

The Politics of Megaprojects: Assessing the Socio-Spatial and Environmental Impacts of the Proposed Dig-Out Port in South Durban

By

Aubrey Mpungose

211521214

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College of Agriculture, Engineering and Science,
School of Agriculture, Earth and Environmental Sciences

University of KwaZulu Natal

Westville Campus

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ABSTRACT

Megaprojects are continuing to transform urban landscapes, and take the form of large development projects such as railways, bridges, ports, dams, shopping malls and iconic skyscrapers. For cities, megaprojects act as marketing and branding strategies, promoting the neoliberal quest to be internationally competitive as spaces of investments, consumption and tourism. Adopting a case study approach, and drawing from qualitative and quantitative methods, this study investigates the impacts of one such megaproject, the proposed dig-out port in Durban. Transnet, a railway, port and logistics state-owned company, proposed that the dig-out port should be built at the old Durban International Airport site. Transnet argued that the dig-out port will be a solution to current challenges such as traffic congestion and low turnaround time at the existing port of Durban, while also addressing future demand and supply challenges.

By using conceptual approaches such as speculative urbanism and neoliberal urban governance, this study argues that critical issues of participation, impacts such as displacements and environmental costs were ignored during the planning process for the dig-out port. Furthermore, civil society organisations and residents in adjacent zones were not consulted. Similar to many international and national case studies of megaprojects, the proponents of dig-out port overestimated benefits such as economic growth and employment, while undermining critical social and ecological impacts especially in an already environmentally stressed area of South Durban.

This study argues that the planning process of the dig-out port reveal the actual existing neoliberalism at the local scale. However, such practices of neoliberalism are varied and are manifested through collaboration between state, municipal and private actors in planning and executing megaprojects.

DECLARATION

I declare that this research project is my own original work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted in the College of Science, Agriculture and Engineering, in the School of Agriculture, Earth and Environmental Sciences, University of KwaZulu Natal. None of the present work has been submitted previously for any degree or examination in any other University. The National Research Foundation funding through Innovation Scholarship is deeply appreciated; however, views and opinions expressed in this thesis remains that of the author.

Signature

Aubrey Mpungose

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Date

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Signature

Prof. Brij Maharaj

.....

Date

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TABLE OF CONTENTS

ABSTRACT.....	i
DECLARATION.....	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF FIGURES	viii
LIST OF TABLES	x
LIST OF ABBREVIATIONS	xi
1. CHAPTER ONE: INTRODUCTION.....	1
1.1 Problem Statement	1
1.2 Why Megaprojects?.....	2
1.3 Background to the Proposed Dig-Out Port	3
1.4 Aims and Objectives	4
1.4.2 Key Questions to be answered in the Study	5
1.5 Theoretical Perspectives in Urban Geography.....	5
1.6 Research Design.....	6
1.7 Structure of the Dissertation.....	6
2 CHAPTER TWO: THEORETICAL FRAMEWORK AND LITERATURE	
REVIEW.....	8
2.1 Introduction	8
2.2 Theoretical Perspectives on Neoliberalism	8
2.2.1 Neoliberalism as an Ideological-Hegemonic Project.....	9
2.2.2 Neoliberalism as Governmentality	10
2.3 Neoliberalisation across the Globe.....	11
2.4 Neoliberalism, Global Economic Restructuring and the City.....	14
2.4.1 From Government to Governance	15
2.4.2 Speculative Urban Development: Neoliberalism and Megaprojects	18
2.5 LITERATURE REVIEW	20

2.5.1	Megaprojects as a Neoliberal Urban Strategy	20
2.5.2	Megaprojects as Branding.....	22
2.5.3	PPPs in Megaprojects	22
2.5.4	Criticism of Megaprojects.....	23
2.6	South African Urban Development.....	31
2.6.1	Apartheid Urban Geography	32
2.6.2	From RDP to GEAR	33
2.6.3	Urban Development Strategy and Urban Development Framework.....	34
2.6.4	Post-Apartheid Urban Development Challenges	35
2.7	Megaprojects in South Africa	36
2.7.1	2010 FIFA World Cup Stadiums	37
2.7.2	The Gautrain	38
2.7.3	The Gauteng Freeway Improvement Project (GFIP).....	39
2.8	Port-City Relationships	41
2.8.1	Port-City Development Models	42
2.9.1	The Competitiveness of Durban Port.....	47
2.9.2	Port Impacts	49
2.10	Conclusion.....	51
3	CHAPTER THREE: METHODOLOGY	53
3.1	Introduction	53
3.2	Aims and Objectives	53
3.3	Study Area: South Durban Basin	53
3.3.1	History of Apartheid Planning in South Durban Basin	54
3.3.2	The Present South Durban Basin	57
3.4	Background of the Dig-Out Port Project.....	58
3.5	Research Design: Case Study Approach.....	60
3.5.1	Primary Data Collection	61

3.5.2	Secondary Data Collection	64
3.5.3	Data Analysis	64
3.5.4	Ethical Considerations	65
3.6	Limitations	65
3.7	Conclusion.....	66
4	CHAPTER FOUR: FINDINGS	67
4.1	Introduction	67
4.2	A Review Megaprojects in Durban	67
4.3	Three Case Studies of Durban’s Megaprojects	70
4.4	Socioeconomic and Spatial Impacts.....	75
4.5	Motivations for the Dig-Out Port.....	78
4.5.1	Meeting the Supply Ahead of Demand.....	78
4.5.2	“A deeper channel floats all boats”: the demand for the Panamax shipping facilities 81	
4.5.3	National Government Policies	83
4.6	The Alternative of Using Other Ports	86
4.7	Socio-Economic Development Imperatives of the Dig-Out Port.....	88
4.7.1	Job Creation	88
4.7.2	Dig-Out Port as the Driver of Economic Growth	91
4.7.3	World Class-Mega-Port’ for the ‘World City’: Marketing and Branding Durban in the Global Economy	96
4.8	Social and Ecological Impacts Concerns	98
4.8.1	Lack of Public Participation.....	98
4.8.2	Fear of Displacements.....	106
4.8.3	Traffic Congestion, Trucking and Accidents.....	110
4.8.4	Environmental Impacts	114
4.9	Residents’ Perceptions of the Dig-Out Port	120
4.10	Conclusion.....	132

5	CHAPTER FIVE: EVALUATION AND CONCLUSION.....	133
5.1	Introduction	133
5.2	Key Findings	133
5.2.1	The Need for the Dig-Out Port	133
5.2.2	Benefits overestimated?	134
5.2.3	Cost Underestimated?	137
5.2.4	Whose Development? Participation and Power.....	139
5.2.5	Residents' Perceptions	142
5.3	Theoretical Reflections	143
5.3.1	Neoliberalising Space	144
5.3.2	Speculative Megaprojects	145
5.3.3	The Dig-Out Port and Branding Durban.....	147
5.3.4	Megaprojects and Urban Governance.....	148
5.4	Recommendations	150
5.5	Conclusion.....	151
	REFERENCES.....	153
	Literature Sources	153
	News Articles	168
	APPENDICES	172
	Appendix 1: SIP Framework.....	172
	Appendix 2: SIP 2-Gateung Durban Corridor.....	173
	Appendix 3: Community Questionnaire	174
	Appendix 4: KIIs Interview Questions	179
	Appendix 5: Consent Form	183

