the party have also been very critical of the judiciary (Times Live, 2012d: Internet Source; and News 24, 2011b: Internet Source). All these threats may translate into actions which would bring about great changes to the system. However, arguably a greatest change that the party may introduce into the system lies in economic policy. Both the government's NDP and NGP documents promise dramatic shifts away from the economic status quo – albeit in different directions. In this alone the ANC is a prominent positive feedback driver.

The political opposition finds itself in a very different position. In seeking to undermine the political hegemony of the ruling party it obviously serves as a driver of positive feedback. However, it also invests a great deal of effort seeking to safeguard constitutional principles, the rule of law, and the wealth and standing of its relatively wealthy middle-class support base. While it may in time come to force the ruling party from power there is no indication of it currently securing that result. Therefore, again on balance, it is currently predominantly a driver of negative feedback seeking to secure the regime governing the system from being undermined by other more radical actors in the system.

The protest movement deserves its own place as the sixth major actor in the political system. In an environment of 50% youth unemployment, and where close on half of all black actors have been shown to live in relative poverty, this movement is arguably a necessary condition of the inequality present in the South African political system (SAIRR, 2012b: 263). It has also been argued in this chapter that there is little in current policy to overcome the challenges of poverty, poor education, unemployment, and inequality. The protest movement must therefore be expected to grow and become an increasingly important driver of positive feedback. There are only two things that can prevent this outcome. The first is that policy changes could allow the government to meet the demands of the 50% of relatively poor individual actors in the system. There is limited evidence of these changes being put into operation. The second is that the state restricts access to demand mechanisms in an effort to cut off the positive feedback loops that the protest movement operates within. However, this chapter has earlier reached the conclusion that South Africa is a very free political system. This, together with the fact that the government does not have the electoral majority to bring about constitutional changes to the system makes that outcome unlikely in the current system. The protest movement will therefore remain a dominant driver of positive feedback into the system.

This may be true for the media and civil society as well. These are an interesting actor in terms of feedback, as their role in the South African political system has reversed over the past 15 years. Following the 1994 transition they were important drivers of negative system-stabilising feedback, as they welcomed the political changes that had taken place in the South African system. However, over time that began to change. Evidence has been cited of the media being routinely critical of the status quo in South Africa. Likewise, this chapter has cited evidence of the extent to which civil society actors have responded to the government's inability to meet the demands of poor actors via court actions, protests, complaints to the Chapter Nine institutions and the like. In all this they are drivers of positive feedback. They also play an important role in directing negative feedback by resisting efforts to restrict access to information and free speech. However, in doing so they are keeping open the channels and demand mechanisms necessary for positive feedback to enter the system. Hence, even where they introduce an element of negative feedback, this will ultimately lead to higher levels of positive feedback entering the system.

Presented on a table the contribution to negative and positive feedback of each of these actors looks at follows:

Table 5: Actors' influence on positive and negative feedback in the current political system

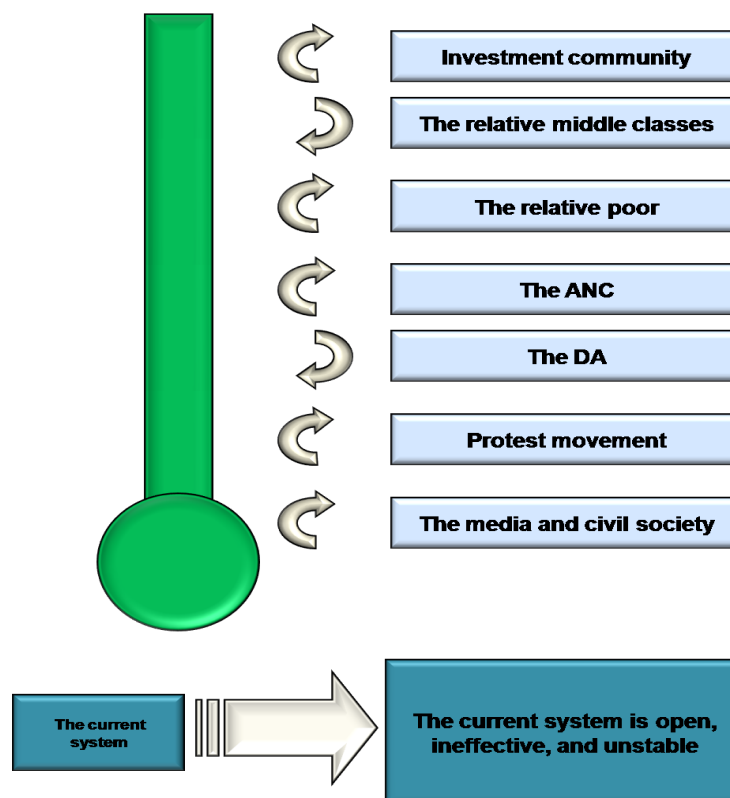
ACTOR	KEY CONTRIBUTIONS TO POSITIVE FEEDBACK	KEY CONTRIBUTIONS TO NEGATIVE FEEDBACK
The business and investment community	Demands for greater policy certainty, investment in physical infrastructure, skills, and growth.	Maintenance of macro-economic policy and property rights.
The 10% of relatively well educated and wealthy actors	Demands for faster growth and wealth creation and better security	Maintaining their property rights, economic interests, and civil liberties as set out in the Constitution.
The 50% of poor, unemployed, and badly educated actors	Demands for employment, education, incomes growth, and greater equality.	Maintaining access to demand mechanisms.
The ruling party	Meeting the demands of its supporters for increasing living standards. Elements of the party support radical economic reforms such as diluting property rights and nationalising key industries. Elements of the party support limiting demand mechanisms.	Elements of the party support the constitutional settlement of 1994 and maintenance of the macro-economic policy environment.
The political opposition	Campaign efforts to undermine the legitimacy of the ruling party in the eyes of voters.	Maintaining the wealth, property rights, and civil liberties of the middle classes as well as access to demand mechanisms.
The protest movement	Bringing about radical change to the system in terms of better education, rising employment, and more equitable distribution of wealth.	Access to demand mechanisms.
The media and civil society	Bringing about improved governance and better education, rising employment, and a more equitable distribution of wealth.	Access to demand mechanisms.

The table shows that the predominant area of negative feedback is the maintenance of demand mechanisms. This is common to most actors in the system with the exception of elements of the ruling party. A second area of negative feedback is the effort by the middle classes and the opposition to maintain their property and business interests. However, together these two actors account for roughly 10% of individual actors. The predominant drivers of positive feedback are the poor majority, elements of the ruling party, the protest movement, and the media and civil society, with their efforts to bring about a more equitable distribution of wealth in the society. Consider that together, these account for a substantial majority of actors, they control parliament and eight of the nine provincial legislatures, and represent the majority of media and civil society. As

long as they maintain access to demand mechanisms their collective influence on feedback into the system must overwhelm the negative feedback of the 10%.

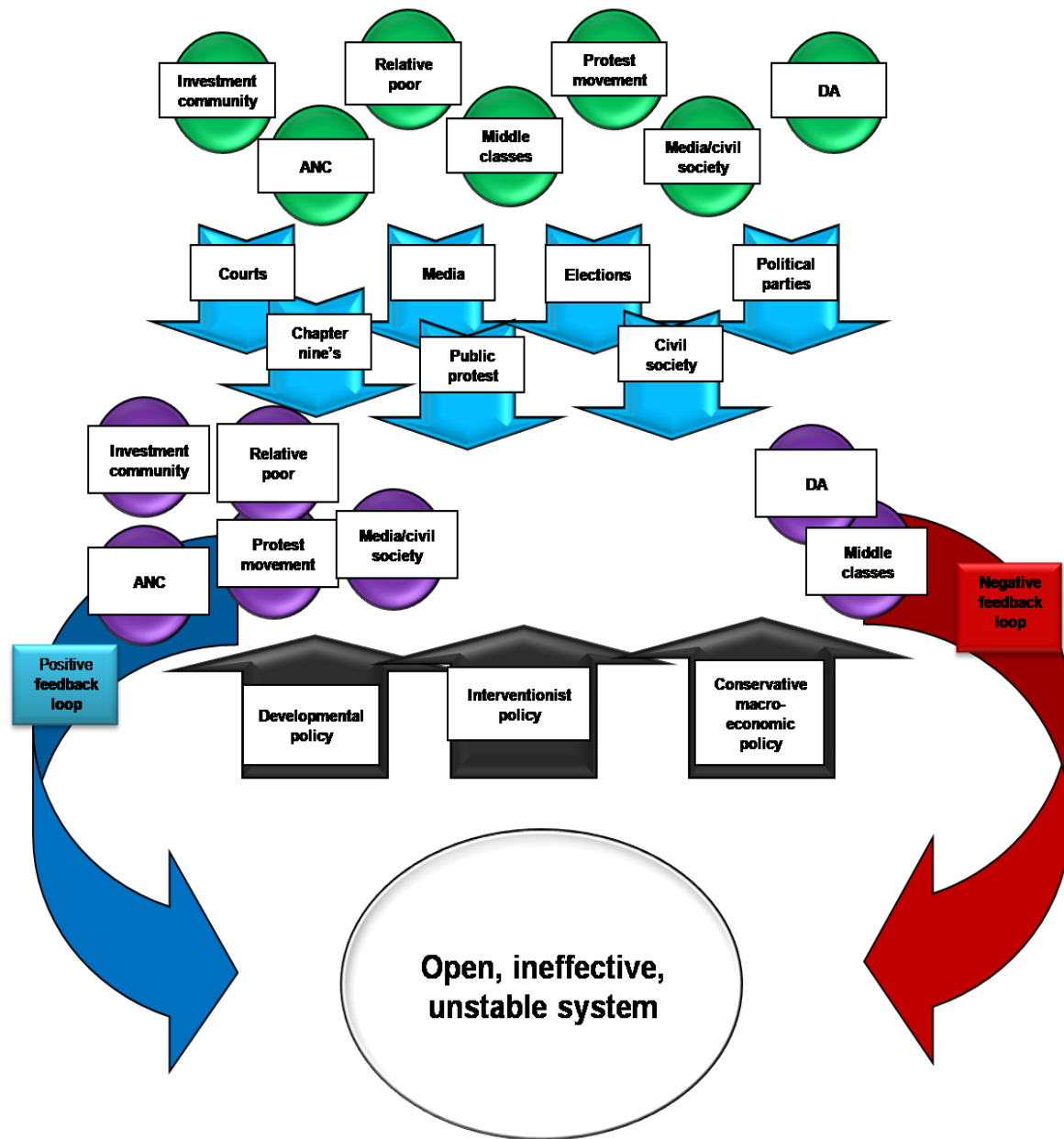
If the situation described above is presented graphically, as a pendulum hanging at equilibrium, it is possible to show each of these actors as a driver of positive feedback pulling the pendulum away from its status-quo or as a driver of negative feedback seeking to maintain equilibrium:

Figure 24: Drivers of feedback into the current political system



The graphic shows only two drivers of predominantly negative feedback in the system as the relative middle classes and the DA. A system so dominated by positive feedback must be classified as an unstable system. The system has also been shown to be open but ineffective at responding to actor demands. The actors, demand mechanisms, and output mechanisms have therefore interacted to result in a current system variant of an open, ineffective, and unstable system. Presented as a complex system this result has been achieved as follows:

Figure 25: A complex systems diagram of the benchmark system



The top of the diagram shows the seven major actors in the system. These place demands on the system via the six major demand mechanisms. The government responds to those demands via its three branches of development, interventionist, and conservative macro-economic policy. The actors respond to this policy by forming streams of either positive or negative feedback. These streams determine the stability of the system.

It is possible now to return to the formal structure of the four-tier model, and based on the analysis and conclusions reached in this chapter, to present the South African political system according to that model:

Table 6: Four-tier model of the current South African political system

Tier one	Political system characteristics	<u>Actors:</u> There are seven key actors in the system: First are the private business and investment actors that will be instrumental in determining future economic growth levels. Second are the 10% or so highly skilled actors which are active at a senior level in the economy and enjoy a relatively high standard of living. Third are the 50% or so of actors who live in poverty. They are for the most part poorly skilled and have probably not completed their schooling. Fourth is the ruling tripartite alliance. This group firmly controls policy making in South Africa. The fifth is the political opposition which represents the main electoral threat to the alliance. The sixth is the growing protest movement and those actors who have lost faith in formal political processes. The seventh and final group of actors is the media and civil society. Increasingly active in placing demands on the political system this group is able to exert growing influence over the future stability of the system.	<u>Regime:</u> The system features six key rules: All the actors firstly have the right to be treated equally in how they make demands and how these are responded to. Secondly they have the right to organise themselves into groups of actors in pursuit of their demands and may express a wide range of ideas and opinions in doing so including those aimed and removing the government from power if they deem it not to be responding sufficiently effectively to their demands. Thirdly the property of actors in the system is protected against random seizure. Fourthly actors have an explicit set of socio-economic rights which the government is obliged to pursue and see realised. Fifthly the actors may demand any piece of information that may aid them in the pursuit of their demands. Sixthly and finally, they may expect that their demands are responded to in terms of what the law requires and not in terms of what the government may decree.	<u>Demand mechanisms:</u> There are six prominent demand mechanisms: The first are elections via which the individual actors in the system are regularly able to choose their government. The second are the courts that have been used extensively as a demand mechanism by political parties, civil society and the media, and individual actors in pursuit of their demands. Third are the chapter nine institutions with special reference to the public protector, human rights commission and auditor general. Fourth are political parties themselves which, especially in the case of the ANC, allow individual actors to exert considerable influence over the political system. A fifth influential demand mechanism is the right to public protest which has been increasingly used by poor communities to place demands upon the government. The sixth is the media and civil society which serve as much as an actor as they do a demand mechanism for other actors to use in placing demands on the system whether through the courts, in the media itself, or in public protest.	<u>Output mechanisms:</u> Three policy themes have consistently informed all post 1994 output mechanisms. At times one theme may have been emphasised over another but all three have been clearly present in every major policy document tabled by the government or the ruling party since 1994. The developmental policy theme is directed particularly at the demands of the 50% or so of actors who are poorly educated, not active in the labour market, and dependent of welfare. The growth policy theme is directed at meeting the demands firstly of the private business and investment community and at the 10% or so of relatively well educated and skilled actors. Their investment and participation in the economy is essential in promoting the growth and tax revenues that are necessary in order to meet the demands of 50% or so of poor actors. The interventionist policy theme is, at times counterproductively, aimed at ensuring that the investment and business community better allows the government to meet the goals of its developmental theme.
Tier two	Attributes	<u>Presence of demand mechanisms:</u> The system features a very broad spectrum of demand mechanisms.	<u>Access to demand mechanisms:</u> There is considerable evidence of actors across race, class, and income lines freely accessing the full range of demand mechanisms within the system.	<u>Effectiveness:</u> In terms of education, employment, equality, investment, and personal safety the system lags behind comparable emerging markets often by a significant extent.	

Tier three	System type	<u>Open effective:</u> X	<u>Open ineffective:</u> While the system is undoubtedly an open system its lagging of comparable emerging markets across a range of socio-economic indicators establishes the extent to which it has been unable to effectively meet the demands of a range of actors within the system.	<u>Closed effective:</u> X	<u>Closed ineffective:</u> X	
Tier four	System behaviour	<u>Stable:</u> X	<u>Unstable:</u> Of the seven major groups of actors in the system only the middle classes and the political opposition are major drivers of negative feedback. The poor majority, the ruling party, the protest movement, and the media and civil society are all now predominantly drivers of positive feedback. A simple accounting of this must result in the conclusion that the system is an unstable one.	<u>Oscillating:</u> X	<u>Chaotic:</u> X	<u>Evolving:</u> X

In terms both of the four tier model above, and the complex system diagram above that, the system presented by the model is an example of a variant 12 system as set out the table below:

Table 7: Variant type of the current political system

TYPE	STABLE	UNSTABLE	OSCILLATING	CHAOTIC	EVOLVING
Ineffective closed	1	2	3	4	5
Effective closed	6	7	8	9	10
Ineffective open	11	12	13	14	15
Effective open	16	17	18	19	20

In being able to classify the variant of the current political system this chapter has met its chief research goal. It has established a benchmark of system type and behaviour that the scenario systems still to be produced in this study will be compared to. Where differences in variant between the benchmark and the scenario systems exist it will be

possible to reach conclusions on the prospects for system stability or instability in the period to 2024.

6.6. CONCLUSION

This chapter sought to determine the type and behaviour of the current South African political system in terms of one of the twenty variants of such a system prescribed by the four-tier model of a political system. The chapter identified a total of seven major actors based on their influence in directing feedback into the system. Six rules were identified as dominating the regime of the system, based on their importance in determining access to demand mechanisms in the system and the government's ability to respond to those demands. Six demand mechanisms were identified, based on their prominence as vehicles for exerting feedback on the system and the extent to which they were accessed by the seven major actors. Three intertwined lines of policy were identified as the primary output mechanisms used by the government in responding to those demands.

This analysis demonstrated that there was a great diversity of demand mechanisms in the system and extensive access to these mechanisms. This allowed the chapter to conclude that the current South African political system is an open system. However, the chapter also concluded that South Africa lagged behind comparable emerging markets in many areas of social and economic performance. Particularly in terms of labour market access and education, South Africa's comparative performance forced the conclusion that despite being an open system, it was ineffective at responding to the demands placed upon it.

Because of its ineffectiveness it features a predominance of positive feedback. This is driven mainly by the majority of poor actors in the system whose demands for education, employment, and greater equality remain unmet. However, they were not the sole drivers of system change. In fact of the seven major groups of actors in the system, only the middle classes and the political opposition are predominantly drivers of negative feedback. The poor majority, the ruling party, the protest movement, and the media and civil society are all now predominantly drivers of positive feedback. These account for the great majority of actors in the system. An accounting of this resulted in

the conclusion that the system was an unstable one. This in turn resulted in the conclusion that in terms of variant the system was open, ineffective, and unstable.

That variant result met this study's classification of a weak state as one unable to meet the demands of its actors and unable to control their ability to make further demands. It must be expected therefore that the scenarios to be produced in later chapters will be of very different system variants from the one described in this chapter. That would, of course, be consistent with the central theoretical basis of this study that the emergent property of complex systems sees small changes in their present conditions result in dramatic shifts in their future circumstances

7. CHAPTER SEVEN: SCENARIO DEVELOPMENT: DETERMINING MAJOR TRENDS IN THE PESTEH ENVIRONMENT

7.1. INTRODUCTION

Having determined the variant type of the current political system it is necessary to begin the process of determining the variant types of the scenario systems. These scenarios can then be compared to the benchmark system and differences between the two will reveal the prospects for long term system instability. The metho-theoretical model indicates that this scenario development process commences via an analysis of the major PESTEH trends within the political system. Accurately identifying these trends is essential in accurately identifying major feedback flows and influences in the system. Of course it is not feasible to identify each and every trend at work in the system. The purpose of the analysis in this chapter is therefore to identify, explain, and list major trends, likely to be of particular significance in exerting feedback on the system. Completing this analysis is the chief research goal of this chapter and will follow six research sub-goals:

- The first will be to identify key trends in the political environment.
- The second will be to identify key trends in the economic environment.
- The third will be to identify key trends in the social environment.
- The fourth will be to identify key trends in the technological environment.
- The fifth will be to identify key trends in the environment in which people live.
- The sixth will be to identify key trends in the historical environment.

With this basis of knowledge in place it will be possible in the next chapter to structure these trends very precisely into a number of individual driving forces, to determine the likely impact on feedback of each driving force, to distil these into a shorter number of Key Driving Forces, and to use those to structure the scenario matrix. The matrix will in turn suggest four possible scenarios for the system. These can each be described in terms of system variant allowing the study to reach its final conclusions.

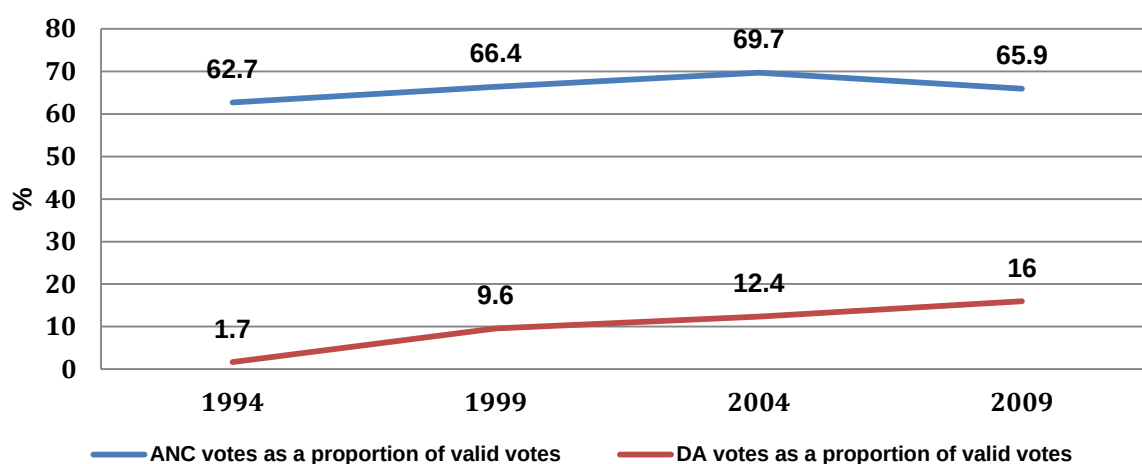
7.2. MAJOR POLITICAL TRENDS DRIVING THE POLITICAL SYSTEM

Political trends relate to the role of political parties, voters, and protestors in directing feedback into the system. The following are major political trends:

7.2.1. Party political balance

The political environment at a national, provincial, and local government level has been dominated by the ANC since 1994. The graphic below tracks the national performance of the two main political parties in all elections since 1994 (SAIRR, 2012b: 799).

Graph 2: ANC and DA performance in all national elections since 1994



Source: SAIRR, 2012b:799

The graphic shows that the ANC has maintained a level of electoral support of over 62% in every election since 1994. Even with the slight weakening in its performance since 2004, its support is still on a par with that of 1999 and is still higher than that of 1994. As a driver of feedback into the system the ANC is therefore a significant determinant of future stability or instability.

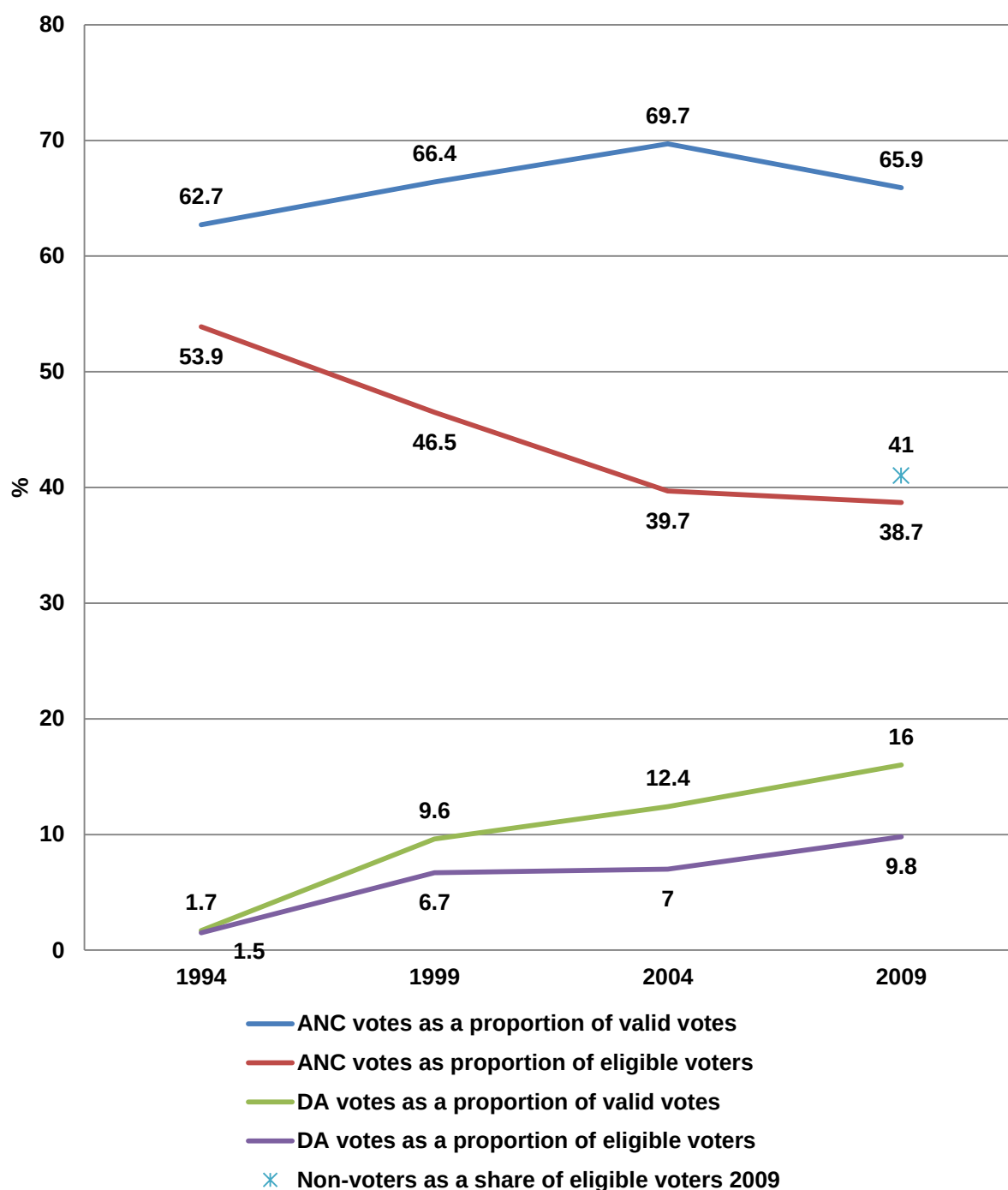
The graphic shows that support for the DA, born out of the Democratic Party (DP) after the 1999 election, increased very quickly from 1.7% in 1994 to 9.6% by 1999. This growth was probably accounted for by the party cannibalizing voters leaving the NNP, which saw a 14% point decline in its support over the same period. DA growth slowed into the 2004 election, which saw the party support increase to 12.4%. However, the party grew by almost 25% in the following 2009 election where it won 16.7% of the national vote. Had the COPE not come into being and taken 7.4% of the vote in that election (SAIRR, 2012b: 790) the DA might have grown even further and have become an even more influential determinant of feedback entering the political system.

Most opposition parties (not shown on the graphic) have seen their support fall dramatically since 1994. This decline is centred on the New National Party (NNP), which saw its support decline from 20.4% in 1994 to 6.9% in 1999 and to 1.7% in 2004 before the remnants of the party merged with the ANC. The Inkatha Freedom Party (IFP) saw its support halve from 10.5% in 1994 to 4.6% in 2009. The steady slide in support for most opposition parties was interrupted by the rise of the Congress of the People (COPE) that won 7.4% of the vote in 2009. There is a clear trend of smaller opposition parties becoming ever less significant to voters and therefore a less influential driver of feedback (SAIRR, 2012b: 790 and 799; and SAIRR, 2008: 656).

7.2.2. Missing voters

South African politics has therefore evolved into a two party system even though the larger of these two parties attracts almost four times the support of the smaller party. Despite this imbalance the DA saw its share of the vote increase into the 2009 election whereas the ANC recorded its first decline in support since 1994. This decline is all the more significant when read against the phenomenon of missing voters. These missing voters become evident when party support is measured not against actual votes received, as has been done above, but against potential votes, as is done in the graphic below (SAIRR, 2012b: 799).

Graph 3: Party support in terms of eligible voters 1994-2009

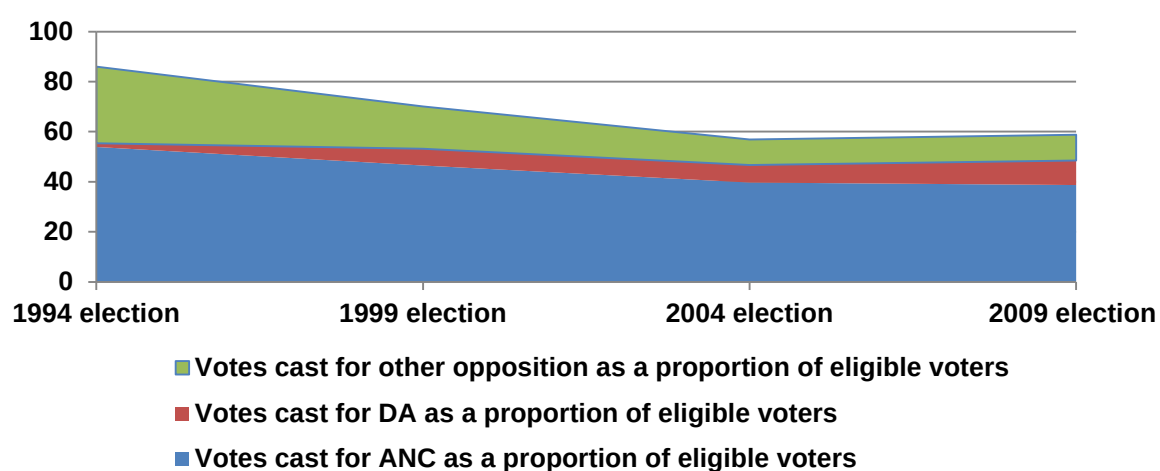


Source: Drawn from SAIRR, 2012b:799

The graphic shows that in 1994 the ANC won 53.9% of the potential vote. This is calculated as the number of people who would have been eligible to vote in that election. ANC support in terms of the eligible vote fell quickly to 46.5% in 1999, to 39.7% in 2004, and to 38.7% in 2009. The declining turnout can be explained by the fact that in 1994 19.5 million valid votes were cast out of a voting age population of 22.7

million people (SAIRR, 2012b: 799). However in 2009 only 17.9 million valid votes were cast out of a voting age population of 30 million people. In other words, when measured as a proportion of the voting age population, voter turnout had declined from 86% to 58.5%. The figure above shows that as a result of this declining turnout the share of eligible voters not voting was higher at 41% in 2009 than the 38.7% who voted for the ANC. This declining turnout is also shown on the figure below. The difference between the shaded areas of the graphic at the 100% line reveals the extent of growing voter stay-away.

Graph 4: Declining voter turnout



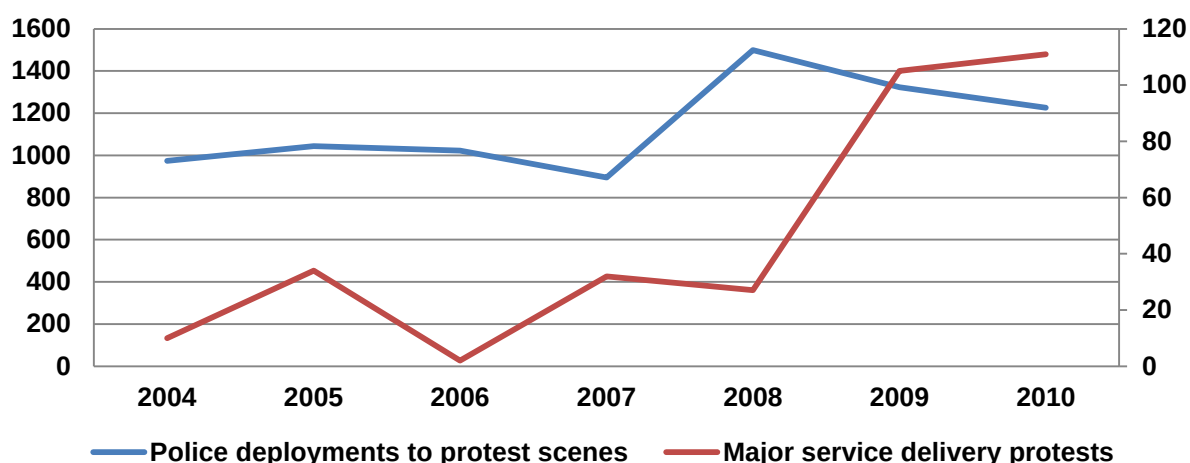
Source: Drawn from SAIRR, 2012b:799

This trend is so pronounced that despite an increase of over 7 million new eligible voters since 1994 fewer votes were cast in the 2009 national elections than in 1994. Following the 2009 elections the number of voters choosing not to vote exceeded the number of ANC voters (SAIRR, 2012b: 799). These missing voters now have the numbers to act as a significant driver of feedback into the political system.

7.2.3. Increasing public protest levels

However, it would be wrong to think that these missing voters have deserted the political environment. Over the period that has seen the fall in voter turnout, there has been a sharp increase in protest action against the state as shown on the graphic below (SAIRR, 2011: 735).

Graph 5: Incidents of major protest action 2004-2010

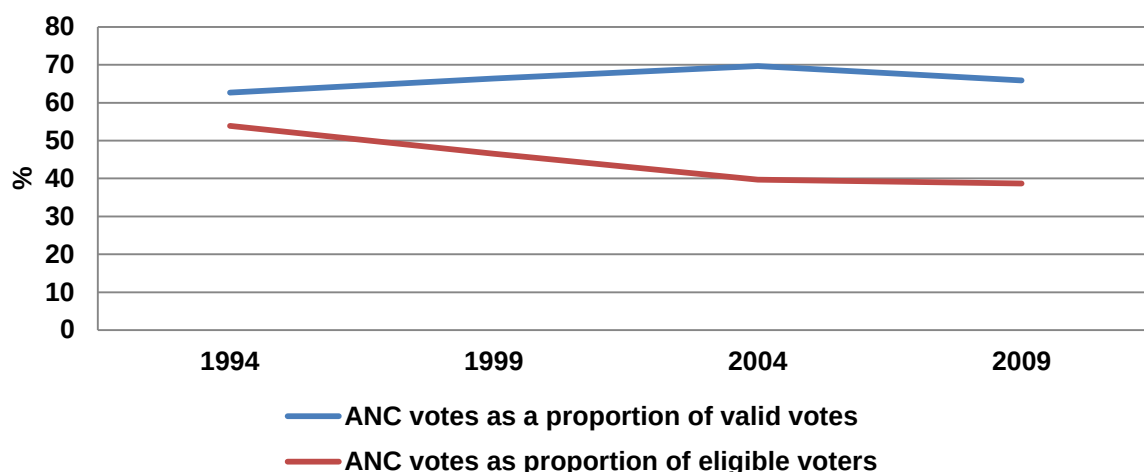


Source: Drawn from SAIRR, 2011:734-735

Over the period 2004 to 2010, for example, the number of major public protests escalated from 10 to 111. Over roughly the same period from 2003/04 to 2010/11 the police recorded an increase from 979 to 1 226 in incidents of public violence (SAIRR, 2011: 734-735). In other words, by 2010/11 the police were handling an average of four often violent protests a day.

The rise of public protests, together with the phenomenon of missing voters, suggests that the ANC may not be performing quite as well as it seems when its performance is measured as a share of votes cast. For example, the graphic below shows that when measured as a proportion of the potential vote ANC support appears to be on the decline in contrast to the impression created by measuring its strength in terms of the actual vote (SAIRR, 2012b: 799).

Graph 6: Performance of the ANC 1994-2009 in terms of eligible voters



Source: Drawn from SAIRR, 2012:799

7.2.4. Internal party factionalism

While declining voter turnout is one clear threat to the future of the ANC a second threat lurks in the increasingly factionalised nature of the party. At times this internal political conflict seems to be more intense than the conflict between parties. In chapter four a number of examples of this infighting were cited. These included cases of physical fights erupting between parties in the tripartite alliance. As a most extreme example that chapter quoted the contention of the head of COSATU, Mr Zwelinzima Vavi, that a number of alliance leaders had been assassinated as a result of internal party turmoil (COSATU, 2012: Internet Source). For example, in an article titled “*The ANC: Fight Club*”, Gareth van Onselen identified twenty separate ruling party congresses or meetings where delegates had come to physical blows since 2008 (Politics Web, 2012c: Internet Source). Along similar lines IOL News (2012: Internet Source) suggested that in the previous five years as many as 46 political leaders had been assassinated in South Africa. Nor is such conflict, plotting, intrigue, and internal suspicion a recent phenomenon. Johnson (2004: 221), for example, recalls the “absurd” plot put forward by Thabo Mbeki that senior ANC leaders Mathews Phosa, Cyril Ramaphosa and Tokyo Sexwale were plotting against him “with the connivance of foreign intelligence services.”

It appears therefore that the ruling party is increasingly factionalized and that infighting may begin to weaken and or paralyze the party. The scale of this infighting, and that it

has extended to political assassination, means that this infighting is also an important driver of feedback. This is significant as it suggests that the party, and the broader alliance of which it is a part, may find it difficult to unite behind a single set of policy proposals in an effort to counteract the rising levels of positive feedback entering the system. The reason for this is that many in the party, and the alliance, are at odds with themselves over how best to respond to rising levels of feedback. Some such as COSATU and the SACP favour greater state intervention in the economy. Others such as senior ANC leaders Trevor Manuel and Cyril Ramaphosa appear to favour a contrary policy approach as set out in their NDP. All of the above complicates the process of seeking to inject new levels of system-stabilising negative feedback into the system through meeting the demands of increasing numbers of actors. The possibility is that the party may not be able to respond to those demands.

7.2.5. Political ideology and the NDR

Part of its inability to respond adequately to demands may relate to the ideology driving the ANC. The party regards itself as being responsible for implementing the NDR (Kane-Berman, 2011: Speech). According to Kane-Berman the NDR has its origins in Lenin's theory of imperialism, which holds that the wealth of colonial powers originates solely out of exploitation of its colonies and is therefore illegitimate. He argues that the NDR sees South Africa as a colony of a special type in the sense that the white colonizing population has become a permanent part of the society. White wealth is seen as having originated out of exploitation and is therefore illegitimate. Proponents of the NDR therefore hold that it is the role of the state to intervene in the economy and restore this wealth to the black majority – even where this may undermine growth and investor certainty. A number of commentators such as Steward, Johnson, Filatova, Hoffman, and Jeffery have suggested that by subscribing to the NDR, the party may even find itself at odds with the Constitution⁸. There is evidence of this. For example, in policy papers released by the party ahead of its 2012 policy and electoral conferences, it argued that the Constitution was a concession made in order to secure the 1994 political liberation through the 1994 transition (ANC, 2012: Internet Source). These

⁸ Notes taken from discussion by RW Johnson, I Filatova, A Jeffery, P Hoffman, and D Steward at the FW de Klerk Foundation's National Policy at the Crossroads conference on 25 July 2012 at the Johannesburg Country Club.

documents further argue that it may be time to revise the Constitution in order to enter into a second transition that will be aimed at economic liberation.

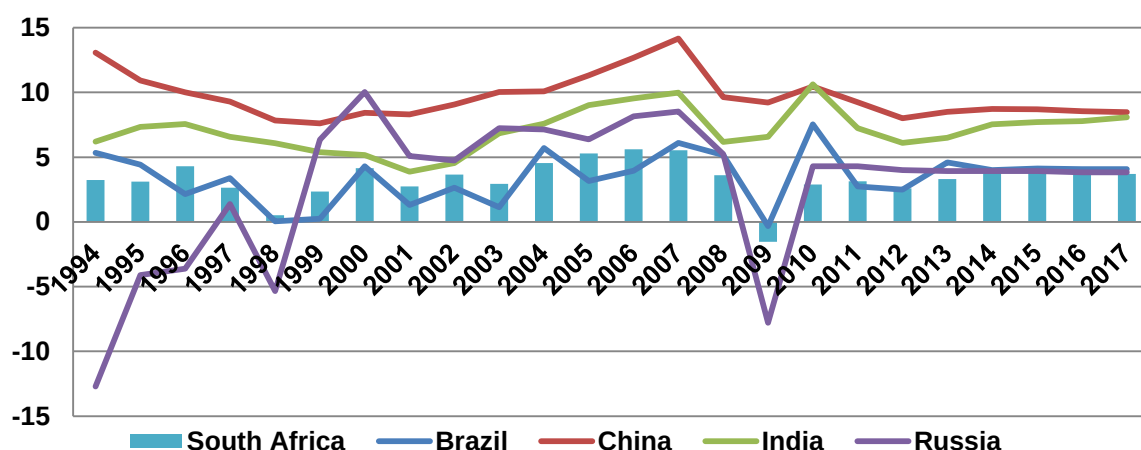
7.3. MAJOR ECONOMIC TRENDS DRIVING THE POLITICAL SYSTEM

Political trends are of course largely a product of the economic environment. It is this environment that determines the wealth and prosperity of the system and therefore the ability of the system to meet the demands placed on it by its political actors. Understanding the major economic trends in the system is therefore necessary in order to understand why certain demands emerge from the political environment, and whether these can be met. That question in turn is the key to understanding the likely future balance of feedback in the system. A thorough economic trend analysis is therefore crucial for answering the focal question of this study.

7.3.1. GDP growth and the impediments to it

The graphic below tracks South Africa's GDP growth rates against those of the other four BRICS countries from 1994, forecast to 2017 (IMF, 2011: Internet Source).

Graph 7: BRICS economic growth rates 1994-2012



IMF, 2011: Internet Source

The graphic shows that since 2003, China has averaged a GDP growth rate in the region of 10%. India has averaged a growth rate of between 8% and 10%. Russia, which was badly affected by the global crisis, nonetheless averaged a growth rate of between 5% and 7% in the pre-2009 period and has subsequently recovered to a growth rate of around 5%. Brazil performed on a par with South Africa in the period to

2009 and has slightly exceeded its level of growth since 2009. South Africa therefore underperforms the growth levels of comparable emerging markets. Economic growth is important in determining feedback into the system, as it determines the extent to which wealth, tax revenues, and economic opportunities are created for actors in the system. However, by some estimates South African growth levels are half of what they need to be in order to make significant inroads into poverty and unemployment (NPC, 2011: Internet Source). In addition there are at least seven structural impediments in the way of future growth:

- 1) The first is that the ratio of savings to GDP is too low to generate higher levels of growth. For example the savings to GDP level which was 16.8% in 1994 was fractionally lower at 16.4% in 2010 (SAIRR, 2012b: 132-133). In July 2011 the finance minister, Pravin Gordhan, told the South African Press Association that at 16% our rate of saving was far below the 52% of China and 22% of Brazil. He added that raising the savings rate to closer to 25% of GDP would be crucial for promoting higher levels of sustainable growth (South Africa.info. 2011: Internet Source).
- 2) The second is that household debt levels have escalated very quickly (SAIRR, 2012b: 132-133). In 1994, for example, the total debt of households as a percentage of their disposable income was 56.5%. That rose very quickly to reach 81.8% by 2008 and had declined to 78.2% in 2010. That household debt levels are so high means that domestic consumer expenditure will unlikely be able to act as a major driver of future growth.
- 3) The third is that South Africa is lagging behind other developing markets in attracting new foreign direct investment (FDI) (UNCTAD, 2012: Internet Source). For example, in 2010 FDI accounted for just 1.9% of fixed capital formation in South Africa. In that year Botswana averaged 13.8%, Argentina, 7.8%, Mexico 8.8%, and the United States 10.8%.
- 4) The fourth is the budget deficit as a proportion of GDP. In 2010 this figure reached -5.5%, which was higher than most previous points, even when compared to the turbulent 1970s and 1980s (SAIRR, 2012b: 174). By 2011 this figure had dropped to -4.8% but was still considerably higher than the -2.4% of Brazil, -1.6% of China, and nil of Russia (*Economist*, 2 March 2013). Countries in considerable financial distress such as Spain and Greece averaged deficits of -8% and -6.6% respectively. The South African government has therefore struggled to meet its expenditure

requirements out of the revenues it collects. It has to borrow the money it needs to pursue its policies. There is therefore limited room to increase future expenditure, such as that on infrastructure, in order to drive future growth.

- 5) A fifth constraint on growth is the quality and availability of skills within the political system. This is a subject tackled in more detail under social factors below.
- 6) A sixth constraint lies in infrastructure. For example in 2010 the minister of transport told parliament that only 70 000 of the 153 000 kilometres of paved roads in South Africa were in a good or very good condition (Martins, 2012: Speech). In 2009 over 1.3 billion tonnes of freight was transported on South Africa's roads compared with 173 million tonnes that was carried on the railways (Council for Scientific and Industrial Research (CSIR), 2010: Internet Source). This suggests that rail infrastructure capacity has not been sufficient to haul freight, which has moved to the more expensive road network. The amount of freight carried on South Africa's railways declined by 15.7% between 2007 and 2009 (SAIRR, 2012b: 359). In early 2012 Eskom was forced to turn off a number of mining smelters after it failed to generate sufficient capacity to keep them working (Mining Weekly, 2012: Internet Source). This was despite the importance that the government had attached to the beneficiation of minerals and the criticism it has leveled at mining houses for not beneficiating more. It has been predicted that at 4% demand growth, South Africa's electricity demand would exceed supply by 2019, despite all of Eskom's new power stations coming on line (SAIRR, 2011: 400).
- 7) The seventh lies in low levels of entrepreneurship. A 2009 report found that only 1.4% of South Africans aged 15-64 owned established businesses. The figure for Brazil was 13.5%, for Russia was 2.3%, and for China was 17.2% (SAIRR, 2011: 325).

7.3.2. The tax base

As a result of relatively low growth, government revenue collection is constrained by a small tax base. In 2010, for example, there were only 5.9 million people registered for income tax purposes (National Treasury, 2011b: Internet Source; and SAIRR, 2012b: 178-180). Of all taxpayers 43% earned less than R120 000 per annum and 92% earned less than R400 000 per annum. In fact 60% of taxable income was earned by people earning under R400 000 per annum.

High unemployment rates appear to preclude any short term prospect of a dramatic increase in the size of the tax base. Since 2001 the share of the population of working age that is employed has fallen from 45.8% to 40.6% (Stats SA, 2007: Internet Source; and StatsSA, 2010c: Internet Source; and SAIRR, 2011: 222). In fact over the whole period 2001 to 2011, the number of employed South Africans increased from 12.5 million to just 13.1 million, even though the population of working age increased by 5.04 million (SAIRR, 2011: 220).

At 24.9% in 2011, South Africa's unemployment rate was considerably greater than the 5.4% of Brazil, 4.1% of China, 6% of Russia, and 9.9% of India (*Economist*, 2 March 2013; and World Bank, 2011b: Internet Source). The unemployment crisis was greatest among younger South Africans. The unemployment rate for people aged 15-24 was 49.7% in 2010, and for people aged 25-34 was 30.1%. The rate was below 20% for people aged 35 and older (SAIRR, 2011: 259; and Stats SA, 2010a: Internet Source). Opinion polls showed that job creation was a priority in the minds of most individual actors. For example, a March 2011 poll found that 90% of all South Africans, and 95% of black African males, believed that job creation was South Africa's most pressing need (TNS Research Surveys, 2011a: Internet Source). Post-1994 GDP growth data reveals that the only years that recorded a sustained decline in the numbers and proportion of unemployed people in the country were those of 2004-2007 when the economy averaged a growth rate of over 5% of GDP (SAIRR, 2012b: 106 and 258).

7.3.3. The changing structure of GDP and investment

One reason for the high rates of unemployment is that the structure of GDP has changed significantly over the past five decades. In 1951 mining and agriculture contributed 28.7% of South Africa's GDP, while financial services contributed just 9.3%. However, in 2010 mining and agriculture contributed just 12.1% and financial services contributed 21.3% (SAIRR, 2011: 110-111).

Hence, the economy is rapidly becoming more tertiary focused. At the same time private sector investment has become increasingly important in generating GDP. In the 1980s private investors contributed between 50% and 60% of all fixed investment into South Africa. By the mid-2000s, as the government focused on social expenditure, and the political transition had opened South Africa to new investors, the private sector was

contributing over 70% of all fixed investment, with that figure peaking at 74% in 2006 (SAIRR, 2012b: 137). That figure has subsequently declined on the back of the global financial crisis, investor uncertainty, and new state infrastructure programmes.

7.3.4. Policy clashes

This trend of South Africa becoming an increasingly tertiary-sector-focused economy, dependent on private sector investment, runs counter to some prominent policy positions and papers adopted by the government and the ANC. For example, in chapter six it was shown how policy initiatives such as GEAR, AsgiSA, and the National Development Plan favoured a more prominent role for private-sector investors but had met with some hostility from elements within the tripartite alliance. Other policy initiatives, such as those proposed at the ANC's Polokwane conference and in the government's New Growth Path, favoured a greater role for the state in centrally directing the economy and increasingly regulating the activities of the private sector.

The focus on a state-centric economic development model has generated much concern in the business and investment community. In July 2011 the chairman of Merrill Lynch, Mr Humphrey Borkum, was quoted in *Business Report* as saying, "In my opinion, almost every company on the JSE is more efficient and competitive than any of our parastatals. If these parastatals were privatised the taxes they would pay would result in more money for better housing, schools and hospitals for the poor. At present they are a drag on the fiscus and it is the small base of taxpayers that have to pay for all the inefficiency" (IOL News, 2011b: Internet Source).

These doubts are not ideologically driven, but relate to the South African government's established poor track record in business. For example, in October 2012 South Africa's shadow minister of finance, Tim Harris, released a statement pointing out that according to the UN Global Investment Trends Monitor, foreign direct investment into South Africa had fallen by 43% in the last year. The report noted that investment levels had increased over the same period in a number of emerging markets and in Africa. Mr Harris ascribed the fall to ideological confusion in policy-making and unsustainable populist policies (Politics Web, 2012d: Internet Source). More than two years previously, Mr Harris released a statement in which he announced that "Cumulatively, the extent of mismanagement and corruption at parastatals has cost the South African

public almost one quarter of a trillion rand in the past four years". Mr Harris provided figures to substantiate his claims that nine state-managed corporations, ranging from the Post Office to the information technology group Sentech, had received taxpayer support to the value of R241 853 million since 2004 (DA, 2009: Internet Source). He had also noted that both the South African Airways and Transnet were without CEOs for some time after their former CEOs were respectively fired and suspended for tender rigging and fraud (Politics Web, 2012d: Internet Source).

Likewise, in January 2012 the South African Institute of Race Relations stated that for 2009/10, only half of state-owned enterprises were profitable and that collectively they had made a loss of R6 billion (Politics Web, 2009: Internet Source). So serious was the mismanagement of state-owned corporations that in February 2012 in its "The Estimates of National Expenditure" the treasury stated that "State-owned enterprises need to change their investment planning framework from one that is based on what their balance sheet can afford to one that is based on ascertaining what investments are required to unlock growth" (Mail and Guardian, 2012: Internet Source). In October 2010, Mr Stephen Grootes, then a senior journalist at Radio 702, wrote in the *Daily Maverick* that parastatal management was in such a mess that these organisations were putting a "handbrake on the economy" (Daily Maverick, 2010: Internet Source). Along similar lines, in January 2013 the director of the Centre for Development and Enterprise, Ann Bernstein, told Business Day (30 January 2013) that government policy choices, with reference to labour market policy, were actually "destroying jobs" in South Africa.

7.3.5. Corruption and financial mismanagement

Corruption was certainly a contributing factor to the weak management that had accompanied the state's ventures into business. While corruption allegations have been cited with growing regularity in the current South Africa media, the scourge dates back several years. Former opposition leader, Tony Leon, noted for example that "we homed in on the wildfire spread of corruption under Mbeki", which Leon described as "a growing mountain of sleaze" (Leon, 2008: 617). Leon's reminiscences dated back to the 1990s and early 2000s. However, not much appeared to change in the decade after that. In April of 2012, for example, the public protector, Thuli Madonsela, was quoted in *The Times* newspaper as saying that corruption in South Africa was endemic. She

added that the extent of the corruption she had encountered in her work “had the potential to distort the economy and derail democracy” (Times Live, 2012c: Internet Source). Likewise Jeremy Gordin notes that President Zuma had allegedly received more than “a million rand” from Schabir Shaik (Gordin, 2008: 100). In 2012 the Institute for Democracy in South Africa was reported as saying that levels of corruption had reached their highest point since 1994 (Political Analysis South Africa, 2012: Internet Source).

7.4. MAJOR SOCIAL TRENDS DRIVING THE POLITICAL SYSTEM

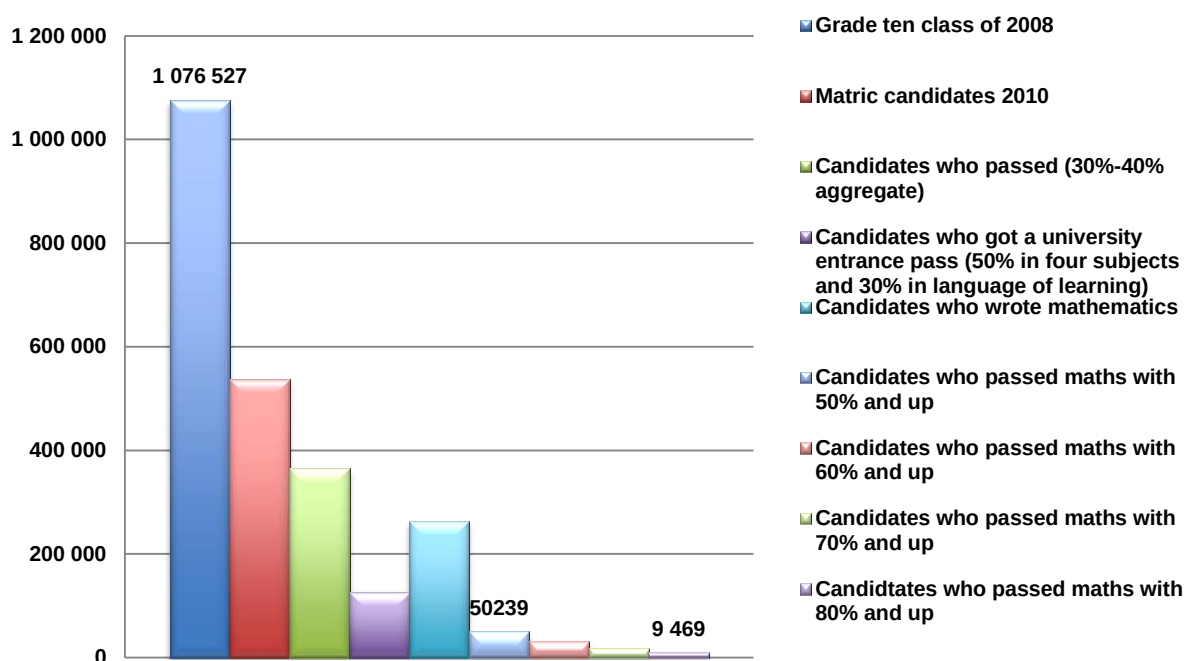
The performance of the economic environment determines a number of trends in the social environment, ranging from inequality levels to calls for radical policy reforms. At the same time trends in the social environment determine the views and attitudes and therefore political pressures that confront economic policy-makers. An analysis of those social trends, and the pressures that flow from them, follows below.

7.4.1. Unequal access to resources and education

Significant inequalities characterise the political system and these have a strong racial dynamic. In 2010 the Gini-coefficient within the white population stood at 0.43 but for black Africans stood at 0.58 (SAIRR, 2011: 294). Likewise, in 2010 47% of the black African population lived in relative poverty while the figure for the white population was just 0.7% (SAIRR, 2011: 310). These inequalities were reflected in figures dealing with access to services. For example, in 2010 93.9% of white households had piped water inside their dwellings while the figure for black African households was 27.8% (SAIRR, 2011: 624).

Much of the reason for these inequalities rests with failures in the public education system. For example the graphic below traces the performance of pupils through their last years of schooling and into the university system.

Graph 8: Performance of the South African school system



Source: Drawn from SAIRR, 2012b:475 and 483; and Cronjé, 2013: Speech

The graphic shows that in 2008 there were just over 1 million pupils in grade ten of the school system. This is the average number of pupils in every grade from grade 1 to grade 10 (SAIRR, 2012b: 483). However, two years later, when the grade 10 class of 2008 became the matric class of 2010, that number had fallen to just 537 000. In other words, almost half the pupils in grade 10 had failed to progress to grade 12. Of the original cohort only 364 513, or just over a third, would pass their school-leaving exams. However, the pass mark has been reduced to an aggregate of only 30% to 40%. Only 126 371, or just over a tenth, would pass well enough to be admitted to university. However, again, the qualification mark to be admitted has been reduced to an aggregate of between 40% and 50%. Only 263 034, or a quarter of the original cohort, would take mathematics as a subject in their final year at school. Only 81 373 would pass mathematics with 40% or more.

Race was an important determinant of achievement in education. For example, in 2010 59% of whites aged 20-24 were enrolled in higher education as opposed to 14% of black Africans (SAIRR, 2011: 501). As a result, in 2010 whilst there were 752 000 whites in South Africa with a tertiary qualification there were only 602 000 black Africans with such a qualification. As a proportion of the population older than twenty,

20.8% of whites had such a qualification as opposed to just 2.9% of black Africans (SAIRR, 2012b: 426).

Inequalities in education in turn have implications for employment equity. For example, in 2010 24.1% of top managers were black as were 33.6% of senior managers (The Presidency, 2010: Internet Source). These figures were a significant improvement on those of a decade earlier, when in 2000 only 12.7% of top managers and 18.5% of senior managers were black. Similar improvements are visible when it comes to supervisors and skilled staff in the economy. In 2010 57% of supervisors and 55% of all skilled staff were black (PE Corporate Services SA, 2010: 12-13; and SAIRR, 2012b: 242). This was an improvement on the figures for 1994, when just 26% of supervisors and 29% of skilled staff were black. However, with whites accounting for just a tenth of the population these figures still indicate high levels of inequality within the social environment.

7.4.2. Rising negative sentiment

Sustained high levels of poverty and inequality may explain negative public sentiment towards the future of South Africa as well as the rise of radical sentiment. In 2000 a total of 72% of South Africans believed that “the government was performing well”. However, by 2010 that figure had fallen to just 57% (The Presidency, 2010: Internet; and SAIRR, 2012b: 807). The proportion of people who were confident of a “happy future for all races” has fallen from 74% to 67% over the same period (SAIRR, 2012b: 813). Likewise the proportion of people who believed that “race relations were improving” had fallen from 74% to 46% (SAIRR, 2012b: 814). Over the same period, the proportion of people who believe that South Africa is “moving in the right direction” has fallen from 56% to 55.3% (SAIRR, 2012b: 808). In 2011 only 41% of South Africans were satisfied with services provided by the government (SAIRR, 2012b: 809). That figure was lowest amongst black African South Africans at 38% (TNS Research Surveys, 2011a: Internet Source; and SAIRR, 2012b: 809-812). Young people were most likely to be dissatisfied, with only 38% of people aged 18-24 expressing satisfaction with government delivery as opposed to 50% of people aged 60 and older. It was also apparent that poorer people were less likely to be satisfied than wealthier people. For example while 46% of people in LSM 10 felt satisfied with service delivery, in LSM 1 that figure was a startling 0%.

One of the risks of increasing negative sentiment in a context of high unemployment, low growth, and poor education is that radical sentiment may come to dominate the environment. The rise of a political actor such as the former leader of the ANC Youth League, Julius Malema, suggests that this risk must be taken seriously. Mr Malema promoted a brand of radical politics that, among other things, called for the nationalisation of the operations of the mining industry and on a number of occasions branded white South Africans as criminals that must be treated as such ([IOL News](#), 2011a: Internet Source; and News 24 2011a: Internet Source). Opinion poll data released in 2011 found that 29% of adults supported what Mr Malema said and did (Politics Web, 2011: Internet Source). While this is admittedly a minority, it must be kept in mind that 29% of adults are nonetheless a very large number of people, and that Mr Malema's calls to nationalise industry and description of whites as criminals are particularly extreme positions.

Similarly, a second opinion poll in 2011 found that 28% of urban adults believed that mines should be nationalised (TNS Research Surveys, 2011c: Internet Source). The same organisation found in a third opinion poll that 24% of the black African population did not believe that Mr Malema's chanting of "Kill the Boer" at political rallies was hate speech (TNS Research Surveys, 2011d: Internet Source).

7.4.3. An active civil society

Rising negative sentiment may also explain why a number of civil society and media actors have been particularly active in holding the government to account over issues such as corruption, failed education, or adherence to the Constitution. Chapter six cited a number of examples where civil society actors had taken the government to court on a range of constitutional matters and won. It was reported that over 500 such cases had been heard by the Constitutional Court itself.

However at times the government and the ANC appeared to be increasingly annoyed by these challenges. Examples include Mr Zuma telling Parliament that the judiciary should stay out of policy matters (Times Live, 2012d: Internet Source), and of the Communist Party accusing judges of running a judicial dictatorship (News 24, 2011b: Internet Source). It was evident, therefore, that there was at least a faction within the government that was set on undermining key feedback mechanisms within the system.

These two trends of greater civil society activism and government threats to undermine such activism will be prominent in any future South African system. Depending on which side ultimately prevails the consequences for feedback, system type and stability will be considerable.

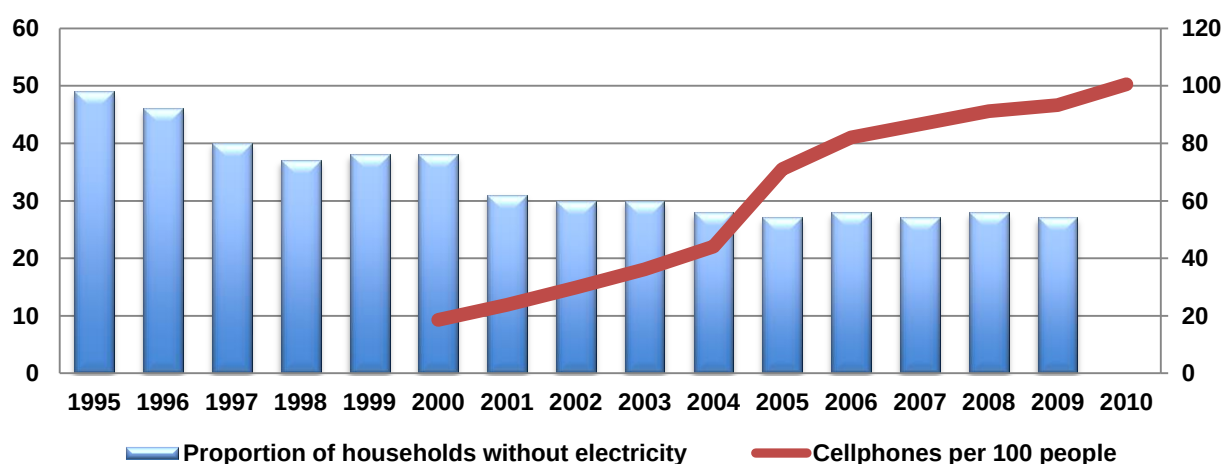
7.5. MAJOR TECHNOLOGICAL TRENDS DRIVING THE POLITICAL SYSTEM

The extent to which such undermining could take place will, however, probably be inhibited by the rise of communications technology. The ability of actors in the social environment to influence events in other environments is closely determined by their access to technology, and especially information technology and the media. These technological trends are analysed and explained below.

7.5.1. Access to information

As a result of a successful roll-out of electricity, the great majority of South Africans now have access to independent means of receiving and disseminating information. The graphic below indicates that the proportion of households without electricity has fallen from just under 50% in 1995 to under 30% in 2009 (The Presidency, 2010: Internet Source; and SAIRR, 2012b: 650).

Graph 9: Households without electricity and with cellular phones



Source: SAIRR, 2012b:650 and 666; and Cronjé, 2013: Speech

This has allowed for a rapid uptake of mobile communications technology even in poor communities. For example the graphic above indicates that the number of cell phones per 100 people in South Africa has increased from under 20 in 2000 to 100 in 2010

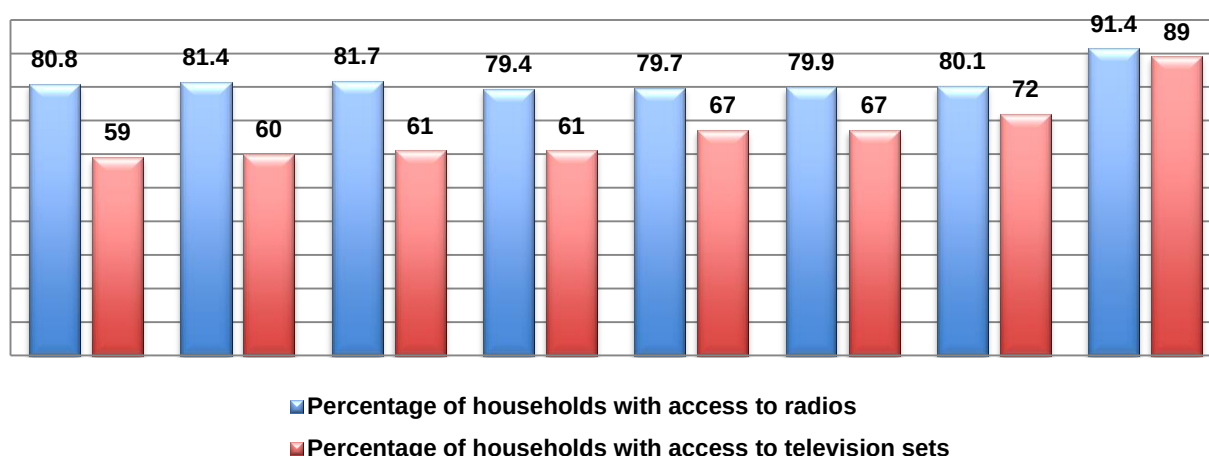
(SAIRR, 2012b: 666). This means that almost all South Africans now have access to cellular communications networks.

This also means that most actors have a means of placing demands directly onto the political system. It further means that their experience of the political system will come to determine dominant ideas within the system. For example, despite half of all young people being unemployed, they nevertheless have the communications ability to demand changes to the political system – which they might not have had twenty or thirty years ago. This could be very important in determining what the dominant political ideas in the system become, as these young people now have the means of expressing their ideas freely, cheaply, easily, and broadly. With the rise in negative and radical sentiment described earlier in this chapter, this has particular implications for future stability in South Africa.

There is much precedent now, especially around the recent middle-eastern uprisings, for the importance of cellular communications networks in allowing and organizing mass public protests. In fact an international comparison showed that in 2009 South Africa had higher levels of cellular phone access than Libya, Egypt and Tunisia, which recently underwent a period of rapid political destabilisation and system change. In that year South Africa averaged 94 cellular phones per 100 people, while Libya averaged 78, Egypt 67, and Tunisia 93 (World Bank, 2011b: Internet Source). With South Africa's significant social and economic inequalities, commentators such as Mr Moeletsi Mbeki have already predicted that South Africa too may face political turmoil.

There is also much evidence that access to other media sources such as television and radio has increased very quickly among South African households. The graphic below shows that both radio and television access has increased since 2002 (SAIRR, 2012b: 662).

Graph 10: Household access to radio and television in South Africa 2002-2010



Source: SAIRR, 2012b:662

In the case of television the proportion of households with a television set increased from 59% in 2002 to 89% in 2010. The rapid increase in the number of households over this same period makes this figure all the more significant. The proportion of households with radios stood at 91.4%.

7.5.2. Attempts to restrict the flow of information

Against this access must be weighed the seriousness of threats by the ANC to restrict access to official information via legislation such as the Protection of State Information Bill and the threatened media tribunal, which may have the powers to discipline journalists who are found guilty of publishing certain facts (Human Rights Watch, 2011: Internet Source). Should the government seek to restrict the information available via the media, this will in turn restrict the ability of actors to direct feedback into the political system and become an ever more important trend in determining the stability of the system.

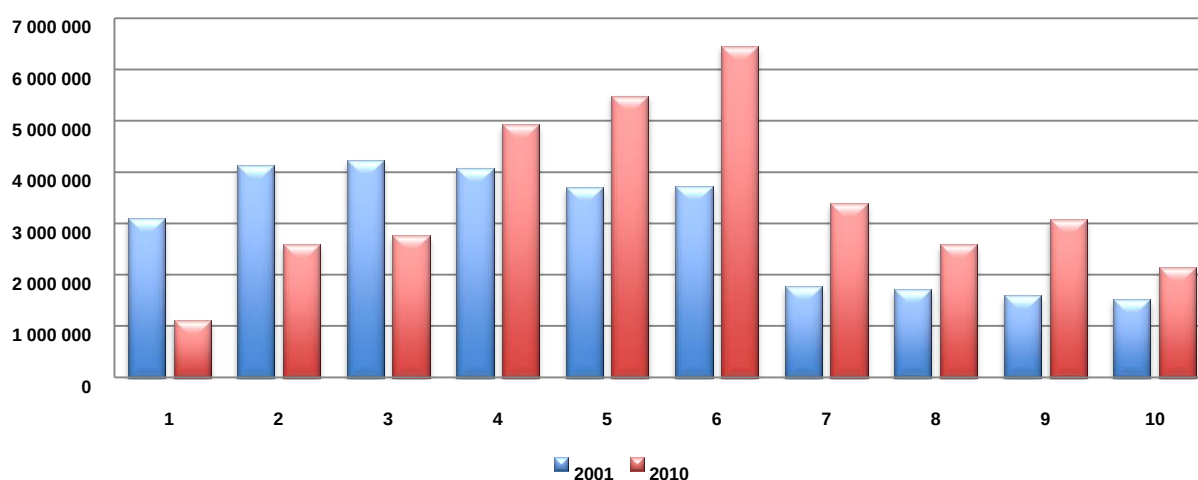
7.6. MAJOR ENVIRONMENTAL TRENDS DRIVING THE POLITICAL SYSTEM

Collectively, events in the political, economic, social, and technological environments determine the living standards, circumstances, or environment wherein the majority of individual actors in the system find themselves. That environment, described below, is therefore largely a product of the PEST sectors analysed above.

7.6.1. Rapid living standard improvements

The environment wherein South Africans live has improved sharply since the political transition of the middle 1990s. For example, the table below shows that there has been an absolute reduction in the number of South Africans in the lower LSM categories and an increase in the higher categories over the period 2001-2010 (SAARF, 2011: Internet Source; and SAIRR, 2012b: 317-320).

Graph 11: Change in number of people per LSM category 2001-2010

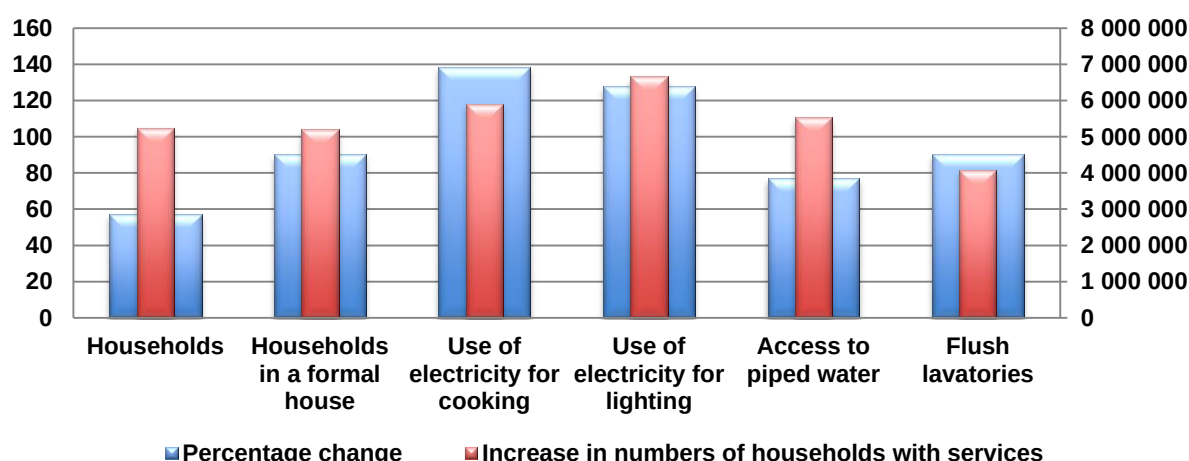


Source: Drawn from SAARF, 2011: Internet Source and SAIRR, 2012b: 317-320

For example in LSM 1 the number of people decreased from just over 3 million in 2001 to just over 1 million in 2010. Net declines in numbers were recorded for LSMs 2 and 3 as well. This led to an increase in the number of people in each of LSMs 4-10. This increase was particularly pronounced in LSM 6 where the number of people increased from 3.7 million to 6.4 million. The standard of living of most actors within the political system has appreciated considerably over the past decade. This may explain the continued high electoral majorities of the ANC. However, increased living standards will be accompanied by new and increased expectations and may, counter-intuitively, result in positive feedback entering the system where these new expectations are not met. This is especially so if economic growth and access to education remain at their current low levels, meaning that individual actors have limited means to improve their standards of living. This counter-intuitive trend may already be present in the system via the rise in public protests identified earlier in this chapter.

Improvements in living standards are in large part due to rapid increases in access to basic services. In 1996 there were 9.05 million households in South Africa. That figure increased to 14.3 million by 2010 (SAIRR, 2012b: 596). New demand for services has increased quickly, despite the population averaging a growth rate of just on 1% per annum (SAIRR, 2012b: 11 and 17). The reason for this is that despite the population increasing from 40.6 million in 1996 to 50.6 million in 2011 (or by 24%), the number of households increased from 9.1 million to 14.4 million or by 58% over the same period (SAIRR, 2011: 610; and SAIRR, 2012b: 5). This was due to average household size declining markedly after the political transition. The graphic below shows the percentage and numerical improvements in households that benefited from services such as running water and electricity over this period (SAIRR, 2012b: 596).

Graph 12: Changes in household access to services 1996-2010



Source: SAIRR 2012b:651

Increases are recorded for all types of services. For example the proportion of households using electricity for cooking increased from 47% to 71%. Those living in a formal house increased from 64% to 77%. This happened despite growing pressure on the state to deliver.

7.6.2. Increased urbanisation

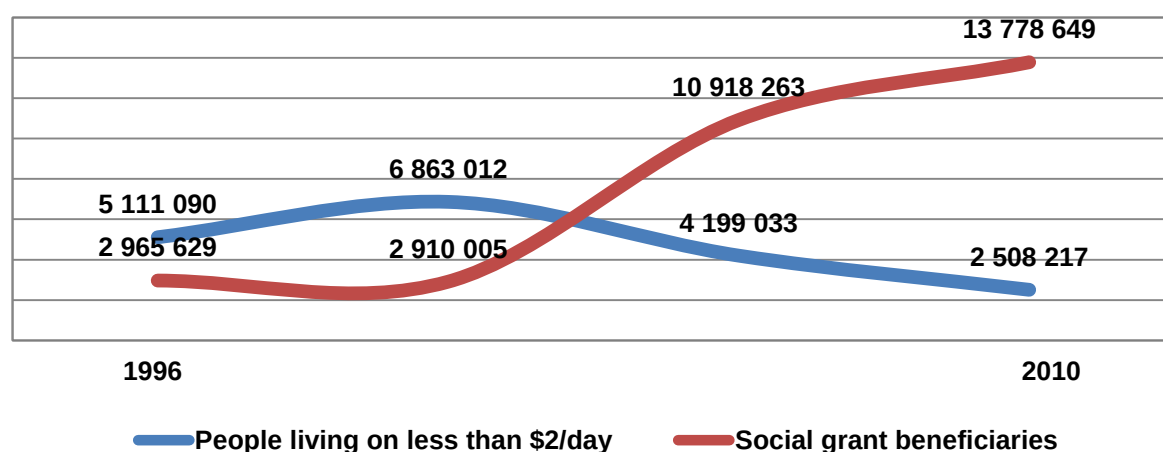
This delivery pressure has partly originated from the South African population urbanizing rapidly over the past two decades. In 1990, for example, 52% of South Africans lived in urban areas but that figure had increased to 62% by 2010 (United Nations Development Program (UNDP), 2010: Internet Source; and SAIRR, 2012b: 35-37). Remarkably, despite an increase of over 4 million households, and rising levels of

urbanization, the proportion of households living in shacks declined from 16% to 13% between 1996 and 2010 (SAIRR, 2011; and 610-611).

7.6.3. Rising welfare dependency

Equally important in meeting actor demands has been the roll-out of the government's social welfare programme. The graphic below shows how the reach of this programme has grown over the period 1996 to 2010.

Graph 13: Relationship between poverty levels and welfare grants in South Africa from 1996-2010



Source: Drawn from National Treasury, 2011b: Internet Source; The Presidency 2010b: Internet Source and SAIRR, 2011: 309 and 590

The graphic shows that the number of people receiving social welfare increased from 2.9 million in 1996 to 13.7 million in 2010 (National Treasury, 2011b: Internet Source: The Presidency 2010b: Internet Source). By 2010 welfare payments were therefore reaching a third of South Africa's population, and there were almost three recipients of welfare for every taxpayer. As with the government-led service delivery efforts, the welfare efforts did improve living standards. The graphic shows the downturn in the number of people living on less than \$2 per day (SAIRR, 2011: 309) after the programme really started to take off in 1999. However, as with service delivery these living conditions improvements came at the cost of dependency.

7.6.4. Changing asset ownership patterns

However, improvements in living standards were not solely a result of state-led delivery efforts. For example, it was estimated in 2011 that of all bonds, houses, listed shares, money market holdings, and non-residential property, 27% was held by black African South Africans, 5% by coloured people, 4% by Indian people, 41% by white people, and the balance by foreigners and the state (SAIRR, 2012b: 286-288). An unrelated source estimated that in 2010 17.4% of the JSE was owned by black African South Africans, 3% by coloured people, 2.5% by Indian people, 44.5% by white people, and the balance of 32.6% by foreigners and the state (Atud, 2011:143). This study indicated that the white share had fallen from 71.4% as the black and foreign held shares rose.

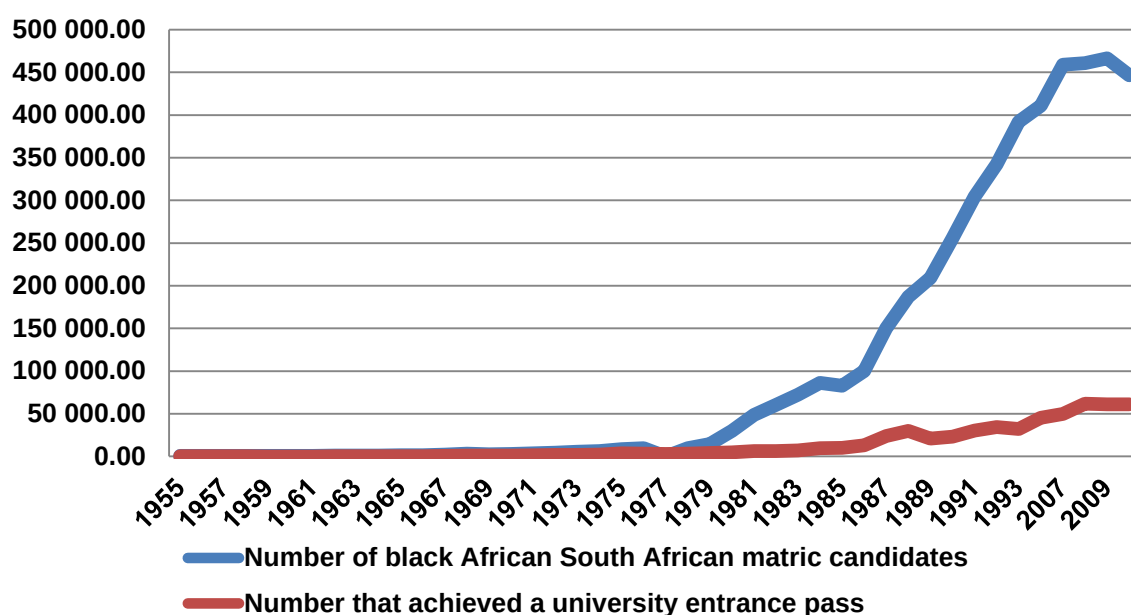
In the case of South Africa, the living standards environment is in part a product of the country's apartheid history. That history also influences trends in the other four PEST sectors. It is important therefore that these historical trends be included in the broader analysis presented in this chapter. In many respects the analysis set out below suggests that that these trends have as great an impact on the present and future as they had in the past.

7.7. MAJOR HISTORICAL TRENDS DRIVING THE POLITICAL SYSTEM

South Africa's history of racial oppression left a lasting mark on the country and it would be naïve not to consider the impact that this history has on the present environment. This final subsection identifies trends that emanate out of the historical environment and exert an impact on feedback entering the present environment.

7.7.1. The historical denial of education

The graphic below shows the performance of the black African matric class from 1955 to 2009.

Graph 14: The black matric class from 1955-2009

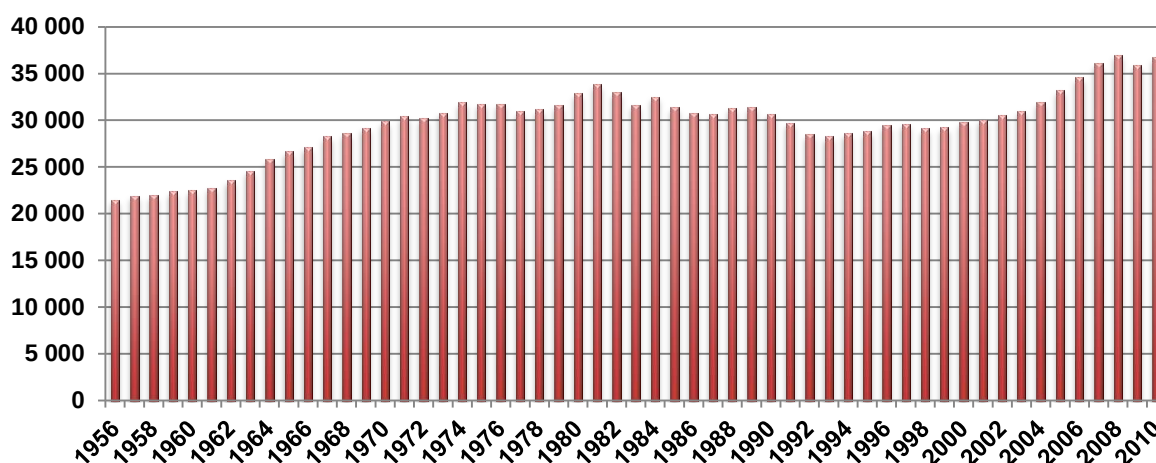
Source: SAIRR, 2011:486

The graphic shows that it was only in the very late 1980s that a significant number of black African candidates began to sit for their matric exams (SAIRR, 2011: 486). It was only in the run-up to the 1994 transition that the number of black matric candidates broke through the 400 000 barrier. This means that it has been for less than a generation that South Africa has been educating a significant number of its population. However, it is also important to remember that this chapter earlier showed that half the school class drops out before reaching matric. It is true, therefore, that partly as a result of historical exclusion, a majority of individual actors in the current political system were never properly educated and are ill-prepared to play a productive role in South Africa's increasingly tertiary-sector-focused economy.