LIST OF FIGURES

Figure 1: Investment in Megaprojects in South Africa, 1948-2012	37
Figure 2: Gautrain Routes	40
Figure 3: The Anyport Model of Port Development	43
Figure 4: Port Regionalisation Model	44
Figure 5: South African Main Ports	47
Figure 6: The Port of Durban	48
Figure 7: Total Port Pricing (US\$) including Port Authority & terminal handling charges, 2012	49
Figure 8: Port-related economic clusters in the eThekweni metropolitan area (2007)	51
Figure 9: Early industrial and residential nodes in South Durban	55
Figure 10: The Racial Zoning Plan, 1944	56
Figure 11: Map of Industrial Areas in South Durban	58
Figure 12: The Layout of the Dig-Out Port	59
Figure 13: The Durban International Airport Site	60
Figure 14: Population Growth in Durban, 1996-2016	68
Figure 15: Schematic of an Aerotropolis	72
Figure 16: Aerotropolis in Durban	73
Figure 17: The Moses Mabhida Stadium, Durban	74
Figure 18: Container Handled by the Port of Durban	79
Figure 19: Container Forecasts for the Port of Durban 2013-2043, in TEUs	80
Figure 20: Shipping Costs by Ship Size	83
Figure 21: Freight Demand Forecast from 2013-2044	86
Figure 22: Container Terminal Capacities for Various Ports, 2013.	88
Figure 23: Economic Impacts of the Dig-Out Port on the KZN Economy	92
Figure 24: Organisational Structure of TEMPI	102
Figure 25: Heavy Vehicles Entering and Exiting the Port per Day, n=54402	110
Figure 26: Number of Accidents in Roads Entering the Port of Durban	113
Figure 27: Dwarf Chameleon, Spotted Shovel Nose Frog and Pickersgill's Reed Frog (From Left to Right)	116
Figure 28: Changes in the Bay of Durban, 1800-1999	118
Figure 29: Monthly Household Income, n=75	122

Figure 30: Household Income Class Categories as Perceived by Respondents, n=94	123
Figure 31: Years Living in the Community (n=94)	123
Figure 32: Socio-Economic Challenges in the Community (N=94, multiple responses).....	124
Figure 33: Is it Worth It to Build the Dig-Out Port? (n=94).....	125
Figure 34: Is it Worth It to Build the Dig-Out Port? By Employment Status (n=94)	126
Figure 35: Responses to the Statement: “The Port Must Be Built” (n=94).....	126
Figure 36: Positive Impacts, (n=94 multiple responses).....	128
Figure 37: Negative Impacts (n=94, multiple responses)	128
Figure 38: Perceptions of Negative Impacts among those who support the port, n=54	129
Figure 39: Level of Agreement/ Disagreement with the Following Statement (n=94)	130
Figure 40: Level of Agreement with the Following Statements (n=94).....	131
Figure 41: Respondents who Strongly Agreed/ Agreed with the following statements.....	132
Figure 42: Stakeholders in the Durban Dig-Out Port	142

LIST OF TABLES

Table 1: Cost Overruns in Transportation Megaprojects.....	28
Table 2: Accuracy of Forecasting in Transportation Megaprojects.....	29
Table 3: A Summary of Criticisms of Megaprojects	31
Table 4: Budgeted versus Final costs of the FIFA 2010 stadia	38
Table 5: Companies Fined during GFIP.	39
Table 6: Stakeholders Considered for Interview	63
Table 7: Changes in the numbers of firms sampled in 2002/03	69
Table 8: Revenue of three small sports events in KZN Province	78
Table 9: Costing Analysis between Durban and Richards Bay (in ‘000 000 Rands)	87
Table 10: Firms in the eThekwinini maritime cluster by sector and sub-sector, 2007	93
Table 11: Public Protest Opposing Port Expansions in Durban.	104
Table 12: Willingness to Relocate Because of Port Expansions, n=1000	108
Table 13: Flora and Fauna Species in the DIA Site.....	115
Table 14: Household Roster, n=94	121
Table 15: Household Size and Average Employment, n=94.....	122
Table 16: Are you Aware of the Dig-Out Port	125
Table 17: Positive and Negative Perceptions of the Dig-Out Port	127
Table 18: Attachment to place in Isipingo	130

LIST OF ABBREVIATIONS

ACSA	Airport Company South Africa
BEE	Black Economic Empowerment
BP	British Petroleum
COSATU	Congress of South African Trade Unions
DCCI	Durban Chamber of Commerce and Industry
DDOP	Durban Dig-Out Port
DIA	Durban International Airport
DIDR	Development Induced Displacement and Resettlement
DTP	Dube Trade Port
EDTEA	Economic Development, Tourism and Environmental Affairs
FIFA	Fédération Internationale de Football Association
FIRE	Financial, Insurance, and Real Estate
FTE	Full-Time Equivalent
GDP	Growth Domestic Product
GEAR	Growth, Employment and Redistribution
GFIP	The Gauteng Freeway Improvement Project
HIV	Human Immunodeficiency Virus
ICC	International Convention Centre
IDP	Integrated Development Plan
IFI	International Financial Institutions
ITF	International Transport Forum
IMF	International Monetary Fund
KII	Key Informant Interview
KSIA	King Shaka International Airport
MDS	Transnet Market Demand Strategy

NDP	National Development Path
NEMA	National Environmental Management Act
NGP	New Growth Path
NMA	Natal Manufactures Association
OECD	Organisation for Economic Co-operation and Development
PICC	Presidential Infrastructure Coordinating Commission
PPP	Public Private Partnerships
RDP	Reconstruction and Development Plan
SACN	South African Cities Network
SADC	Southern African Development Community
SANRAL	South African National Roads Agency Limited
SAP	Structural Adjustment Packages
SDB	South Durban Basin
SDCEA	South Durban Community Environmental Alliance
SDF	Spatial Development Framework
SIP	Strategic Integrated Projects
SOE	State-Owned Enterprise
TEMPI	Transnet-eThekweni Municipality Planning Initiative
TEU	Twenty-Foot Equivalent Unit
TNPA	Transnet National Port Authority
UDF	Urban Development Framework
UDS	Urban Development Strategy
WBHO	Wilson Bayly Holmes Ovcon
WTO	World Trade Organisation

CHAPTER ONE: INTRODUCTION

1.1 Problem Statement

The present study examines the impacts of the proposed dig-out-port at the old Durban International Airport (DIA) site, through a lens of megaprojects, which continue to configure the socio-spatial, economic and environmental organisation of cities. The proposed construction of the dig-out port is led by Transnet, a state-owned enterprise, but also backed by the eThekweni Municipality, as well as national and provincial governments. This thesis argues that the proposal of the dig-out port in Durban by Transnet should not be looked in isolation, but integrated within the current global and South African urban geography debates. As it will be indicated in the literature review (chapter 2), since the 1980s, debates of urban entrepreneurialism and urban neoliberalism have been one of the dominant in urban geography (but also in sociology, urban and regional planning and economics).

Megaprojects, globally, have become a popular form of urban public investment. Everywhere we go, we are confronted with large-scale projects such as highways, railways, dams, airports, shopping malls, waterfronts projects, sports stadia, etc. Recent literature in urban studies (e.g. Swyngedouw, Moulaert, Rodriguez, 2002; Fainstein, 2008; Orueta and Fainstein, 2008; Jaffee, 2015) contends that the increasing domination of megaprojects (and mega-events), especially in urban areas, is an example of neoliberalisation and globalisation of urban policies. In this way, megaprojects/events play a crucial role in marketing cities as spaces of investments, tourism and consumption. In his classic paper *From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism*, Harvey (1989) argues that these new urban development strategies are the reflection of the 'entrepreneurial city', where city officials are primarily concerned with attracting investments from the private sector and market urban spaces as safe havens for investments.

Urban theorists argue that megaprojects are the consequences of the hegemonic dominance of neoliberalism since the 1970s and the accelerating rate of globalization (Brenner and Theodore, 2002, Jessop, 2002; Harris, 2014). In terms of the neoliberal paradigm, megaprojects are not only seen as an infrastructural development plan but also conceptualized as a strategy for improving the 'city image' and enhancing inter-city competition for investments. Indeed, Ren (2008:518) articulates that "local governments attempt to use megaprojects to create a new

global image for urban regeneration, to rebrand and reposition their cities in the global economic competition”. With competition and entrepreneurialism in mind, urban managers put emphasis on sports stadia, museums, airports, shopping malls, etc. as ‘place marketing’ strategies (Ren, 2008).

Megaprojects are also funded by various sources and strategies, including Public-Private Partnerships (PPPs). PPPs are not uncommon models of financing megaprojects; they seek to attract the local and international capitalist class with purchasing power (Ren, 2008; Sklair and Struna, 2013). The present study offers an opportunity to interrogate key players involved in the dig-out port, their interests and distribution of power to influence decision-making.

1.2 Why Megaprojects?

Megaprojects have not been immune to criticisms; there is a large body of scholarship examining the social, economic, environmental and spatial outcomes of mega projects around the globe (Harris, 2014). For example, most of the literature reviewed suggests that mega projects are characterized by:

- Minimal commitment to socially just policies with the primary orientation towards profitability and competitiveness;
- Delivered by quasi-governmental organisations; and
- Operating within introverted business-oriented modes of governance that lack democratic accountability and exclude public participation (Harris, 2014:9).

Furthermore, a review of the literature suggests that most megaprojects around the world are characterized by similar trends: overestimation of benefits, undermining of costs and social, economic and environmental risks (Flyvbjerg et al., 2003; Orueta and Fainstein, 2008; Vickerman, 2008). Based on the study of 258 transportation megaprojects, Flyvbjerg (2007) estimated that 9 out of 10 projects have cost overruns, and this trend is found in all 20 countries and 5 continents covered by the study. Flyvbjerg (2007) adds that promoters and planners of most megaprojects provide inaccurate information about cost-benefit analysis and forecasting. There are policy implications for this: “lawmakers, investors, and the public cannot trust information about costs, benefits, and risks of large infrastructure projects produced by promoters and planners of such projects” (Flyvbjerg, 2007: 6).

This has led to some of the scholars terming megaprojects as speculative, relying on the international finance and trying to please the investors, with serious socio-spatial, economic

and environmental consequences (Flyvbjerg et al., 2003; Gellert and Lynch, 2003; Goldman, 2011; Sager, 2011). Flyvbjerg et al. (2003:4) argue that “economic and physical scale of today’s megaprojects is such that the whole nation may be affected in both medium and long terms by the success or failure of just one project”. Gellert and Lynch (2003) argue that displacements are intractably linked to megaprojects. Goldman (2011) adds that speculative megaprojects in Bangalore resulted in displacements of rural farmers and many poor urban dwellers were also pushed out of the city. Through engagement with the literature on megaprojects and empirical findings of the study, I argue that the initial planning process of mimic the popular model of undertaking megaprojects, that is, ignoring and undermining the public participation process and underestimating the socio-economic and environmental costs.

1.3 Background to the Proposed Dig-Out Port

Historically, the port of Durban has been and continues to be, the cornerstone of South Africa and Durban’s economic growth. The port serves as an important international gateway for imports and exports to South Africa and Southern Africa. Transnet has therefore identified a number of port expansion related projects to increase the capacity of the Port of Durban, and one of them is the proposed dig-out port at the old Durban International Airport (DIA) site, which is the focus of this study.

The Transnet Market Demand Strategy (MDS) calculated the demand and supply from 2013 to 2044 and concluded that because of the future demand for container handling, the port will experience serious capacity and supply challenges by 2020. Furthermore, the proposed dig-out port is fully supported by the Strategic Integrated Projects 2, and within the Durban-Gauteng-Free State Corridor, the dig-out port is expected to play a vital role to handle increasing freight. The eThekweni Municipality has fully supported the notion of building the new port, citing economic benefits it will bring to the city. The city also acknowledges that the port of Durban is running out of capacity.

Advocates argue that the dig-out port cite several benefits for the city of Durban, province of KwaZulu Natal and the country as a whole. Transnet and the government have argued that the project will create approximately 64 000 construction jobs and 24 000 operational jobs, in addition to increased Gross Domestic Product (GDP) and reduced logistics costs (Mather, 2013; Naidoo, 2015).

The construction of the new dig out port will result in serious spatial and land use changes, such as the construction of new roads and railways. Some of the proposed changes include, amongst others, the extension of N2 uMhlathuzana River Valley Highway; M4 Mobeni to Clairwood Truck freight road route; R8.33 billion Transnet Rail infrastructure modernisation; R23.4 billion Transnet Durban-Johannesburg oil pipeline; BP to modernise SAPREF oil refinery to Euro V standards (R2.5 billion) (Dyer, 2014).

The area forms a part of the broad South Durban Basin (SDB). The SDB is an industrial hub of Durban created during the apartheid era when African, Coloured and Indian communities were forcibly removed from places such as Cato Manor. These communities were relocated to the SDB, often adjacent to heavy industries to provide cheap labour. Because of these historical (but also present) conditions, the SDB communities of Wentworth, Merebank, Bluff, Clairwood, Lamontville, among others, have experienced negative environmental and socio-economic externalities such as crime, health issues from air pollution and hazardous waste, crime, drug problems and community disintegration (Bond, 2014).

The planning process has been characterised resistance from communities and civil society (Bond, 2014). Groups that are opposed to the dig-out port argue that the port of Durban is characterised by many inefficiencies including higher costs compared to other international ports and lack of investment in technology. Hence, it may be necessary to maximise the efficiency of the existing port of Durban rather than starting a new project that would cost billions (Manda, 2015). A similar argument is made by Dyer (2014) who states that there are ports, such as Ngqura in Port Elizabeth, that are underutilised, and need to be utilised to their maximum efficiency. This study contends that the dig-out port is an attempt by Transnet and the city of Durban to promote megaprojects in spite of the severe social and ecological costs.

1.4 Aims and Objectives

The aim of this study is to investigate the impacts of the proposed dig-out-port in Durban.

The objectives of this study are to:

- i. Review literature and critically analyse selected mega projects in Durban since 1994;
- ii. Assess the projected and socio-spatial, economic and environmental impacts associated with the -dig-out port; and
- iii. Examine the participation and ability of various stakeholders with regard to influence decision making in matters relating to the port.
- iv. Assess the perceptions of residents in adjacent areas towards the dig-out port.

1.4.2 Key Questions to be answered in the Study

- i. Is it necessary to construct a new dig out port?
- ii. What are changes to be brought by the proposed port?
- iii. Who is included and excluded in decision making relating to the port; and who has the power to influence the decision making?
- iv. What are the perceptions of residents in adjacent areas towards the dig-out port?