7.7.2. Structural economic damage

A second historical trend that still influences the present environment is the damage suffered by the South African economy since the late 1970s. Average GDP growth in South Africa halved from the 1960s to the 1970s and halved again from the 1970s to the 1980s (SAIRR, 2011: 96-97). The result, shown on the graphic below, is that real per capita income stagnated from the mid-1970s and declined from 1981 right into the period of the political transition.

Graph 15: Real income per head in South Africa from 1955-2010



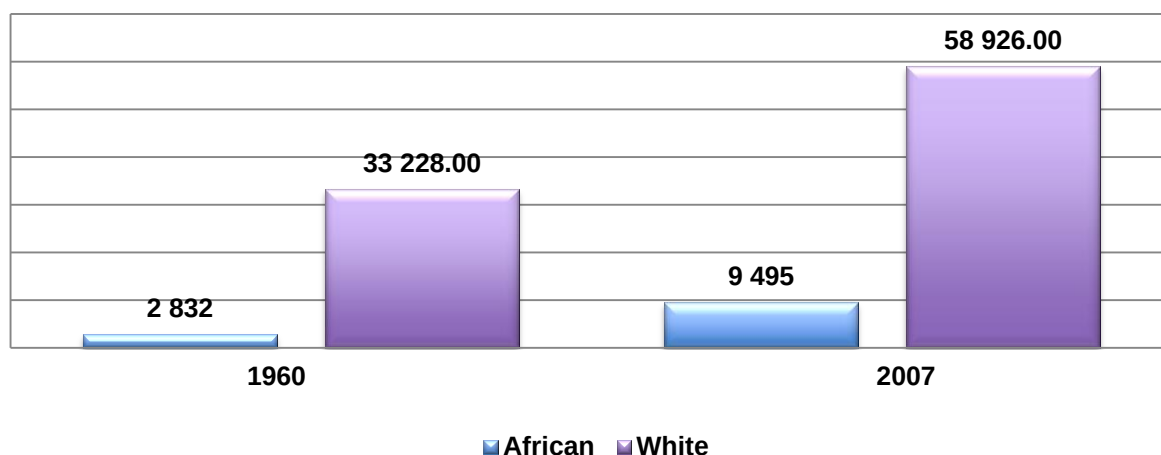
Source: SAIRR, 2011:96-97

That means that for a period of almost two decades, South Africans became on average poorer. The growth in per capita income since the transition is therefore growth that should have been recorded more than twenty years ago. In fact it was exactly 25 years after 1981, in 2006, that South Africans again reached the level of income of a quarter-century before. The damage that was caused to domestic consumer markets, growth, and employment as a result of declining incomes would have been significant, and South Africa is still paying that cost – especially in terms of long term inequality between apartheid's proponents and its victims.

7.7.3. Long term inequality

A final historical point relates to the impact of five decades of sustained inequality. The graphic below shows that in terms of real per capita incomes, white income has significantly exceeded that of all other race groups for a sustained period of time.

Graph 16: Real income per capita income 1960-2007



Source: SAIRR, 2010:255-256

The graphic shows for example that in 1960 whites averaged a per capita income of R33 228 while black Africans averaged just R2 832 (SAIRR, 2010: 255). In other words whites earned roughly ten times more than black Africans. Almost fifty years later in 2009 that gap had closed, but at an income of R58 926 as opposed to the R9 495 of black Africans, white incomes were still six times higher than those of black South Africans. The social and political consequences of such a long period of sustained inequality must influence the nature of much of the feedback currently entering the political system. This is especially true in relation to the demands that black South Africans make on the present and future political system.

7.8. CONCLUSION

This chapter sought to identify the wide diversity of trends that could impact on future feedback flows into the system. Its role was not to structure them in a particular formal framework or to test their impact on feedback but rather to ensure that the structured scenario process that will follow was based on as complete an analysis of the PESTEH environment as possible. In the political world trends ranging from diminishing opposition influence to rising protest levels were identified. The economic world revealed that growth levels were low and that a number of impediments stood in the way of higher growth levels. Large inequalities characterised the social environment and these often had a racial character. However access to technology, especially mobile phones, meant that actors were better positioned than at any point in the history of South Africa to express their frustration at slow growth and inequality. Curiously this

frustration was despite the very real increases in living standards that counter-intuitively were driving rising positive feedback through having raised expectations of future improvements that have not been met because of failures in education and labour markets. These frustrations had their origins several decades earlier in the former apartheid system.

The result has been to ensure that every trend that could have a significant impact on feedback entering the system is accounted for. This required, by necessity, a very broad and general discussion. While there will obviously be other trends that may impact on the future stability of the system it is the argument of this thesis that none have been missed that could overturn the collective impact on feedback of those identified in this chapter.

The broad trends sketched in this chapter therefore serve as the foundation of knowledge upon which the scenarios will be structured and built. The manner in which these trends develop over the period to 2024 will determine the stability of the system over that period.

It is important now that this study takes these trends and analyses them, not in broad or general terms, but in very precise and structured terms to identify their likely impact on feedback and then to distil them into a small number of Key Driving Forces. These can then be ranked for impact and uncertainty to become the axes of the scenario matrix that will in turn reveal a set of future system scenarios.

8. CHAPTER EIGHT: SCENARIO DEVELOPMENT: IDENTIFYING THE SCENARIOS

8.1. INTRODUCTION

Two steps towards completing the application of the metho-theoretical model have been completed. The first, in chapter six, was to determine the benchmark system variant against which the scenario variants could be compared. The second, in chapter seven, was to determine the full spectrum of trends that could have an impact on future system type and feedback and thus on stability in the South African political system over the next decade. The third step is to structure those broad trends into a scenario matrix and then to identify a set of scenarios. This is the chief research goal of this chapter and will require meeting four research sub-goals:

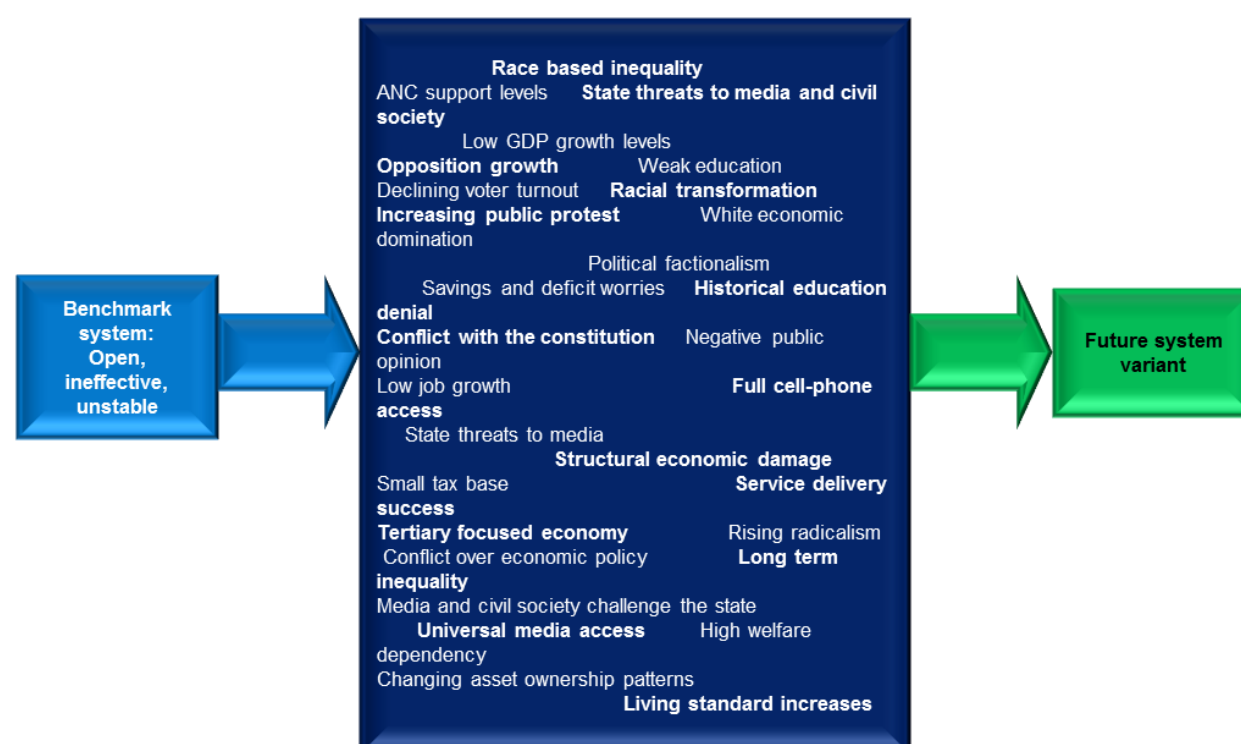
- The first is to structure the broad trends identified in the previous chapter into a set number of clearly distinguished driving forces with a view to identifying the likely impact on positive or negative feedback of each driving force.
- The second is then to take all the driving forces and distil them into a more manageable number of KDFs.
- The third is to determine which of those KDFs is most important in terms of driving future system type, feedback, and hence stability, and which of them is most uncertain, and then to rank them accordingly.
- The fourth research sub-goal is to select the two KDFs of greatest impact and uncertainty, and use these to construct a scenario matrix.

Completing the matrix will allow the chapter to meet its chief research goal and to identify four possible scenarios for the South African political system of 2024. The identified scenarios will then be described in greater detail in the following chapter, allowing their system type and behaviour or variant to be identified. The scenario variants will then be compared to the benchmark political system described in chapter six. Differences between the benchmark system and the scenario systems will reveal the prospects for change in the stability or instability of the political system in the period to 2024.

8.2. DETERMINING FEEDBACK FLOWS FOR THE DRIVING FORCES

In total, the PESTEH analysis in chapter seven identified a very wide range of trends out of which this chapter will now identify a numbered list of driving forces. Depending on how these evolve over the next decade they will determine the future system variant for South Africa as set out in the diagram below:

Figure 26: Driving forces determining future system variants



What is not known yet is how they will influence that future. Consistent with the theoretical underpinnings of the study, the manner in which these trends determine system type and then feedback balances in the system will determine its stability. For this reason, the analysis that follows below takes the broad trends identified in the previous chapter and uses these to structure a precise list of driving forces and then assesses these with a view to determining their likely impact on feedback. Thereafter the chapter will be able to structure these driving forces into a more manageable number of KDFs and use these to structure the scenario matrix.

8.2.1. Driving forces and feedback in the political environment

In the **political environment** the previous chapter found **firstly** that ANC support, when measured in terms of valid votes, has been sustained at close to two thirds of national political support (SAIRR, 2012b: 799). Data was cited to show how this level of support had never dipped below 62% and that in terms of valid votes the ANC was the dominant source of feedback in the political environment. Where the ANC weakens this will be a source of systems-changing positive feedback as it will allow new political actors to exert greater influence over the system. Alternatively if it maintains its dominance the opposite may be true. However, where it maintains that dominance via major policy reforms, or even the erosion of demand mechanisms, it may become a growing source of positive feedback.

Second, the chapter found that opposition parties, with the exception of the DA, have become increasingly irrelevant (SAIRR 2012b: 799). The DA has, however, bucked this trend to see its national support grow from under 2% to over 16% since 1994. It got 25% stronger between the 2004 and 2009 national elections, over a period that saw the ANC get fractionally weaker. There was therefore some reason to question whether the ANC would remain as politically dominant as it has been since 1994. If the opposition unseats the ANC then it will serve as a driver of systems-changing positive feedback. However, if it maintains its current role in serving the interests of its relatively wealthy middle class constituency it remains predominantly a driver of negative feedback.

The **third** political driving force is that an increasing proportion of potential voters are choosing not to participate in the electoral system (SAIRR, 2012b: 799). This driving force is so pronounced that despite an increase of over 5 million new eligible voters since 1994, fewer votes were cast in the 2009 national elections than in 1994. Voter stay-aways, like increased opposition support, erode the political dominance of the ANC, and are generally a positive feedback driver.

Fourth, the chapter was able to show that voters deserting the electoral system were not opting out of politics entirely. Rather, the decline in voter numbers had seen a commensurate increase in public protest. In 2010 there were over 100 major protests and the police recorded responding to an average of three protest scenes every day (SAIRR, 2011: 734-735). Protest action was therefore becoming an increasingly

important driver of positive feedback into the political system. If this trend is reversed then the system may stabilise. If it does not then the system's behaviour may remain unstable.

Fifth, the chapter cited evidence that the ruling party is factionalized and suffering from high levels of infighting. Examples were cited of physical fights between party members, and even of assassinations within the tripartite alliance. Such infighting, in combination with the decline in voter turnout and the rise in public protests, is indicative of a party that may see its political dominance eroded. This is of course a driver of positive feedback. If the trend were reversed and the party found a new level of internal cohesion, then the opposite could be true and it could become a trend stabilizing the system.

Sixth, the chapter found that the ruling party appears at times to be committed to an ideology at odds with the Constitution (Kane-Berman, 2012: Speech) and therefore the regime governing the political system. This trait, in conjunction with the risk of seeing its political dominance undermined, means that it may try to use its remaining dominance to restrict access to demand mechanisms in order to ensure its longevity. If that happened, then levels of positive feedback entering the system could diminish. The relative, *long term*, balance of feedback would then favour the negative. However, if the state was unable to interfere in feedback mechanisms, then it would be obliged to meet actors' demands in order to introduce negative feedback into the system - or face the prospect of being driven from power.

8.2.2. Driving forces and feedback in the economic environment

In the **economic environment** the chapter **firstly** noted that South Africa significantly underperforms the growth levels of other emerging markets (IMF, 2011: Internet Source). By some estimates, South African growth levels are half what they need to be in order to make significant inroads into poverty and unemployment. On current trends, demands for increasing prosperity and employment are not likely to be met. The inability to grow fast enough to meet the economic demands of actors will see positive system-changing feedback becoming increasingly dominant within the system unless the government manages to successfully undermine actor access to demand mechanisms. This driving force therefore suggests that without higher levels of

economic growth, it may not be possible to introduce significant new flows of negative feedback into the system short of destroying access to demand mechanisms.

The chapter **secondly** identified a number of savings, deficit, skills, and infrastructure-related constraints standing between South Africa and higher levels of GDP growth (SAIRR, 2012b: 132-133 and 174). These are structural impediments to higher levels of growth. They are also very useful indicators, as they can be measured to determine the growth potential of the economy. Tracking them would therefore indicate to what extent demands by actors for improved living standards can be met, and therefore the extent to which negative feedback may be introduced into the system. If these indicators do not show marked improvements, then positive feedback may very well continue to dominate the system.

Thirdly the chapter found that revenue collection is being constrained by the small and brittle nature of the tax base, while the South African government already draws more heavily on that base than do comparable developing economies (SAIRR 2012b: 178-180). This is a direct constraint on the ability of the state to meet the demands of poor actors. In the South African system, this is a particularly important driving force considering the extent to which state-led delivery efforts have been important in raising living standards. Therefore, in order to introduce new negative feedback flows, it is necessary to grow this revenue base considerably. A contraction in the base would lead to a domino effect of new positive feedback flows, and rapidly destabilise the system further.

Fourth, in the economic environment, the chapter identified that the South African economy has been unable to generate sufficient opportunities for work seekers, especially younger people, to enter the labour market (*Economist*, 2 March 2013). Its levels of unemployment were much higher than comparable emerging markets. Opinion polls suggested that many young people saw employment growth as the single biggest priority of the state (TNS Research Surveys, 2011a: Internet Source). For young actors, this trend is likely to be very important in determining the type of feedback they place on the system. If the high unemployment trend continues, these young people will predominantly remain drivers of positive feedback. However, if the trend reverses, then that may change.

Fifth, the chapter identified that the economy is increasingly tertiary-focused and driven by private investment (SAIRR, 2011: 111-112). It was therefore becoming a high-skill economic environment, which stood in contrast to the low skills base produced by the public education system. Also, dependency on private investment capital meant that policy initiatives that caused uncertainty among investors would directly result in lower levels of investment and therefore economic growth. This would then in turn restrict the revenue base of the government, leading to a dangerous cycle of declining growth, and rising demands for welfare support. Investment trends, and the sources of that investment, would therefore be an important determinant of feedback entering the system. Therefore policy that undermined or discouraged private, and often foreign, investment would drive much future positive feedback. Policy that attracted new investment would do the opposite.

Sixth, the chapter found that some policy-makers are promoting policy that will see rapid market liberalization and reform, while others are seeking increased state direction, interventionism, and protectionism – despite the government's established track record of mismanagement and repeated taxpayer-funded bailouts of parastatals (NPC, 2011: Internet Source; and NGP, 2011: Internet Source). In other words, the state was simultaneously proposing two contradictory economic policy models. This was in part a consequence of the infighting within the tripartite alliance. Such policy uncertainty will deter investment and depress growth levels. However, it is also possible that the government may at a point in the future commit to one of these two growth models. It is completely unclear to which model it would commit, but any future decision would lead to significant economic changes within the political system and these would in turn bring about changes to the feedback entering the system. If it commits to a model that drives higher levels of growth and education that would aid in introducing negative feedback to stabilise the system. If it remains at odds with itself, or introduces a model that fails to meet demands, then further system instability may be inevitable.

8.2.3. Driving forces and feedback in the social environment

In the **social environment** the chapter found **firstly** that the political system was a very unequal system and that these inequalities often had strong race-based characteristics (SAIRR, 2011: 294). The demands that individual actors placed on the system would therefore be very different depending on which groups within the society they belonged

to. Such different demands had the potential to contradict each other and to cause conflict within the system. For example, wealthier actors might try to protect their wealth, while poorer actors might make demands for existing wealth to be redistributed. The feedback these different groups of actors exert could be contradictory, with some seeking to maintain their status-quo while others seek revolutionary changes within the political system. Overall, continued inequalities are a clear positive feedback driver. However, where inequalities can be curbed by eradicating poverty and rapidly raising income levels in poor communities, this trend may become a driver of negative feedback.

Secondly, the chapter argued that much of the reason for this inequality rested in low levels of access to quality education (SAIRR, 2012b: 482-483). Data was cited to show that fewer than half of children would complete their schooling and fewer than 10% would go to university. This was particularly problematic considering that the economy is increasingly evolving into a high-skills tertiary-focused economic system. Without improvements in education, it may not be possible to meet the demands of many actors for employment and increased prosperity, and this will obviously drive a rise in positive feedback. However, if educational reforms reverse the current trend of weak education, negative feedback may quickly introduce rising stability to the system.

Thirdly, the chapter found that a minority of white South Africans dominate economic activity in the political system (The Presidency, 2011: Internet Source). In terms of company directors and the ownership of assets, white South Africans demonstrate a disproportionate degree of economic dominance (PE Corporate Services, 2010: 12-13). This causes two problems. Firstly, black actors may make radical demands for transformation that cannot be immediately met. Secondly, radical policy changes may cause so much uncertainty within the white population that they withdraw from South Africa in sufficient numbers to reduce the growth potential of the economy, as well as its revenue base. This could then set in motion a chain of events that would begin with the government's inability to meet demands for welfare and service delivery, leading to ever greater amounts of positive feedback entering the system. However, if more black people were afforded the opportunity to enter the formal economic system, this trend would become a predominant driver of negative feedback.

It was perhaps due to high poverty and unemployment levels that the chapter was able to find a **fourth** social driving force in opinion poll data suggesting that public opinion has turned decidedly negative towards the government and the progress of the country (SAIRR, 2012b: 807-813). Such a turn in opinion is in turn a precursor to more positive feedback entering the system, and is therefore an early indicator that growing system instability and change may be inevitable. However, if actor demands are increasingly met then widespread endorsements of the policy reforms that secured such a result may serve to stabilise the system.

Similarly, the chapter was able to find a **fifth** social driving force that a third of South African adults now openly express support for the radical, and at times racist, positions expressed by fringe political leaders (Politics Web, 2011: Internet Source; and TNS Research Surveys, 2011d: Internet Source). While some would point out that a third is a minority, it is nonetheless a substantial number of people. With an adult population of almost 30 million it means that almost 10 million South Africans could become drivers of feedback demanding radical policy change in the country. This serves as an early warning sign that ever-increasing amounts of positive feedback may enter the system, if growth levels do not pick up allowing for inequality levels to decline. However, where those growth levels do pick up, radicalism may give way to stabilizing flows of negative feedback.

Sixth, the chapter found that social actors and the media are increasingly active in successfully challenging the state via the courts and in public opinion. Cases have been cited in this study of how social actors have successfully challenged the state on matters ranging from the provision of housing to the fight against corruption. The state has suffered many setbacks in the courts and been subjected to criticism in the media. As a driving force, social actors were very active in using a range of demand mechanisms to force the state to meet certain demands. These are a driver of positive feedback as they seek to ensure change within the system. However it is also possible, that where the state actually meets actor demands, these actors may revert to being drivers of supportive negative feedback

The chapter was also able to identify a **seventh** social driving force that the state is seeking to curtail the extent to which social actors can use mechanisms such as courts and the media to challenge its decisions. This is an indicator of just how effective and

active these social actors are. The state's efforts to restrict access to demand mechanisms may be a symptom of its adherence to ideas that may at times come into conflict with the Constitution. The extent to which the state imposes such restrictions will obviously determine the extent and nature of feedback exerted by social actors on the political system. Where it interferes extensively, feedback flows may change in favour of negative feedback – even where it fails to meet actor demands. Where it is unable to interfere, and unable to meet demands, these mechanisms must continue to drive positive feedback as would be the case in any weak state.

8.2.4. Driving forces and feedback in the technological environment

In the **technological environment** the chapter found **firstly** that access to cellular communications allows actors to disseminate information freely and quickly (SAIRR, 2012b: 666). This is a very different situation to that under previous South African governments when restrictions on the flow of information were easier to apply. Now that this is no longer the case, the experience of individual actors within the system may come to shape dominant ideas within the system. The chapter cited evidence for this in the recent North African uprisings, and showed that South African actors enjoyed higher degrees of cellular communications access than their compatriots in Libya, Tunisia, and Egypt. Cellular communication is therefore an important driver of feedback into the political system. The nature of that feedback will reflect the aspirations of the majority of actors in the system and is currently positive. Significant economic, educational, and labour market reversals will be necessary to change that.

Secondly the chapter found that there is near-universal access to media such as radio and television in South Africa (SAIRR, 2012b: 662). Hence, information is able to flow quickly and easily between almost all actors within the political system. The nature and editorial control of this information, will dictate whether it remains a driver of positive feedback or becomes a driver of more neutral or even negative feedback.

Thirdly, the chapter found evidence in proposed policy that the state may be seeking to restrict the information available via the media. The reason for this may be to restrict the growth of positive systems-changing feedback evident in the political system. While the Constitution would be a formidable obstacle to achieving such restrictions, and while the ruling party does not have the parliamentary majority to implement them, they would

nonetheless change the balance of feedback entering the system in favour of the negative.

8.2.5. Driving forces and feedback in the living standards environment

In terms of **environmental** driving forces the chapter found **firstly** that living standards have appreciated considerably over the past decade. Data for this was cited, based on living standard measures or LSM indicators (SAIRR, 2012b: 317-320). At first glance, this trend may seem at odds with the increasing flow of positive feedback into the system. However, increasing living standards may cause increasing expectations about future improvements, which may lead to unstable behaviour if these expectations are not met. Trends in the economic environment together with the poor quality of public education may prevent a great number of actors from meeting those increased aspirations – beyond what the state can give them in welfare and free or subsidized services. Where it is tied to high levels of dependency, this driving force of increasing living standards may therefore, counter-intuitively, be a source of rising positive feedback within the system. However, where employment growth and educational improvements complement these rising living standards, the opposite may come to apply.

Related to this is a **second** environmental driving force: that the physical environment wherein most actors live has improved rapidly since 1994. Data was cited of dramatic increases in access to services such as housing, electricity, and water (SAIRR, 2012b: 651). However, it was also shown that these improvements were driven mainly by state-led development projects. Many actors are therefore completely dependent on future state delivery in order to record further improvements in their living standards. The ability of the state to meet future demands will therefore be important in determining what type of feedback actors may in future exert on the political system. If it meets demand, a measure of negative feedback may ensue. However, this trend is also one that raises expectations of further improvements in living standards. In the absence of rapid economic, revenue, and job growth this driving force may well remain a driver of systems instability.

Thirdly the chapter showed that welfare payments have reduced the worst effects of poverty. Welfare payments now reach a third of the population (National Treasury,

2011: Internet Source). One consequence of this is a very high level of dependency of welfare recipients on the state and of the state on the taxpayers who provide the revenues to fund such welfare. The ability to continue meeting welfare demands will be an important determinant of the nature of future feedback entering the system. If the real value of these falls, either through inflation or revenue contractions, the result will be immediate increased positive feedback flows into the system.

A **fourth** environmental driving force is that in terms of employment equity and asset ownership there are clear signs of racial transformation within the middle classes (SAIRR, 2012b: 286-288; and Atud, 2011: 143). However, these changes account for a very small proportion of black South Africans. These black South Africans may in future come to share the same expectations as their white middle-class neighbours, and become a source of negative feedback, resisting demands for radical transformation policies. Growth in their numbers will determine the extent of that feedback.

8.2.6. Driving forces and feedback in the historical environment

Three driving forces were identified in the **historical environment**. The **first** was that decades of denial of education to black South Africans must be taken into account in understanding the demands they will place on future political systems (SAIRR, 2011: 486). In many cases, this denial means that they do not have the skills base necessary for their demands of increasing prosperity to be met. Equally, the denial of proper education for black people is a serious structural impediment to economic growth. Thirdly, a largely poorly-educated population in an environment of much inequality is a recipe for radicalism. In all respects this trend is set to remain a positive feedback driver that can only be countered by rapid economic and employment growth or the mass denial of access to demand mechanisms.

The **second** historical driving force is that massive economic and social damage suffered by South Africa over the past four decades continues to influence the present environment (SAIRR, 2011: 96-97). Hence South Africa's domestic consumer market and export capacity, both damaged by decades of slow growth, would remain structural impediments to future growth. This in turn remains a key positive feedback driver.

Thirdly, the system has featured decades of high levels of inequality (SAIRR, 2010: 255). Anger at what many actors may perceive to be slow progress in meeting their

demands will reflect these decades of inequality, and therefore become a particularly potent source of positive feedback. This will continue to complement all other radical and positive feedback drivers. It can only be neutralized by South Africa becoming either a more closed, or more effective, political system.

8.2.7. A review of the driving forces

In total the above analysis identifies 29 separate driving forces. Represented as a table the 29 driving forces are as follows:

Table 8: PESTEH driving forces and their impact on feedback

PESTEH AREA	DRIVING FORCES
Driving forces in the political environment	1. ANC support, in terms of valid votes, has been sustained at close to two thirds of national political support. (N) 2. Opposition parties, with the exception of the DA, have become increasingly irrelevant. (P+N) 3. An increasing proportion of voters are choosing not to participate in the electoral system. (P) 4. Voters deserting the electoral system led to a commensurate increase in public protest. (P) 5. The ruling party is increasingly factionalized and suffering from high levels of infighting. (P) 6. The ruling political party appears at times to be committed to an ideology at odds with the Constitution and therefore the regime governing the political system. (P)
Driving forces in the economic environment	7. South Africa significantly underperforms the growth levels of other emerging markets. (P) 8. A number of savings, deficit, skills, and infrastructure constraints may prevent faster growth. (P) 9. Revenue collection is being constrained by the small tax base. (P) 10. The South African economy has been unable to meet demands for employment. (P) 11. The economy is increasingly tertiary focused and driven by private investment. (P) 12. Some policy makers propose state control while others propose a private sector led growth model. (P+N)
Driving forces in the social environment	13. The system features significant race-based inequalities. (P) 14. Access to quality education is limited. (P) 15. A minority of white South Africans dominate economic activity in the political system. (P) 16. Public opinion has turned decidedly negative towards the government and the progress of the country. (P) 17. A third of South Africans adults now openly express support for the radical, and at times racist, positions expressed by fringe political leaders. (P) 18. Social actors and the media are increasingly active in successfully challenging the State. (P) 19. The state is seeking to curtail the extent to which social actors can access demand mechanism. (P)
Driving forces in the technological environment	20. Access to cellular communications allows actors to disseminate information freely and quickly. (P) 21. There is near universal access to media such as radio and television in South Africa. (P)

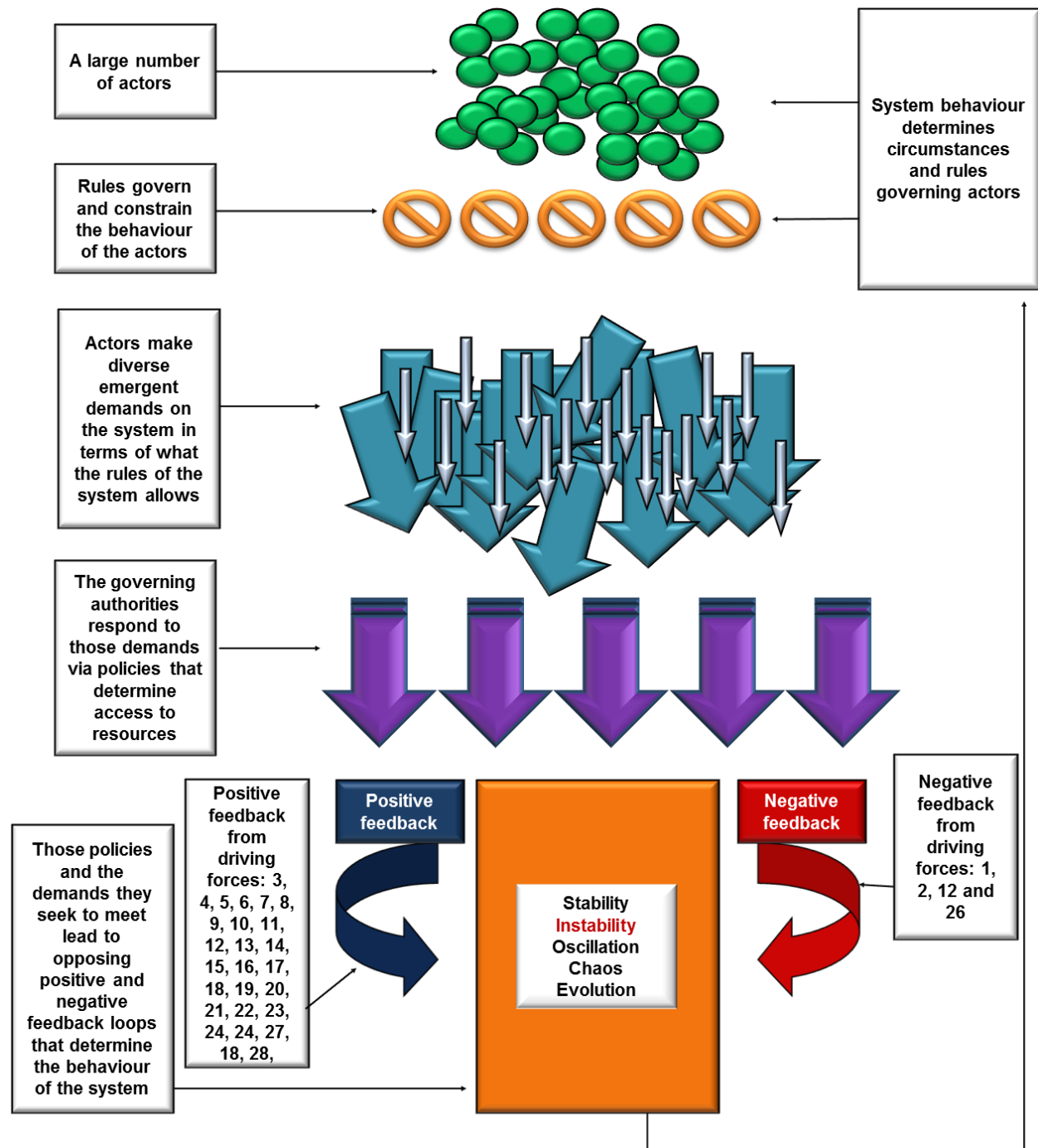
Chapter Eight: Scenario development: Identifying the scenarios

PESTEH AREA	DRIVING FORCES
	22. The state may be seeking to restrict the information available via the media. (P)
Driving forces in the environmental environment	23. Living standards have improved considerably over the past decade (P) 24. The environment wherein most actors live has improved mainly as a result of state-led development projects. (P) 25. Welfare has reduced the worst effects of poverty. Welfare payments now reach a third of the population. (P) 26. In terms of employment equity and asset ownership there are clear signs of racial transformation. (N)
Driving forces in the historical environment	27. Decades of denial of education to black South Africans is contributing to the demands they will in future place on the system. (P) 28. Massive economic damage was suffered by South Africa over the past four decades. (P) 29. The political system has featured decades of high level inequality. (P)

This table allows all the driving forces to be seen as a whole in the order they were originally identified. The table can therefore be used as an organisational reference to group similar driving forces together in order to identify a smaller number of KDFs. The **P** or the **N** next to each driving force identifies its predominant contribution of feedback entering the system. A **P** represents a predominance of positive feedback and an **N**, a predominance of negative feedback. Of the 29 driving forces 25 are identified as predominantly drivers of positive feedback. Two are drivers of negative feedback while two are arguably drivers of both positive and negative feedback. For example, the political opposition seeks to challenge the government, but also to safeguard the constitutional settlement of 1994. Likewise, some policy-makers speak of radical reforms, while others seem set on maintaining large parts of the ANC's macro-economic policy framework track record. The predominance of **Ps** over **Ns** indicates that the current system is an unstable system and is consistent with the variant classification of the benchmark system.

Represented graphically as a complex system, the table above would look as follows for the South African political system:

Figure 27: Feedback acting on the current South African political system



With such a predominance of positive feedback, many observers might not even bother to consider any other long-term outcome for the South African system than further instability. However, this would be a mistake, in that it would disregard the complex-systems theoretical basis of this study and, with reference to emergence, ignore the fact that small changes in the initial conditions of a complex system may bring about significant changes in its future circumstances (Syvantek and Brown, 2000: 69). Small

changes in its current 29 driving forces may therefore result in significant shifts in the future type and stability of the South African system. However, this 29 is too great a number of variables to incorporate into any single analysis. The reason for this is that the level of complexity that would result from trying to determine the interactions of such a great number of different factors would lead to confusion.

8.3. DETERMINING THE KEY DRIVING FORCES

In order to avoid such confusion it is necessary to reduce all the driving forces identified into a more manageable number of KDFs. A KDF differs from the 29 'normal' driving forces identified above in that it is what Schwartz (1991: 242) describes as a "force(s) behind the micro environment". In other words, a KDF is a trend that is deterministic in shaping the broader environment of a political system. These are drivers that represent a group of normal driving forces and therefore exert a particularly significant impact on the feedback received by the system. The 29 driving forces can be grouped into just 5 KDFs as set out below. These KDFs represent the great majority of feedback that is likely to enter the South African political system over the next decade.

8.3.1. Key Driving Force 1 – the future of the tripartite alliance

Driving forces 1, 2, 3, 4, 5, 13, 16, 17, and 20 all relate to the internal and external strength of the ruling party and the threats it faces from protests, voter desertion, and the opposition. These driving forces are as follows:

Table 9: The future of the tripartite alliance as KDF

DRIVING FORCE NUMBER	DRIVING FORCE
1	ANC support, in terms of valid votes, has been sustained at close to two thirds of national political support.
2	Opposition parties, with the exception of the DA, have become increasingly irrelevant.
3	An increasing proportion of potential voters are choosing not to participate in the electoral system.
4	Voters deserting the electoral system have seen a commensurate increase in public protest.
5	The ruling party is increasingly factionalized and suffering from high levels of infighting.
13	The system features significant race-based inequalities
16	Public opinion has turned decidedly negative towards the government and the progress of the country.
17	A third of South Africans adults now openly express support for the radical, and at times racist, positions expressed by fringe political leaders.
20	Access to cellular communications allows actors to disseminate information freely and quickly.

These can be grouped together into a single KDF which relates to the extent to which the tripartite alliance will retain or exceed its close on two thirds electoral majority as a unified movement, or whether infighting and rising negative and radical sentiment, together with a rise in levels of public protest against the state, may drive the ANC from power and/or see it lose a future election. Presented as a spectrum, one extreme of this driving force would see the tripartite alliance remain intact and in control of South Africa, and the other would see the alliance fragment and lose political control of the country.

It is important at this juncture also to try and understand the role that each extreme of this spectrum will play in driving feedback into the system. For example, if the ANC remains in power, that may result from the implementation of dramatic policy reforms in the economy, labour market, and education system. These would change the system type from ineffective to effective and thereby introduce new negative feedback flows. Alternatively the party may seek to limit positive feedback by restricting feedback mechanisms. This would see a shift on the openness axes of the system that would see it become an increasingly closed system but would nonetheless have the effect of changing the balance of feedback in favour of the negative. Alternatively again the party may fail to transform policy and fail to restrict demand mechanisms. This would lead to ever increasing positive feedback flows into the system.

8.3.2. Key Driving Force 2 – access to demand mechanisms

Driving forces 6, 18, 19, 20, 21, and 22 relate to the extent to which actors retain access to demand mechanisms against the risk that the state might seek to restrict access to these. These driving forces are as follows:

Table 10: Access to demand mechanisms as a KDF

DRIVING FORCE NUMBER	DRIVING FORCE
6	The ruling political party appears at times to be committed to an ideology at odds with the Constitution and therefore the regime governing the political system.
18	Social actors and the media are increasingly active in successfully challenging the state.
19	The state is seeking to curtail the extent to which social actors can access demand mechanisms.
20	Access to cellular communications allows actors to disseminate information freely and quickly.
21	There is near-universal access to media such as radio and television in South Africa.
22	The state may be seeking to restrict the information available via the media

These six driving forces can be grouped as a KDF signifying the extent to which actors retain access to sufficient demand mechanisms to hold the government to account. Again presented as a spectrum, one extreme of this driving force would see individual, political, economic, and social actors using the courts, the media, the electoral system and other demand mechanisms to insist that the government meets their demands. The other extreme would see access to these mechanisms eroded to such an extent that the government could rule with impunity.

In the present system, continued access to demand mechanisms will promote continued flows of positive feedback into the system. The reason is that access to demand mechanisms will allow actors the means to express anger that so many of their demands are not being met. The other side of this spectrum, an absolute restriction on demand mechanisms would, however, be a driver of negative feedback, as such restrictions would limit positive feedback entering the system. By default therefore, the balance of feedback in the system would change to favour negative system-stabilising feedback. However, a successful economic reform process could see continued access to demand mechanisms becoming a negative feedback driver as actors endorsed the success of the reforms.

8.3.3. Key Driving Force 3 – economic growth rates

Driving forces 7, 8, 9, 10, 14, 15, 27 and 28 identified South Africa's slow economic growth, the structural impediments to future growth, and its low employment rates. These driving forces are as follows:

Table 11: Economic growth as a KDF

DRIVING FORCE NUMBER	DRIVING FORCE
7	South Africa significantly underperforms the growth levels of other emerging markets.
8	A number of savings, deficit, skills, and infrastructure constraints may prevent faster growth.
9	Revenue collection is being constrained by the small tax base.
10	The South African economy has been unable to meet demands for employment.
14	Access to quality education is limited.
15	A minority of white South Africans dominate economic activity in the political system
27	Decades of denial of education to black South Africans is contributing to the demands they will in future place on the system
28	Massive economic damage was suffered by South Africa over the past four decades.

The above can be grouped as a KDF that relates to whether the South African economy can grow fast enough to generate sufficient wealth and employment to make inroads into poverty and inequality levels. This will also depend on the ability of the education system to place a sufficient number of individual actors in a position to access employment and business opportunities. The first extreme of this spectrum would represent a society demonstrating rapid improvements in education, employment, incomes, and equality indicators. The other extreme would see the current status-quo remaining intact or even worsening. On this spectrum, higher levels of growth, education, and employment will serve as a driver of negative feedback stabilizing a future political system. However, continued low growth and high unemployment levels will remain a driver of positive systems-changing feedback.

8.3.4. Key Driving Force 4 – meeting the welfare demands of poor actors

Driving forces 9, 13, 23, 24, 25, 26, and 29 relate to state-led development projects and their importance in increasing living standards for poorer actors.