1.5 Theoretical Perspectives in Urban Geography

Through engagement with both South African and international literature in urban geography, I conceptualise the proposed dig-out port within the major debates that shaped the discipline since the 1970s:

- *Neoliberalism*: I contextualise megaprojects such as the proposed dig-out port as a neoliberal urban development strategy. Through the works of Harvey (1989), Peck and Tickell (2002) Brenner and Theodore (2002) I will illustrate how the proposed dig-out port and other megaprojects in Durban are examples of the hegemonic shift towards neoliberal urban development. I will also draw from the post-structural and Gramscian conceptualisation of neoliberalism. However, the argument will be that neoliberalism is a variegated concept and is diffused differently across diverse spatial scales.
- *Urban Entrepreneurialism and Governance*: Through the works of Harvey (1989) I use the concepts of entrepreneurialism as a lens to critically examine the dig-out port as a marketing and branding strategy for the city of Durban. The focus will be on the role of globalisation and economic restructuring in influencing cities to be ‘competitive’ and to position themselves as attractive and safe spaces for capital and investments.
- *Growth Coalitions and PPPs*: this also allows for the interrogation of the multi-scalar politics and the interaction of players from national, provincial and local governments, and to private sectors and civil society. It also serves as a

“means for identifying key actors and for characterising patterns of interaction between them, including the types of knowledge they mobilise and the extent to which knowledge is shared among various categories of actors” (Kennedy, Robbins, Bon, Takano, Varrel and Andrade, 2014: 4).

- *Speculative Urbanism*: the concept of speculative urbanism underscores the impacts of fast-tracked urban infrastructural projects to attract the investors. However, it is not guaranteed that there will be a return on investments since urban governments will rely on the confidence in the market.

1.6 Research Design

This study adopted a mixed method approach, using both qualitative and quantitative data, to explore the impacts of mega projects in the Durban. Combining quantitative and qualitative data enhances the breadth and depth of the study and enables holistic and flexible investigation. In-depth, semi-structured interviews were conducted with key informant and stakeholders of the proposed projects. Stakeholders that were interviewed included authorities from eThekweni Metropolitan, Transnet, Civil Society groups and academic experts and consultants. The study also utilised quantitative data collection through structured questionnaires. Secondary data came from a wide range of sources such as newspapers, social and environmental impact assessment reports by consulting companies and municipalities, census data, information from Transnet and government departments, and the existing academic literature.

1.7 Structure of the Dissertation

Chapter one introduces the study and highlights the background and problem statement of the study. The chapter also describes the aims and objectives of the study as well as introducing the theoretical and conceptual underpinnings of the study. Lastly, the chapter briefly describes the background to the dig-out port as well as research design and methods used in the study.

Chapter two attempts to position megaprojects and urban governance within various conceptual debates in urban geography. The chapter concentrates on the conceptual understandings of neoliberalism, namely, the political economy, hegemony, as well as the poststructuralist's perspectives. After this, the implications of neoliberalisation on urban governance, policies, development and restructuring will be discussed. A key contention is that neoliberalism has influenced the emergence of new forms and tools of urban governance, both in the cities of the global North and South. Then the chapter discusses urban development strategies and tools in contemporary cities, with specific reference to megaprojects and mega-events, public-private partnerships, and property investments.

The second chapter also present a review of the literature pertaining to the study and impacts of megaprojects, and especially neoliberal influence. Furthermore, socio-spatial and economic impacts of megaprojects such as displacements, corruption, cost overruns and spatial polarisation will be discussed. The chapter further discusses the urban geography of South Africa with reference to post-apartheid urban policies, urban development strategies including recent megaprojects undertaken

Chapter three presents the methodological approach used in the study. First, the historical and present settings of South Durban Basin are presented, followed by the background of the port of Durban and the proposed dig-out port. Second, the case study research designed will be described as well as the sampling approach, quantitative and qualitative methods used to collect data, methods of analysis as well as ethical considerations.

Chapter four presents the empirical findings as guided by the aims, objectives and research questions of the study. Here quantitative and qualitative findings are presented based on the primary and secondary data collected and analysed.

In chapter five, I synthesise and evaluate the key findings of the study in terms of the theoretical and conceptual perspectives outlined in chapter two

CHAPTER TWO: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Introduction

Since the late 1980s, several scholars have argued that neoliberalism is increasingly being diffused to many parts of the world. It has emerged as an ideological, but also as a policy agenda, displacing previous welfare and state-led development policies (Leitner, Shepard, Sziarto and Maringanti, 2007). One such policy is the promotion of megaprojects. Neoliberalism differs from other preceding pro-market policies in that: it is a global project, diffused unevenly almost in every part of the world, and is “implemented at all scales ranging from municipal to supranational authorities” (Leitner *et al.*, 2007:3). It proposes the ideas of individualism and entrepreneurialism, thus “making individuals responsible for their own well-being, and redefining citizens as consumers and clients” (Leitner *et al.*, 2007: 2).

This chapter conceptualises the proposed dig-out port within major theoretical debates in urban geography. The chapter is divided into two three broad sections. The first section reviews the major theoretical arguments and debates about neoliberalism. This section will illustrate the political economy and postructuralist perspectives on neoliberalism. Furthermore, this section will also assess the influence of neoliberalism on urban policies and strategies. The emphasis here will be on the changing nature and role of urban governance, the relationship between urban megaprojects and neoliberalism, and the speculative character of urban megaprojects. The second section reviews literature relating to the rise and impacts of megaprojects in urban spaces. South African urban policy and megaprojects experience will also be assessed. The last part will discuss the changing role of ports in the global economy, including impacts of the port of Durban on the South African economy.

2.2 Theoretical Perspectives on Neoliberalism

The concept of neoliberalism has been discussed intensively and extensively in the human geography literature, especially from the 1990s. Authors have come from different theoretical paradigms; within human geography, major theoretical debates about neoliberalism and its practices have come from the political economy perspective (Harvey, 1989; Brenner and Theodore, 2002; and Jessop, 2002; Peck and Tickell, 2002; Swyngedouw *et al.*, 2002; Harvey,

2005) and poststructuralism (Rose, 1999; Larner, 2000; Lemke, 2002; Larner, 2003). This section therefore discusses these theoretical frameworks.

2.2.1 Neoliberalism as an Ideological-Hegemonic Project

Neoliberalism, as a political-economic doctrine, “proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade” (Harvey, 2005:2). Indeed, the virtues of active individualism, free market, trade liberalisation and flexible labour are now common across various spatial scales. The fundamental principle of neoliberalism is rooted in the notion that individual freedom is best guaranteed by the market institutions (Harvey, 2005). The state must, therefore, withdraw from the provision of services such as health, education, water and sanitation, and these services are to be provided by the private sector (Brenner and Theodore, 2002; Peck and Tickell, 2002; Jessop, 2002; Swyngedouw *et al*, 2002; Harvey, 2005; Sager, 2011).

Political economy literature stresses that neoliberalism is an ‘ideology’ and a political project, that dates back from the works of Friedrich von Hayek, Joseph Schumpeter and Milton Friedman. Collectively, these thinkers strongly advocated for individual freedom, private property, and were opposed to centralised state planning (Barnett, 2010). However, it was the demise of the Keynesian-welfare state, the rise of Thatcherism in the UK and Ronald Reagan’s policies in the US in the 1980s that led to the rise of neoliberalism in the west. Furthermore, international institutions such as the International Monetary Fund (IMF), World Bank and the World Trade Organisation (WTO) consolidated, and geographically diffused neoliberal policies and practices around the world (Peck and Tickell, 2002; Harvey, 2005; Barnett, 2010).

Harvey (2005), coming from the Marxist tradition, argued that neoliberalism is characterised by what he calls ‘*accumulation by dispossession*’. This is a capital accumulation strategy which seeks to “transfer publicly or commonly held assets and resources into private property” (Barnett, 2010: 4). Privatization of common property and social security, the degradation of environmental commons, and financialisation of the economy are popular strategies of *accumulation by dispossession*. Recently, land speculations, housing and mortgage crisis, gentrification and megaprojects have become common methods of accumulating profits and rents in urban areas, while creating externalities such as displacements. From this perspective, neoliberalism can be regarded ideological project that seeks to create new means and conditions

of capital accumulation (Harvey, 2004; Harvey, 2005; Clarke, 2008; Barnett, 2010; Tasan-Kok, 2012).

A critical conceptualisation of neoliberalism comes from the regulation school, deeply influenced by the Gramscian state theory. This perspective conceptualises neoliberalism as a *hegemonic project*, “with clear and unambiguous origins, whose spread is sustained and circulated by an identifiable set of institutions” (Barnett (2005:8). Neoliberalism, from a Gramscian perspective, is a class-driven project of state restructuring in the interests of self-regulating markets and intensified accumulation. Hence, neoliberalism is seen as a ‘hegemonic’ project in that, political dominance is exercised by elite actors or interest groups within a ruling bloc. In this way, public values are subordinated in favour of market ones, and this resolves the problem of a relationship between politics and economy. It does so by presenting ‘neoliberalism’ as a ‘hegemonic’ project “in which capital’s logic is vocalized as a political programme and directive ideology” (Clarke, 2004: 4).

The political economy approach has mainly focused on the role of neoliberalism in shaping economic systems of region. However, the ‘cultural turn’ in human geography has also gave a rise to the post-structuralist approaches. Armed with Foucault’s theories, the post-structuralists is concerned with the role neoliberalism in creating ‘neoliberal selves’ and governing various institutions. This is discussed in the following section.

2.2.2 Neoliberalism as Governmentality

Post-structuralist perspective has shifted the conceptual analysis of neoliberalism from ideology to ‘discourse’ (Larner, 2000 and 2003; Lemke, 2002; Rose, 1999). The focus here is on neoliberal governmentality. As Larner (2000:12) argues, “while neoliberalism may mean less government, it does not follow that there is less governance”. Neoliberal governmentality entails different kind of spatiality: “government at a distance” (Rose, 1999: 49). The assemblage of different technologies and rationalities are used to make sure that institutions and individuals conform to market governance:

setting targets and monitoring outcomes; transforming the ethos of governance from bureaucracy to business; giving agencies autonomy to act as long as they are accountable; and creating calculable spaces to monitor outcomes (relying heavily on auditing, targets, and rankings) (Leitner et al, 2007: 3).

Scholars working within post-structuralism paradigm have conceptualised governmentality to explain the shift from the Keynesian to neoliberal policies in Western Europe and the United

States. The argument is that this shift has been associated with the transfer of functions of government to non-state agencies, in that:

the logic of the market has been extended to the operation of state functions, so that even the traditionally core institutions of government, such as post offices, schools, and police are—if not actually privatized at least run according to an "enterprise model" (Ferguson and Gupta, 2002: 989)

Along these lines, Larner (2000) argues that neoliberal governmentality practices are found in various spaces, including government welfare agencies, workplaces, health and educational institutions. Government agencies are governed by technologies such as audits, budget disciplines and cost-benefit calculations while avoiding the implications of social and ethical issues. This itself does not mean less government but indicates a new kind of governance where states play a minimal role, and new quasi-public ‘enterprises’ are responsible for the provision of social services. These institutions encourage the population to perceive themselves as ‘active citizens’, responsible for the development of their own well-being. Citizens are responsible for their own families, their education and health rather, than relying on the state welfare; employees are expected to behave like entrepreneurs and risk takers (Clarke, 2008; Gupta and Ferguson, 2002; Larner, 2003; Leitner *et al*, 2007; Hamann, 2009; Rose, 1999; Springer, 2012).

The process of ‘neoliberalisation’ was diffused unevenly across different regions. For example, in Western Europe and North America, it is argued that the crisis of Keynesianism and welfare states and the rise of Thatcherism and Reaganomics created conducive environments for neoliberalism to be consolidated (Jessop, 2002; Harvey, 2005). In the Global South, however, the role of Bretton Woods institutions in diffusing neoliberal policies through Structural Adjustment Packages is acknowledged (Willis, 2005). The following section therefore discusses the roll-out of neoliberalism in different parts of the world.

2.3 Neoliberalisation across the Globe

This section discusses the process of *neoliberalisation*, and how neoliberalism became hegemonic across many parts of the world. There is a consensus in social sciences that the process of neoliberalisation did not follow a linear model. For example, Harvey (2005) argues that the rise of neoliberalism in Western Europe and the US resulted from the crisis of Keynesian-welfare based policies, and the crisis in Fordist production. Shifts to neoliberalism started to emerge in New Zealand, Australia, Sweden, Canada, France and Germany. However, in post-

socialist countries, the collapse of the Soviet bloc in 1980-1990 that facilitated the rise of a wide range of market reforms resulting in the gradual adoption of neoliberal practices in Eastern and Central Europe (Jessop, 2002). In this way, “neoliberalism does not, and cannot, exist in pure form, but only manifests itself in hybrid formations” (Clarke, 2008:140). It is also not geographically and socially diffused evenly (Brenner and Theodore, 2002); hence one may speak of plural neoliberal spaces or neoliberalism as a variegated concept (Springer, 2012). This underscores the point that neoliberalism cannot just be assumed as a hegemonic project that produces similar conditions across different spatial scales. However, there are different, varying forms of ‘actually existing’ neoliberal policies and practices implemented in a specific site (Brenner and Theodore, 2002).

Under Keynesianism, or what Harvey (2005) calls ‘embedded liberalism’, the common consensus was that the state should be the key player in the economy and welfare of citizens. There was a class compromise between capital and labour, and trade unions had a significant influence on the industrial relations and state apparatus (Harvey, 2005). The state was actively involved in the provision of social services (education, healthcare). State-led economic planning was evident. The state-owned key industries such as coal, steel, automobiles. Economic growth under Keynesian economic policies accelerated in industrialised countries, especially during the 1950s and 1960s. This system entails public expenditures on education, health and welfare; the state had active participation and intervention in the economy. Keynesianism resulted in huge benefits, as employment was high, and this went hand in hand with economic growth rates resulting from Fordist production strategies (Harvey, 2005).

At the end of the 1960s, however, Keynesian economies began to experience deep fiscal crises, and it was clear within international and domestic economies that embedded liberalism is crumbling. Unemployment rates were increasing at faster rates and inflation was rising. During this period, western countries, especially Western Europe and the US were going through a phase of stagflation (Harvey, 2005). Keynesian economics faced many crises as the tax revenues were declining and spending on social services fell dramatically (Harvey, 2005).

Peck and Tickell (2002) identified an important phase in the history of neoliberal reform, especially in Europe and North America: the shift from ‘rollback’ to ‘roll-out’ neoliberalism. In the course of this shift, the agenda gradually moved from one preoccupied with the active *destruction and discreditation* of Keynesian welfarist and social-collectivist institutions, to one focused on the purposeful *construction and consolidation* of neoliberalised state forms, modes

of governance, and regulatory relations. Brenner and Theodore (2002) term this process as *creative destruction*: the partial destruction of, and attack on existing institutions, and the creation of new programmes of market-led growth.