Table 12: Welfare and delivery demands as a KDF

DRIVING FORCE NUMBER	DRIVING FORCE
9	Revenue collection is being constrained by the small tax base.
13	The system features significant race-based inequalities.
23	Living standards have appreciated considerably over the past decade.
24	The environment wherein most actors live has improved mainly as a result of state-led development projects.
25	Welfare has reduced the worst effects of poverty. Welfare payments now reach a third of the population.
26	In terms of employment equity and asset ownership there are clear signs of racial transformation.
29	The political system has featured decades of high level inequality.

These driving forces can be grouped as a KDF as to whether the state will have the revenues it requires to meet future welfare and service delivery demands. Here the first extreme would see a state able to meet the welfare and delivery demands of actors in the system. The other extreme would see the state being overwhelmed by demand. Where the state has the capacity to meet both current demand, and rising expectations, for service delivery, this will be a driver of negative feedback. However, where demand

exceeds supply, even where successes are achieved as was the case over the past decade, this KDF will result in much new positive feedback entering the system.

8.3.5. Key Driving Force 5 – economic policy direction

Driving forces 11 and 12 related to the fact that while the South African economy has become increasingly dependent on private investment, a number of current policy proposals advocate a more direct role for the state in directing economic activity within the system. The two driving forces were identified as follows:

Table 13: Economic policy direction as a KDF

DRIVING FORCE NUMBER	DRIVING FORCE
11	The economy is increasingly tertiary-focused and driven by private investment.
12	Some policy-makers propose state control while others propose a private sector led growth model.

These two driving forces can be grouped together as a KDF representing whether South Africa becomes an increasingly deregulated and private sector-led economy or whether it evolves to become a heavily regulated state-directed economy. Here the extremes would stretch from a liberalized trade and investment environment dominated by private sector investment to a heavily regulated and protected economy directed by state planners. The former would put South Africa within reach of higher growth levels while the latter, if still mired in the inefficiency and corruption of current state-led business ventures, would not.

Again in terms of feedback the two extremes suggested by the KDF will produce two different types of feedback. A state-led development model, handicapped by corruption and inefficiency, will fail to deliver on the growth necessary to drive job creation and rising incomes, and so drive increased positive feedback. A private sector-led model, that attracts new investment and drives entrepreneurial talent, may promote higher levels of GDP growth that deliver employment and rising incomes, and so generate negative feedback.

The value of the scenario methodology adopted by this study really stands out in the process of selecting KDFs above. The methodology has allowed the study to reduce the entire PESTEH environment to 29 driving forces and then to just five KDFs. There is no other methodology that would have been able to take such a range of PESTEH

factors and distil them to such a precise number of driving forces and KDFs. Without such precision, there is probably no way that a range of factors as broad as those in the PESTEH environment could be analysed to determine that environment's likely impact on the future stability of the political system. Having reduced the broader environment to just five KDFs the next step of this scenario methodology is that these five KDFs must now be ranked for impact and uncertainty.

8.4. RANKING THE KEY DRIVING FORCES

The 5 KDFs need to be ranked according to the extent to which they will impact on the future stability or instability of the political system and the extent to which that impact is uncertain. Specifically the impact and uncertainty here relate to the extent to which the KDFs may cause changes to the three axes of the triangular systems-type diagram and hence to the type of system. System type will determine actors' experience of living in the system. This will in turn determine feedback that different actor groups are likely to exert in each scenario, which in turn will determine the stability or instability of that scenario. The reason for the ranking exercise is that it allows researchers to create the scenario matrix or framework around which the scenarios will be built. The KDF of greatest impact will become one axis of this matrix while the KDF of greatest uncertainty becomes the other. The matrix will therefore offer up four quadrants based on how the most important and uncertain KDFs combine over the next decade.

What this subsection must ultimately demonstrate is the probable impact of each KDF measured in terms of its ability to cause the system to change from its current variant to another variant, as well as the uncertainty associated with that impact. The current system is a variant 12 system which means that it is open, ineffective, and unstable. Change would therefore relate to it becoming effective, closed, and transitioning either to stable, oscillating, chaotic, or evolutionary behaviour.

8.4.1. The impact and uncertainty of the five KDFs

The impact of the first KDF, the extent to which the tripartite alliance remains intact and in political control of South Africa will obviously be significant on the future of the system. Were the party to be driven from power via an uprising, or see its support decline rapidly via a series of electoral setbacks in 2014, 2019, or 2024, this will introduce all manner of positive feedback into the system leading to significant changes

to that system. The changes brought about by this feedback could include a new government in power, a new political party at the head of that government, and a series of new policy positions. All of these outcomes could dramatically change both the openness, effectiveness, and stability of the system to literally any of the 20 alternative variants. However, where the party reforms successfully, that initial positive feedback may become a key driver of negative feedback as the reforms better meet the demands of actors in the system.

For example, if changes following a future demise of the ANC see a future government better meeting the demands of actors, then the system type could change to a type 16 which would be an open, effective, and stable system. However, should a new government also fail to meet actor demands then rising positive feedback may see the system change to a type 14 which would be an ineffective, open, but now chaotic system. Likewise if the party remains in power, reverses its electoral decline, and counters increasing negative sentiment via meeting more of the demands of actors within the system, that will see new sources of negative feedback entering the system as actors expressed satisfaction with their demands being met. Here the system may change from being a type 12 to a type 20 as the system evolves towards stability. However, it may happen that the success in meeting demands gives rise to new demands, which in turn introduce new forms of positive feedback into the system. Here the system may change from its current type 12 to a type 16, which is an open, effective, but unstable system.

While the future of the ruling tripartite alliance could therefore bring about changes to both the type and behaviour of the political system, this is not the most impactful KDF in the system. Nor is it the most uncertain. The reason is that there are other KDFs which will determine the future of the ANC itself.

For example, the second KDF, the extent to which actors retain access to demand mechanisms, will determine the ability of actors to direct feedback into the system. This will include the ability to determine the future of the ANC. This is therefore a KDF of greater impact on the system than that of the future of the ANC itself. For example, in the current type 12 environment, continuing high levels of positive feedback may cause the behaviour of the system to change from unstable to chaotic, causing system type to change from a 12 to a 14. It is admittedly possible that faced with growing levels of

positive feedback, the ANC government may move to restrict access to demand mechanisms. This change will see the system move, over time, from open to closed with the result that its behaviour changes from unstable to stable. This is because where access to these mechanisms is denied actors will progressively lose the ability to direct positive feedback into the system, despite the failure of their government to meet their demands. In the current environment, dominated as it is by positive feedback, that will see the relative balance of feedback change in favour of negative feedback and may serve to stabilise the system. This could cause the system to change from its current type 12 to a type 1 or even a type 3 which would be an ineffective closed and stable, or perhaps oscillating system. However while the ANC may move to restrict demand mechanisms it does not have the parliamentary majority to change the constitution and is unlikely to see such a majority again. It is fairly certain, therefore, that actors in the system will retain much access to effective demand mechanisms over the period to 2024.

The third KDF, the performance of the South African economy, will determine whether the economy can grow fast enough to meet the employment and incomes demands of actors across the political system. This will be particularly so for the poorer 50% of individual actors whose demands for employment, increased incomes, and better living conditions are a growing source of positive systems-changing feedback. The performance of the economy will therefore determine the type of feedback that actors exert on the political system – however, this will only be so where actors retain the mechanisms to direct such feedback. Growth levels can therefore not be argued to have a greater impact on the future of the system than access to demand mechanisms will. There is admittedly a high level of uncertainty surrounding future growth levels. This is especially so, considering that the difference between a 4% and 3% growth average over a decade will have a definitive effect on income and employment levels in the system. However, it is going to be demonstrated under KDF five below that economic policy direction is even more uncertain.

It must follow that the fourth KDF, whether the government will be able to meet delivery demands, will largely depend on growth within the economy. It is therefore of less impact on the future than that of economic growth and by deduction that of access to demand mechanisms. There is obviously a high degree of uncertainty attached to this

driving force as evidenced by rising positive feedback, largely in response to the government not meeting the demands of a host of actors in the system. However, whether the government comes to better meet the demands of its actors will depend on its economic performance which will in turn depend on the economic policy model it pursues. For this reason it is argued that the fifth driving force below, of future economic policy, is the most uncertain trend facing the future of the system.

The final driving force will determine whether South Africa's economy resembles a liberalized, deregulated, and private investment-led environment, or whether it becomes increasingly heavily regulated, protected, and centrally directed. This will depend on whether the government can commit to either the NGP or the NDP. This decision is important for future stability as it will ultimately determine the future performance of the economy, and hence its ability to meet actor demands. It is therefore of greater impact than growth and welfare performance, but remains of lesser impact than access to demand mechanisms. However, in terms of uncertainty, the current status of policy debates within the ruling party represents such a diversity of different approaches that there is widespread confusion as to the direction of future economic policy in South Africa. Earlier chapters of this study demonstrated the extent of this confusion in the opposing economic policy models proposed by the Zuma administration. The second of these documents questioned the wisdom of increased state involvement in the economy, while the first called for precisely such involvement. Future economic policy is therefore absolutely uncertain. It is not possible in the present environment to predict with any degree of accuracy what model future South African governments may prefer. This KDF is therefore by a long stretch the most uncertain of the five.

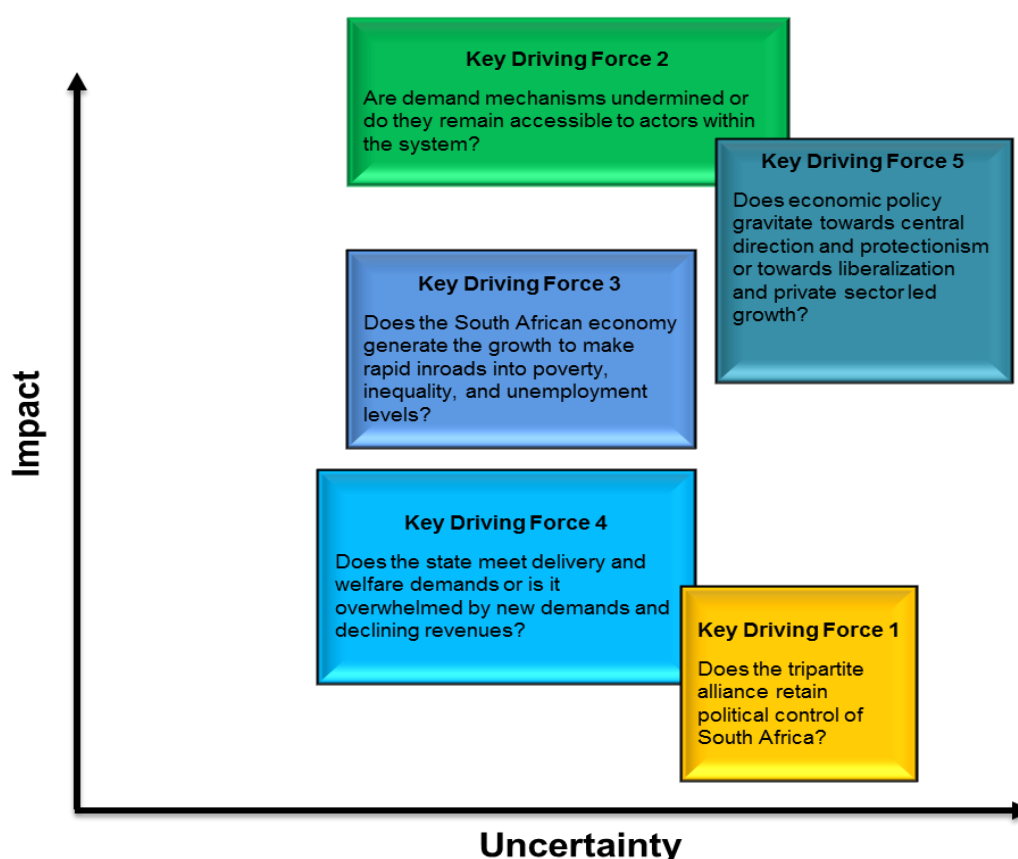
It follows logically from the above discussion that access to demand mechanisms will have a particularly definitive impact in terms of future feedback entering the system. With unfettered access to demand mechanisms, actors will determine the balance of negative and positive feedback in terms of the extent to which their demands are met. However, where access to demand mechanisms is constrained, the balance of feedback may shift in favour of negative feedback even where actor demands are unmet. It is suitable therefore that this KDF be selected as the impact axis of the scenario matrix. The uncertainty axis must represent future economic policy. While

there is a measure of uncertainty around the other four KDFs there is absolute uncertainty around the fifth.

8.4.2. The impact/uncertainty hierarchy

As future access to demand mechanisms has been chosen as the KDF of greatest impact on the future stability of the political system, and the direction of future economic policy has been chosen as the KDF of greatest uncertainty, the other KDFs will by default have lesser degrees of impact and uncertainty. It is not critical which KDF here is relatively less important or uncertain than another, as all the KDFs will be brought back into the analysis of the scenarios that follow. However, these five KDFs could be plotted on an impact and uncertainty diagram as follows:

Figure 28: Relative impact and uncertainty of the five KDF's selected by this study



The diagram shows access to demand mechanisms as the KDF of greatest impact on the future stability of the system and shows economic policy as the KDF of greatest uncertainty. Economic policy is also shown as the KDF of second greatest impact as it

will determine the growth levels which will in turn determine the ability of the state to meet the demands of its actors which will in turn determine the future of the ANC. The future of the ANC is in turn shown as the driving force of second greatest uncertainty as its future will depend largely on the economic policy decisions that the party takes. Access to demand mechanisms, growth and the ability to meet demands are all ranked as being similarly uncertain KDFs. The reason here is that they hinge on the decisions taken by the ANC – hence their uncertainty must be on a par with that of the party.

Critics may argue that this ranking exercise is subjective. The established defence of the methodology would again apply. It is conceded that this defence of scenarios sits uncomfortably with proponents of forecasting who reject what they see as uncertainty inherent in the subjective ranking of KDFs. However such critics can again be countered on two fronts – as they have been elsewhere in this study. The first is that they do not understand the scenario methodology in the sense that a number of major KDFs could arguably be used to structure the matrix axes. Secondly their desire for the objectivity they see in forecasting methodologies exposes them to the emergent characteristics of complex systems which are certain to doom forecasts to failure. If forecasts are certain to fail in complex systems, and if scenario methods are seen as too subjective, then the critics must resign themselves to the conclusion that the future of political systems cannot, and must not, be studied at all. This is a preposterous position. What is not preposterous is to use the ranked KDFs to structure the scenario matrix. This will suggest up to four possible scenarios for a future South African political system.

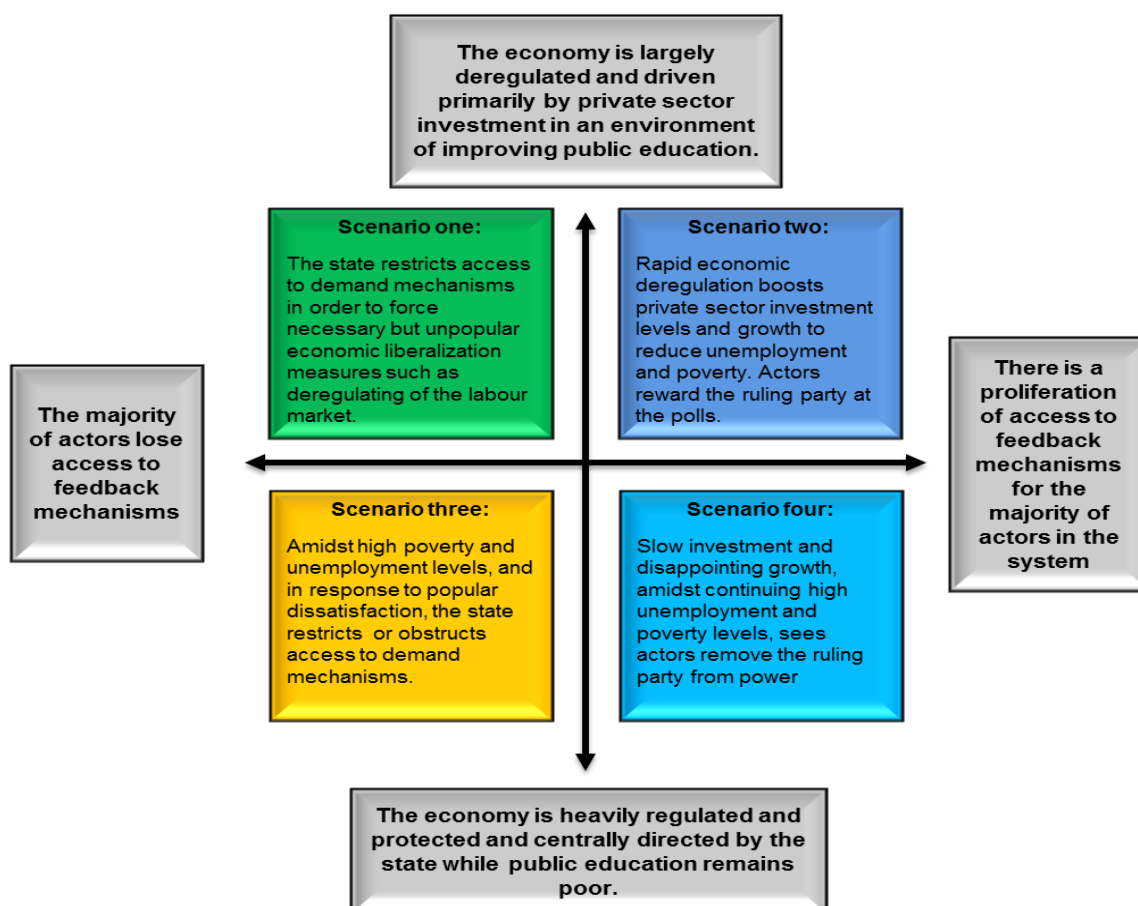
8.5. PRODUCING THE SCENARIO MATRIX

This matrix will become the framework that identifies the scenarios that will later be described in this study. The matrix has two axes. The first is the impact axis. This axis is a spectrum showing the extremes of the KDF identified as having the greatest impact on the future stability of the political system. The second is the uncertainty axis representing the KDF identified as most uncertain in determining the future stability of the political system. The result will be four possible extrapolations of the future, based on how the most important and uncertain KDFs combine over the next decade.

8.5.1. The scenario matrix

The matrix diagram is set out below. Its horizontal axis represents a spectrum measuring the extent to which actors retain control of demand mechanisms in the system. The left hand side of this axis represents an environment where access to demand mechanisms is increasingly restricted. The right hand side of the axis represents an environment in which the majority of actors in the system retain access to a host of mechanisms via which they place demands on the system. The vertical axis represents a spectrum of economic policy alternatives for South Africa. The upper side of this spectrum represents a liberalized, deregulated, and private sector led economy. The lower side of the axis represents a heavily regulated and state directed economy.

Figure 29: Scenario matrix defining scenario possibilities



The four quadrants of the matrix each reveal a scenario for a future political system in South Africa. These are based on how the most important and uncertain KDFs may combine over the next decade. It must be emphasised that the purpose at this stage is mainly structural in identifying a diversity of possible scenarios, based on how the most

uncertain and important KDFs for the South African political system interact over time. Very detailed descriptions of these scenarios, down to the level of system variant, are presented in the following chapter.

Scenario one is a much de-regulated private sector economy and improved public education system, in an environment where access to demand mechanisms has been restricted. **Scenario two** is a political system featuring a liberalized economy and improved public education system, in an environment of proliferating demand mechanisms. **Scenario three** represents a state-led economy, in a political system where access to demand mechanisms is increasingly restricted. **Scenario four** represents a centrally directed economy in an environment where demand mechanisms proliferate.

This matrix has therefore allowed the 29 driving forces, and five KDFs, to be reduced to four possible future outcomes for South Africa. Much must still be done to describe these outcomes to the level of system variant. However, it is worth pausing at this juncture to consider just how remarkable it is that the scenario methodology has been able to reduce such a diverse and complex range of PESTEH trends into such a concise and precise set of options for the future. It would be improbable, and possibly impossible, to reduce such a diverse set of trends to such a concise set of options via any other methodology.

8.6. CONCLUSION

The research goal of this chapter was to identify a number of plausible scenarios for a future South African political system. As a first step towards this goal, the chapter took all the trends emerging from the PESTEH analysis in chapter seven, structured these into 29 driving forces, described each driving force in detail in terms of its impact on feedback, and reduced them to a more manageable number of KDFs. In total, this saw the 29 driving forces emanating from the PESTEH analysis reduced to five KDFs. These were then ranked according to the impact they would have on future stability in the system and the extent to which that impact was uncertain. This led to future access to demand mechanisms being identified as the KDF of greatest impact, while future economic policy direction was identified as the KDF of greatest uncertainty.

This ranking exercise allowed the chapter to produce a scenario matrix with the KDF of greatest impact on one axis, and that of greatest uncertainty on a second axis. The four quadrants of this matrix suggested four possible scenarios for a future political system.

The **first** such scenario was that the government might pursue a policy of unpopular economic liberalization through restricting access to demand mechanisms. The **second** scenario was that the government might adopt a policy of economic reform and liberalization in order to stave off rising positive feedback, and that demand mechanisms would remain easily accessible to a majority of actors in the system. The **third** scenario was that the state would play an increasingly central role in directing and regulating the economy. In response to growing popular dissatisfaction with the performance of this policy, the government would act to restrict access to numerous demand mechanisms in order to stave off positive feedback entering the political system. The **fourth** scenario held that the state would increasingly regulate and direct economic activity. Despite the shortcomings of such a policy, it would not be able to cut off rising levels of positive feedback. Social and political actors would use these mechanisms to drive changes within the political system, extending as far as the removal from power of the government.

Encouragingly, this presents a very broad spectrum of plausible outcomes for the system, consistent with the theoretical basis of this study that the emergent property of complex systems causes small shifts in their present circumstances to result in major shifts in their futures. However, to corroborate that result it is necessary that each of the scenarios be described down to the level of system variant. An analysis of differences between the benchmark system variant and the scenario systems will then reveal the prospects for political stability or instability over the next decade. This is the chief research goal of the following chapter.

9. CHAPTER NINE: SCENARIO DEVELOPMENT: DESCRIBING THE SCENARIOS

9.1. INTRODUCTION

In seeking to determine the prospects for stability or instability in the South African political system over the period to 2024, this study has followed a number of theoretical and methodological steps. The study demonstrated that a political system is a complex system. It further demonstrated that the emergent property of complex systems means that their futures cannot be forecast, and that they must therefore be studied as scenarios. Based on those two points of departure it produced a metho-theoretical model according to which long-term stability or instability within political systems could be determined. Chapter six of the study commenced step one of the application of that model in demonstrating that the current South African political system was an open, ineffective, and unstable system. This finding serves as a benchmark against which scenarios of future system variants can be compared. In chapter seven step two of the metho-theoretical model identified trends most likely to influence future feedback entering the South African political system and therefore its stability. In chapter eight step three of the model was completed as these trends were reduced to 29 driving forces and then to just 5 KDFs before being structured into a scenario matrix suggesting up to four possible scenarios for the future of the political system.

This chapter will conclude the metho-theoretical model by completing its fourth step: describing the scenarios suggested in chapter eight down to the level of system variant. These will then be compared to the benchmark system variant in order to determine the prospects for political stability or instability. Determining those prospects, the focal question of this study, is therefore the chief research goal of this chapter. In meeting this chief research goal the chapter must first meet four research sub-goals:

- The chapter must firstly determine the role of each of the five KDFs in driving change along the three axes of the triangular system type diagram for each separate scenario. It will therefore provide a detailed narrative description of how each KDF is likely to play itself out in each scenario in terms of influencing the openness and effectiveness of that scenario.
- It must secondly determine the role of each of the seven major actors of the system in each of the four scenarios in terms of their role in directing feedback and hence

determining the stability or instability of each scenario. It will therefore describe how each actor group may respond to the type of system they find themselves in for each scenario.

- Completing the two research sub-goals above will result in a detailed description of the influence of each KDF and actor on the type and behaviour of the political system revealed by each scenario. This will serve as a description of the openness, effectiveness, and system behaviour of each scenario. The third research sub-goal of this chapter will be to plot those outcomes on the system variant table. This will indicate how the benchmark system, a variant 12 system, may change for each scenario.
- The fourth research sub-goal will be to enter the results of research sub-goals one, two, and three into a chart of the four-tier model of a political system, exactly as was done for the benchmark system in chapter six. This will show how each scenario achieved its specific variant outcome. This will allow for a like-for-like comparison to be drawn between the benchmark system and the four scenario systems.

That like-for-like comparison will reveal the prospects for change in the openness, effectiveness, and behaviour of the South African political system. Therefore, in having met these four research sub-goals, the chapter will be able to meet its chief research goal and describe the prospects for stability or instability of the South African political system in the years to 2024.

9.2. SCENARIO ONE: “OFF ROAD”⁹ (the closed, effective, stable system)

The first scenario is one of increased economic liberalization and educational reform together with a restriction on access to demand mechanisms. This scenario therefore sees South Africa depart completely from what many in 2012 see as its predestined path. For this reason the scenario is christened as “off road”. The free, open, and democratic society, that characterised the 1990s transition to democracy, becomes ever more closed as demand mechanisms are restricted. At the same time, the weak

⁹ This study has adopted the “road” metaphor in describing its four scenarios. This is partly in reverence to the ground-breaking “high-road/low-road” scenario work of Clem Sunter in the 1980s. However, it is also because the metaphor so perfectly encapsulates the sense of different routes that South Africa may travel in the period to 2024. In the case of this study the four scenarios are titled “off-road”, where the country departs from what many see as its predestined path, “new-road” where its government is forced into dramatic reforms that set the country on a better economic and social trajectory, “dangerous-road” where the state undermines demand mechanisms in an effort to force stability, and “toll-road” where state-centric economic interventions strangle growth and development.

economic performance that so many observers in 2012 regarded as an unavoidable future is quickly reversed.

9.2.1. Key driving forces in scenario one

The subsection below describes how each of the 5 KDFs is likely to evolve over the life of this scenario:

9.2.1.1 *The first Key Driving Force: The tripartite alliance retains political control of South Africa*

The first KDF was identified in chapter eight as follows:

[The first] Key Driving Force relates to the extent to which the tripartite alliance will retain or exceed its close on two thirds electoral majority as a unified movement or whether infighting and rising negative and radical sentiment, together with a rise in levels of public protest against the state, may drive the party from power and/or see it lose a future election. Presented as a spectrum, one extreme of this driving force would see the tripartite alliance remain intact and in control of South Africa and the other would see the alliance fragment and lose political control of the country.

In this scenario the ANC manages to retain political control of South Africa as it comes to meet the expectations of a broad cross-section of actors in the system. It does this largely as a result of a dramatic shift in economic policy (described under the relevant KDF below) that leads to higher investment and growth, and therefore income and employment levels. The shift is forced on the party by its realisation that unmet demands for work and education are generating such immense levels of positive feedback that without a shift in policy, the party will be driven from power. This shift prioritises private sector investment over state-led economic intervention in a desperate last ditch effort to drive up levels of economic growth. At the same time, in support of the reforms, the party introduces policy interventions that improve the basic quality of school leavers. The benefits are felt by the investment community, the middle classes, and the 50% of relatively poor actors (described in more detail under the relevant sections on actors below). This KDF sees the system move up the effectiveness axis of triangular system type chart.

However, this is a scenario where the long-running economic policy battle within the tripartite alliance threatens to scupper the ANC's chances of introducing these policy reforms. Chapter six of this study showed at length how a number of actors, particularly COSATU and the SACP, have clashed bitterly with the ANC over economic policy, dating back to Nelson Mandela's presidency. Outside of the business community and middle classes, the newly introduced reforms, such as a deregulated labour markets, are very unpopular. Equally unpopular will be austerity measures in the civil service and the welfare environment to curb a yawning deficit, moderate wage increases, strict adherence to fiscal and monetary discipline, and the watering down of race based equity policy to boost domestic and foreign investment flows. A number of civil society, media, and political actors see the reforms as eroding the rights of workers and poor communities in favour of the business and investment communities. They take action to lobby against the reforms via protests, media campaigns, internal party policy channels, and even legal action based on the socio-economic rights clauses of the Constitution. These efforts pose such a threat that, in order to carry the reforms through, the party finds it necessary to undermine various demand mechanisms in the political system. The party is desperate and realises that without the reforms, positive feedback will drive it from power. For example, it seeks to restrict the extent to which civil society groups challenge its reforms in the courts. It further seeks to undermine the power and influence of the trade unions within the tripartite alliance.

In addition, it seeks through the security forces to prevent displays of public protest against the reforms. The party becomes highly critical of the media, and uses controls on the flow of information to prevent as much critical opinion as possible from reaching the public. The South African Broadcasting Corporation (SABC), for example, blacklists prominent socio-economic rights proponents and trade union leaders. Using its majority political control of South Africa, in conjunction with its cadre deployment programme, the ANC ensures that institutions ranging from the civil service, the police, the Judicial Services Commission, and the Chapter Nine institutions are staffed with reformists working to restrict flows of positive feedback into the system. The cadre deployment programme is used particularly to force MPs and party members to publicly endorse and pass legislated elements of the reforms. The system therefore moves down both the openness axes of the triangular system type chart.

9.2.1.2 The second Key Driving Force: The state restricts access to demand mechanisms

The second KDF relates to access to demand mechanisms. In chapter eight it was described as follows:

[This] Key Driving Force signifies the extent to which actors retain access to sufficient demand mechanisms to hold the government to account. Again presented as a spectrum, one extreme of this driving force would see individual, political, economic, and social actors using the courts, the media, the electoral system and other demand mechanisms to insist that the government meets their demands. The other extreme would see access to these mechanisms eroded to such an extent that the government could rule with impunity.

This is a scenario that sees access to demand mechanisms undermined, as a necessary condition for limiting growing positive feedback, in order to allow the government the time and space to introduce necessary, but very unpopular, economic reforms. In the current system, six prominent demand mechanisms were identified including elections, the courts, the Chapter Nine institutions, political parties, public protest, and the media and civil society.

In this scenario, electoral processes may be undermined as the ANC uses its control over the Independent Electoral Commission to obstruct the registration of opposition parties. It uses its control of the security, intelligence, and prosecution services to harass and even intimidate any opposition leaders, especially on the political left, that threaten the reform process. It similarly uses its control of the Judicial Services Commission to appoint judges sympathetic to the party line. Likewise, it uses its political control of Parliament to ensure that the Chapter Nine institutions, most notably now the SAHRC, do not propagate ideas that the government's economic policy reforms undermine human or socio-economic rights. Through its control of cadre deployment processes, it undermines the efforts of any individual or organisation within the tripartite alliance that stands in the way of its reforms. Critical trade union and Communist Party leaders are excluded from government and the cabinet. ANC critics are subject to internal party charges of bringing the party into disrepute and sowing disunity, and are expelled. ANC members critical of the reforms are denied contracts and tenders. In

terms of public protest, the party uses legislation such as the Gatherings Act (Republic of South Africa, 1993: Act 205) as well as appeals for public order to deny more and more groups the right to protest. Where illegal protests take off, the party uses its control of the security forces to stamp them out. The media and civil society are increasingly regulated in terms of what information they may access and how they may publish it. Great pressure is put on civil society funders not to support what are portrayed by the state as counter-revolutionary or destabilising actors within the system. Activist groups are accused of incitement. Journalists who report critically on the government's policy reforms are harassed and in extreme cases investigated for various breaches of new information regulations. The SABC is in contrast used as a propaganda tool to promote the government's reforms. This KDF therefore also sees the system move down both the openness axes of the triangular system type chart and thereby becomes a driver of negative feedback as it restricts the ability of actors to introduce systems-changing feedback.

9.2.1.3 The third Key Driving Force: Economic growth and investment levels increase

The third driving force relates to the extent to which higher levels of growth, investment and wealth creation can take place in the society. In chapter eight it was presented as follows:

[This] Key Driving Force relates to whether the South African economy can grow fast enough to generate the wealth and employment to make inroads into poverty and inequality levels. This will also depend on the ability of the education system to place a sufficient number of individual actors in a position to access employment and business opportunities. The first extreme of this spectrum would represent a society demonstrating rapid improvements in education, employment, incomes, and equality indicators. The other extreme would see the status quo remaining intact or even worsening.

In this scenario, as a result of creating an enabling environment for both foreign and domestic investment, GDP growth levels must be expected to pick up from their historical moving average of 3% over the period 2000-2010. It has been shown in this study that where growth levels have averaged 5% this has resulted in sharp declines in

the rate and number of unemployed people. Higher growth levels therefore ensure that the government is better able to meet the demands of actors in the system for work and rising incomes.

This is especially so as reforms in the education system, some as simple as delivering books on time and ensuring that teachers are in class, have secured a higher standard of matriculant. Such improvements are essential if this scenario is to be realised. Education performance in South Africa is so poor that without a concomitant increase in the proportion of South Africans with good school leaving results and higher education, the economic policy changes introduced under this scenario may not be sustainable in generating higher levels of growth or employment. At the same time it has been shown that the structure of GDP in South Africa has shifted to reflect an increasingly high-skilled tertiary-sector economy. It is neither within the scope of this study, nor its focus, to produce a set of detailed policy initiatives to improve levels of education attainment. However, if levels of education continue to lag behind comparable emerging markets, this will serve as a drain on growth and investment. Left unchecked, it may undermine this scenario to the extent that it moves into scenario three or four below – despite the economic policy reforms introduced by the ANC.

Higher growth levels also generate the tax revenues necessary to reduce the budget deficit, thereby allowing the state the resources it requires to invest in future infrastructure, education, and social programmes. The poor 50% of actors will therefore record rapid improvements in their living standards, driven increasingly by their own employment. This alone has a significant effect on reducing positive feedback entering the system. The middle classes, which are growing, also see their living standards improve. Business actors see their profitability rise and the size of their business expand with increasing demand. This all explains why this KDF sees the system climb up the effectiveness axis of the triangular system type chart and thus becomes a driving force of negative feedback.

9.2.1.4 The fourth Key Driving Force: Demands from poor actors are met

The fourth driving force relates to the ability of the state to meet the welfare demands of actors in the system. In chapter eight this KDF was described as follows:

[This] Key Driving Force [relates] to whether the state will have the revenues it requires to meet future welfare and service delivery demands. Here, the first extreme would see a state able to meet the welfare and delivery demands of actors in the system. The other extreme would see the state being overwhelmed by demand.

In this scenario, higher employment levels have reduced the extent of dependency on the state while allowing it increased revenues to meet demand that continues to exist. It remains the case that close on 15 million South Africans receive welfare. Despite increased employment levels, many older or badly educated people struggle to find work, even in a rapidly growing economy. Likewise initially lower wage levels, a result of the economic reforms, mean that demand for welfare will not evaporate. What changes, however, is that welfare is no longer the primary source of income driving living standard improvements for poor households. Their own work and income starts playing an increasingly important role in allowing them to secure improved living standards. This would have the effect of reducing the dependency and anger that drove the increasing socio-economic protests recorded in the period around 2012. This KDF therefore also promotes movement up the effectiveness axis of the triangular system type chart as this driver therefore changes to become a source of negative feedback into the political system.

9.2.1.5 The fifth Key Driving Force: The reformists win the battle for macro-economic policy control

The fifth driving force relates to the economic policy model chosen by the government. This KDF was described as follows in chapter eight:

[This] Key Driving Force represent[s] whether South Africa becomes an increasingly deregulated and private sector led economy or whether it evolves to become a heavily regulated state-directed economy. Here the extremes would stretch from a liberalized trade and investment environment dominated by private sector investment to a heavily regulated and protected economy directed by state planners.

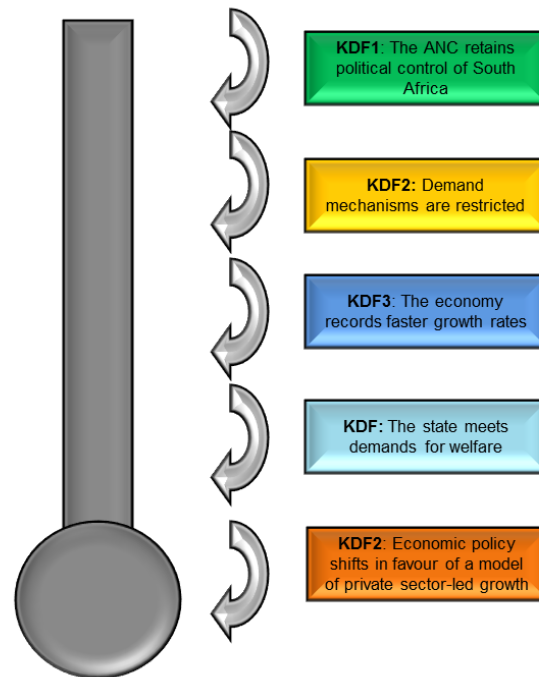
This scenario suggests that the historical failure to generate sufficient GDP growth and employment causes the government to realise that without dramatic reforms it will be overwhelmed by positive feedback and driven from power. It therefore abandons the interventionist model in favour of one it believes can better generate growth and hence

employment. The move here could easily be seen as a firm shift from NGP policy to the NDP policy – both of which were reviewed in chapter six. The government realises that further state-led intervention in the economy is likely to depress growth and investment levels. Hence, a number of initiatives ranging from labour regulations to the role of parastatals in industrial policy to black empowerment requirements - once mainstays of ANC policy thinking - are abandoned. The reason is that the party realises that if it does not change course, it will never be able to meet the demands of the poor 50% of actors in the system for work and rising incomes. In order to avoid inevitable electoral defeat, the party reforms in an effort to turn rising positive feedback into a flow of negative feedback. These reforms are successful in that they are instrumental in driving the system up the effectiveness axis of the triangular system type chart. While initially a dramatic change in the system, this is a KDF that over the life of the scenario, secures its long term stability. Towards the end of this scenario this KDF too is acting as a driver of negative feedback.

The diagram below represents these five driving forces graphically for this first scenario. The diagram shows the by now familiar pendulum hanging at equilibrium. The influence of each of the five KDFs, at the end of the scenario¹⁰, is represented by an arrow pushing the pendulum towards equilibrium and stability or pulling away towards non-stable behaviour.

¹⁰ Be aware that the influence of a KDF can change over the life of a scenario. For example economic reforms will initially change the system and therefore be a driver of positive feedback early in the life of a scenario. However, towards the end of the scenario those reforms may generate the growth, employment, and improved living standards that cause new flows of negative feedback to enter the scenario. This study would record them on balance to be drivers of negative feedback. Likewise restrictions on demand mechanisms will be an early change for the system but may generate long term negative feedback as they deny actors the means to generate positive feedback. Similarly populist promises may be an early driver of negative feedback winning support for the government of a system. However, in time those promises may be a driver of positive feedback as their consequences wreck the economy.

Figure 30: The impact on feedback of Key Driving Forces in scenario one



9.2.2. Actors in scenario one

In addition to describing this scenario in terms of the five KDFs, it is also necessary to describe the circumstances, and hence feedback, of major actors in the system to see if these corroborate the findings on KDFs above. Chapter three of this study identified seven prominent actors whose behaviour, it was argued, would determine future feedback into the system. These included the investment community, the middle classes, the relative poor, the ANC, the political opposition, the protest movement, and the media and civil society.

9.2.2.1 *The investment community takes advantage of higher growth and deregulation*

It is likely in this scenario that the investment community welcomes the economic reforms and higher growth levels, as these ensure a more enabling and profitable business environment. In response to the reforms more investment, both foreign and domestic, will enter the country and this will create new economic and job opportunities. For example, the R500 billion cash pile that uncertain investors were sitting on in the system of 2012 (iAfrica.com, 2013: Internet Source) will a decade later have been committed to expansion projects in South Africa's growing economy. For this reason

South Africa, which in chapter six was shown to be lagging behind comparable emerging markets, may catch up in terms of investment inflows. This increased investment boosts the revenue base of the government, enabling it to better meet actor demands in areas such as welfare and infrastructure development. In this scenario, the business and investment community will therefore become an important driver of system-stabilising negative feedback.

9.2.2.2 The relative middle class grows and becomes more prosperous

The second actor was identified as the relative middle classes. In the system of 2012, these were shown to include the 10% or so of actors with tertiary education and active at relatively high levels in the economy. Under this scenario, their numbers are growing both as a result of employment growth and educational reforms. In addition, their demands for increasing incomes and living standards are well met in South Africa's rapidly expanding economy. While they are initially alarmed at the restrictions on demand mechanisms, their increasing prosperity dampens the criticism they have for the government. In any case towards the end of this scenario, the system has become so closed that individual actors realise that complaining or drawing attention to themselves by challenging the government is likely to harm their business and career prospects. These actors therefore also come to serve as a driver of system-stabilising negative feedback.

9.2.2.3 The relatively poor find work and new economic opportunities

The third major actor in the benchmark system was identified as the 50% or so of relatively poor actors. These were predominantly unemployed, had not completed their education, and were wholly reliant on welfare for improvements in their living standards. They were therefore central to the declining voter turnout of the ANC and the rise of the protest movement in the period to 2012. Many of their members favoured radical economic policy shifts. In the benchmark system they were therefore identified as a primary driver of positive feedback. However, in this scenario, rising growth and investment together with improved education will change all that. These actors now find it increasingly easy to find employment, with the result that they experience income growth driven by their own efforts. At the same time welfare, which remains an important component of their overall income, is better able to meet demands as a result

of increasing tax revenues and declining dependency levels. Rapid improvements in their standard of living, driven by their own efforts in addition to support from the state, see these actors change to become a driver of negative feedback. This is precisely the change in feedback that the ANC strategists had in mind when they abandoned the interventionist economic model in favour of the private sector-led growth model. It is largely this change in actor behaviour that allows the ANC to sustain a comfortable electoral majority.

9.2.2.4 The ANC retains its parliamentary majority

The fourth actor in the benchmark system was the ANC itself. In the 2012 benchmark system it was described as a deeply factionalized party wracked by infighting and committed to contradictory economic policy ideas. That has also changed in this scenario. The ANC now finds the means to unite behind a single relatively pragmatic economic policy approach, driven solely by self-interest and self-preservation. While this may seem unlikely to observers of the current ANC, they would do well to remember that it was the Zuma administration that published the NDP, which is a blueprint for the economic policy shifts described in this scenario. Similarly, critics of this scenario may point to the ANC's democratic credentials to argue that the party would never undermine demand mechanisms. However, these critics must remember that there is much evidence in the 2012 environment of the ANC-led state seeking to restrict demand mechanisms via initiatives such as the Protection of State Information Bill, the proposed media tribunal, and the use of the police to crack down on protests, as evidenced at Marikana. In this scenario, the party therefore introduces changes to the political system that, while dramatic, can be traced directly to some of its own published policy positions of more than a decade previously. While its reforms initially see the party act as a driver of systems-changing positive feedback, the reforms eventually become the source of increased negative feedback as they meet more and more actor demands. Over the life of this scenario, the ANC ultimately acts as a driver of negative feedback.

9.2.2.5 Official political opposition fights for civil rights

The fifth actor in this scenario is the official opposition, which was described in the current system as a then rare driver of negative feedback. In this scenario, the DA's

political rise has been cut short by the economic reforms introduced by the ANC. No longer able to capitalise on the massive amounts of positive feedback that were being generated by the political system of ten years ago, the party is no longer tipped as a government in waiting. It is, however, outspoken in criticism of the erosion of civil rights by the ANC. The DA has brought several challenges relating to constitutional infringements by the government in the courts and been successful in some of these. However, buoyed by its newfound popularity, and with strict control over the civil service, the ANC has been able to, if not ignore, then certainly prevaricate over criticism levelled at it by the opposition and the courts. In addition, the DA is caught in a contradictory position as many of the economic policies being introduced by the ANC are policies that the DA would itself adopt if it were in power. The DA's only growth now comes from established members of the middle class, alarmed at the ANC's indifference to constitutional principles. After flirting with the chance of running a declining ANC out of office just ten years ago, the opposition has become an increasingly less important driver of feedback into the system. Its role in directing feedback also changes from negative to neutral as it must welcome many of the ANC's economic policy reforms, but cancels that negative feedback out in criticizing its undermining of civil rights and other constitutional principles.

9.2.2.6 The occurrence of protests decreases

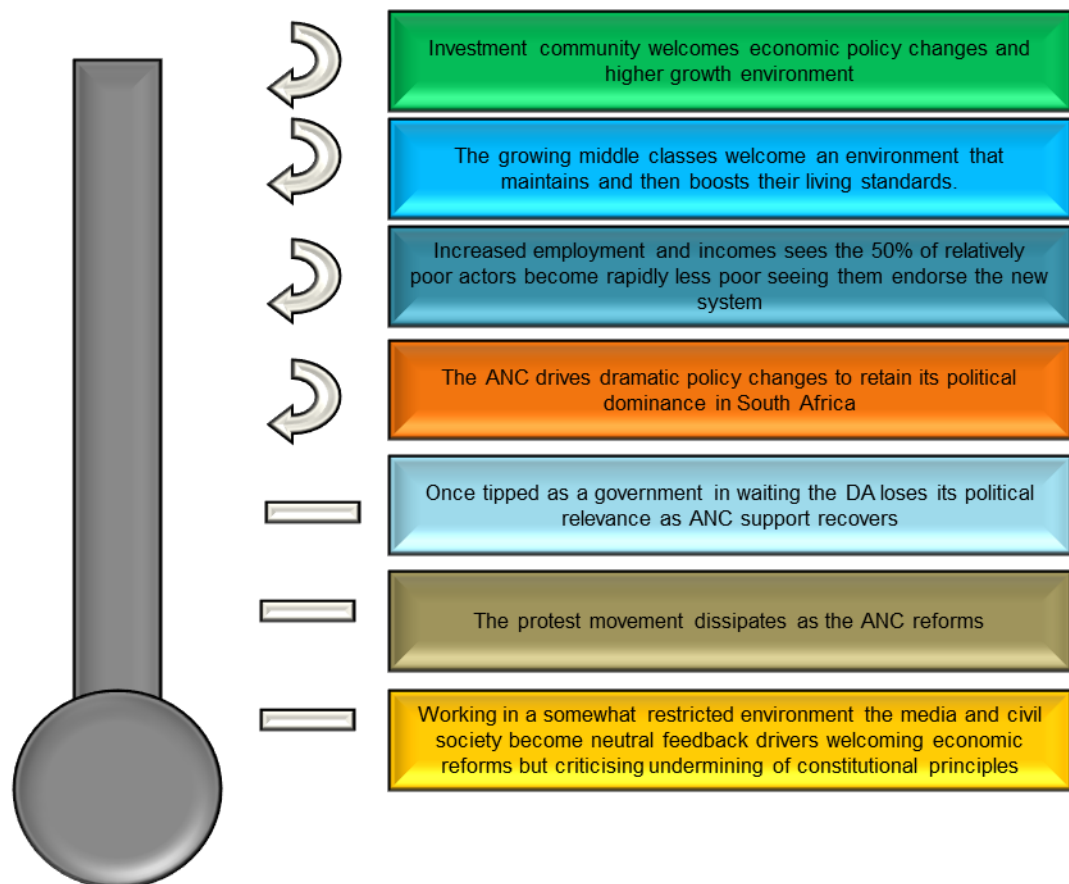
The sixth actor identified in the 2012 benchmark system was the protest movement. It was shown in chapter six how this movement was experiencing rapid growth, with South Africa seeing an average of 4 public protests a day in 2012. However, the employment and incomes growth cited above, together with restricted demand mechanisms, has changed that for this scenario. In the initial stages of this scenario, protests occur only where state action has been unable to prevent them. Towards the final stages of this scenario rapidly falling unemployment, rapidly rising incomes, and increasing revenues invested in welfare and service delivery contain the protest movement even further. People's demands are being met, so the need to protest to draw attention to unmet demands falls away. By the late stages of this scenario, the movement is no longer a significant driver of any type of feedback.

9.2.2.7 The media and civil society lose their impact

The seventh major actor in the benchmark system was the media and civil society. In that system these two groups were shown to be important drivers of positive feedback. In the early stages of this scenario, a number of civil society actors and elements of the media will have been harshly critical of the ANC's economic policy reforms and undermining of civil rights. However, these actors will themselves have been victims of that very undermining. With their activities heavily regulated and funding sources curtailed, they will struggle to make their positive feedback felt on the system. On the media side, throughout this scenario the SABC is used very effectively by the state to market its reforms and accuse critics of being unpatriotic and worse. Also towards the late stages of this scenario, as the economic and incomes gains of the reforms become more apparent, a number of media and civil society actors will be forced to concede that the initial reforms may have had some merit. While remaining critical of the government's antagonism towards the Constitution, many of these actors endorse the results of its economic policy reforms. As is the case for the protest movement and opposition, the media and civil society become a relatively neutral driver of neither a predominance of positive nor negative feedback.

Presented on the pendulum diagram these actors act as follows in this scenario:

Figure 31: Pendulum diagram of actors for the "Off Road" scenario



9.2.3. System variant change for scenario one

In recording rapid levels of growth, investment, and job creation, the system is now meeting the demands of the majority of its actors. This will be evident in rising income, investment, and employment levels. Also, declining dependency and rising resources to invest in welfare programmes will further meet the demands of actors. The system has therefore changed from being an ineffective system to an effective one. However, the reforms necessitated restricted access to demand mechanisms, to a point where actors could no longer freely introduce positive feedback. This means that the system can no longer be described as an open one.

In addition in the benchmark system it was shown how 5 of the 7 actors were drivers of positive feedback. That led to the conclusion, in chapter six, that the system was an unstable one. However, in this scenario that has changed. Of the 7 actors, 4 are now drivers of negative feedback while the remaining three have a neutral effect on

feedback. The behaviour of the system has therefore changed and can no longer be described as unstable. With such a predominance of negative feedback, the system cannot be oscillating or chaotic. Hence, its behaviour must be either stable or evolving. A strong case can be made for both. The erosion of demand mechanisms and predominance of negative feedback may see the system described as a stable one. Alternatively the dramatic policy changes brought about by its government are evidence of evolution within the system away from instability. However, much of this evolution has been forced on the system by the limitations placed on feedback mechanisms. It is therefore most appropriate to describe it as a stable system.

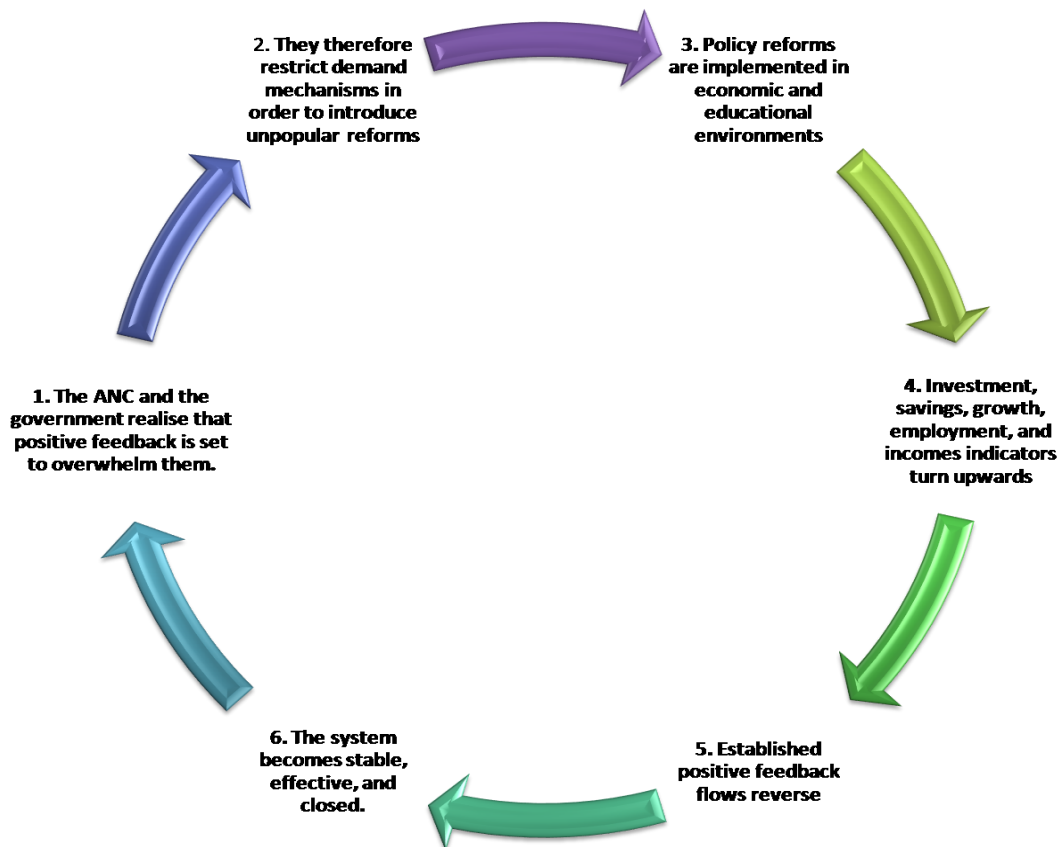
Overall this is a scenario that sees system type and behaviour change from its current categorisation of a 12 to a 6, as shown on the system variant table below:

Table 14: System variant change for the "Off Road" scenario

TYPE	STABLE	UNSTABLE	OSCILLATING	CHAOTIC	EVOLVING
Ineffective closed	1	2	3	4	5
Effective closed	6	7	8	9	10
Ineffective open	11	12	13	14	15
Effective open	16	17	18	19	20

The graphic below shows that in terms of causality, the system change described in the variant table comes about as a result of the following six major steps away from the benchmark system:

Figure 32: Causality leading to system variant change for the "Off Road" scenario



The graphic shows that this scenario commences with the ANC realising that positive feedback will remove it from power. It realises that without limiting demand mechanisms for its opponents, it will not be able to introduce dramatic reforms in the broader economic environment. These limitations therefore free its policy-makers to slash labour market regulations, undermine trade unions, abandon racial empowerment policy, and reform the education system. These reforms prompt increased growth and investment in an environment of better education. These indicators in turn prompt the established trend of positive feedback flows to change in favour of negative feedback flows, which secures the future of the ANC in power. The system therefore moves a full 180 degrees from open to closed, from ineffective to effective, and from unstable to stable.

Represented according to the four-tier structure of a political system, as was done with the benchmark political system in chapter six, the system described above looks as follows:

Table 15: Four-tier structure of a political system for the "Off Road" scenario

Tier one	Political system characteristics	<u>Actors:</u> Of the seven major actor groups four are now drivers of negative feedback, while three are neutral contributors to feedback.	<u>Regime:</u> On paper the key rules of the system remain largely unchanged. However the ANC is using its cadre deployment policy and control over patronage systems, to undermine the spirit of a number of constitutional provisions.	<u>Demand mechanisms:</u> Elections remain a demand mechanism although the ANC uses the intelligence services and the electoral commission to harass and undermine opposition politicians. The courts, the media, and civil society also remain important but their impact is being undermined and they are becoming less effective in directing feedback. The protest movement has dissipated.	<u>Output mechanisms:</u> The interventionist and developmental thrusts of policy that were prominent a decade ago now take second place to a policy framework that prioritises investment and growth.
Tier two	Attributes	<u>Presence of demand mechanisms:</u> The system features a very broad spectrum of demand mechanisms.	<u>Access to demand mechanisms:</u> Access and efficacy of demand mechanisms is undermined.		<u>Effectiveness:</u> In terms of education, employment, equality, and investment, the system now matches the relative performance of other emerging markets and is effective in meeting the needs of its actors.
Tier three	System type	Open effective X	Open ineffective: X	Closed effective: Access to demand mechanisms has been undermined to allow the state to introduce much needed policy reforms.	Closed ineffective: X
Tier four	System behaviour	<u>Stable:</u> Of the five KDFs and seven major actors none remain as a driver of positive feedback	<u>Unstable</u> X	<u>Oscillating</u> X	<u>Chaotic</u> X
					<u>Evolving</u> X

9.3. SCENARIO TWO: "NEW ROAD" (the open, effective, evolving system)

For the second scenario the KDFs came together to suggest an environment of economic reform, led by private sector investment together with a continued proliferation of demand mechanisms. In this scenario the ANC again realises that without significant reform its government will be driven from office. In setting South Africa on a new and more prosperous trajectory this scenario is christened "new road".

9.3.1. Key driving forces in scenario two

The five KDFs look as follows in this scenario:

9.3.1.1 The first Key Driving Force: The ANC's popularity returns

The first KDF relates to the future of the ANC. In this scenario the ANC again reaches a watershed. It realises that without dramatic reform it will not be able to meet the GDP growth levels necessary to meet the social and economic demands of its actors, and that positive feedback in the system will grow until the party is unseated, whether through protest action or through an election. The reformists within the party therefore win the internal policy and political battle to unite the party behind a policy blueprint that had its origins in GEAR and the NDP, in the hope that this may boost the country's sluggish growth performance. The ANC therefore abandons its once interventionist approach in favour of creating an increasingly enabling environment for investment. As in the scenario above, there will have been critics of the reforms both within the tripartite alliance and outside. However, possibly through a split in the alliance (described in more detail later in this scenario), the reformists within the ANC have carried the day. As is the case for the first scenario, economic reforms introduced by the government, together with improved quality of education, generate higher levels of investment, economic growth, employment, and therefore living standards. This leads to much increased flows of negative feedback from actors whose demands in the system are slowly being met. Specifically this is the case for the 50% of relatively poor actors in the system, who now see their living standards improve through employment and hence through their own efforts. The middle classes and the business community see much improvement in their circumstances. The reform process within the party is instrumental in seeing the system climb up the effectiveness axis of the triangular system type diagram. This result serves to sustain the ruling ANC in power, not through limiting dissent, but through emphasising the demonstrable successes of the policy reforms. The party therefore becomes a driver of negative feedback driving the system up the effectiveness axis of the triangular systems type diagram.

9.3.1.2 The second Key Driving Force: South Africa remains a democratic success story

The second KDF relates to the presence of demand mechanisms. This scenario diverges significantly from the first in that the government has found it unnecessary, or been unable, to limit access to these mechanisms in introducing its economic reforms. It has therefore relied on the demonstrable economic successes of its reforms to win the battle of public opinion and overcome criticisms of the reforms. Therefore, although actors in the system retain access to demand mechanisms, they use this access to introduce negative feedback in support of the reforms. No change is therefore recorded on either of the openness axes of the triangular system type diagram.

9.3.1.3 The third Key Driving Force: Growth and investment boom

The third KDF relates to the rate of economic growth. As in the scenario above, this scenario heralds an economy that records growth levels well in excess of its post-2000 moving average of 3%. It has been demonstrated earlier in this study that a South African economy recording growth rates in excess of 5% is able to begin to meet the demands of actors in the system for employment and therefore income growth. At the same time, higher growth levels translate into higher tax revenues, allowing the government to sustain a welfare programme that remains important in bolstering the living conditions of previously poor communities. Better economic growth performance also meets the demands of the investment community and the middle classes, both of which grow quickly in this scenario. The system therefore records rapid progress up the effectiveness axis of the triangular system type diagram. This KDF, which was a driver of instability in the current political system, changes to become a strong driver of negative system-stabilising feedback.

9.3.1.4 The fourth Key Driving Force: The state meets demands for service delivery and welfare support

The fourth KDF relates to the extent to which the system can meet demands for welfare and service delivery of actors in the system. Higher education, growth, and employment levels in this scenario allow the system to better meet such demands. Firstly, increased employment means that a number of previously dependent households are improving their standards of living through their own efforts. Secondly, higher growth levels allow

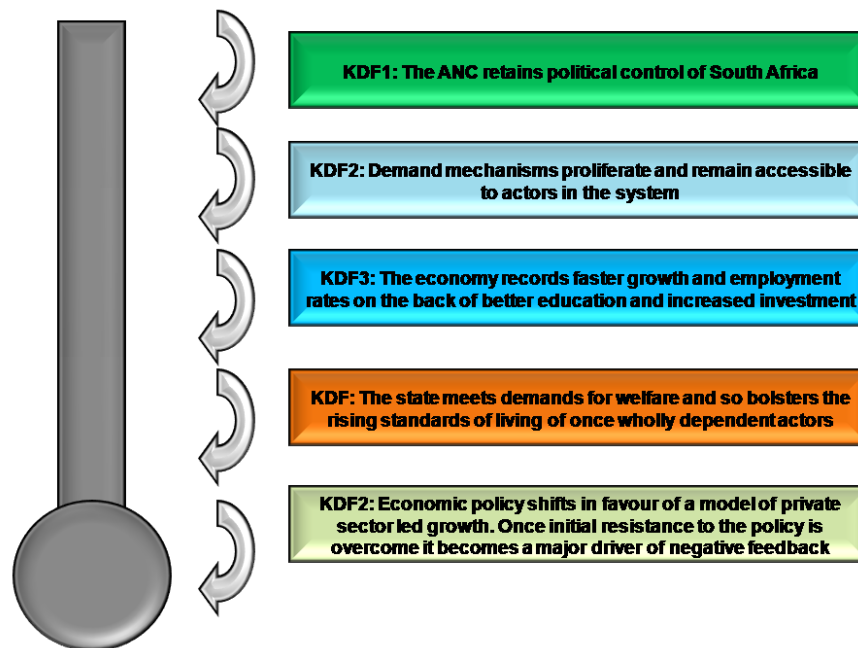
the state the revenues to better meet the welfare demands that exist in the society. Again this is a KDF that promotes progress up the effectiveness axis of the triangular system type diagram. This is therefore not a scenario in which state-led development efforts become unimportant. On the contrary, they play a role in bolstering the efforts of poor communities to uplift themselves. This too, therefore, becomes a driver of negative feedback.

9.3.1.5 The fifth Key Driving Force: The reformists win the battle for economic policy control

The fifth and final KDF relates to the economic policy framework of the government. In this scenario, the government has made a firm decision to pursue growth over the interventionist and developmental themes of previous policy frameworks. In other words, the government has minimised its own participation in the economy, and removed numerous barriers to investment, labour market access, and the free flow of capital. Examples would include dispersal sales of parastatals, the watering down of black empowerment regulations for foreign and domestic investors, the erosion of the labour market regulatory environment, and the reduction of protectionist trade and investment barriers. This KDF is probably the most important cause of the system's progression up the effectiveness axis of the triangular system type diagram. While initially meeting with strong resistance, these reforms demonstrate such improvements in the growth and employment profile of the economy that they come to win wide public support and therefore become a driver of negative feedback.

Represented against the pendulum diagram, this scenario sees significant changes in the role of each KDF compared to the current system:

Figure 33: Key Driving Forces for the "New Road" scenario



All five KDFs therefore become causal factors promoting negative feedback. The seven major actor groups identified in the benchmark political system also become important drivers of negative feedback.

9.3.2. Actors in scenario two

In this scenario the seven major actor groups turn out as follows:

9.3.2.1 The investment community capitalises on a rapidly expanding and increasingly deregulated economy

As in the scenario above the investment and business community welcomes the economic policy reforms as these create an enabling investment environment. Higher growth levels secure higher profit levels. Rising incomes lead to expanding domestic markets which drives strong negative feedback flows out of this actor group.

9.3.2.2 Middle class prosperity improves

For individual middle class actors their wealth and prosperity improves, while the primacy of constitutional principles safeguards their property and investments. As their numbers begin to grow quickly in this scenario they become a more influential source of feedback. Having had the majority of their demands met, middle class actors continue to serve as a source of system-stabilising negative feedback.

9.3.2.3 The relatively poor actors find work and see their living standards improve

The circumstances of the relatively poor 50% of actors change very quickly in this scenario. While living standard improvements have been recorded in South Africa's past these were driven almost exclusively by welfare. In this scenario, it is better education and rising levels of employment that become the primary driver of living standard improvements in poor communities. For the first time since 1994 the demands of these actors are largely being met. Freed from their utter dependency on the state, and taking full advantage of new economic opportunities, these actors change to become prominent drivers of negative feedback – which is precisely the outcome that the policy reformists in the ANC had wished to see realised.

9.3.2.4 The ANC retains control of South Africa

This is a scenario where the ANC has changed direction in terms of its approach to the governance of South Africa. Acutely aware of the danger to itself in high levels of unemployment, and also aware that it is unlikely to overcome constitutional safeguards in seeking to restrict demand mechanisms, it is forced to evolve in order to survive politically. This evolution is directed at simultaneously meeting the largely unmet demands of investment, middle-class, and poor actors in the system. The party therefore ditches its commitment to the interventionist policies of a decade ago, having identified these as lying at the heart of its failure to record GDP growth levels necessary to meet actor demands in the system. This will no doubt be a messy process that sees reformists in the party square off against other factions, and could well culminate in a split in the party. This would be in line with past splits that first saw the United Democratic Movement (UDM) and then COPE splinter from the party, as certain factions felt that their ideals were no longer being represented by the ANC. In this scenario, many of the ideals of the trade union movement, the Communist Party, and elements of the youth league will be rejected outright by the ANC. This will lead to a bitter policy battle and so recreate the circumstances that contributed to past party splits. However, the reformists ultimately prevail to implement a policy framework closely resembling that of the NDP. Trade unionists, advocates of race-based transformation policy, the radicals of the ANC Youth League and the SACP are the ultimate losers in this conflict. While they make a lot of critical noise about the new direction taken by the ANC, the early successes of the ANC's reforms win much

support both amongst the poor and the middle classes towards the end of this scenario and so become a negative feedback driver. Therefore, even if the party splits, the radical left will find itself in an effective political wilderness, as happened with both previous splits.

9.3.2.5 The ANC and the opposition drift together

The reforms in the ANC also change the role and environment faced by the political opposition. In many respects, the ANC is now implementing a policy framework so close to that of the opposition that the rationale for these two movements opposing each other falls away. This is especially as the ANC, in choosing not to undermine demand mechanisms, now appears quite committed to constitutional principles. Additionally, this is a scenario where the middle classes are becoming blacker, and class is replacing race as a fissure in the society. In the case of an ANC split this scenario may see a gradual coming-together of the ANC and the DA, possibly in opposition to the leftist split from the ANC. The closeness, in terms of policy, between the DA and the ANC sees the former also serving as a driver of negative feedback.

9.3.2.6 The protest movement dissipates

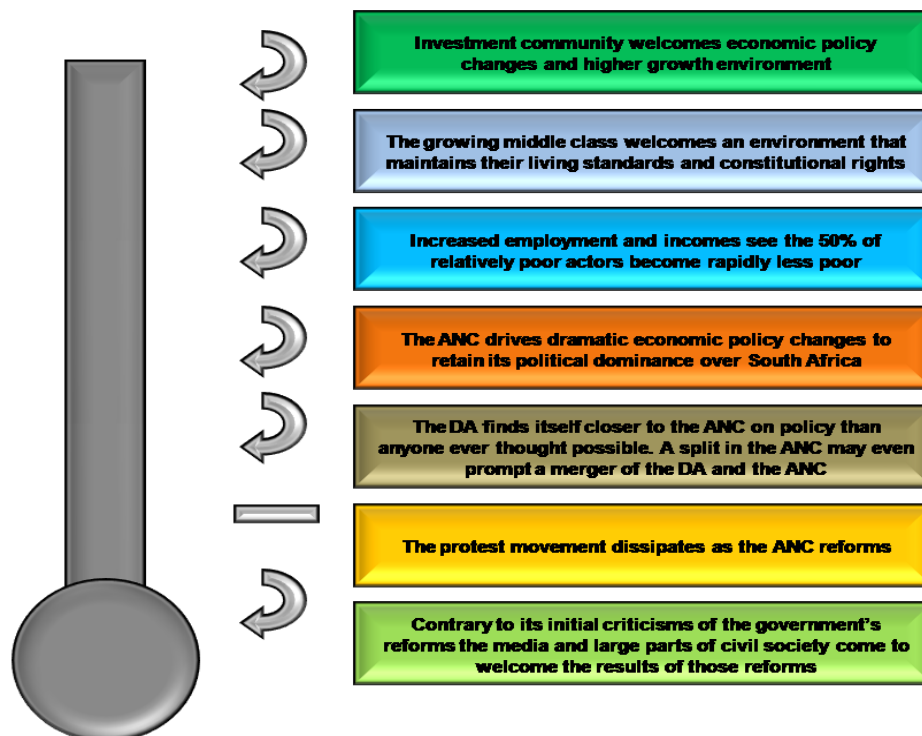
The rapid improvement of living standards sees a major decline in the protest movement that was such a growing force just ten years before. Access to demand mechanisms means that protest actions still take place – as they do in any free and democratic society. However, the government's economic policy reforms put increasing numbers of young people into jobs. They therefore cannot afford to be away from work for days on end, protesting. The reforms also see these young people driving improvements in their own living standards. They therefore feel that they have a stake in the successful future management of the country, and support its government in achieving those outcomes. The desperation that drove the large scale violent protests of just a decade ago dissipates in this scenario. In addition, increasing revenues ensure even more generous welfare support to households. Collectively these points reverse the decline in the ANC's support base that was visible in the period to 2012. There is no need to engage in protest, as more people experience the benefits of an effective and responsive government. This actor therefore changes to become a relatively neutral driver of feedback.

9.3.2.7 The media and civil society exert great influence

The media and civil society play a prominent role in directing feedback into this scenario, as access and availability of demand mechanisms continue to proliferate. In the initial years after the ANC introduces its reforms, it is likely that many of these actors will be very critical of such reforms. For example, repealing aspects of labour or empowerment legislation will be seen by sections of the press as contrary to the demands of poor and black actors. It must be expected that some civil society groups may seek to challenge such reforms in the courts on the grounds that they undermine worker rights, for example. However, in time, as the government rides out initial criticisms of its reforms, it becomes obvious even to the most fervent critics that growth in employment is driving a rise in living standards and a decline in protest action. This must see these same media and civil society actors come to welcome the reforms. Towards the end of this scenario, these actors too change to become predominantly drivers of negative feedback.

Represented on the pendulum graphic the seven major system actors look as follows in this scenario:

Figure 34: Major system actors for the "New Road" scenario



9.3.3. System variant change for the “New Road” scenario

In terms of the KDFs acting on the system this is a scenario that sees dramatic improvements in effectiveness while remaining an open system. Like the first scenario, in recording rapid levels of growth and improved education, the system is now meeting the demands of the majority of its actors. This will be evident in rising income, investment, and employment levels. Also, declining dependency and rising revenues to invest in welfare programmes will further meet the demands of actors. The system has therefore changed from being an ineffective system to an effective one which has brought about significant changes in actor behaviour.

In the current system it was shown how the majority of actors were drivers of positive feedback. That led to the conclusion in chapter six that the system was an unstable one. However, in this scenario that has changed. All the 6 remaining actors in the system (the protest movement falls away), are now drivers of negative feedback. The behaviour of the system has therefore changed very dramatically and, as in the scenario above, can no longer be described as unstable. The question again is whether its behaviour is stable or evolving. A case can again be made for both. However, in this case the transformation of the system has come about solely through evolutionary policy responses from the government, as it sought to save itself from what looked, in 2012, like an inevitable political demise. Unlike the first scenario, this was not aided by a restriction on positive feedback mechanisms in an effort to enforce stability on the system. Hence the behaviour of this system is best described as evolutionary.

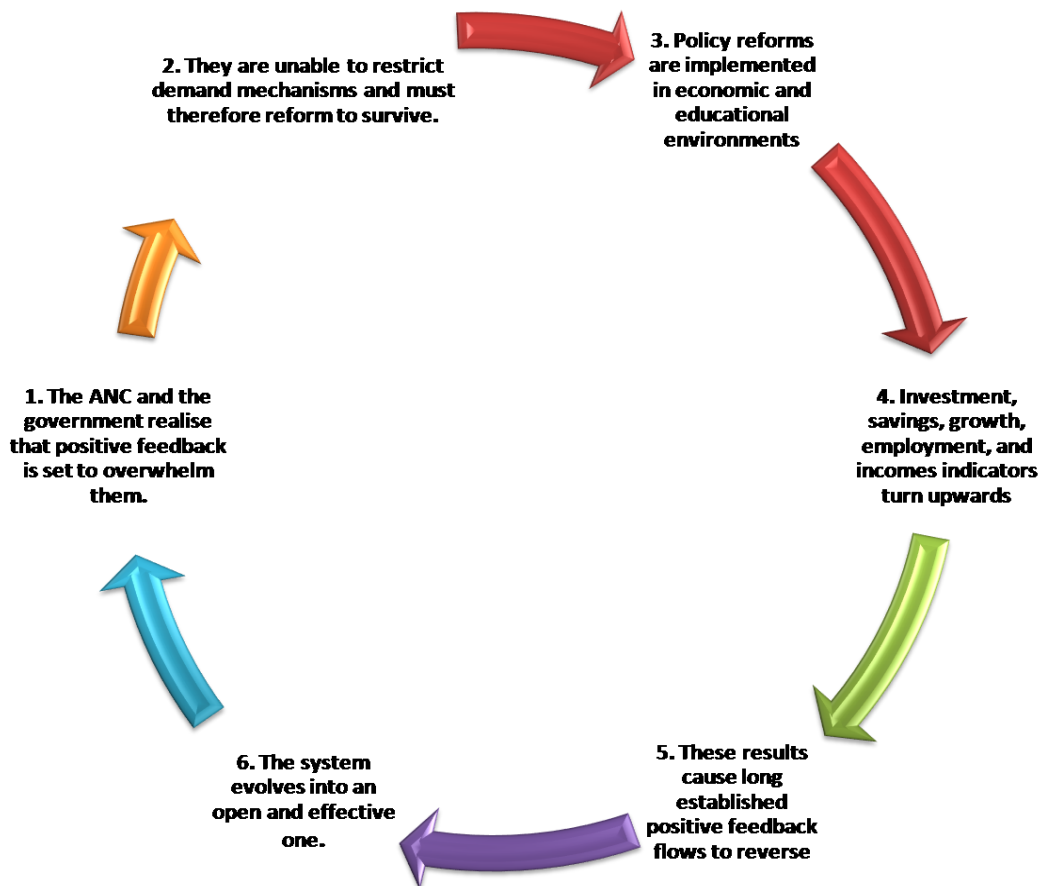
Overall, this is a scenario that sees system variant change from its benchmark categorisation of a 12 to a 20 as shown on the system variant table below:

Table 16: System variant of scenario two

TYPE	STABLE	UNSTABLE	OSCILLATING	CHAOTIC	EVOLVING
Ineffective closed	1	2	3	4	5
Effective closed	6	7	8	9	10
Ineffective open	11	12	13	14	15
Effective open	16	17	18	19	20

In terms of causality the major steps the system followed away from the benchmark system are as follows:

Figure 35: Causality leading to system variant change for the "New Road" scenario



The graphic shows that this scenario starts with the ANC realising that positive feedback will remove it from power. It therefore is inspired to move swiftly to change its policy mix to one that is more attractive to investors and allows more people access to previously heavily regulated labour markets. Growth, investment, and employment levels pick up as a result of these reforms. These changes prompt the established trends of positive feedback flows into the system to reverse in favour of negative feedback flows, which secures the future of the ANC in power. The system therefore remains open but becomes effective as a result of the ANC's policy evolution.

Represented according to the four-tier structure of a political system, as was done with the benchmark political system in chapter six, the system described above looks as follows:

Table 17: Four-tier model for the "New Road" scenario

Tier one	Political system characteristics	<u>Actors:</u> Of the six remaining major actor groups (the protest movement falls away) in the system all are drivers of negative feedback.	<u>Regime:</u> There is little to no change to the constitutional regime of the system.	<u>Demand mechanisms:</u> These mechanisms proliferate in the system. The six major demand mechanisms identified in the benchmark system remain active although protest levels decline towards the end of this scenario.	<u>Output mechanisms:</u> The interventionist and developmental thrusts of policy, that were so prominent a decade ago, now take second place to the growth thrust.
Tier two	Attributes	<u>Presence of demand mechanisms:</u> The system features a very broad spectrum of demand mechanisms.	<u>Access to demand mechanisms:</u> There is wide and free access to demand mechanisms.	<u>Effectiveness:</u> In terms of education, employment, equality, and investment, the system now matches the performance of other emerging markets and is therefore effective in meeting the demands of its actors.	
Tier three	System type	<u>Open effective:</u> The system has remained open but output changes have seen it become effective in meeting the demands of its actors	<u>Open ineffective:</u> X	<u>Closed effective:</u> X	<u>Closed ineffective:</u> X
Tier four	System behaviour	<u>Stable:</u> X	<u>Unstable:</u> X	<u>Oscillating:</u> X	<u>Chaotic:</u> X
					<u>Evolving:</u> The government has survived solely through changing policy in order to reduce the risks to itself that were evident in the rising positive feedback of the benchmark system.

9.4. SCENARIO THREE: “DANGEROUS ROAD” (the closed, ineffective, oscillating system)

The third scenario sees the state actively directing and also participating in economic activity in the system, both as a player and referee. It also restricts access to demand mechanisms. Here the government takes a number of political and economic wrong turns, and places South Africa on the road to long term economic and political disaster. For this reason the scenario is christened “dangerous road”. These wrong turns commence with the government taking direct management control of the South African

economy. Alarmed at falling growth and investment levels, and amidst a frenzy of protest and dissatisfaction, the government moves quickly to undermine any mechanism via which actors in the system can remove it from power. By the time the majority of actors realise what they have allowed to happen, the government is cemented in power and able to act with impunity.

9.4.1. Key Driving Forces

Presented in terms of the five KDFs the system changes as follows:

9.4.1.1 The first Key Driving Force: The tripartite alliance breaks the rules and clings to power

The first KDF relates to the future of the tripartite alliance and the government it leads. In this scenario the reformists have lost the battle over economic policy reform in the ANC. Elements of COSATU, the SACP, and the Youth League (YL) have convinced the alliance that the state must direct the economy both as a player, through parastatals, and as a referee in directing the efforts of private investors. In other words, the battle over economic policy has been settled in favour of the blueprint laid out in the NGP document. However, the state's efforts continue to suffer from the same corruption and inefficiency that characterised the management of many government departments and state-owned enterprises in the period to 2012. The radical changes have been unable, therefore, to generate the growth and investment levels necessary to meet the demands of actors in the system. This is particularly true for the poor 50% of actors who remain largely unemployed and badly educated. However, despite this failure to meet demands, the ANC remains firmly ensconced in power in South Africa. The reason for the party remaining in power, despite its poor track record in meeting the demands of actors, relates to what the party does to demand mechanisms in the system. Early in this scenario, the party sees that its reforms are not meeting the demands of actors in the system. It knows that the rising levels of positive feedback witnessed in the period up to 2012 are set to continue. Unable to introduce negative feedback through meeting actor demands, it realises that its only chance at political survival is to limit mechanisms for positive feedback to the greatest extent possible (described under the relevant subsection below). This has the desired effect, and as it secures the alliance leadership in power, it becomes a strong driver of negative feedback. However, it does so at the

expense of the openness of the system as the ANC forces a slide down the openness axes of the triangular system type diagram.

9.4.1.2 The second Key Driving Force: Access to demand mechanisms is lost

In terms of the second KDF, which relates to access to demand mechanisms, the party therefore sets about a destructive campaign of undermining such mechanisms. Rather than responding to popular dissatisfaction, the government acts to restrict the availability of, and access to, demand mechanisms so as to prevent positive feedback driving it from power. All of the six major demand mechanisms identified in chapter six are undermined in this scenario.

Where it faces an electoral threat, the party uses its political control of the IEC to undermine the registration of opposition parties, to disqualify them on technicalities, and in extreme cases to engineer the results of certain electoral outcomes. Likewise, it uses its control of the Judicial Service Commission (JSC) to appoint judges sympathetic to its political ideology of NDR. Similarly, the heads of the Chapter Nine institutions are carefully selected for their political loyalty. Opposition political parties and their supporters are harassed and their funding sources restricted. Public protest action is restricted through reference to legislation such as the Gatherings Act and appeals to public order. Protest leaders are identified as sell-outs and counter-revolutionaries. The party uses its control of the prosecution and security services to bring investigations and charges against community leaders and to forcibly stamp out protests that do occur. The media is strictly regulated in this scenario, possibly to the extent of having to register with a government body in order to receive accreditation to report on South Africa.

Strict new information and confidentiality laws further restrict the information the media may report on. Civil society is harshly regulated and great pressure is put on foreign governments and domestic funders not to support organisations that the state accuses of destabilising the country. Of course many organisations and courageous journalists fight very hard to oppose the restrictions. However, they are alarmed to find that their appeals to the courts and to the Chapter Nine institutions are ineffective. Legal challenges are dragged out for years, or Chapter Nine cases simply ignored or buried in procedural matters or bureaucracy. In addition, civil society is increasingly denied the

financial resources it requires to fight the state in the courts. Even where courts find against the state, this is a scenario where such findings are at worst ignored or become the subject of long and expensive appeals. Of course, the declining socio-economic circumstances of many actors in the system causes them to constantly identify new means of placing positive feedback on the system. New unregistered advocacy groups may be formed, social media campaigns may be launched, and individual journalists may act bravely to report on state abuses. However, as soon as these new mechanisms come to the attention of the government, it acts swiftly to undermine them, forcing actors to seek new mechanisms. This KDF too forces a slide down the openness axis of the triangular system type diagram. Ironically therefore this KDF becomes a driver of negative feedback, as actors are less and less able to use demand mechanisms to bring about change in the system.

9.4.1.3 The third Key Driving Force: Economic growth and investment stagnates

In terms of the third KDF, which relates to growth levels, this is a scenario of low growth, declining investment, and limited, if any, job creation. The battle of economic policy has ultimately been won by the interventionists over the reformists. Initiatives along the lines of those suggested by the NGP of a decade ago have been implemented. As a result the state intervenes directly into a number of economic sectors via various industrial policy plans that effectively instruct private investors in what to do and where to invest, creating a hostile environment for private investors. This results in the stagnation or even decline in private investment levels. This in turn results in declining government revenues and also in declining employment growth. Greater and greater pressure is therefore placed on the state to meet the demands of increasingly desperate poor actors who are seeing their living standards erode. As the government is forced to borrow increasing amounts of money, its debt bill begins to spiral out of control. At the same time, a weakening rand and increases in administered prices drive inflation which erodes the real value of income earned and welfare received by actors in the system. This KDF sees the system remain ineffective. Low growth and investment therefore becomes a driver of positive feedback.