The rollback phase of neoliberal reform was mainly concerned with ‘destroying’ and aggressively attacking ideological and institutional vestiges of the previous Fordist-Keynesian regimes of accumulation (Brenner and Theodore, 2002). This destruction involved efforts to shrink the size of the state through fiscal restraint, privatisation and rolling back of state powers, as well as efforts to deregulate the economy and reduce the power of unions. As Harvey (2005) argues, the aim of neoliberalism was to, therefore, ‘disembody’ capital from such constraints as state intervention, unionised labour and high social expenditure. This meant dismantling trade unions, privatisation of state-owned enterprise, opening borders for foreign investment, budget cuts for municipalities, and reducing corporate taxes, and privatisation of social services such as housing, water and electricity, and thus, an attack on welfarist policies (Peck and Tickell, 2002; Brenner and Theodore, 2002; Harvey, 2005; McDonalds, 2009).

The ‘rollback’ neoliberalism is inextricably linked to Thatcher and Reagan’s administrations in Britain and the United States, respectively, from the 1970s to the 1980s. Though there were neoliberal experiments before in countries such as Chile, where von Hayek ideas were put in the lab by the ‘Chicago Boys’, the dramatic consolidation of neoliberalism as a new global economic hegemony was shaped by Thatcher and Reagan’s policies from the late 1970s. However, growing social externalities such as poverty and unemployment resulting from Thatcher and Reagan’s pro-market policies and interventions could not be ignored.

As a result of these perverse economic impacts of pro-market approaches, neoliberalisation shifted to a different course. While it was assumed that free-market-based policies would be sufficient for economic growth as long as the government rolled back, by the 1990s, however, it was starting to dawn that areas such as labour markets, food systems and pollution required solutions other than deregulation. As a result, there was an emergence of concepts such as ‘community’ ‘partnerships’ and ‘social capital’ in the literature (World Bank, 1999; Peck and Tickell, 2002). This is what Brenner and Theodore (2002:362) refer to as ‘roll-out’ neoliberal reform, and the “*creation of new infrastructure for market-oriented economic growth, commodification, and the rule of capital*”.

Brenner and Theodore (2002) argue that if the above conditions experienced in the West represented extreme neoliberalism, moderate neoliberal practices were also undertaken in countries such as New Zealand, France, Germany and Sweden. New Zealand is a case in point. During the 1980s the state withdrew from many areas of economic production. There was an extension of the marketisation programme, and the rise of neoconservative and/or authoritarian policies and programmes in the area of social policy. In the late 1990s, different programmes such as 'partnerships' were increasingly being introduced in economic and social policy (Brenner and Theodore, 2002).

Neoliberalism, as argued above, is unevenly diffused across nations. It is essential here to trace the development of neoliberalism in the Global South. The shift to neoliberalism in other developing countries was consolidated through International Financial Institutions (IFIs). In an African context, neoliberal policies came with a wide range of structural reforms in social and economic policies. The World Bank and the International Monetary Fund (IMF) imposed the structural adjustment packages (SAPs) which were loans given to countries but with a set of reforms (Willis, 2005). When countries accepted these packages, they were coerced to reduce their spending on social services such as education and health, and reduction in government workforce and privatisation of public services. These packages were also associated with trade liberalisation and devaluation of currencies.

This section has discussed the consolidation of neoliberalism in different world regions. However, urban areas across developed and developing countries have increasingly become the spaces where neoliberal practices are experimented. Literature has argued that this has changed the nature of urban governance. The following section discusses the various neoliberal practices in urban areas.

2.4 Neoliberalism, Global Economic Restructuring and the City

Urban areas have not been immune to changes brought by neoliberal economic conditions. Cities have become "increasingly important geographical targets and institutional laboratories for a variety of neoliberal policy experiments" (Brenner and Theodore, 2002: 368). Urban commentators agree that national neoliberal policies impact on the institutional and political governance of cities by prioritising pro-growth urban policies and encouraging entrepreneurialism at a local scale. At the same time, many urban areas are expected to raise their own revenues as a result of budget cuts, and increase inward investments by undertaking a wide range of development practices, including property-based development, megaprojects

and mega-events, place marketing, public-private partnerships and other forms of local boosterism (Harvey, 1989; Molotch, 1993; Bassett, 1996; Brenner and Theodore, 2002; Peck and Tickell, 2002; Jessop, 2002; Miro, 2011; Tasan-Kok, 2010; Sager, 2011; Swyngedouw, 2005; Krätke, 2014).

2.4.1 From Government to Governance

Scholars working in urban studies have long argued that neoliberalism has changed the governance of cities. Harvey (1989) termed this process ‘urban entrepreneurialism’ which, has three fundamental features. First, the interests and influence of business elites triumph, and this is especially visible through public-private partnerships. Second, the new governance agenda is more concerned with creating an enabling environment for economic enterprise, than with wealth distribution and welfare. In turn, societal benefits are expected to be generated by trickle-down effects. With this notion of trickle-down economics, cities around the world are undertaking highly speculative and risky megaprojects, mega-events and other flagship projects to enhance the image of the city. Lastly, urban entrepreneurialism tends to focus on the political economy of place rather than territory; that is, emphasis is on flagship projects like convention centres, theme parks and festival for international tourists and needs of residents come second (Harvey, 1989; Hubbard and Hall, 1998; MacLeod, 2002; Leitner *et al.*, 2007; Doucet, 2013).

The concept of public-private partnerships (PPP) has gained prominence in the era of neoliberal urbanism. PPPs have become active in several economic sectors including infrastructure development, waterfront development (Basset, Griffiths and Smith, 2002), transport, and water and sanitation (Sager, 2011). PPPs involve outsourcing from the public sector, and thus some degree of privatisation. As a management reform, “partnerships are promoted as an innovative tool that will change the way government functions, largely by tapping into the discipline of the market” (Linder, 1999:42 cited in Sager, 2011).

The concept of *urban growth machines* has been used to conceptualise the rise of PPPs in the urban projects. Originally used by Molotch (1976), growth machines comprise a range of actors in local politics (growth coalitions) “whom *together* operate to define and implement development objectives for the city” (Rogerson & Boyle, 2000:135). These growth coalitions include local business communities, property rentiers, local politicians, local media, universities, professional sports, labour unions and cultural institutions (Harding, 1999; Pierre, 1999; Rogerson & Boyle, 2000; Ward, 2000; Wood, 2004; Tasan-Kok, 2009). But perhaps the powerful coalitions are among the business elites and local politicians, in that, they have the

ability to influence urban policy or change the land-use within the city (Tasan-Kok, 2009). This resonates with Harding's (1999: 297) argument that local business elites "need local politicians to liaise with and lobby national and supranational public- and private-sector officials".

With regard to the above argument, PPPs and growth coalitions are rooted in the neoliberal ideology and mark the shift to neoliberal governance of cities (Sager, 2011). According to Rodgers (2009), such coalitions regard growth as a panacea for improving the lives of ordinary citizens. For Pierre (1999), PPPs and growth coalitions are elitist and exclusive, and as a result, democratic public participation is lacking.