9.4.1.4 The fourth Key Driving Force: Demands for welfare support are not met

The fourth KDF relates to the state's ability to meet the welfare demands of its actors. In this scenario, because of deteriorating economic conditions, high inflation, low investment, a high budget deficit, and declining tax revenues, the government is unable to meet these demands. Because of limited (if any) job growth, and possible net job losses, demands for welfare support are spiralling. It is also the case that the real value of welfare payments is eroded by inflation. Again this is a KDF that ensures the system remains low down on the effectiveness axis of the triangular system type diagram. This KDF therefore becomes a driver of positive feedback.

9.4.1.5 The fifth Key Driving Force: The interventionists win the economic policy battle

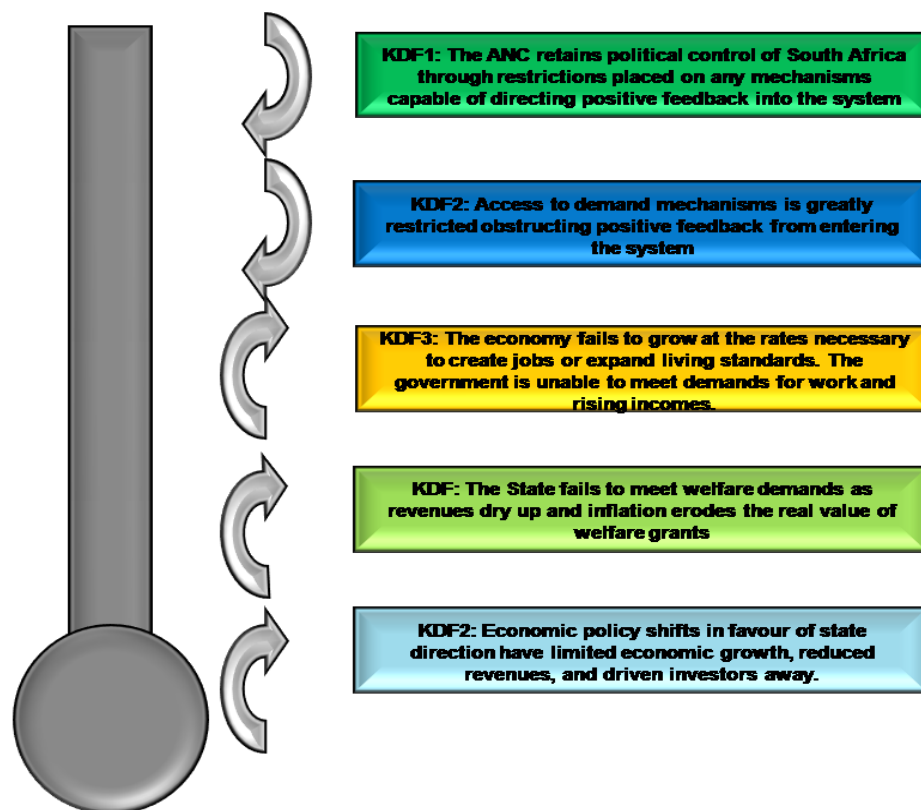
The fifth and final KDF, of economic policy shifts, has, as described above, culminated in the state's complete commitment to the interventionist and developmental branches of policy. Specifically, initiatives such as stricter labour regulations and higher minimum wage levels have been implemented. Likewise, high local content requirements for manufacturers and retailers are introduced. Pension funds are forced into prescribed investments in state-led industrial ventures. These see the establishment of state-owned steel, construction, and agricultural enterprises. In order to secure the viability of these enterprises, tariff barriers, arguably in violation of international agreements, are put into place, while international investment protection agreements are allowed to lapse. Most large private sector investors are required to enter into public-private partnerships in a number of fields where they carry the bulk of the risk while having to share revenues with the government. The activities of private investors are therefore increasingly heavily regulated and taxed in order to fund the state's economic expansion plans.

These plans, however, continue to suffer from the same inefficiencies and corruption that have plagued many government departments and parastatals since 1994. This is especially so, as growing restrictions on demand mechanisms make it increasingly difficult for actors to hold their representatives in government to account, leading to a fertile environment for corruption. Collectively, the changes create such a hostile investment environment that flows of new investment, both foreign and domestic, start

to dry up. At the same time the profitability of domestic producers declines, and so too therefore does the tax take of the government. The middle classes and any actors skilled enough to find employment overseas consider leaving the system, and emigration starts to starve it further of tax revenues and now also of skills. A government desperate for revenues, now largely able to act with impunity, further regulates and taxes those investors and skilled actors that remain in the system until these too become unproductive or pull out of the system. This is therefore the predominant KDF maintaining the system's position on the low end of the effectiveness axis of the triangular system type diagram. This KDF therefore becomes perhaps the most important driver of positive feedback.

Represented on the pendulum diagram the scenario looks as follows:

Figure 36: Key Driving Forces in the "Dangerous Road" scenario



9.4.2. Actors in the "Dangerous Road" scenario

As a result of the underperformance of the economy, the majority of the seven major actor groups in the country experience much hardship. However, with limited means for

them to place demands on the system the ruling party and the government survive their dissatisfaction.

9.4.2.1 A hostile investment environment

The investment community, for example, finds itself facing a hostile and heavily regulated investment environment stacked in favour of state-led corporations and parastatals. Many of the concerns of business leaders in the benchmark system of 2012 are realised. Unable to compete effectively in such an environment, this community starts to look for opportunities outside of South Africa. Of course, many companies remain in South Africa but these are forced to limit their expansion plans. Those that remain are faced with ever greater regulatory and tax burdens as the government seeks to squeeze the maximum amount of revenue out of them, in a desperate effort to meet its welfare and other expenditure demands. In this scenario the business and investment community is a driver of positive feedback as it contributes ever less value to the South African economy.

9.4.2.2 Middle class lifestyles deteriorate

The middle classes are particularly unhappy in this scenario. Their wealth is being undermined by a weakening currency and high inflation. In addition, their business interests have become less profitable and productive. It is also likely that their property rights are being eroded, as a now desperate government seizes these as a resource to distribute to the increasingly angry poor. The middle classes are further dismayed at the erosion of civil liberties in the system. However, they find that the means to express that dissatisfaction and force change in the system are limited by the undermining of demand mechanisms. Dissatisfied with such a state of affairs, the most talented and mobile leave South Africa for opportunities elsewhere. As they contribute less and less to the South African economy, they too serve as drivers of positive feedback.

9.4.2.3 The living standards of the poor stagnate

Despite 15 years of improvements in living standards and incomes following the 1994 transition, by the later stages of this scenario, the poor 50% of actors have experienced a decade of stagnation and even reduction in their income and living standard levels. Low growth means that jobs have not been created. Price increases on basic goods

have occurred on the back of a weakening rand, high inflation, and a deteriorating domestic economy. The erosion of property rights, especially in relation to commercial farming land, drives food price inflation, causing the real value of welfare grants to decline. However, these poor actors have limited means of making their dissatisfaction felt. Protest action has been restricted by the security forces and the protest leaders described as counter-revolutionaries or threats to the state. Despite seething resentment and dissatisfaction with the government, communities realise that short of revolution they no longer have the means to drive it from power. These actors are a significant source of positive feedback but the impact of that feedback is limited by the extent to which demand mechanisms are undermined.

9.4.2.4 The ruling party acts with impunity

The ANC, initially alarmed at the failure of its economic policy framework, has moved quickly and effectively to cement its position in power. By limiting the effectiveness of demand mechanisms, it has limited the flow of positive feedback into the system. By default therefore the balance of feedback in the system has shifted in favour of the negative, and this has secured the party's future in power.

9.4.2.5 Political opposition becomes ineffective

The political opposition finds itself in an increasingly activist role, as it fights the state's efforts to reduce access to demand mechanisms. Reviled by the ruling party, opposition politicians may well be popular enough to win a truly free election if such a thing were possible. However, again due to the absence of demand mechanisms, the opposition finds it difficult to effectively introduce positive, systems-changing, feedback into the system.

9.4.2.6 The state cracks down upon shows of mass dissent

The protest movement, that would have been expected to be particularly prominent in this scenario, is fatally weakened by the restrictions on demand mechanisms. Hence, while there are regular socio-economic and human rights-based protests, these are not occurring on anywhere near the scale that might have been expected considering the economic circumstances of the country. In the absence of legal and formal political means to challenge the state, these protests become the most prominent source of

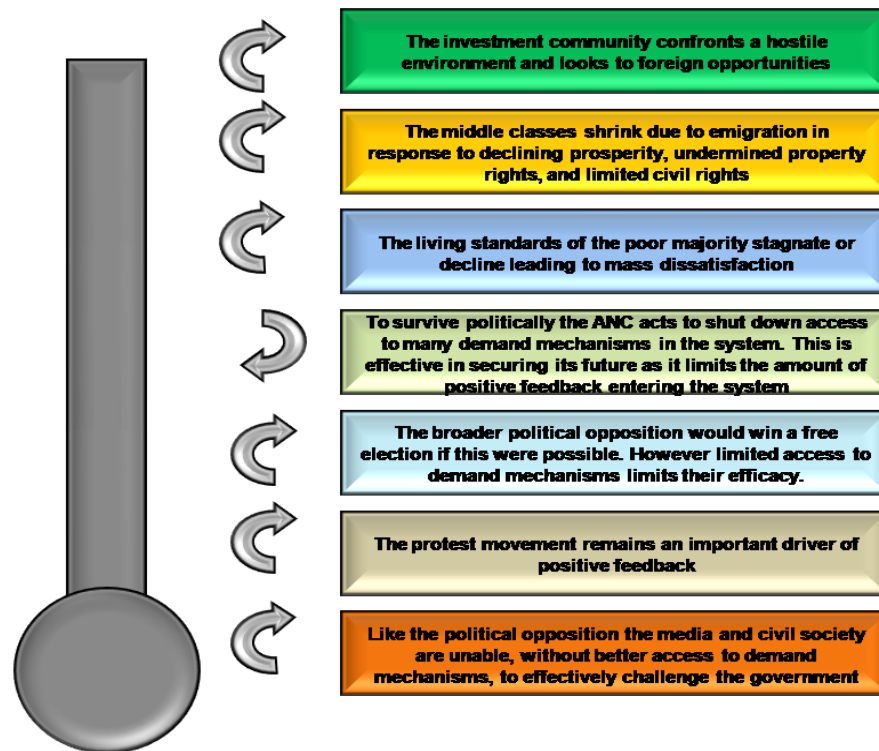
positive feedback into the system, although they are not prominent enough to remove the government from power.

9.4.2.7 The media and civil society are marginalised

The media and civil society have suffered numerous setbacks in the decade leading to this scenario. The state has realised the danger these two actors pose to its future in power and sought to undermine their influence as a driver of positive feedback. This is particularly ironic as many on the political left initially heralded the leftward economic policy shifts of the government. However, towards the final years of this scenario, laws have been passed restricting access to information and censoring certain forms of publication. Regulations now restrict the activities and funding efforts of the civil society sector. Even where these meet with outrage it is quickly apparent that a pliant judiciary, obstructive civil service, and abusive security forces will conspire to prevent challenges to new restrictive regulations. While obviously still a source of positive feedback, these media and civil society actors find their efficacy constrained by limited resources and draconian regulations.

Presented on the pendulum diagram, most actors have remained drivers of positive feedback. However it must be kept in mind that they no longer have access to the mechanisms they once had to make that feedback felt on the system.

Figure 37: Actors in the "Dangerous Road" scenario



9.4.3. System variant change for the "Dangerous Road" scenario

This is therefore a scenario which, unlike the first two scenarios, does not see the growth and employment necessary to meet the demands of actors in the system. Taken to its extremes, this is a scenario that sees declining living standards. In terms of effectiveness the system described by this scenario must still be classified as an ineffective one. The system does, however, differ from the original benchmark system in that the KDFs bring about an erosion of demand mechanisms and actors find it increasingly difficult to make their demands felt on the system. It therefore changes from an open to a closed system.

In chapter six the realisation that the majority of actors were introducing positive feedback led to the conclusion that the benchmark system was an unstable one. However, because of restrictions on demand mechanisms in this scenario, that has changed. Despite most actors being drivers of positive feedback, they have only limited means of making that feedback felt on the political system. The six demand mechanisms that were so prominent in the benchmark system, including elections, courts, Chapter Nine institutions, political parties, protests, and the media and civil society, have been undermined to a point that they have become significantly less

effective. Obviously, with so many drivers of positive feedback the system could not be described as stable. However, with limited means to express that feedback, it is unlikely that the system is unstable or chaotic. Indeed, it was by limiting positive feedback that the government has been able to stay in power and overcome the instability that threatened its future a decade ago. However, the demands of so few actors are being met that the system cannot be described as stable. The only conclusion to reach therefore is that this is a system of oscillating behaviour. As described in chapter two of this study, oscillation may occur in a political system where a government seeks to undermine positive feedback by limiting access to demand mechanisms, so ushering in a period of stability. However, desperate actors quickly find new demand mechanisms causing a period of instability before these mechanisms too can be undermined. Hence, the system oscillates between periods of relative stability and calm followed by periods of rising instability.

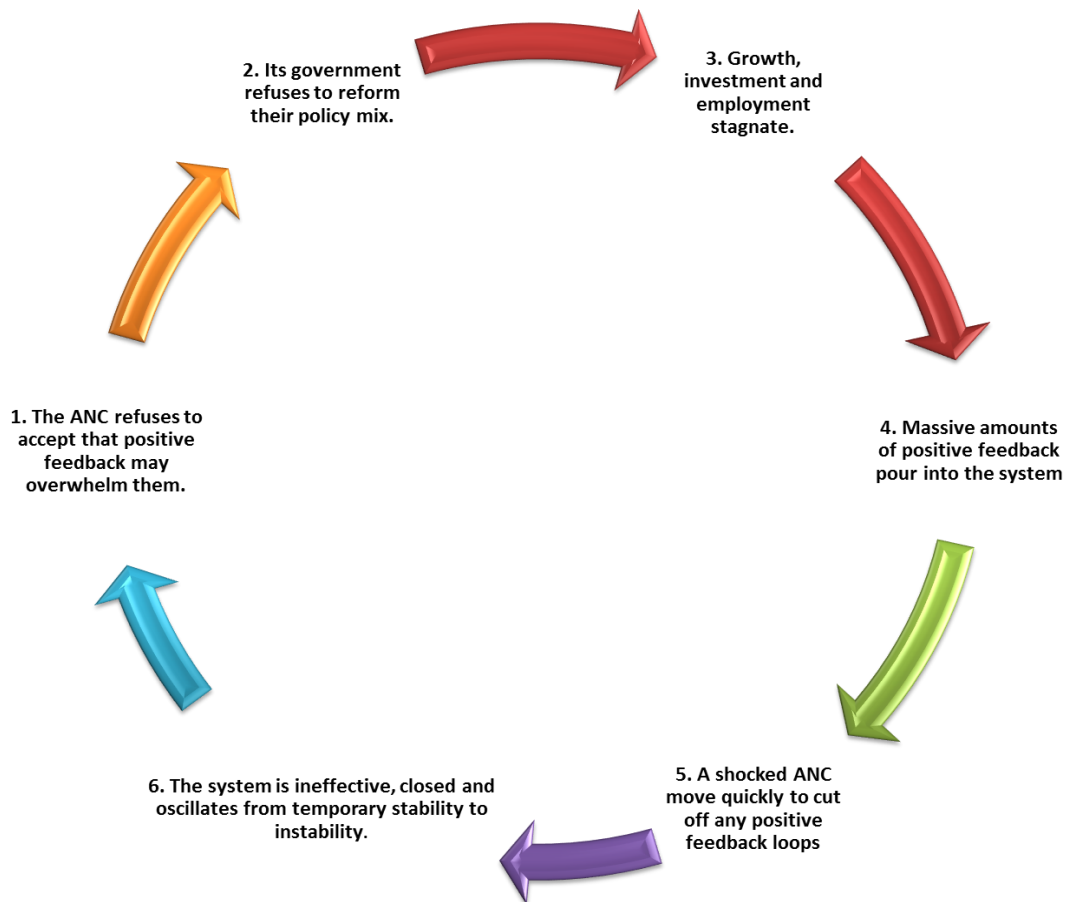
Overall, this is a scenario that sees system type and behaviour change from its current categorisation of a 12 to a 3, as shown on the system variant table below:

Table 18: System variants of scenario three

TYPE	STABLE	UNSTABLE	OSCILLATING	CHAOTIC	EVOLVING
Ineffective closed	1	2	3	4	5
Effective closed	6	7	8	9	10
Ineffective open	11	12	13	14	15
Effective open	16	17	18	19	20

This time, in terms of causality, the major steps the system followed away from the benchmark system are as follows:

Figure 38: Causality leading to system variant change for the "Dangerous Road" scenario



The graphic shows that in terms of causality, this scenario starts with the ANC refusing to accept that positive feedback may drive it from power. It therefore does nothing to change policy track. Growth, investment, and employment levels therefore stagnate. This prompts increasing positive feedback flows in the early stages of the scenario. The ANC moves quickly, and desperately, to shut down the feedback mechanisms carrying this feedback in a bid to restore a measure of stability to the system. This has the effect of changing the system into a closed, ineffective, and oscillating one.

This is the worst case scenario for South Africa. The variant table and causality diagram above shows that the variant of system has changed completely from the open, ineffective and unstable system described in chapter six. The system suggested by this scenario is now a closed, still ineffective, but oscillating system. Represented according to the four-tier structure of a political system, as was done with the benchmark system in chapter six, the system described above looks as follows:

Table 19: Four-tier model for the "Dangerous Road" scenario

Tier one	Political system characteristics	<u>Actors:</u> All major actor groups, less the ANC led government, are drivers of positive feedback but lack the means to make that feedback felt on the system.	<u>Regime:</u> The regime has changed significantly. A number of social, economic, and political rights have been eroded even if they have not been changed in the constitution itself.	<u>Demand mechanisms:</u> The presence and access to all six of these mechanisms have been eroded.	<u>Output mechanisms:</u> The interventionist thrust of policy now completely dominates the policy framework implemented by the government.	
Tier two	Attributes	<u>Presence of demand mechanisms:</u> A number are nominally still present in the system. For example elections are still held, courts still sit, and newspapers are published.	<u>Access to demand mechanisms:</u> Free access to these mechanisms has been curtailed.		<u>Effectiveness:</u> Living conditions and incomes stagnate and even decline.	
Tier three	System type	<u>Open effective:</u> X	<u>Open ineffective:</u> X	<u>Closed effective:</u> X	<u>Closed ineffective:</u> The system cannot meet the demands of its actors and denies them the mechanisms to demand a change of system.	
Tier four	System behaviour	<u>Stable:</u> X	<u>Unstable:</u> X	<u>Oscillating:</u> Periods of stability are interspersed with periods of instability as actors find new means to place demands on the system before these new mechanisms are also eroded.	<u>Chaotic:</u> X	<u>Evolving:</u> X

9.5. SCENARIO FOUR: "TOLL ROAD" (the open, ineffective, chaotic system)

The fourth is a scenario where the state takes primary responsibility for directing investment and output in the South African economy as described above. However, this scenario differs in that the presence of, and access to, demand mechanisms continue to proliferate. Therefore the scenario or route taken describes a 'toll road', as a reference to controversial government efforts in 2012 to toll freeways in and around Johannesburg. Here, an ideologically obstinate government places such restrictions on the free flow of capital and skills in the economy that growth levels stagnate and even decline. A wide range of actors, frustrated that their demands are not being met, come together to remove the government from power.

9.5.1. Key driving forces for the “Toll Road” scenario

The five KDFs turn out as follows in this scenario:

9.5.1.1 The first Key Driving Force: The tripartite alliance loses control

In terms of the first KDF this is a scenario that sees the tripartite alliance lose political control of South Africa. This outcome results from increased levels of positive feedback emanating from actors disappointed with the economic performance of the government and its resultant inability to meet their demands. Economic performance has been weak, and amidst declining investment, GDP growth, employment and rising inflation almost all individual actors experience a decline in their living standards. Because of the extent of access to demand mechanisms, most notably the electoral system, these actors remove the ANC from power. Towards the late stages of this scenario, either at the 2019 or 2024 national elections, the ANC loses its electoral majority to an opposition coalition. This is an assessment in line with the trends identified in the benchmark system, of the ANC’s share of the eligible vote slipping steadily since 1994. After more than two decades of uninterrupted rule this change of government will introduce all manner of positive feedback into the system.

An important question, of course, relates to who will lead the coalition that unseats the ANC. In answering that question it is important to consider that the period leading up to the electoral demise of the party sees a rise in radical sentiment in the country. This would be in keeping with the trends identified in the benchmark system, which showed that almost a third of actors expressed support for ideas such as the nationalisation of mines. It must also be kept in mind that this is a scenario where educational performance remains weak. The majority of individual drivers of change in the system are therefore likely to be both poor and badly educated, meaning that they are particularly sympathetic to radical promises. It is questionable therefore whether this is a scenario that culminates in a moderate or even liberal political party, such as the DA, taking over the reins of power in the country. This is of course possible where the DA leads a broad coalition in a campaign that juxtaposes its success in the Western Cape against failures by the ANC to meet demands in the rest of the country. The DA has the experience of leading just such a coalition where it unseated the ANC in Cape Town in the early 2000s. However, it is also plausible the ANC may lose to an even more radical

and ideologically driven movement than itself. Whatever the outcome in terms of who comes to lead South Africa's government, in this scenario, the demise of the ANC is a driver of positive feedback.

9.5.1.2 The second Key Driving Force: Actors control the system

In terms of the second KDF this is a scenario that has seen no undermining of demand mechanisms. All the six major demand mechanisms identified in the benchmark system of chapter six remain available and accessible to the majority of actors in the system. Throughout this scenario a variety of political, civil society, and media actors refer a host of matters to the courts in an effort to force the government to meet its constitutional obligations in terms of socio-economic rights. The Chapter Nine institutions, especially the office of the public protector and the auditor general, are active in holding the government to account. Opposition political parties are gaining ground, as disillusioned former ANC supporters place their faith in new, and possibly very radical, political movements. The number and intensity of protests have escalated very quickly. These are now routine at local, provincial, and national level. No longer directed mainly at the government, these are now also directed at ANC offices, as actors realise that their unmet demands originate in policies implemented by the ANC. For their part, the media and civil society are scathing of the failure of the government to raise living standards and achieve greater economic equality. All the above would create the positive feedback that the opposition coalition may capitalise on in unseating the ANC. This KDF is a clear driver of rising levels of positive feedback.

The question arises as to why, faced with such volumes of positive feedback, the ANC has not moved to restrict demand mechanisms as is the case in the scenario above. The reasons include that despite their cadre-deployment policies, they have been unable to enforce the political loyalty they demand from the judiciary and the Chapter Nine institutions. As a result a host of civil society and other actors have successfully challenged, through the courts, various proposed policies that would infringe on the Constitution. In addition, initial efforts at maintaining order by the security forces have been overwhelmed by the scale and growth of the protest movement. Abuses perpetrated in stamping out some protests have made international headlines and drawn widespread condemnation. Finally, the factionalized nature of the alliance has prevented the united front necessary to stamp out the growing positive feedback.

Alliance members are using failures of policy to score cheap political points against each other.

9.5.1.3 The third Key Driving Force: Growth and investment levels disappoint

In terms of the third KDF, the system has failed to achieve growth levels necessary to meet demands for employment or higher incomes for the 50% of poor actors. In addition, investors and the middle classes face a hostile and low growth environment that does not meet many of their demands for rising incomes and deepening domestic markets. Revenues are in decline and the productive sphere of the economy is shrinking. Skills and investment are lost. In desperation, the state is racking up higher debt-servicing costs as it borrows to meet its expenditure obligations. This KDF maintains the systems position on the lower end of the effectiveness axis of the triangular system type diagram and possibly forces it even further down that axis. Collectively, low growth and investment levels result in positive feedback emanating from both the rich and the poor, as they all demand changes to the system.

9.5.1.4 The fourth Key Driving Force: Welfare fails to meet demands

Because of that low growth and investment the state does not have the resources to meet rising demands for welfare. Lower tax takes, higher debt levels, and rising inflation undermine the real value of welfare payments. A simple lack of resources prevents the state from meeting demands for free services such as housing and electricity. Again the inability of the system to meet demands means that this KDF maintains the system's position on the lower end of effectiveness axis of the triangular system type diagram. Rising demand and a declining supply of such services therefore becomes a driver of positive feedback.

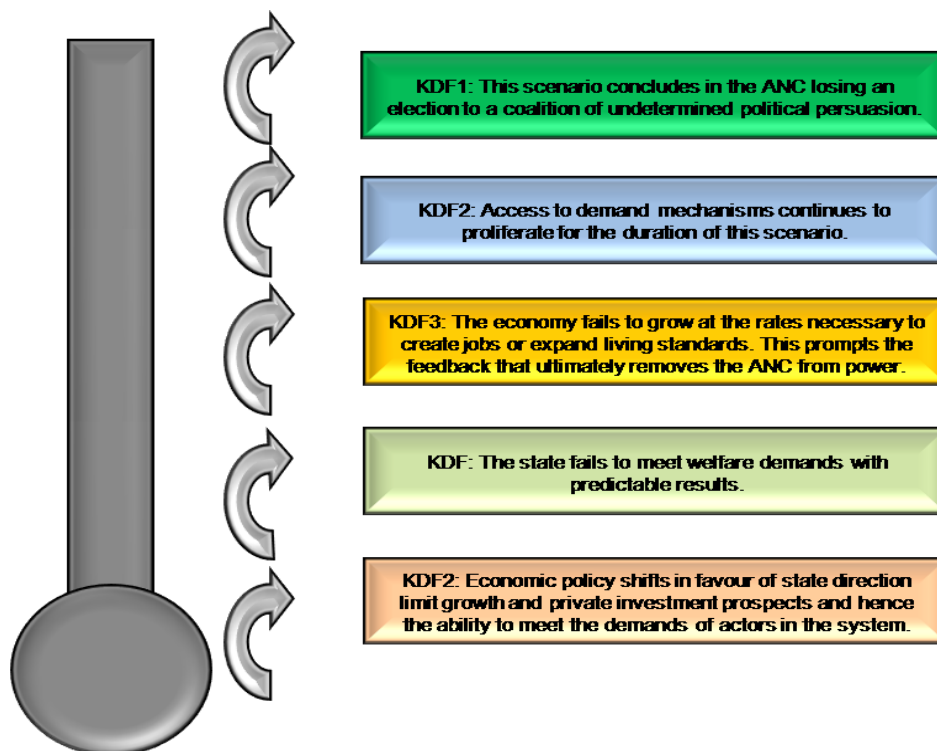
9.5.1.5 The fifth Key Driving Force: The interventionists have dominated economic policy-making

In terms of the fourth KDF the economic policy fight in the ANC was ultimately won by the interventionists. They, however, have come to preside over a low growth economy unable to meet the demands of almost all actors in the system. Overly regulated and taxed, private investors have frozen new capital commitments to South Africa. The declining profitability of the business sector has driven a decline in tax revenues. The

economic shifts have therefore made it impossible for the government to meet the demands of almost all actors in the system. As for the two KDFs above this KDF also acts to maintain the system's position on the lower end of the effectiveness axis of the triangular system type diagram. This KDF becomes the single biggest source of positive feedback entering the system.

Represented on the pendulum diagram, this system looks as follows:

Figure 39: Key Driving Forces for the "Toll Road" scenario



9.5.2. Actors in scenario four

As in the scenario above, the majority of the seven major actor groups in the country experience much hardship. However, in this scenario they have the demand mechanisms to bring about changes to the system.

9.5.2.1 Investors rebel against an increasingly restrictive investment environment

In this scenario the investment community finds itself facing a hostile and heavily regulated investment environment, stacked strongly in favour of state-led corporations. However, its decreasing contribution to the economy in the form of limited new investment, limited new job creation, and declining profitability compromises the ability

of the state to meet the demands of other actors in the system. For example, declining tax revenues make it impossible for the state to meet welfare demands. Declining investment leads to job losses and therefore adds to the welfare burden, as newly unemployed people look to the government to meet their demands. Declining investment and corporate profitability lead to much positive feedback.

9.5.2.2 The middle class acts to bring policy change to the system

The middle classes are again particularly unhappy in this scenario. Their demands for improving living standards are not being met. Their wealth is being eroded through high inflation and a weakening rand. Their property rights are under threat, as a desperate government seeks, unsuccessfully, to seize property in an effort to meet the demands of poorer actors in the system. However, unlike the scenario above, the middle classes here use their unrestricted access to the media, civil society, opposition parties, and the courts to pour massive amounts of new positive feedback into the system.

9.5.2.3 The poor rise up and drive the government from power

The poor 50% of actors are doing precisely the same thing in this scenario. They realise that promises of meeting their demands for work, education, and rising living standards will not be realised. Initially in the protest movement, but also, towards the late stages of this scenario, by supporting new political alternatives, they are actively seeking to bring a change to the system. It is true that being badly-educated and angry, they may easily be taken advantage of by new even more radical movements that promise even more than the ANC did. Hence, this scenario must not suggest that these poor actors will necessarily introduce a more effective or open government than the one they remove. It is possible that as long as actors in the system retain access to demand mechanisms, the demise of the ANC may herald a period in which governments are removed from power one after the other as each fails to deliver on the demands of the poor majority of actors. Only a government that effectively meets demands, or one that restricts demand mechanisms, may put an end to this cycle. Regardless of the exact outcome, this actor group introduces much positive feedback into the system.

9.5.2.4 *The ANC loses an election*

The ANC, initially alarmed at the failure of its economic policy framework, is too wracked by infighting to save itself. This scenario suggests that rather than making a desperate bid to cling to power, the ANC will simply have to walk away from government after losing an election. Disillusioned cadres within the civil service want a change within the system. Hence the ANC's very own support base within the government and the civil service becomes an agent for change agitating for system reform. The security forces are certainly not prepared to act against their own people to keep the party in power. Democratic institutions remain strong enough to resist any effort by party bosses to co-opt them into undermining the change process sweeping through the society. Unable to restrict access to demand mechanisms, the ANC will really have no other choice.

9.5.2.5 *The opposition governs South Africa*

This scenario obviously heralds great opportunities for the political opposition to capitalise on massive amounts of positive feedback entering the system. However, it must be kept in mind that poor and angry people, possibly having suffered some decline in living standards, may be susceptible to even more radical promises than those of the ANC when it first came to power. It is not guaranteed therefore that a pragmatic and even liberal alternative to the ANC, such as the DA, will be the opposition movement that unseats the party. It is plausible that a radical leftist group comes to usurp the role of official opposition. This scenario therefore suggests two different outcomes depending on who succeeds the ANC. The first is a pragmatic coalition. If this outcome is realised then the scenario changes directly into either of the first two scenarios described above, as the new government introduces economic policy reforms to stave off future positive feedback. Alternatively, if a radical left-wing coalition unseats the ANC, then the outcome for the system changes. Here the ANC will be succeeded by a government that can also not meet the demands of actors in the system. This may change the system into scenario three, if this new government restricts demand mechanisms in order to remain in power. If it is unable to restrict such mechanisms, then the system moves into a chaotic state. In reaching any of these outcomes the opposition serves as a source of positive feedback.

9.5.2.6 Protests become a primary form of political expression

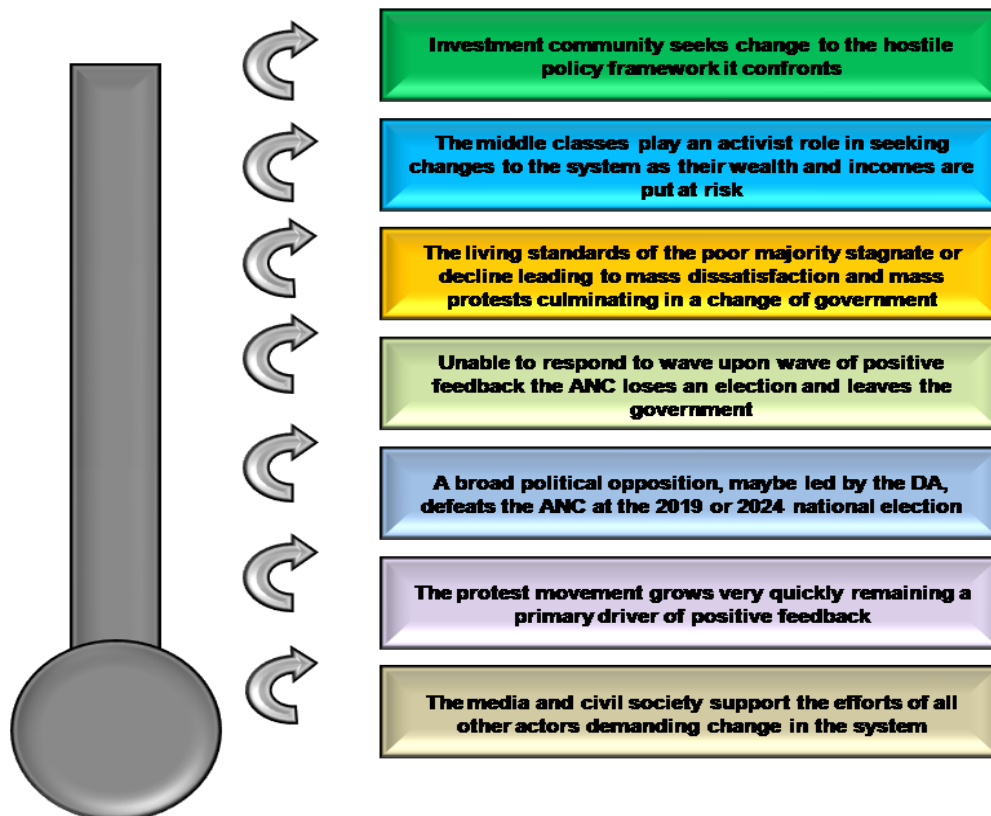
Throughout this scenario the growth of the protest movement will have been evident to observers in South Africa. Unable to meet actor demands for education and employment, the government has kept a significant number of actors dependent on welfare and handouts. Even where this has improved living standards, as was the case between 1994 and 2012, the state's inability to put actors in a position to meet their expectations via employment causes a sharp rise in protest action. In this scenario, it is doubtful if these past improvements will be maintained. Hence, there is no conclusion to reach other than that the protest movement will grow as a driver of positive feedback.

9.5.2.7 An active media and civil society role drive change in the system

With unlimited access to demand mechanisms, the media and civil society play a very active role in this scenario in supporting the efforts of the poor, the middle classes, and the business community to drive the ANC from power. Civil society groups will engage in all manner of activities aimed at highlighting the failures of the government, or forcing it to better meet the demands of actors in the system. The media will loudly and prominently draw attention to policy and other failures, while serving as a demand mechanism for a host of actors. In this scenario these two actors serve almost exclusively as drivers of positive feedback.

Presented on the pendulum diagram all actors in this scenario are drivers of positive feedback:

Figure 40: Actors in scenario four



9.5.3. System variant change in scenario four

This is a scenario where the KDFs serve to maintain the ineffectiveness and openness of the system. Unlike the first two scenarios this one does not see the growth and employment necessary to meet the demands of actors in the system. Taken to its extremes, this is again a scenario with declining living standards. In terms of effectiveness, the system described by this scenario must still be classified as an ineffective one. This scenario does, however, conclude with the demise of the ANC, which means that the system has been open enough to force a once powerful political actor from power. This scenario therefore comes to represent the archetypal weak state identified in chapter three, as a state unable to meet actor demands and unable to exert authority over those demands.

Consistent with its classification as a typical weak state all the seven major actors respond to the continued ineffectiveness of the system by introducing or contributing to positive feedback flows. It must therefore be a scenario of non-stable behaviour and system change. In the event where the ANC is defeated by a pragmatic coalition, the

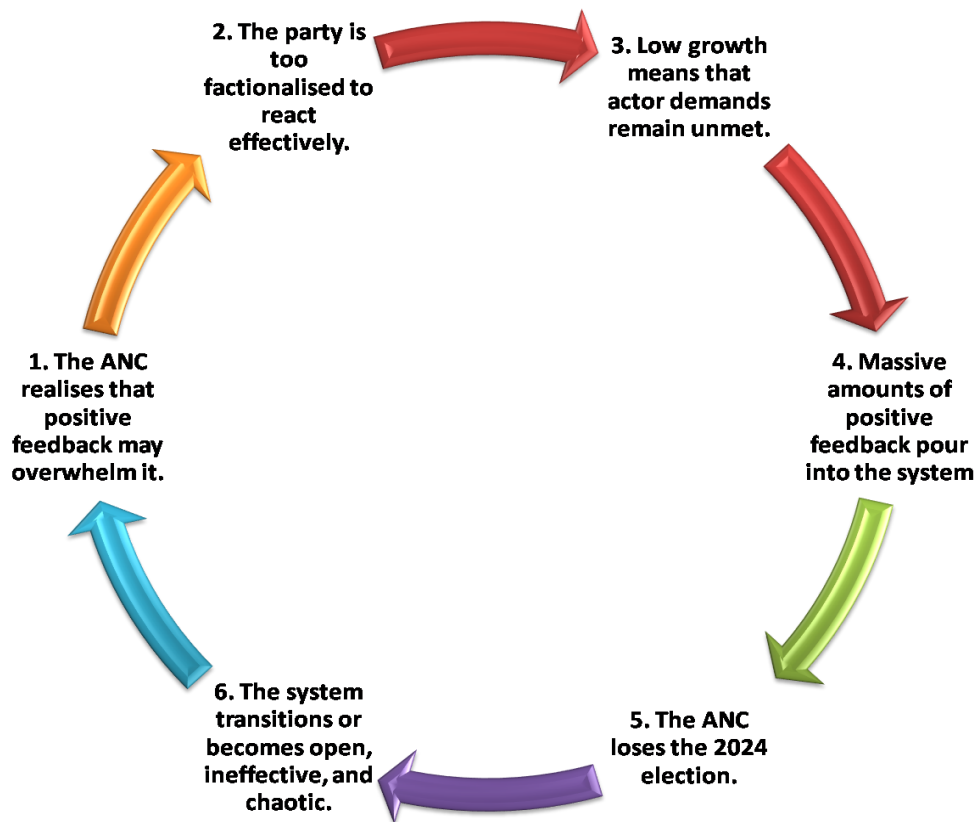
system moves directly into either scenario one or scenario two above. Here its behaviour therefore becomes stable or evolving. Alternatively if a particularly radical movement takes over from the ANC, the economic reforms capable of generating the GDP growth necessary to meet the demands of actors will not take place. Hence, the government that follows the ANC will be just as unable to meet the demands of actors as the ANC was. If this new government restricts access to demand mechanisms then it automatically moves the system into scenario three above. However, as long as demand mechanisms remain available within the system, this will see voters and other actors rejecting the new movement in favour of another. In other words the demise of the ANC sets in motion a chaotic outcome where a host of actors fight for access to resources in the system. Determining cause and effect in this system becomes difficult, as an array of different actors and forces seek to bring about an array of changes to the system. Hence, if this scenario does not change the system into scenarios one, two, or three above, it drives it into a state of chaos and heralds a change in system variant from the 12 of the benchmark system to a 14 as shown on the system variant table below:

Table 20: System variants for the "Toll Road" scenario

TYPE	STABLE	UNSTABLE	OSCILLATING	CHAOTIC	EVOLVING
Ineffective closed	1	2	3	4	5
Effective closed	6	7	8	9	10
Ineffective open	11	12	13	14	15
Effective open	16	17	18	19	20

In terms of causality the following major steps have secured this variant result:

Figure 41: Causality leading to system variant change for the "Toll Road" scenario



The graphic shows that in terms of causality this scenario starts with the ANC realising that positive feedback will remove it from power. However, for reasons of ideology, factionalism, or corruption the party is too weak to respond effectively to rising positive feedback. Low growth and investment and employment levels therefore continue to characterise the system. This prompts increasing positive feedback flows. These culminate in the collapse of the ANC government. This then changes the system into one of the previous three scenarios or drives it into a state of chaos.

Represented according to the four-tier structure of a political system, as was done for the benchmark, the system described above looks as follows:

Table 21: Four-tier model for the "Toll Road" scenario

Tier one	Political system characteristics	<u>Actors:</u> All major actor groups are drivers of positive feedback	<u>Regime:</u> The regime remains unchanged from that described in the benchmark system		<u>Demand mechanisms:</u> These remain the same as in the case of the benchmark system	<u>Output mechanisms:</u> The interventionist thrust of policy completely dominates the policy framework implemented by the government
Tier two	Attributes	<u>Presence of demand mechanisms:</u> There are a very wide array of these available in the system		<u>Access to demand mechanisms:</u> Access is virtually unlimited		<u>Effectiveness:</u> Living conditions and incomes stagnate and even decline.
Tier three	System type	<u>Open effective:</u> X	<u>Open ineffective:</u> The system cannot meet the demands of its actors prompting these to remove the governing party from power		<u>Closed effective:</u> X	<u>Closed ineffective:</u> X
Tier four	System behaviour	<u>Stable:</u> X	<u>Unstable:</u> X	<u>Oscillating:</u> X	<u>Chaotic:</u> If the changes in the system do not set scenarios 1-3 into motion then chaos will ensue. Various factions, parties, and interest groups react to the power vacuum resulting from the sudden demise of the ANC and fight for access to resources in the system.	<u>Evolving:</u> X

9.6. THE PROSPECTS FOR STABILITY OR INSTABILITY

The sub-sections above have laid out the answers to the focal question of the study as to what the prospects for political stability or instability in South Africa are in the period to 2024. The answer is that the prospects depend on how the most important and uncertain KDFs in the system will come together in the period to 2024. In chapter eight the most important KDF was described as access to demand mechanisms. The most uncertain was future economic policy.

It has now been shown that if the government engages in a process of policy reform that prioritises the role of private investors, while at the same time restricting access to demand mechanisms, then the prospects are that the system will change from being open to closed, from ineffective to effective, and from unstable to stable.

However, should the government engage in similar reforms while not restricting access to demand mechanisms, then the prospects are somewhat different. Under this second scenario the system will remain open, it will change from being ineffective to effective, and its behaviour will change from instability to evolution.

Thirdly, if the reformists lose the battle for economic liberalization in the ANC, and a desperate government curbs access to demand mechanisms, then the prospects again change. Under this scenario the system changes from being open to closed, it remains ineffective, and its behaviour shifts from instability to oscillation.

Finally, if the reformists lose their internal policy battle within the ANC but the government finds it impossible to restrict access to demand mechanisms, then the prospects again change. This change may herald a transition of the system into any one of the first three scenarios described above. Alternatively, if the system remains open and ineffective its behaviour will change to chaos as various factions clash over resources in the system.

Represented on the system variant table these four prospects for stability or instability can be shown as follows:

Table 22: System variants for scenario one, two, three and four

TYPE	STABLE	UNSTABLE	OSCILLATING	CHAOTIC	EVOLVING
Ineffective closed	1	2	3	4	5
Effective closed	6	7	8	9	10
Ineffective open	11	12	13	14	15
Effective open	16	17	18	19	20

The results show that the answer to the focal question of the study depends on what happens to demand mechanisms and macro-economic policy over the years to 2024. Where access to demand mechanisms is curbed, the system's behaviour will change from instability to either stability or oscillation depending on whether the private sector plays the primary role in directing economic activity in the system. Where demand

mechanisms are not curbed, this behaviour will change from instability to either chaos or evolution, depending again on economic policy decisions.

In terms of causality, the scenario matrix originally structured at the end of chapter nine can be amended showing the causal factors that lead to system variant change in each of the scenarios:

Figure 42: Scenario matrix of causality of systems variant change



This diverse range of variant outcomes, indicated on both the variant table and causality diagram above, bears out the theoretical point of departure of this study: that

the emergent nature of complex political systems will cause changes in their initial conditions to bring about great shifts in their futures. For example, whether the current South African government eventually commits to the blueprint of the NDP or NGP will determine whether it becomes a stable or chaotic system. Likewise, the ability or inability of individual actors, the media, and civil society to hold their government to account will result in equally diverse outcomes. It is not possible, therefore, without knowing the answers to questions such as what future economic policy options the government will pursue, to forecast the future of South Africa's political system to a specific point in time. This in turn bears out the methodological point of departure of this study: that it is necessary to follow a scenario approach, identifying the most important and uncertain drivers of future feedback and structuring these into a set of scenarios, in order to anticipate future shifts in the behaviour of a complex system. Such a process will result in a diverse series of outcomes for the future of the system. Then, at any point in time over the life of the scenario, by determining whether the conditions observed in the political system coincide with those described in a scenario, it will be possible to accurately describe the likely future circumstances of that system.

For example, if it is observed at any point in the future that the government is moving to implement policies in line with the NGP while simultaneously seeking to curb demand mechanisms, then it will be possible to suggest that South Africa is moving towards scenario three. However, if the reformists start getting the upper hand in the tripartite alliance, then South Africa's future will be drifting towards scenarios one or two. Likewise, if the reformists lose the battle over policy control in the alliance but the government seems unlikely to overcome constitutional provisions securing access to demand mechanisms, then the country will be on route to scenario four.

9.7. CONCLUSION

This chapter set out to answer the focal question of the study; *what are the prospects for political stability and instability for South Africa in the period to 2024*. In addressing this chief research goal, the chapter first met four research sub-goals. The first of these was to describe for each scenario the role of the five KDFs in determining system type for that scenario. It then described the circumstances of the seven major actors in each scenario and whether these would primarily be drivers of positive or negative feedback. These descriptions allowed the chapter to determine whether the scenarios they

described were of open or closed, effective or ineffective, and stable or non-stable political systems. Thirdly, the chapter plotted those results on system variant tables to indicate how system variants changed from one scenario to the next, and how these changes compared to the benchmark system variant described in chapter six. The fourth research sub-goal was to plot all the above results on four-tier system type charts in order that the scenario systems could be compared directly to the benchmark system.

The resulting comparisons revealed that if the government introduced liberalizing economic policy reforms while restricting access to demand mechanisms, then the benchmark (open, ineffective and unstable) system would in the years to 2024 change into a closed, effective, and stable system. However, if the government introduced those same reforms without restricting access to demand mechanisms, then the benchmark system would change into a still open but now effective and evolving system. Thirdly, were the reformists in the ANC to lose the battle over policy control, and the party to move towards a strictly state-directed economy while restricting access to demand mechanisms, then the system would change to become a closed, still ineffective, and oscillating system. Finally, if such central economic control coincided with the maintenance of access to demand mechanisms then the system would either move into any one of the three scenarios described above, or remain open and ineffective while its behaviour would become chaotic.

Various combinations of the most important and uncertain driving forces could produce a diverse set of results for the openness, effectiveness, and stability of the system. This is consistent with the theoretical basis of the study: that a political system is a complex system with an emergent property which means that its future cannot be forecast but must be studied as scenarios. Applied more broadly to the study of political systems this is a metho-theoretical approach that will allow political scientists to overcome their discipline's poor track record in anticipating future shifts in the systems they study.

10. CHAPTER TEN: CONCLUDING PERSPECTIVES

10.1. INTRODUCTION: THE ACTUALITY AND MOTIVATION FOR THE STUDY

Despite taking the high road in the 1990s, it was apparent by 2012 that the South African political system was coming under increasing strain. Growth levels in the South African economy had averaged over 4% of GDP between 2000 and 2008 and over 5% between 2004 and 2007 (SAIRR, 2012b: 105-106). This was an undoubted recovery from the low and even negative growth levels recorded before the 1994 transition. In the period to 2008 inflation had largely been kept within its target band of 3%-6% (SAIRR, 2012b: 124). Debt and deficit levels as a proportion of GDP declined (SAIRR, 2012b: 98-99 and 198-2001). Real per capita incomes increased from R20 000 in 1994 to R26 000 by 2009 (SAIRR, 2011: 103, 104 and 121). After 1994 extensive service delivery efforts by the government saw both the number and proportion of households with access to formal housing, clean water, and electricity increase substantially (SAIRR, 2012b: 651). Social welfare recipients increased in number from under 3 million people to over 15 million in the first 15 years of South Africa's democracy (SAIRR, 2011: 590-591). The living standards of South Africans improved appreciably when measured on the living standards measures scale (SAIRR, 2012b: 317-320). Over the same period, the ruling ANC saw its majority in national elections sustained at over 60% (SAIRR, 2011: 810). It was the opinion of political commentators that constitutional principles had been maintained over the same period. With a free and independent media and critical civil society, South Africa had the appearance of a successful and stable emerging market.

However, by 2012 it was becoming apparent that beneath this veneer lay problems. Since the global financial crisis, growth levels had been under 3% of GDP. Short-term forecasts suggested that they might stay at this level. Debt and deficit levels had increased and the Reserve Bank had warned that inflation was becoming a significant future risk factor (Business Report, 2012: Internet Source). South Africa was experiencing declining levels of FDI inflows, even as these were increasing in other emerging markets (UNCTAD, 2012: Internet Source). Such weak economic performance had to be read against a social environment where unemployment levels had remained stubbornly high since 1994, at around 25% (*Economist*, 2 March 2013). Among young black South Africans that figure was over 50% (SAIRR, 2012b: 263).

Despite increased welfare support, and the obvious success of service delivery, voter support for the ruling African National Congress had declined from 55% of eligible voters in 1994 to under 38% after the 2009 national election (SAIRR 2012b: 799). This decline had coincided with an increase in public protest action of over 1000%, by some measures, in the period 2000-2010 (SAIRR, 2011: 734-735). As the protest movement grew, opinion polls began to show evidence of very radical opinion, with one poll suggesting that as many as a third of South Africans supported proposals to nationalise the mining industry (TNS Research Surveys, 2011d: Internet Source). Such radical calls were now also emanating from within parts of the tripartite alliance, which was itself wracked with conflict and infighting over future policy direction for the country.

It was against this background that commentators, observers, and ratings agencies had by 2012 come to question the future stability of South Africa. Even Clem Sunter, who, more than twenty years earlier, had done so much to put South Africa on the high road, increased his odds that South Africa might slip into terminal decline (News 24, 2012a: Internet Source). However, such assessments generally flowed from opinions based on the outwardly observed features of the South African political system such as the wave of strike action that hit the mining industry around the 2012 Marikana shootings (News24, 2012b: Internet Source). It was against this background that the study sought to propose a theoretical and methodological model via which to determine the prospects for future stability or instability in South Africa in the period to 2024.

10.2. POINTS OF DEPARTURE

The study was built upon three pillars. The first was theoretical, the second conceptual, and the third methodological. These three pillars supported a metho-theoretical model upon which the conclusions of this study rest.

10.2.1. The theoretical point of departure

A first problem confronted by the study was to find a theoretical framework in which terms such as stability and instability could be objectively defined and then measured. Especially in the context of political analysis, these are terms which are used very loosely to define the outwardly observed features of a political system. Such subjective assessments would not work for an academic study, and a more objective measure of stability or instability would have to be found.

The study argued that this measure could be found in complex systems theory. This is the theory of systems featuring a large number of actors, an emergent characteristic, and driven by opposing loops of positive and negative feedback. The balance of this feedback determined the stability of the system. Where negative feedback predominated, the system would remain stable. However, where positive feedback predominated, the system would display one of four forms of non-stable behaviour including instability, oscillation, chaos and evolution. By studying feedback patterns, stability in complex systems could be objectively measured and tracked over time.

10.2.2. The conceptual point of departure

The study then demonstrated that a political system was a complex system in that it also featured a great number of actors, whose interaction was emergent in the sense that it shaped the rules of the system, and that these same actors subjected the system to positive and negative feedback in pursuit of their demands. Stability or instability in a political system would therefore occur for the same reason it did in all complex systems - a balance of feedback.

With these theoretical and conceptual points of departure in place, the study produced a model with which the stability or instability of an observed political system could be determined. The four tiers of this model represented four steps that a researcher should follow in determining the stability or instability of a particular political system.

The first tier was to determine the system characteristics. Here the researcher had to identify the major participants in the system and their demands, the rules of the system, the feedback mechanisms available to the participants, and the policy mechanisms available to the government. The second tier was to use those results to determine whether the system demonstrated a proliferation of demand mechanisms, whether these were freely accessible, and whether the policies of the government were effective in meeting the demands of actors. For the third tier, the researcher had to use those results to determine whether the system was an open or closed system and an effective or ineffective system. Finally he or she had to determine the balance of feedback acting on the system by studying its major actors and the extent to which their demands were met.

With this model in place the type and behaviour or variant of any political system could be determined. In other words, the study produced a series of objective units of analysis against which political stability or instability could be diagnosed. In total 20 such measures were proposed which would be representative of the behaviour of any political system. However, the study wanted to do more than determine the type and behaviour of the current political system. It also wanted to determine the prospects for future stability or instability in a political system.

10.2.3. The methodological point of departure

Here the task was complicated both by the historical failure of political science to accurately anticipate shifts in political systems, and by incredulity at the suggestion that the future could be studied with any degree of accuracy. However, the study was able to demonstrate that the failures and incredulity had their origins in methodologies that could not account for the emergent characteristic of complex systems. By adopting a scenario methodology that sought to identify a number of plausible futures for the same system, the study argued that the uncertainty inherent in that emergent property could be overcome. This methodology had five steps:

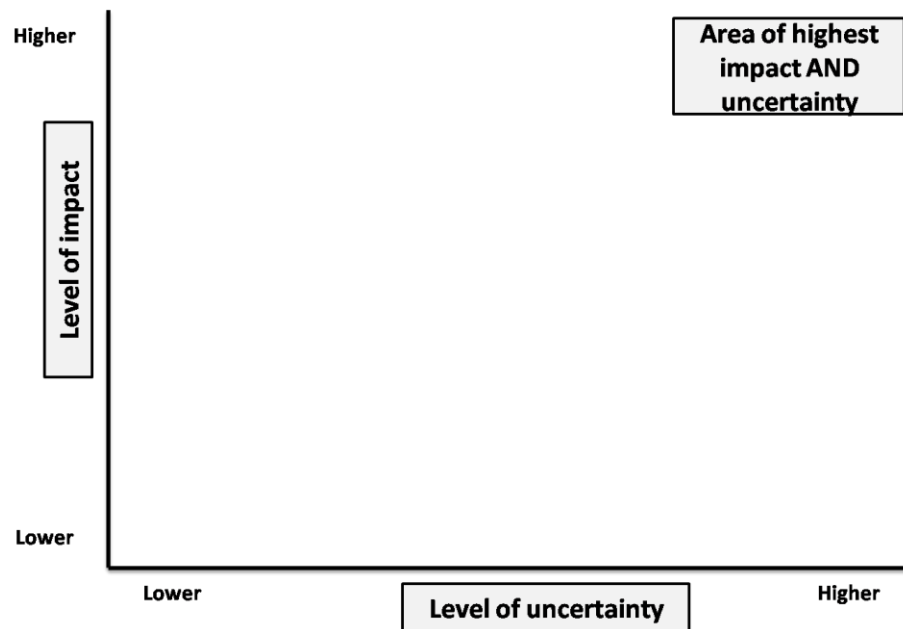
Step one was to determine the focal question that the scenarios would seek to address. In the case of this study, that was the prospect for political stability or instability in the period to 2024.

Step two was to identify a number of driving forces or trends that would determine future feedback flows into the political system. These would then be reduced to a more concise number of Key Driving Forces or trends likely to have a definitive effect on feedback entering the system and hence its stability.

Step three was to rank these KDFs according to two criteria. The first was the level of impact that the KDF in question was likely to have on the stability of the political system, and the second was the level of uncertainty surrounding that KDF. Those results could then be plotted on a ranking chart such as the one reproduced below. The chart has two axes: the left hand axis measuring impact and the right hand axis measuring uncertainty. The result of the ranking was to produce a chart of all the KDFs showing their relative impact and uncertainty. The items in the top right area of the chart were

those with the greatest level of impact and associated with the greatest degree of uncertainty.

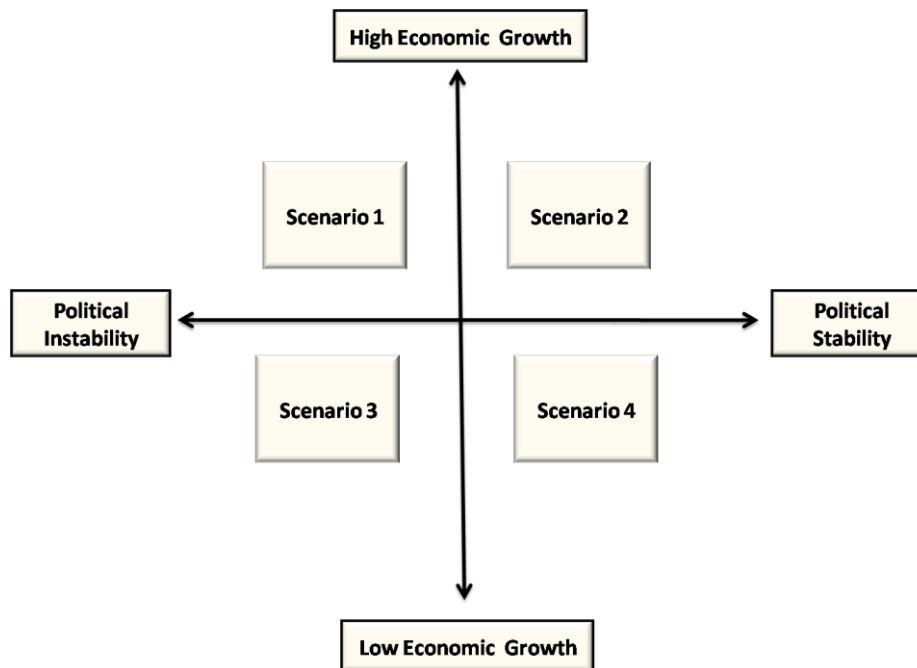
Figure 43: Impact and uncertainty matrix



Republished

Step four was to use the ranking exercise conducted above to produce a scenario matrix based on the two most important and most uncertain KDFs. These two KDFs became the axes of this matrix and, as shown on the diagram reproduced below, suggested up to four possible scenarios for the system, based on how the axes of greatest uncertainty and impact would combine in the period to 2024.

Figure 44: A basic scenario matrix



Republished

Step five involved describing the scenarios in terms of the full list of KDFs identified under step two above.

With the theoretical, conceptual, and methodological points of departure completed, the study had to integrate the theoretical and conceptual components of the study with the methodological in order to propose a single metho-theoretical model with which to determine the long-term prospects for stability or instability in a political system.

10.3. THE METHO-THEORETICAL MODEL

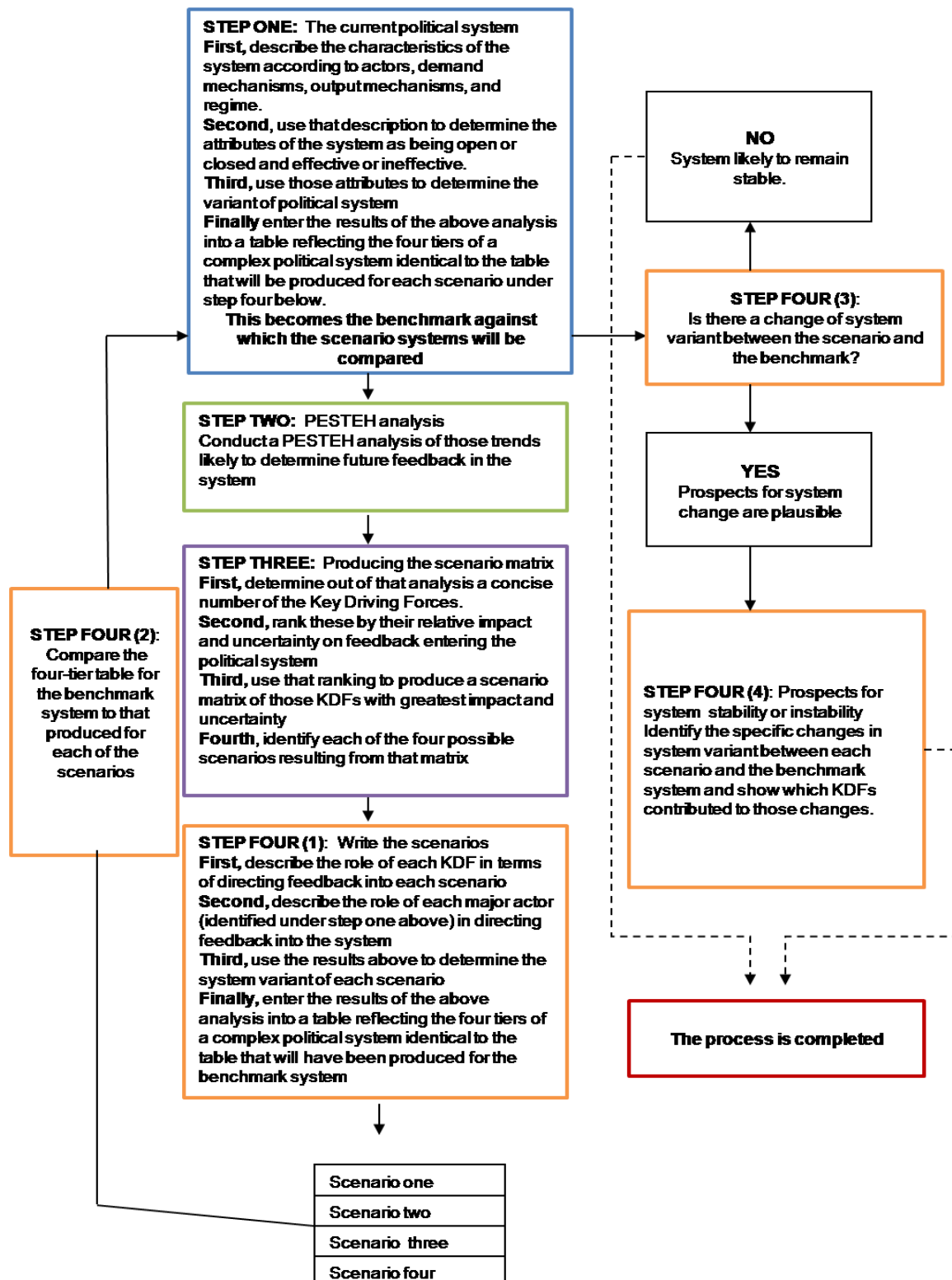
This metho-theoretical model had four steps. The first was to determine the type and behaviour of the current political system in South Africa. This description served as a benchmark against which scenarios of plausible futures could be compared. The second step was to determine all the major trends that could determine future feedback flows into the system and hence the stability of the system. The third step was to distil these trends into a more manageable number of KDFs that would have a definitive impact on future feedback flows. These were then to be ranked for their likely impact on future feedback entering the system and the uncertainty associated with that feedback. The most important and uncertain trends became the axes of a matrix suggesting up to

Chapter Ten: Concluding perspectives

four possible future scenarios for the South African political system. The fourth step was to write four detailed descriptions, one for each scenario, of how the KDFs and the major actors in the system determined firstly its type and then its behaviour. KDFs would be described in terms of how they drive changes along the three axes of the triangular system type diagram, and actors in terms of how the feedback they produced reacted to those changes. This would allow the study to reach conclusions about the likely system variant of each scenario. These conclusions could then be compared to the benchmark system in order to gauge the prospects for change in the stability or instability of the South African political system in the period to 2024.

A diagram of the model is reproduced below:

Figure 45: Metho-theoretical model for determining the prospects of future political system stability or instability



Chapter Ten: Concluding perspectives

Having integrated the theoretical, conceptual, and methodological elements of the study, it was possible to operationalise the model on the South African political system and thereby to determine the prospects for political stability or instability confronting that system in the period to 2024.

In terms of the first step of the model, producing a benchmark description of the current political system, this study concluded that the current system featured a broad proliferation of demand mechanisms. These included elections, courts, Chapter Nine institutions, political parties, and civil society groups. These were freely available to actors in the system who therefore had every means of directing feedback into the system. However, the study found that in terms of growth, investment, employment, education, equality, and personal safety indicators, South Africa lagged considerably behind other emerging markets with a special emphasis on the BRICS. Because of the state's inability to meet demands, a significant number of actors in the system were making their dissatisfaction felt by introducing positive feedback into the system. In fact of the seven major actor groups identified in the system, five were identified as drivers of positive feedback. With such a predominance of positive feedback, there was no conclusion to reach other than that the system was an unstable one. It was also ineffective in meeting the demands of actors, but open in terms of the great number of and easy access to demand mechanisms. The conclusion that the system was an open but ineffective and unstable one therefore became the benchmark against which the scenario systems would be compared. Differences between the benchmark and the scenario systems would indicate the prospects for stability or instability of the South African political system in the period to 2024.

The process of developing those scenarios commenced with step two of the methodological model, which was to identify the most important trends acting on the system. These were selected for their importance in introducing feedback into the system and hence determining its stability.

Out of these the study identified 29 driving forces, ranging from rising levels of protest to low levels of economic growth. However, 29 was too great a number of driving forces to introduce into any analysis. These therefore had to be distilled into a number of KDFs that would have a definitive effect on system type therefore on future feedback entering the system. In total, five such KDFs were identified.

Chapter Ten: Concluding perspectives

The first of these related to the extent to which the tripartite alliance will retain or exceed its close on two thirds electoral majority as a unified movement, or whether infighting and rising negative and radical sentiment, together with a rise in levels of public protest against the state, may drive the party from power and/or see it lose a future election. Presented as a spectrum, one extreme of this driving force would see the tripartite alliance remain intact and in control of South Africa, and the other would see the alliance fragment and lose political control of the country.

The second was the extent to which actors would retain access to sufficient demand mechanisms to hold the government to account. Again presented as a spectrum, one extreme of this driving force would see individual, political, economic, and social actors using the courts, the media, the electoral system and other demand mechanisms to insist that the government meets their demands. The other extreme would see access to these mechanism eroded to such an extent that the government could rule with impunity.

The third related to whether the South African economy could grow fast enough to generate the wealth and employment to make inroads into poverty and inequality levels. The first extreme of this spectrum was a society demonstrating rapid improvements in education, employment, incomes, and equality indicators. The other extreme would see the current low growth and investment status quo remaining intact or even worsening.

The fourth was whether the state would have the revenues it required to meet future welfare and service delivery demands. Here the first extreme would see a state able to meet the welfare and delivery demands of actors in the system. The other extreme would see the state being overwhelmed by demand.

The fifth represented whether South Africa would become an increasingly deregulated and private sector led economy or whether it would evolve to become a heavily regulated state-directed economy. Here the extremes would stretch from a liberalized trade and investment environment dominated by private sector investment to a heavily regulated and protected economy directed by state planners.

In line with the scenario methodology of the study, these KDFs were then ranked according to their impact and uncertainty. Access to demand mechanisms was identified as the KDF of greatest impact as it would determine the extent to which actors

could introduce feedback into the system which would ultimately determine its type as open or closed and hence the ability of its actors to determine its behaviour as stable or unstable. The KDF of greatest uncertainty was that of future economic policy. This would determine the effectiveness of the system and hence the manner in which actors responded to their experience of living in the system. The study showed how conflicts in the ruling alliance over future economic policy direction led to a split between advocates of a state-directed economy and reformists wanting a model of private investor-led growth. There was no way to tell which of the two factions would ultimately prevail.

When these results were plotted on the scenario matrix they suggested four scenarios for a future political system, based on how these two KDFs would combine in the period to 2024. The first such scenario was of a much deregulated private-sector-led economy, where access to demand mechanisms had been restricted. The second was of a liberalized economy in an environment of a proliferation of demand mechanisms. The third suggested a state-led economy in a political system where access to demand mechanisms was increasingly restricted. The fourth was of a centrally directed economy in an environment where demand mechanisms would proliferate.

Having identified the scenarios, it was necessary to describe them in detail according to how each of the KDFs and each of the major actors would contribute to the feedback received by each scenario. These could then be compared with the benchmark system described earlier in the study, and the differences between the benchmark system and the scenario systems would indicate the prospects for stability or instability of the political system in the period to 2024.

10.4. THE SCENARIOS

The first scenario, titled Off-Road, was described as one where the reformists won the battle for policy control in the tripartite alliance, but had to restrict access to demand mechanisms in the system in order to force through their unpopular economic reforms. The positive economic results of these reforms allowed the system to begin meeting the demands of most actors in the system. At the same time, the restrictions on demand mechanisms prevented any remaining dissatisfied actors from introducing much positive feedback into the system. Compared to the open, ineffective, and unstable benchmark system this scenario therefore changed to a closed system. However, in

better meeting the demands of its actors it became an effective system. The conclusion - that each of the five KDFs and four of the seven actors were drivers of negative feedback (three of the actors were neutral feedback drivers) - saw the system behaviour change from unstable to stable.

The second scenario, titled New Road, again saw the reformists win the battle for economic policy control in the ANC. Higher investment and growth levels made it possible for the system to begin meeting the demands of its actors. These successes were such that the government did not attempt, nor needed, to restrict access to demand mechanisms in the system. Compared to the open, ineffective, and unstable benchmark system, this scenario suggested a still open, now effective, and evolving system. This evolutionary behaviour resulted from the government of the system responding to the rising positive feedback with policy changes, in order to introduce new flows of negative feedback into the system.

The third scenario, titled Dangerous Road, saw the reformists in the ANC lose the battle for control over economic policy. The government therefore introduced a series of reforms that squeezed out private sector investors and placed the state at the centre of the economy both as a participant and a director of other economic actors. However, the inefficiency and corruption that had plagued state participation in the economy prior to 2012 had not been discarded. Unable to meet the demands of actors in the system, and afraid of the consequences of rising positive feedback, the government moved to restrict access to demand mechanisms. This reduced the levels of positive feedback that might otherwise have entered the system. Compared to the open, ineffective and unstable benchmark system, this scenario suggested a closed, still ineffective, and now oscillating system as increasingly angry actors found new demand mechanisms with which to introduce positive feedback, until these too were restricted.

The fourth scenario, titled Toll Road, also saw the reformists lose the battle for policy control in the alliance. However, despite its efforts, the ANC government was too factionalized and weakened by positive feedback to restrict access to demand mechanisms and was voted out of power. Here the system could transition into scenarios one, two, or three under its new government. However, if this did not happen then the open, ineffective and unstable benchmark system would remain a still open and ineffective system while its already unstable behaviour turned into chaos, as

various actors fought over resources in the leadership vacuum left by the departing ANC.

The four scenarios revealed the prospects for system stability or instability in the period to 2024. The scenarios show that such stability or instability will depend on how the most important and uncertain KDFs combine over that period. If a private-sector-led growth model is pursued, the system's behaviour will change from instability to either stability or evolution. If a state-directed economic policy model is chosen, then the behaviour will change from instability to either oscillation or chaos. Likewise, if demand mechanisms are restricted, then the system's behaviour will change from instability to either stability or oscillation. If these are not restricted, then a change will take place to either evolution or chaos.

10.5. MEETING THE RESEARCH OBJECTIVES OF THE STUDY

In its introduction the study set itself seven research objectives. Through its theoretical, conceptual, and methodological points of departure and in the application of its methodological model it has addressed each of these.

The first research objective was to determine a theoretical framework against which stability or instability could be measured and defined. This was shown to be complex systems theory, and led to the following definition of stability and instability, "Stability occurs whenever the actors within a system introduce sufficient negative feedback to balance or overwhelm the positive feedback acting on the system. However, where positive feedback dominates the system this will have the effect of driving the system away from equilibrium into one or another form of non-stable behaviour". A complex system was in turn defined as, "Any system comprising an innumerable number of participants, whose participation results in outputs greater than the sum of their parts, and the behaviour of which is driven by opposing forces of positive and negative feedback".

The second was to define a political system. Here the study relied on David Easton (1953, 1957, 1965, 1968, and 1990), Robert Dahl (1973 and 1984), Gabriel Almond (1965), and Harold Lasswell (1958) to define a political system as "any system in which the interaction of actors, in pursuit of demands, leads to the development of binding rules and procedures, determining which of those demands are met".

Chapter Ten: Concluding perspectives

The third was to show that a political system was a complex system, and then to define a complex political system. Here the study showed that political systems and complex systems share the same characteristics in a large number of actors, feedback mechanisms, and an emergent characteristic. It was therefore possible to conclude that stability or instability within a political system takes place for the same reasons that it does in a complex system. This led to the definition that a complex political system is “any system featuring an innumerable number of participants, who pursue demands via feedback mechanisms that result in the authoritative assignment of resources, according to a set of constantly evolving rules and procedures, and the stability of which is determined by a balance of feedback”.

The fourth was to determine various types of political systems that could result from the emergent property of complex political systems. Here the study showed that there were four types of political systems, depending on whether a system in question was open or closed and effective or ineffective. Open systems offered broad access for actors to a host of demand mechanisms, while closed systems restricted both the presence of, and access to, demand mechanisms. Effective systems met actor expectations for incomes, employment, education, and personal safety. Ineffective systems did not meet those expectations.

The fifth was to integrate the theoretical and conceptual points of departure into a model against which system type and stability could be determined. This led to the adoption of the four-tier complex systems model of a political system. The model held that every political system could be conceived of as four tiers. The first consisted of actors, demand and output mechanisms, and a regime which determined the rules governing the behaviour of actors in the system. The second consisted of three attributes resulting from the four characteristics in the tier above. These three attributes were whether the system displayed a proliferation of demand mechanisms, free access to such mechanisms, and whether it was effective in meeting the demands of its actors. On the third tier of the model these three attributes in turn determined whether the system was open or closed and effective or ineffective. The fourth tier of the model determined the behaviour of the system as stable, unstable, oscillating, chaotic or evolving, based on how actors placed positive or negative feedback into the system. This tier therefore identified the system variant in terms of its type and its behaviour.

This model became an analytical tool suggesting up to twenty different system variants. These were units of measurement or analysis that a researcher could use to distinguish one political system from another or to describe change in a political system over time.

The sixth was to identify a methodology via which that four-tier model could be applied to the future of a political system. The study showed that the emergent property of complex systems means that their futures cannot be forecast to a single point in time and space. However, in describing a range of plausible outcomes, a scenario methodology could overcome the uncertainty inherent in the emergent property of complex systems. The study therefore proposed the five-step scenario methodology that has been set out earlier in this concluding chapter.

The seventh was to integrate the theoretical and conceptual components of the study with the methodological, in order to develop a single metho-theoretical model with which to determine the long-term prospects for the stability or instability of the South African political system in the period to 2024. Meeting this research goal was done in proposing the metho-theoretical model that has been described earlier in this chapter.

The eighth was to apply this metho-theoretical model to the South African political system. This resulted in the four scenarios described above.

10.6. ANSWERING THE FOCAL QUESTION OF THE STUDY

This metho-theoretical model concluded that the manner in which access to demand mechanisms and macro-economic policy combined would determine the stability or instability of the political system over the period to 2024. The study was able to conclude that if the reformists won the battle for economic policy control, then the system would see its current unstable behaviour change to either stability or evolution. However if the interventionists won the battle for economic policy control, the system's behaviour would change to either oscillation or chaos. Likewise, the scenarios suggested that if actors in the system retained access to demand mechanisms then the system's behaviour would change to either evolution or chaos. If they lost such access, then the system would stabilise or enter a period of oscillation.

By observing events in the political, economic, and social environments in the run-up to 2024, it will be possible to determine what behaviour changes the South African political

system will experience. If, for example, the NDP is adopted and action plans relating to this policy put into operation, then it will be possible to conclude that the reformists have won the battle for policy control in the tripartite alliance, and that the behaviour of the system will either stabilise or evolve. However, if the opposite happens and the state starts to take ever-greater control of economic activity in the system, then it will be possible to speculate that oscillation or chaos will ensue in the period to 2024.

Similarly by observing whether actors are freely able to use elections, courts, Chapter Nine institutions, and the media and civil society to place demands on the system, it will be possible to conclude that the system will change from its current instability to either evolution or chaos. Where access to these mechanisms is eroded, behaviour will stabilise or oscillate.

Hence, by tracking economic policy shifts and access to demand mechanisms, any observer should be able to accurately anticipate shifts in the variant type of the South African political system. In following the metho-theoretical approach of this study, no observer should be caught off guard by changes in the political system of South Africa in the period to 2024.

10.7. IMPLICATIONS FOR SOUTH AFRICA

The policy shifts and variant changes that are plausible for South Africa indicate that the country may, within a decade, find itself confronting a very different political, social, and economic environment from the one described in the benchmark system. Reaching this determination has been the author's key motivation for persisting with, and now completing, this study. Before concluding, it is rewarding to pause and consider the implications for the country.

The first is, without doubt, that the current system is unsustainable. Therefore, if more is not done to put the system in a position to better meet actor demands then, in the short term, further system destabilisation is inevitable. There are only two options that can prevent this. The first is that the government takes the firm decision to follow the broad prescripts of its own NDP and create a more enabling investment environment, improve the quality of education, and generate the levels of GDP growth necessary to swell the ranks of the employed and so to tackle poverty and inequality levels. The second is to

undermine demand mechanisms, and so to destroy the democratic culture of the society, in order to force stability on the system.

In one of its scenarios, the study has suggested that the latter may be necessary to secure the former. If this is indeed the case then, as unsatisfactory as it is, it is a price worth paying in order to secure the growth and wealth necessary to stabilise the society. However, the study showed that such a bargain with the devil is not necessary, as it is quite possible to secure that growth and development while defending South Africa's democratic culture. This would certainly be the best-case scenario for the future, but it requires that actors stand up for the country's democratic institutions while *also* advocating for the policy reforms that will secure a more enabling investment and growth environment.

If that does not happen then it is apparent to this author that a terrible future awaits. As an absolute worst-case scenario the system fails to generate the necessary GDP growth levels while allowing its government to destroy its democratic institutions. The research is quite clear that this is a plausible outcome within the next decade. It is also plausible that a floundering and incoherent government drives the system into a state of chaos where all manner of actors, inspired by ever more radical opinion, use whatever demand mechanisms they can to extract whatever wealth still exists in the system. This will be a wildly unstable future - wholly incapable of meeting the demands of its people. While South Africa may wander for some time in this chaotic holding-pattern it must inevitably change into one of the other three scenarios identified by this study.

It must be of concern therefore that it is not clear in the present environment whether the country's government will commit to the economic policy reforms necessary to attract increased investment and growth. In fact, there are many actors that propose moving even further in the opposite direction by undermining the private business and investment sector and placing an often corrupt and incompetent state at the centre of the economy. Likewise, there are many others who believe that it is necessary, and even desirable, to erode the democratic culture of the country in order to secure the economic emancipation of the poor majority.

Hence the reformists within the government and the ANC, who realise the precarious nature of the future that awaits, will require public support to overcome the many

hurdles that lie ahead of them. It must also be of concern then to consider just how few actors exist in the system that are prepared to publicly back the reform process. The media is at times ambivalent and many actors in the media sector remain wedded to state-led industrial and race-based social engineering policies that have thus far failed to meet actor demands. To believe, as many still do, that those same policies can somehow meet actor demands is to ignore a decade's worth of evidence that they have failed. Likewise, many in civil society, while advocating for development, also advocate for state-led economic and social interventions that will retard growth, and therefore undermine human development in South Africa. While their good intentions cannot be faulted, their economics can. The business community does particularly poorly on this score and remains wedded to a culture of deal- and pact-making with government and trade unions which is a process that research published in this study suggests excludes as many as half of all actors in the system.

It can surely come as no surprise therefore that the system as it currently stands is destabilising. The instability is largely driven (this study finds predominantly) by that 50% of poor actors knocking on the door and asking to be let in. The enduring challenge for the decade ahead will be to introduce policy initiatives to let them in. Where that happens, a measure of order and prosperity, if not freedom, will result. Where that does not happen, chaos and disorder lie on the horizon.

10.8. CONCLUSION: THE CONTRIBUTIONS OF THE STUDY

In having determined the prospects for stability or instability of the South African political system in the period to 2024, and in meeting all its research objectives, this study has made a number of specific and unique contributions to political science, systems science, scenario planning, and futures research. These are as follows:

The first contribution was the four-tier complex systems model. This presented a new analytical framework comprising 20 political system variants or units of analysis that could be used both to distinguish political systems from one another and to track change in one political system over time. Its 20 units of analysis ensured that this tracking and comparative analysis could be done in a level of detail not found in many other categorisations of political system type. Likewise the sound systems theoretical basis of these categorisations meant that they could more easily overcome accusations

that analysis of political behaviour and change was subjective and dependent heavily on the opinions of analysts regarding the outward observed features of political systems.

The second was to demonstrate that political systems are complex systems and that as complex systems their emergent property means that their futures cannot be forecast, but must be studied as scenarios. Previous failures at seeking to anticipate the futures of political systems relate to this specific point: that political scientists have not sufficiently conceived of political systems as complex systems and thereby understood the implications of emergence. Having conceived of a political system as a complex system, there are no grounds upon which to forecast the future of such a system to a specific point in time and space. Rather, the only means of studying such a future is via scenarios. Such an approach should allow political scientists to begin accurately anticipating future changes in the political systems they study. This will be an advance for the discipline, which is often confronted with questions around future changes in political systems, but has a weak track record in accurately predicting such changes.

Both these contributions led to the third major contribution of the study, which is its unique metho-theoretical model that merges complex systems theory with a scenario planning methodology. This is a model that could be applied to the future of any complex system. Systems scientists can use the model to study the futures of the systems they are experts in, where previously they may have had limited means to understand those futures beyond speculation. In a sense, therefore, the model frees complex systems theory from being trapped in the present and allows it to be incorporated more easily into futures research. Likewise, scenario planners can use the model to determine the behaviour and hence outcomes of the scenarios they describe. It therefore frees scenario planners from the criticism that they are able to describe likely future environments but have no means of supporting their view that those descriptions are accurate, and no means to determine the behaviour of those environments.

A further related contribution for political science is that the ability to accurately predict the long-term futures of political systems empowers policy-makers to test the long-term implications of the policies they introduce. By adjusting the circumstances of the present environment, the model will show them the likely long-term results of possible

Chapter Ten: Concluding perspectives

policy shifts. For example, changes in education policy, resulting in higher matric pass rates, can be incorporated into the model to show what the effect of higher pass rates may be a decade or more into the future. Likewise, the model could show what the implications of low matric pass rates may be. Such outcomes may also become powerful lobbying and advocacy tools.