The neoliberal agenda has had serious implications and caused a shift in the urban policy and development discourse. Maye (2007) argues that cities have emphasised pro-growth urban development policies. Privatisation of public infrastructure and services, low taxes, and marketing the city are some initiatives that municipal authorities use to cope with declining budgets from national governments (Harvey, 1989; Brenner, 2002, Peck and Tickell, 2002; Maye, 2007). This view is echoed by Brenner (2002) who argues that the neoliberalisation of urban policy saw "municipalities introducing (sic) a variety of cost-cutting measures, cutbacks in public services, and the privatization of infrastructural facilities" (Brenner, 2002:26).

Urban policy initiatives have focused on marketing the city; with innovative strategies to improve the 'image' of the locality. In this way, the city becomes 'competitive' with local and international investors and tourists. Consequently, cities around the world strive to become world centres of investment and trade by pursuing various forms of local boosterism. These include waterfront developments, undertaking megaprojects such as sports stadia, increasing land values through gentrification, mega-events bidding, etc.

Waves of studies have interrogated the role of mega-events as a form of urban regeneration. Mega-events are a strong catalyst for megaprojects, and they come with a range of urban socio-spatial transformations. FIFA World Cups, Olympics, and Commonwealth Games "leave behind social, economic and physical legacies which will have an impact on the host community for a far greater period than that in which the event took place" (Hall, 2006:59). These events are associated with new developments such as stadiums, waterfronts development, theme parks, airports, retail developments and hotels and other placed-based consumption amenities.

Influences of neoliberalism and global economic restructuring on mega-events are clear. First, megaprojects and mega-events reflect the shift from old industrial to post-industrial cities

where mega-events are seen as a means to enhance the competitiveness of the city and attract inward investments. Second, “mega-events are particularly useful to those urban boosters who advocate pro-growth strategies for long-term economic development and job creation” (Hiller, 2000: 439). Third, mega-events present an opportunity for PPPs and growth coalitions to play an active role in the provision of infrastructure and services. Fourth, the rationale behind mega-events is the notion of trickle-down effects, that benefits will be subsequently spread downward to poor citizens (Basset, 1996).

Several authors have commented on the property-led developments that are transforming urban spaces in the cities of the North and South. Smith (2002) conceptualises gentrification as a global ideology, where cities take advantage of the property development to enhance the competitiveness of the city. This is a form of supply-side development that cities adopt with an assumption that property development will attract businesses and high-income households back into the city. Due to social, economic and environmental issues in the inner city such as crime, de-industrialisation, traffic congestion and pollution, there has been an exodus of business and high and middle-income families to suburban areas whereas poor and disadvantaged households have concentrated in the inner city. This has created the rent gap in the city, and by undertaking new property-led development, cities try to fill this gap by attracting high income and business activities. This is assumed to subsequently widen the tax base, increase property values and stimulate business activities (Freeman and Braconi, 2004; Miro, 2011; Shin, 2011; Sager, 2011; Krätke, 2011).

Property-led urban development and gentrification have been associated with the emergence of various ‘growth coalitions’ with interests in property markets. Miro (2011) argues that the FIRE (Financial, Insurance, and Real Estate) Sector is the main actor in these new property-led developments. Krätke (2014) also notes that financialised real estate sector plays a big role in providing housing and commercial offices in cities, and thus accumulate huge profits from the provision of these new spaces.

Sager (2011) argues that property-led development and gentrification of urban spaces are linked to neoliberal urbanism, in that; the private sector has made huge profits from these developments. Krätke (2014:1675), however, notes that this development strategy disadvantages poor households in that it is “geared towards restructuring the city’s spatial fabric and built environment according to the presumed ‘needs’ of global finance and service functions, consequently fostering socio-spatial polarization”. This concern is echoed by other

several scholars. For example, Ha (2004) states that the housing renewal programme in Seoul, South Korea, benefited middle-income households whereas 20 percent of residents were displaced, and low-income families lost important social networks as a result. On the other hand, Rolnik (2013) argues that the financialisation and liberalisation of the housing markets in the 1970s resulted in households being in high debt. This is a case in point especially when one looks at the involvement of FIRE sector in housing provision and gentrification. When a new property is developed, the market must be found, and in the US, this was ensured by accelerating credit provisions to low-income families (Harvey 2005).

The above neoliberal practices in urban areas have changed the cities from one preoccupies with social just policies to ones concerned with attracting investments. This means that profit and competitiveness come first while welfare of citizens comes second. Consequently, cities have embarked on practices and strategies described above in order to be globally competitive. However, these practices are speculative, that is, there is no guarantee that there will be return on investment. This is discussed in detail in the following section.

2.4.2 Speculative Urban Development: Neoliberalism and Megaprojects

The neoliberal hegemony, as discussed above, brought a shift to pro-growth urban development policies. An increasing trend, both in the First World and Third World, has been the *financialisation* of urban development and policy. World city regeneration projects, such as skyscrapers, transport, water and sanitation infrastructures are now being funded by local and transnational private investors, and thus increasingly become “embedded with global flows of finance and capital” (O’Brien and Pike, 2014: 2). This has been further influenced by the austerity measures resulting from the international cyclical financial crisis. Consequently, urban service projects around the world are being privatised, funded by hedge fund and international insurance investors, who in turn, seek to gain higher fortunes from these projects, thus creating speculative infrastructural projects. This is what Goldman (2011) calls *speculative urbanism*.

Speculative urbanism, argued Goldman (2011), is the increasing trend where city governments and parastatals facilitate the process of expansion of large infrastructural projects in cities in order to attract foreign investors. Goldman (2011) refers to the role of local governments and parastatals, and illustrates in the case of Bangalore, where these agencies facilitate land acquisition from the poor rural farmers and those living on urban peripheries at lower rates

(Goldman, 2011). Foreign investors, in turn, just like hedge funds investors, must gain confidence that value will be easily extracted from these projects, and the role of governments is to create an ‘enabling environment’:

A prime example of this is the way in which competing cities have leveraged their urban infrastructure – housing complexes, waterfronts, city centres – to attract the capital to improve city life. Just as speculative profits often come from perceived confidence in that market, these worlding practices too rely on the confidence that rates of return can be high for investments, at different stages of the urban worlding process. Since the “hot capital” of hedge funds is never invested for more than the short-term (e.g., weeks, months), national governments and international finance institutions are creating the institutional apparatus of guarantees to ensure that investors will continue to come long after the hot-capital players have moved on (Goldman, 2011:230).

These processes shape urban planning in many cities of the global South, and megaprojects and their financiers determine the direction for local urban governments to make sure that urban spaces are integrated with the world economy (Goldman, 2011). Hence, megaprojects play a central role in transforming urban spaces to integrate cities into the global economy. As a result, large investors such as banks and investments companies, in search of value in developing countries, embark on funding risky projects in search of *speculative* profits. However, there is no guarantee that these profits will be realised (Goldman, 2011; Jaffe, 2015).

The above cases are not unique to Bangalore as cities around the world are trying to follow the example of Dubai, Shanghai, Singapore and Hong Kong. African cities are also following this. This is evident when one views slogans such as ‘last development frontier’ or Africa Rising. Watson (2014:1) argues that “sub-Saharan Africa’s larger cities are currently being revisioned in the image of cities such as Dubai, Shanghai and Singapore, which claim top positions in the world-class city leagues”. Such notions are visible in websites of many African cities and investment analysts such as McKinsey (Watson, 2014). This is also evident from increasing rhetoric of ‘eco-cities’, ‘smart cities’, as well as new master plans for new African cities.