This final contribution of this study lies outside of the field of political science and policy-making for governments. Any field of enquiry that needs to engage in long-term planning will be able to draw on the model both to describe the futures of the environment they are planning for, and to understand how those futures are likely to behave. For example, economists, business people, and military planners could all adapt the model to their own unique circumstances in order to gauge how decisions they make in the current environment are likely to influence the long-term future. In understanding emergence, they will not be tempted to produce long-term forecasts to a single point in time and therefore will be better equipped to prepare for the future of the complex environments they operate in.

11. BIBLIOGRAPHY

Allen, P.M., Datta, P.P. & Christopher, M. 2006. Improving the resilience and performance of organisations using multi-agent modeling of a complex production-distribution systems. *Risk management*, 8(4):294-309.

Almond, G.A. 1965. A developmental approach to political systems. *World politics*, 17(2):183-214.

AfriForum. 2009. Court rules in AfriForum's favour that all PTA schools' power supply must be restored. <http://www.afriforum.co.za/english/2009-09-18-court-rules-in-afriforums-favour-that-all-pta-schools-power-supply-must-be-restored/> Date of access: 27 Oct. 2010.

ANC (African National Congress). 1997. ANC 50th National Conference: Resolutions. <http://www.anc.org.za/show.php?id=2425> Date of access: 30 Oct. 2012.

ANC (African National Congress). 2002. ANC 51st National Conference: Resolutions. <http://www.anc.org.za/show.php?id=2495> Date of access: 30 Oct. 2012.

ANC (African National Congress). 2007. ANC 52nd National Conference Resolutions. <http://www.anc.org.za/show.php?id=2536> Date of access: 30 Oct. 2012.

ANC (African National Congress). 2009. ANC Manifesto: working together we can do more. <http://www.anc.org.za/docs/manifesto/2009/manifesto.pdf> Date of access: 30 Oct. 2012.

ANC (African National Congress). 2012. Recommendations from the 4th National Policy Conference. http://www.anc.org.za/docs/pol/2-12/policy_conferencev.pdf Date of access: 5 Nov. 2012.

ASGISA (Accelerated and Shared Growth Initiative for South Africa). 2006. Accelerated and Shared Growth Initiative for South Africa or (AsgiSA): a summary. <http://www.info.gov.za/speeches/briefings/asgibackground.pdf> Date of access: 25 Mar. 2013.

Bibliography

Atud, V. 2011. Nationalisation and black advancement. (*In* Evans, J., ed. Nationalisation. Johannesburg: Free Market Foundation)

Auditor-General of South Africa. 2010. General report and national audit outcomes, 2009-2010. <http://www.agsa.co.za/Reports%20Documents/PMFA%202009-10%20national%20general%20report.pdf>. Date of access: 30 Oct. 2012.

Bird, A. 2000. Thomas Kuhn. London: Acumen Publishing.

Business Day. 1994. Affirmative action must be enforced. *Business Day*, 6 October 1994.

Business Day. 1996. RDP 'needed for growth and jobs'. *Business Day*, 24 July 1996.

Business Day. 1996. RDP, macroeconomic goals complement one another. *Business Day*, 28 October 1996.

Business Day. 1997. GEAR is the means for implementing the RDP. *Business Day*, 23 December 1997.

Business Day. 1998. Mandela hits out as Allies attack GEAR. *Business Day*, 2 July 1998.

Business Day. 2000. Use pension funds. *Business Day*, 22 August 2000.

Business Day. 2001. Policy vacuum. *Business Day*, 7 June 2001.

Business Day. 2001. Manuel changes GEAR. *Business Day*, 1 November 2001.

Business Day. 2002. For Revised Mineral Bill, the devil is in the details. *Business Day*, 26 April 2002.

Business Day. 2006. ANC economic policy under fire. *Business Day*, 22 September 2006.

Bibliography

Business Day. 2010. DA gave 'Hobson's choice' on open toilets. *Business Day*, 27 October 2010.

Business Day. 2010. Attorneys agree court is a mess. *Business Day*, 12 November 2010.

Business Day. 2010. Zuma loses appeal on Zimbabwe report. *Business Day*, 15 December 2010.

Business Day. 2011. Wealth creation. *Business Day*, 10 February 2011.

Business Day. 2011. Only a matter of time before the grenade explodes. *Business Day*, 10 February 2011.

Business Day. 2011. Nzimande to appeal SETA ruling. *Business Day*, 4 May 2011.

Business Day. 2011. Mboweni scathing on 'reckless nationalism row. *Business Day*, 18 July 2011.

Business Day. 2011. Nationalisation scary, so drop the word – Cutifani. *Business Day*, 10 October 2011.

Business Day. 2011. Rare unified voice against the info bill. *Business Day*, 23 November 2011.

Business Day. 2011. ANC unlikely to go for full nationalism. *Business Day*, 2 December 2011.

Business Day. 2013. Court case to decide future of 17,000 clothing workers. *Business Day*, 30 January 2013.

Business Report. 2012. Marcus: weaker rand key inflation risk.
http://www.iol.co.za/business/business-news/marcus-weaker-rand-key-inflation-risk-1.1334135#.UJe_7mdtOck Date of access: 5 Nov. 2012.

Bibliography

Cape Argus. 1998. GEAR and magic wands. *Cape Argus*, 29 June 1998.

Chen, D. & Stroup, W. 1993. General system theory: toward a conceptual framework for science and technology education for all. *Journal of science education and technology*, 2(3):447-459.

Chen, X. & Zhang, J. 2006. Bayesian test and Kuhn's paradigm. *Frontiers of philosophy in China*, 1(3):491-505.

Cilliers, P. 1998. Complexity and postmodernism: understanding complex systems. London: Routledge.

Citizen. 2012. Vavi gets stoned.

<http://www.citizen.co.za/citizen/content/en/citizen/opinion-leaders?oid=334835&sn=Detail&pid=40&Vavi-gets-stoned> Date of access: 30 Oct. 2012.

City Press. 2011. Tembisa calm ahead of MMC address. *City Press*, 20 September 2011.

City Press. 2012. How Limpopo went bankrupt. *City Press*, 22 January 2012.

City Press. 2012. Litmus test for a young democracy. *City Press*, 19 February 2012.

Cleary, S. & Malleret, T. 2006. Resilience to risk. Cape Town: Human and Rosseau.

Cronje, F.J. 2010. The major driving forces shaping the South African business environment of 2020 and the scenarios that emanate from those forces. Speech at SAIRR client briefing, Prepared exclusively for the Institute's top tier subscribers, South Africa Institute of Race Relations, 5 November 2012.

Cronje, F.J. 2013. An introduction to South Africa in 2013 and beyond. Speech at Africa Development Bank, 6 March 2013.

COSATU. 2012. Address by Zwelinzima Vavi, on his appointment as Chairperson of

Bibliography

the National Anti-Corruption Forum. <http://www.cosatu.org.za/show.php?ID=6779> Date of access: 7 Mar. 2013.

Council for Scientific and Industrial Research. 2010. State of logistics survey for South Africa. <http://www.csir.co.za/sol/ebooks/> Date of access: 5 Nov. 2012.

Courtney, H. 2003. Decision-driven scenarios for accessing four levels of uncertainty. *Strategy and leadership*, 31(1):14-22.

Daft, R.L. 2010. Understanding the theory and design of organisations. 10th ed. Mason, OH: South-Western Cengage Learning.

Dahl, R.A. 1973. Introduction. (*In* Dahl, R.A., ed. Regimes and oppositions. New Haven: Yale University Press)

Dahl, R.A. 1978. Pluralism. *Comparative politics*, 10(2):191-203.

Dahl, R.A. 1984. Modern political analysis. 4th ed. Englewood Cliffs, NJ: Prentice-Hall.

Daily Maverick. 2010. Analysis: parastatals, the mess that could bring SA down. <http://dailymaverick.co.za/article/2010-10-13-analysis-parastatals-the-mess-that-could-bring-sa-down> Date of access: 6 Nov. 2012.

Daily Maverick. 2012. Harnessing the power: ANC in action. <http://www.dailymaverick.co.za/opinionista/2012-12-21-harnessing-the-power-anc-in-action/> Date of access: 7 Mar. 2013.

Democratic Alliance. 2009. Parastatals: mismanagement and corruption has cost quarter of a trillion, privatisation will help solve crisis. <http://www.da.org.za/newsroom.htm?action=view-news-item&id=7618> Date of access: 7 Mar. 2013.

Department of Education **see** South Africa. Department of Education.

Bibliography

Department of Labour **see** South Africa. Department of Labour.

Department of Rural Development and Land Reform **see** South Africa. Department of Rural Development and Land Reform.

Dinokeng Scenarios. 2012. Dinokeng. <http://www.dinokengscenarios.co.za/> Date of access: 10 Dec 2011.

Dodge, T. 2012. Conclusion: the Middle East after the Arab Spring. (*In* Kitchen, N., ed. Special report: after the Arab Spring: power shift in the Middle East?. London: London School of Economics and Political Science).

Doornbos, M. 2005. State collapse and civil conflict. (*In* Burnell, P. & Randall, V., eds. Politics in the developing world. New York: Oxford University Press).

Doyle, J.K., Radziki, M.J. & Trees, W.S. 2008. Measuring change in mental models of complex dynamic decision making. (*In* Qudrat-Ullah, H., Spector, J.M. & Davidson, P.I., eds. Complex decision making: theory and practice. Cambridge: Springer).

Duggan, J. 2008. Using system dynamics and multiple objective optimization to support policy analysis for complex systems. (*In* Qudrat-Ullah, H., Spector, J.M. & Davidson, P.I., eds. Complex decision making: theory and practice. Cambridge: Springer).

Earnest, D.C. 2008. The butterfly effect in the classroom: teaching undergraduates about complex systems theory. Paper presented at the annual meeting of the ISA's 49th Annual Convention, Bridging Multiple Divides, Hilton San Francisco, San Francisco, CA, USA, 26 Mar. http://www.allacademic.com/meta/p253745_index.html Date of access: 7 Mar. 2013.

Easton, D. 1957. An approach to the analysis of political systems. *World politics*, 9(3):383-400.

Easton, D. 1965. A systems analysis of political life. Chicago: University of Chicago Press.

Bibliography

Easton, D. 1968. The theoretical relevance of political socialisation. *Canadian journal of political science*, 1(2):125-146.

Easton, D. 1990. The analysis of political structure. New York: Routledge.

Economist. 2011. BRICS in search of a foundation.

http://www.economist.com/blogs/banyan/2011/04/emerging_economic_powers Date of access: 16 Apr. 2011.

Economist. 2012. Cry, the beloved country.

http://www.economist.com/news/leaders/21564846-south-africa-sliding-downhill-while-much-rest-continent-clawing-its-way-up_ Date of access: 30 Oct. 2012.

Economist. 2012. Over the rainbow. *Economist*, 20 October 2012.

Economist. 2013. Economic and financial indicators. *Economist*, 2 March 2013.

Ellis, B. & Herbert, S.I. 2011. Complex adaptive systems (CAS): an overview of key elements, characteristics and application to management theory. *Informatics in primary care*, 19:33-37.

Engineering News. 2011. SA schools system not producing the skills needed-PMI. *Engineering news*, 20 January 2012.

Ethiraj, S.K. & Levinthal, D. 2004. Modularity and innovation in complex systems. *Management science*, 50(2):159-173.

Eye Witness News. 2012. Unemployment a ticking time bomb – Vavi.

<http://ewn.co.za/2012/05/16/Poor-rage-against-rich-growing-Vavi> Date of access: 30 Oct. 2012.

Feinstein, A. 2007. After the party. Johannesburg: Jonathan Ball.

Financial Mail. 2011. Blueprint could fly. *Financial mail*, 23 December 2011.

Bibliography

- Financial Mail. 2012. Right intentions and wrong consequences.
<http://www.fm.co.za/fm/2012/08/10/right-intentions-and-wrong-consequences> Date of access: 1 Apr. 2013.
- Flowers, B.S. 2003. The art and strategy of scenario writing. *Strategy and leadership*, 31(2):29-33.
- Fontela, E. 2000. Fore front: bridging the gap between scenarios and models. *Foresight*, 2(1):10-14.
- Ford, R. 2008. Complex adaptive systems and improvisation theory: towards framing a model to enable continuous change. *Journal of change and management*, 3(4):173-198.
- Fourie, P. 2007. The future of AIDS in Africa: lessons from two scenario projects. *South African journal of AIDS research*, 6(2):97-107.
- Fraser Institute. 2011. Survey of mining companies 2010/2011.
<http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/mining-survey-2011-2012.pdf> Date of access: 3 Nov. 2011.
- Freedom House. 2012. Zimbabwe freedom of the press 2012.
<http://www.freedomhouse.org/report/freedom-press/2012/zimbabwe> Date of access: 1 Apr. 2013.
- Friedman, S. & McKaizer, E. 2009. Civil society and the post-Polokwane South African state. Johannesburg: Centre for the Study of Democracy.
- Gale, F. 1998. Cave "Cave! Hic Dragones": A neo-Gramscian deconstruction and reconstruction of international regime theory. *Review of international political economy*, 5(2):252-283.
- Galer, G. 2004. Scenarios of change in South Africa. *The round table*, 93(375):369-383.

Bibliography

Gordin, J. 2008. Zuma: a biography. Johannesburg: Jonathan Ball.

Growth Employment and Redistribution. 1996. A macro-economic strategy.
<http://www.treasury.gov.za/publications/other/gear/chapters.pdf>_ Date of access: 30 Oct. 2012.

Guardian. 2008. Electoral fraud in Zimbabwe.
<http://www.guardian.co.uk/news/blog/2008/mar/28/electoralfraudinzimbabwe> Date of access: 1 Apr. 2013.

Haas, E.B. 1983. Conflict management and international organisations. *International organization*, 37(2):189-256.

Habib, A. & De Vos, C.M. 2002. Human rights. (*In* Human Sciences Research Council, ed. Public attitudes in contemporary South Africa. Cape Town: Human Sciences Research Council).

Haldenwang, B.B. 2011. Projections of the South African population, 1985-2040 (with-AIDS and no-AIDS projections). Cape Town: Institute for Futures Research.

Harrington, J.H., Carr, J.J. & Reid, R.P. 1999. What's this 'systems' stuff, anyhow?. *The TQM magazine*, 11(1):54-57.

Heath, W.C. & Ressler, R.W. 2011. Important and often overlooked aspects of market equilibrium. *Journal of economics and economic education research*, 12(2):77-82.

Human Rights Watch. 2011. South Africa: vote on Protection of Information Bill Damaging. <http://www.hrw.org/news/2011/11/22/south-africa-vote-protection-information-bill-damaging> Date of access: 7 Mar. 2013.

Huntington, S.P. 1968. Political order in changing societies. Yale: Yale University Press.

Hurtardo, P.S. 2010. Recovering the root of design and convergence concepts: evaluation of strategy process approaches against complexity theory background.

Bibliography

Competition forum, 8(1):28-34.

iAfrica.com. 2013. Government policies worry BUSA.

<http://business.iafrica.com/news/851040.html> Date of access: 15 Apr. 2013.

IMF (International Monetary Fund). 2011. World economic outlook database.

<http://www.imf.org/external/pubs/ft/weo/2011/01/weodata/index.aspx> Date of access: 30 Oct. 2012.

Independent Electoral Commission. 2012. What we do.

<http://www.elections.org.za/content/Dynamic.aspx?id=588&LeftMenuId=79&name=About%20Us&BreadcrumbId=218> Date of access: 25 Oct. 2012.

Institute for 21st Century Energy. 2012. Metric of the month: May 2012: a deeper look into interesting trends in energy security data.

<http://www.energyxxi.org/sites/default/files/file-tool/MetricoftheMonth-MAY12CrudeOilPriceVolatility.pdf> Date of access: 25 Mar. 2013.

Institute for Accountability in South Africa. 2010. The Constitutional Way and the way of the National Democratic Revolution.

http://www.ifaisa.org/South_African_Choices.html Date of access: 7 Mar. 2013.

International Labour Organisation. 2011. International Labour Organisation.

<http://www.ilo.org/global/lang--en/index.htm> Date of access: 14 Apr. 2011.

IOL News. 2011a. Malema: mines will be nationalized.

<http://www.iol.co.za/business/business-news/malema-mines-will-be-nationalised-1.1150796#.UTgiehynqXs> Date of access: 7 Mar. 2013.

IOL News. 2011b. Let's talk about parastatals not nationalization.

<http://www.iol.co.za/business/business-news/let-s-talk-about-parastatals-not-nationalisation-1.1093264#.UTge4BynqXs> Date of access: 7 Mar. 2013.

IOL News. 2012. Political murders: it's about money.

<http://www.iol.co.za/news/politics/political-murders-it-s-about-money->

Bibliography

1.1351279#.UTgh5xynqXs Date of access: 7 Mar. 2013.

Jeffery, A.J. 2010. Chasing the rainbow: South Africa's move from Mandela to Zuma. Johannesburg: South African Institute of Race Relations.

Jennings, D. & Wattam, S. 1998. Decision making: an integrated approach. 2nd ed. London: Pittman Publishing.

Johnson, R.W. 2004. South Africa: the first man, the last nation Johannesburg: Jonathan Ball.

Kahane, A. 1992. Mont Fleur scenarios: what will South Africa be like in the year 2002? *Deeper news*, 7(1):1-20.

Kane-Berman, J. 2012. South Africa in 2012: tipping point or turning point. Speech at SAIRR South Africa Mirror Briefing, Johannesburg Country Club.

Kennedy, P., Perrottet, C. & Thomas, C. 2003. Scenario Planning after 9/11: managing the impact of a catastrophic event. *Strategy and leadership*, 31(1):4-13.

Kiel, D.L. & Elliott, E. 1996. Chaos theory in the social sciences. Ann Arbor, MI: University of Michigan Press.

Kleiner, A. 1996. The age of heretic. New York: Doubleday.

Kondraske, G.V. 2011. General systems performance theory and its application to understanding complex system performance. *Information knowledge systems management*, 10:235-259.

Krasner, S.D. 1982. Structural causes and regime consequences: regimes as intervening variables. *International organization*, 36(2):185-205.

Kriek, D.J. & Faure, A.M. 1984. Die moderne politieke teorie. Pretoria: Butterworth.

Lansing, S.J. 2003. Complex adaptive systems. *Annual review anthropology*, 32:183-

Bibliography

204.

Lasswell, H.D. 1958. Politics: who gets what, when, how. New York: McGraw-Hill.

Laszlo, E. 1972. The systems view of the world. Aylesbury: Compton Printing.

Leon, T. 2008. On the contrary. Johannesburg: Johnathan Ball Publishers.

Levanti, G. 2011. The complex system theory for the analysis of inter-firm networks: a literature overview and theoretical framework. *International business research*, 4(2):31-37.

Mail & Guardian. 2012a. More tough love for parastatals.

<http://www.mg.co.za/article/2012-02-24-more-tough-love-for-parastatals> Date of access: 6 Nov. 2012.

Mail and Guardian. 2012b. Cash for growth and dividends.

<http://mg.co.za/article/2012-05-04-cash-for-growth-and-dividends> Date of access: 25 Mar. 2013.

Marren, P.B. & Kennedy, P.J., Jr., 2010. Scenario planning for economic recovery: short term decision making in a recession. *Strategy and leadership*, 38(1):11-16.

Martins, B. 2012. Response by the Minister of Transport to Question 1563 by Mr NJJ Koornhof (COPE). [Parliament of the Republic of South Africa, Response to question 1563]. Western Cape, 10 June 2011.

Mercer, D. 1995. Simpler scenarios. *Management decisions*, 33(4):32-40.

Mercer, D. & Wilter, A. 2002. Removing the fear of uncertainty from the future: theory and practice. *Foresight*, 4(5):38-45.

Metro Newspaper. 2012. Political killings: a time line.

<http://www.metronewspaper.co.za/2012/08/02/political-killings-a-timeline/> Date of access: 30 Oct. 2012.

Bibliography

Millet, S.M. 2003. The future of scenarios: challenges and opportunities. *Strategy and leadership*, 31(2):16-24.

Mine Web. 2012. Miners need to tackle unemployment ticking time-bomb - Shabangu. <http://www.mineweb.co.za/mineweb/view/mineweb/en/page72068?oid=152725&sn=Detail&pid=102055> Date of access: 30 Oct. 2012.

Mining Weekly. 2012. Xstrata-Merafe venture shuts furnaces to help Eskom. <http://www.miningweekly.com/article/xstrata-merafe-venture-shuts-furnaces-to-help-eskom-2012-02-17> Date of access: 5 Nov. 2012.

Morales-Matamoros, O., Jejeida-Padialla, R. & Badillo Pina, I. 2010. Factual behaviour of complex systems. *Systems research and behavioural science*, 27:71-86.

Morel, B. & Ramanujam, R. 1999. Through the looking glass of complexity: the dynamics of organisations as adaptive and evolving systems. *Organisation science*, 10(3):278-293.

Mouton, J. & Marais, H.C. 1990. Basic concepts in the methodology of the social sciences. Pretoria: Human Sciences Research Council.

National Planning Commission (South Africa). 2011. National development plan: vision for 2030. <http://www.npconline.co.za/medialib/downloads/home/NPC%20National%20Development%20Plan%20Vision%202030%20-lo-res.pdf> Date of access: 11 Nov. 2011.

National Treasury (South Africa). 2001. Estimates of national expenditure. <http://www.treasury.gov.za/documents/national%20budget/2001/ene/foreword.pdf> Date of access: 25 Oct. 2011.

National Treasury (South Africa). 2011a. Medium term budget policy statement 2011. http://d2zmx6mlqh7g3a.cloudfront.net/cdn/farfuture/UnREygG9NHaVgQpsosfxWaRli2JSucFF1jt_pxGi9sc/mtime:1319617239/files/docs/111025mtbps_0.pdf Date of access: 25 Oct. 2011.

Bibliography

National Treasury (South Africa). 2011b. Social security and healthcare financing. <http://www.treasury.gov.za/documents/national%20budget/2011/review/chapter%207.pdf> Date of access: 7 Mar. 2013.

New Age. 2012a. Service delivery protests trash scenic Clarens road. *New age*, 10 January 2012.

New Age. 2012b. Death, casualties in protest. *New age*, 15 February 2012.

New Growth Path. 2011. New growth path: the framework. <http://www.info.gov.za/view/DownloadFileAction?id=135748> Date of access: 5 Nov. 2012.

News 24. 2011a. Malema: what, me racist? <http://www.news24.com/SouthAfrica/Politics/Malema-What-me-racist-20110420> Date of access: 7 Mar. 2012.

News 24. 2011b. Nzimande slams 'judicial dictatorship'. <http://www.news24.com/SouthAfrica/Politics/Nzimande-slams-judicial-dictatorship-20111217-2> Date of access: 7 Mar. 2012.

News 24. 2012a. The latest South African scenarios. <http://www.news24.com/Columnists/ClemSunter/The-latest-South-African-scenarios-20120607> Date of accessed 7 Mar. 2012.

News 24. 2012b. Marikana conflict timeline. <http://www.news24.com/SouthAfrica/News/Marikana-conflict-timeline-20121001> Date of access: 7 Mar. 2012.

OMD South Africa. 2011. South Africa and SADC media facts 2011. <http://www.ond.co.za/samediafacts2011.pdf> Date of access: 25 Oct. 2012.

PE Corporate Services SA. 2010. South Africa remuneration and benefit survey. South Africa: PE Corporate Services SA.

Bibliography

- Political Analysis South Africa. 2012. Why corruption in South Africa's public sector is at an all-time high. <http://www.politicalanalysis.co.za/2012/09/18/why-corruption-in-south-africas-public-sector-is-at-an-all-time-high/> Date of access: 16 Apr. 2013.
- Politics Web. 2009. Parastatal privatization would save SA billions – Tim Harris. <http://www.politicsweb.co.za/politicsweb/view/politicsweb/en/page71654?oid=152063&sn=Detail> Date of access: 5 Nov. 2012.
- Politics Web. 2011. Most youth support disciplining of Malema – TNS. <http://www.politicsweb.co.za/politicsweb/view/politicsweb/en/page71619?oid=266484&sn=Detail&pid=71619> Date of access: 5 Nov. 2012.
- Politics Web. 2012a. Pravin Gordhan, Minister of Finance, medium term budget Policy Statement: 2012 speech. <http://www.politicsweb.co.za/politicsweb/view/politicsweb/en/page71654?oid=335383&sn=Detail&pid=71616> Date of access: 30 Oct. 2012.
- Politics Web. 2012b. Jacob Zuma: strong on affability, weak on policy. <http://www.politicsweb.co.za/politicsweb/view/politicsweb/en/page71639?oid=336564&sn=Detail&pid=71639> Date of access: 30 Oct. 2012.
- Politics Web. 2012c. The ANC Fight Club. <http://www.politicsweb.co.za/politicsweb/view/politicsweb/en/page71619?oid=310629&sn=Detail&pid=71619> Date of access: 30 Oct. 2012.
- Politics Web. 2012d. FDI declines by 43% over past year – Tim Harris. <http://www.politicsweb.co.za/politicsweb/view/politicsweb/en/page71654?oid=335125&sn=Detail&pid=71616> Date of access: 5 Nov. 2012.
- Presidency **see** South Africa. Presidency.
- Ralston, W.K. & Wilson, I. 2006. Scenario planning handbook: developing strategies in uncertain times. Mason, OH: Thompson.
- Ratcliffe, J. 2002. Scenario planning: strategic interviews and conversations.

Bibliography

Foresight, 4(1):19-30.

Renwick-Monroe, K. 2001. Paradigm shift: from rational choice to perspective. *International political science review*, 22(2):151-172.

Rhee, Y.P. 2000. Complex systems approach to the study of politics. *Systems research and behavioural science*, 17:487-491.

Ringland, G. 2006. Scenario planning: managing for the future. Chichester: Wiley.

Ringland, G. 2008. Innovation: scenarios of alternative futures can discover new opportunities for creativity. *Strategy and leadership*, 36(5):22-27.

Rotberg, R. 2004. Introduction. (In Rotberg, R., ed. When states fail: causes and consequences. Princeton, NJ: Princeton University Press.

Saturday Star. 2000. Gearing up for a confrontation. *Saturday star*, 22 January 2000.

Saturday Star. 2011. CSA wins bid for travelgate records. *Saturday star*, 29 July 2011.

Saunders, S.G. 2009. Scenario planning: a collage construction approach. *Foresight*, 11(2):19-28.

Schnaars, S.P. 1999. The essentials of scenario writing. *Industrial marketing management*, 28(6):565-571.

Schoemaker, P.J.H. 1991. When and how to use scenario planning: a heuristic approach with illustration. *Journal of forecasting*, 10:549-564.

Schoemaker, P.J.H. 1993. Multiple scenario development: its conceptual and behavioural foundation. *Strategic management journal*, 14:193-213.

Schoemaker, P.J.H. 1995. Scenario planning: a tool for strategic thinking. *Sloan management review*, 36(2):25-41.

Bibliography

Schwartz, P. 1991. The art of the long view: planning for the future in an uncertain world. New York: Double Day.

Segal, N. 2007. Breaking the mould: the role of scenarios in shaping South Africa's future. Stellenbosch: Sun Press.

Sengupta, C. 2004. Political and social stability: ideas, paradoxes and prospects. *Economic and political weekly*, 39(48):5101-5105.

Simon, H.A. 1962. The architecture of complexity. *Proceedings of the American Philosophical Society*, 106(6):467-482.

Simon, H.A. 1990. Prediction and prescription in systems modeling. *Operations research*, 38(1):7-14.

Siverson, R.M. & Starr, H. 1994. Regime change and the restructuring of alliances. *American journal of political science*, 38(1):145-161.

South Africa. 1993. Regulations of Gatherings Act 205 of 1993. *Government gazette*, no. 15446, 28 January 1994.

South Africa. 1994. White Paper on Reconstruction and Development.
<http://www.info.gov.za/view/DownloadFileAction?id=70427> Date of access: 7 Mar. 2013.

South Africa. 1996. The Constitution of the Republic of South Africa, Act 108 of 1996. *National gazette*, no. 17678, 18 December 1996.

South Africa. 2002a. Mineral and Petroleum Resources Development Act 28 of 2002. *Government gazette*, no. 23922, 10 October 2002.

South Africa. 2002b. Promotion of Equality and Prevention of Unfair Discrimination Amendment Act 52 of 2002. *Government gazette*, no. 24249, 10 June 2002.

South Africa. 2003. Broad Based Black Economic Empowerment Act 53 of 2003.

Bibliography

Government gazette, no. 25899, 9 January 2004.

South Africa. 2010. Protection of Information Bill. *Government gazette*, no. 32999, 5 March 2010.

South Africa. Department of Education. 2000. Education statistics at a glance 2000. <http://www.education.gov.za/LinkClick.aspx?fileticket=QDQ%2bEXo5Uxc%3d&tabid=462&mid=1326&forcedownload=true> Date of access: 30 Oct. 2012.

South Africa. Department of Education. 2010. Education statistics at a glance 2010. <http://www.education.gov.za/EMIS/StatisticalPublications/tabid/462/Default.aspx> Date of access: 30 Oct. 2012.

South Africa. Department of Labour. 2011. Annual labour market bulletin: April 2010 - March 2011. <https://www.labour.gov.za/downloads/documents/annual-reports/labour-market-bulletin-report/2010-2011/almb201011.pdf> Date of access: 7 Mar. 2013.

South Africa. Department of Rural Development and Land Reform. 2011. Green Paper on Land Reform, 2011. <http://www.info.gov.za/view/DownloadFileAction?id=150833> Date of access: 5 Nov. 2012.

South Africa Government Website. 1994. White Paper on Reconstruction and Development Programme. <http://www.info.gov.za/view/DownloadFileAction?id=70427> Date of access: 30 Oct. 2012.

South Africa Government Website. 2011. Ministry of Economic Development: the new growth path: the framework. <http://www.info.gov.za/view/DownloadFileAction?id=135748> Date of access: 30 Nov. 2011.

South Africa. Presidency. 2010a. Development indicators 2009. <http://www.thepresidency.gov.za/learning/me/indicators/2009/indicators.pdf> Date of access: 1 Mar. 2011.

South Africa. Presidency. 2010b. Development indicators 2010.

Bibliography

<http://www.thepresidency.gov.za/MediaLib/Downloads/Home/Publications/NationalPlanningCommission4/Development%20Indicators2010.pdf>_ Date of access: 1 Mar. 2011.

South Africa.info. 2011. Gordhan urges South Africans to save.

<http://www.southafrica.info/news/business/715419.htm>_ Date of access: 30 Oct. 2012.

South Africa.info. 2012. South Africa's political parties.

<http://www.southafrica.info/about/democracy/polparties.htm#.UTguCxynqXs> Date of access: 7 Mar. 2013.

South African Advertising Research Foundation. 2010. All media products survey.

<http://saarf.co.za/saarf-publications/publications.asp> Date of access: 30 Oct. 2012.

South African Civil Society Information Service. 2011. Devil in the data: South Africa's rich overrepresented in the vote. <http://www.sacsis.org.za/site/article/681.1>_ Date of access: 30 Oct 2012.

South African Government Information. 2012. National Development Plan: launch speech by Trevor A. Manuel, Minister in the Presidency: National Planning Commission.

<http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=29845&tid=79973>

Date of access: 30 Oct 2012.

South African Human Rights Commission. 2012. Annual report 2012.

<http://www.info.gov.za/view/DownloadFileAction?id=175039> Date of access: 5 Nov. 2011.

South African Legal Information Institute. 2000. Government of the Republic of South Africa and Others v Grootboom and Others (CCT11/00) [2000] ZACC 19; 2001 (1) SA 46; 2000 (11) BCLR 1169 (4 October 2000).

<http://www.saflii.org.za/za/cases/ZACC/2000/19media.pdf> Date of access: 7 Mar. 2013.

South African Legal Information Institute. 2012. South Africa: Constitutional Court.

<http://www.saflii.org.za/za/cases/ZACC/> Date of access: 7 Mar. 2013.

South African Institute of Race Relations. 2008. South Africa Survey 2007/2008.

Bibliography

Johannesburg: South African Institute of Race Relations.

South African Institute of Race Relations. 2009a. South Africa Survey 2008/2009. Johannesburg: South African Institute of Race Relations.

South African Institute of Race Relations. 2009b. Fast facts, November 2009: democracy may be a bridge too far. Johannesburg: South African Institute of Race Relations.

South African Institute of Race Relations. 2010. South Africa Survey 2009/2010. Johannesburg: South African Institute of Race Relations.

South African Institute of Race Relations. 2011. South Africa Survey 2010/2011. Johannesburg: South African Institute of Race Relations.

South African Institute of Race Relations. 2012a. 82nd Annual report.
<http://www.sairr.org.za/profile/annual-report/Web.2011-12%20Annual%20Report.11Jun12.pdf/view> Date of access: 6 Nov. 2012.

South African Institute of Race Relations. 2012b. South Africa survey 2012. Johannesburg: South African Institute of Race Relations.

South African Revenue Service. 2011a. Tax statistics 2010.
<http://www.sars.gov.za/Tools/Documents/DocumentDownload.asp?FileID=66359> Date of access: 1 Mar. 2011.

South African Revenue Service. 2011b. Annual report 2010-2011.
http://www.sars.gov.za/home.asp?pid=286_ Date of access: 1 Mar. 2011.

Snowden, D. 2011. Good fences make good neighbours. *Information knowledge systems management*, 10:135-150.

Stacey, R.D. 1996. Complexity and creativity in organizations. San Francisco: Berret-Koehler.

Bibliography

Stacey, R.D. & Parker, D. 1994. Chaos management and economics. London: Institute of Economic Affairs.

Star. 1995. Wheels are finally rolling. *Star*, 31 August 1995.

Star. 2006. Cosatu congress delegates on offensive against Mufamadi. *Star*, 22 September 2006.

Star. 2011. Far safer to think twice. *Star*, 14 August 2011.

Star. 2011. It's the citizens right to appeal to the concourt. *Star*, 15 September 2011.

Star. 2011. Pennyville residents oppose evictions. *Star*, 16 November 2011.

Star. 2011. Judges lash Zuma. *Star*, 2 December 2011.

StatsSA. 2009a. Labour force survey. Historical revision, March series 2001-2007. http://www.statssa.gov.za/qlfs/docs/March_Series_Historical_revisions.pdf Date of access: 3 May 2011.

StatsSA. 2009b. General household survey 2009. <http://www.npconline.co.za/MediaLib/Downloads/Home/Tabs/Diagnostic/MaterialConditions2/Stats%20SA-General%20Household%20survey%202009.pdf> Date of access: 20 Nov. 2010.

StatsSA. 2010a. Monthly earnings of South Africans 2010. <http://www.statssa.gov.za/publications/P02112/P021122010.pdf> Date of access: 20 Nov. 2010.

StatsSA. 2010b. General household survey 2010. <http://www.statssa.gov.za/publications/P0318/P0318June2010.pdf> Date of access: 20 Nov. 2010.

StatsSA. 2011a. General household survey 2009. <http://www.statssa.gov.za/Publications/P0318/P0318April2012.pdf> Date of access: 3

Bibliography

May 2012.

StatsSA. 2011b. General household survey 2010.

<http://www.statssa.gov.za/publications/P0318/P0318June2010.pdf> Date of access: 5 Nov. 2012.

Stats SA. 2011c. Mid-year population estimates 2011.

<http://www.statssa.gov.za/publications/P0302/P03022011.pdf> Date of access: 5 May 2012.

Steward, D. 2012. Speech to private meeting [email]. 31 October 2010.

Sunday Independent. 1997. ANC faithful embrace the free market. *Sunday independent*, 21 December 1997.

Sunday Independent. 2011. JSC may look for consensus on Hlophe. *Sunday independent*, 6 April 2011.

Sunday Times. 2011. Protect our public protector. *Sunday times*, 10 July 2011.

Sunday Times. 2012. What I want to see in a political party. *Sunday times*, 12 June 2012.

Sunter, C. 1987. The world and South Africa in the 1990s. Cape Town: Human & Rousseau.

Sunter, C. 1992. The new century: the quest for the high road. Cape Town: Human and Rousseau.

Sunter, C. 2012. The world and South Africa beyond 2012: the latest scenarios, flags, probabilities and implications for healthcare. Speech held at the Johannesburg Country Club, South African Institute of Race Relations, Johannesburg, 28 June.

Syvantek, D.J. & Brown, L.L. 2000. A complex-systems approach to organisations. *Current directions in psychological science*, 9(2):69-74.

Bibliography

Thietart, R.A. & Forgues, B. 1995. Chaos theory and organization. *Organisation science*, 6(1):19-31.

TimesLive. 2012a. ANC factionalism is holding country's democracy hostage. <http://www.timeslive.co.za/opinion/editorials/2012/09/10/anc-factionalism-is-holding-country-s-democracy-hostage> Date of access: 25 Oct. 2012.

TimesLive. 2012b. Soweto councillor's house burn down. <http://www.timeslive.co.za/local/2011/07/05/soweto-councillor-s-house-burn-down> Date of access: 25 Oct. 2012.

Times Live. 2012c. South Africa at corruption tipping point: Madonsela. <http://www.timeslive.co.za/politics/2012/04/03/south-africa-at-corruption-tipping-point-madonsela> Date of access: 7 Mar. 2012.

Times Live. 2012d. Take politics out of courts. <http://www.timeslive.co.za/thetimes/2012/11/23/take-politics-out-of-courts-1> Date of access: 7 Mar. 2012.

TNS Research Surveys. 2011a. Expect more flash-points - half of SA's metro residents are still not satisfied with service delivery a year later. <http://www.tnsresearchsurveys.co.za/news-centre/pdf/2011/ServiceDeliveryend2010-4March2011.pdf> Date of access: 7 Mar. 2013.

TNS Research Surveys. 2011b. South Africans feel very strongly that job creation is the most pressing need. <http://www.tnsresearchsurveys.co.za/news-centre/pdf/2011/JobsPressingNeed-30Mar2011.pdf> Date of access: 30 Oct. 2012.

TNS Research Surveys. 2011c. Just over a third of metro adults feel that SA's mines should be nationalized. <http://www.tnsresearchsurveys.co.za/news-centre/pdf/2011/Nationalisation-7April2011.pdf> Date of access: 30 Oct. 2012.

TNS Research Surveys. 2011d. Three quarters of metro adults feel "Kill the Boer" counts as hate speech. http://www.tnsresearchsurveys.co.za/news-centre/press_2011.html Date of access: 5 Nov. 2012.

Bibliography

- Treasury (South Africa). 2011. Social security and healthcare financing.
<http://www.treasury.gov.za/documents/national%20budget/2011/review/chapter%207.pdf>
f. Date of access: 7 Mar. 2013
- UN. 2010. Eleventh United Nations Survey of Crime Trends and Operations of Criminal Justice Systems 2003-2008. http://www.unodc.org/documents/crime-congress/12th-Crime-Congress/Documents/A_CONF.213_3/V1050608e.pdf Date of access: 25 Oct. 2012.
- UNCTAD. 2012. Global Investment Trends Monitor.
http://unctad.org/en/PublicationsLibrary/webdiaeia2012d20_en.pdf Date of access: 30 Oct. 2011.
- UNDP. 2010. Human development report 2010.
<http://hdr.undp.org/en/reports/global/hdr2010/> Date of access: 5 Nov. 2011.
- Van der Heijden, K. 2005. Scenarios: the art of strategic conversation. Chichester: John Wiley and Sons.
- Van der Merwe, L. 2008. Scenario-based strategy in practice: a framework. *Advances in developing human resources*, 10(2):216-239.
- Van Onselen, G. 2012. Appearance and reality: liberal values in democratic South Africa. *Focus*, 65:57-61.
- Von Bertalanffy, L. 1950. An outline of general systems theory. *British journal for the philosophy of science*, 1:134-165.
- Wack, P. 1985a. Scenarios: uncharted waters ahead. *Harvard business review*, 63(5):73-89.
- Wack, P. 1985b. Scenarios: shooting the rapids. *Harvard business review*, 63(6):139-150.

Bibliography

Ward, M. 1995. Butterflies and bifurcations: can chaos theory contribute to our understanding of family systems. *Journal of marriage and the family*, 57:629-638.

World Bank. 2011a. Life expectancy at birth, total (years).
<http://data.worldbank.org/indicator/SP.DYN.LE00.IN> Date of access: 25 Mar. 2013.

World Bank. 2011b. Mobile cellular subscriptions (per 100 people).
<http://data.worldbank.org/indicator/IT.CEL.SETS.P2> Date of access: 25 Mar. 2013.

World Bank. 2012. GINI Index. <http://data.worldbank.org/indicator/SI.POV.GINI> Date of access: 25 Oct. 2012.

World News. 2012. Moody's cuts: South Africa's sovereign credit rating by one level.
http://article.wn.com/view/2012/09/27/Moody_s_Cuts_South_Africa_s_Sovereign_Credit_Rating_by_One_L/ Date of access: 25 Oct. 2012.