The above ideas are actually being implemented on the grounds in sub-Saharan African cities. There is now the Nairobi 2030 Metro Strategy in Kenya, aiming to make “a world-class African metropolis” (Watson, 2014: 4). Meanwhile, Ghana is busy with planning Hope City with six linked towers, and Microsoft is one of the partners. It is estimated to cost US\$ 10 billion (Watson, 2014).

These above plans are *speculative* because, first, there is no guarantee that intended economic development objectives will be achieved if these projects are built. As stated by Harvey (1989) in his classic paper, these types of megaprojects tend to focus on the political economy of place rather than that of the territory, thus relying on the trickle-down effects associated with these projects. Second, in the current era of crisis and a volatile economic environment, it is difficult to predict the extent to which these projects will stimulate the local economy.

The following section reviews the literature on the nature, characteristics and consequences of urban megaprojects.

2.5 LITERATURE REVIEW

The above section discussed various theories of neoliberalism and drew from the literature various changes brought by neoliberal urban development. It was argued that neoliberalism has led to the shift to entrepreneurial urban governance. Consequently, entrepreneurial cities have favoured pro-growth urban development practices. One of these practices which cities have adopted have is megaprojects. This section reviews the literature on megaprojects; it is argued that megaprojects is a neoliberal urban development strategy which is used as instrument to market and sell cities in order attract investments. However, there are serious consequences for urban development which will be discussed.

2.5.1 Megaprojects as a Neoliberal Urban Strategy

There is extensive literature on megaprojects in relation to neoliberal urban regeneration. Studies reveal that cities have responded to neoliberalism and globalisation by using megaprojects to attract international private investments. According to Keil (2002: 239), “the concrete implementation of new technologies of power has played a key role in these processes of neoliberalisation”. Megaprojects, according to Vento (2016), can be considered to be one of the drivers of neoliberal urban governance and are characterised by PPPs and lack of democratic accountability.

Orueta and Fainstein (2008) argue that the recent increase of megaprojects in cities reflect the shift to the post-Fordist urban economy. Under Fordism, manufacturing, heavy industries and ports played a significant role in sustaining the urban economy. The shift to the post-Fordist economy, however, saw cities transforming their economic base to finance, service economy, tourism and creative industries (Fainstein, 2008). This is when many urban policy makers saw

megaprojects such as property developments, waterfronts, museums, theme parks, stadiums, and other developments as playing a role in sustaining the new service-dominated economy and regenerate industrial cities.

Extensive studies in America and Europe (e.g Fainstein, 2008; Laidley, 2009; Lehrer and Sager, 2011; Doucet, 2013) suggest that deindustrialisation as a result of neoliberal globalisation in many cities necessitated the need for construction of mixed-use megaprojects in order to attract businesses and high and middle-income class. In this way, megaprojects are used to regenerate former industrial cities. In other cases, megaprojects are built with an assumption that they will redress social issues of poverty and unemployment. According to Fainstein (2008), such ideas are clearly motivated by the neoliberal ideology, with the assumption that impacts will trickle down to low-income groups.

The neoliberal governance has meant that urban municipalities are responsible for the generation of revenue and investments (Brenner and Theodore, 2004). Consequently, municipal managers have collaborated with the private sector to undertake various kinds of megaprojects with the aim of attracting investments and widening the tax base of cities.

Doucet (2013) sees megaprojects as reflecting the ideological *shift* from urban managerialism based on the Keynesian economic principles to more neoliberal policies since the 1970-80s. Although megaprojects are not a new phenomenon, however, such projects were centred on the principles of wealth distribution with the goal of providing housing and better quality of life for the working class. Since the 1970s, megaprojects, as a result of a growth-first approach to urban development, have been used for urban entrepreneurial and marketing purposes and the “primary specific goal is to improve the tax basis of the city via a sociospatial and economic reorganisation of metropolitan space” (Doucet, 2013: 2038). The above argument is echoed by Lehrer and Laidley (2009) who contend that under the Keynesian state interventions from the 1930s to 1970s, megaprojects were built with the principal aim of distributing benefits such as housing, job security or electricity to citizens. However, within the deregulation approach to urban development since the 1970s, megaprojects started to be viewed as “an urban renewal strategy which could more easily respond to market demand” (Lehrer and Laidley, 2009: 788).

Extensive literature also contends that megaprojects are used as instruments of marketing and branding cities. Megaprojects such as skyscrapers, theme parks, convention centres and events such as FIFA World Cup and Olympics are useful for attracting investments and tourists. The section below discusses how megaprojects are seen as useful in entrepreneurial cities.

2.5.2 Megaprojects as Branding

The notion that competition has become a dominant paradigm under neoliberal and entrepreneurial urban governance is widely accepted among geographers. Different scholars argue that urban megaprojects are used as a tool for enhancing city competitiveness due to their sizes and symbolic role. This is a result of the changing global economic environment where cities around the world strive to be globally economic competitive, and are marketed as centres of investments, attracting the creative class as well as international tourists (Bornstein, 2010). Lehrer and Laidley (2009) study waterfront developments in Toronto and concluded that this is similar to other international case studies where cities are increasingly transforming abandoned waterfronts into new spaces, with the goal of attracting global capital and positioning themselves in the competitive global economic system.

The pace at which megaprojects are being planned around the world is having a major impact on the post-industrial industrial economy. Doucet (2013) argued that recent megaprojects in Glasgow and Rotterdam indicate a shift to the new post-industrial economy, with an emphasis on the service-based economies such as tourism and financial sector. In this way, cities are sending a message to investors that they are safe spaces for international capital investment.

Müller (2014: 629) studied the Olympic megaproject in Sochi, Russia, and concludes that games were the government's marketing and branding strategies to the rest of the world that the country "can be a world leader in such areas as technology, infrastructure, leisure, and quality of life".

In the new urban governance agenda, there has been extensive involvement of other role players in the business and other sectors in the name of partnerships. These partnerships have also been used to finance megaprojects. Consequently, many decisions relating to megaprojects are taken together with these role players. The following section discusses the role of public-private partnerships in facilitating megaprojects.

2.5.3 PPPs in Megaprojects

Recent literature in urban studies has stressed the increasing involvement of the private sector in the urban policy (Harvey, 1989; Sager, 2011). Similarly, new megaprojects undertaken in many cities are developed with greater private sector involvement. The state, on the other hand, has been the facilitator rather than the developer of megaprojects (Swyngedouw *et al.*, 2002; Brenner, 2004; Orueta and Fainstein, 2008; Sager, 2011). In their case study of Atlantic Yards,

a New York new mixed-use development project, Orueta and Fainstein (2008), state that the project was initiated by the private developer and the state was seen as facilitating the process.

There is a consensus that the PPP model of infrastructural provision is inextricably linked to the neoliberal ideology. This results in the hollowing out of states, with an increasing number of private actors getting involved in the design, planning and provision of megaprojects (Brenner and Theodore, 2002). PPP does not only refer to the rise of the private sector in governance but also implies that this model becomes the governance strategy itself (Hohn and Neur, 2006).

The growth of partnerships and growth coalitions in megaprojects is considered to be a shift towards the flexible and less hierarchical and stakeholder-based style of decision-making (Vento, 2016). The core perception with regard to megaprojects is that PPPs connect public officials and private investors. However, such participation is often restricted to limited groups involved in megaproject design such as planners, architects, business elites, financiers and politicians (Vento, 2016). The result has been the loss of public participation in the decision making and development planning process, which basically means privatisation of governance and planning (Imrie and Thomas, 1999). This also illustrates the growing influence and power of the private sector and the subordination of local authorities and the public (Imrie and Thomas, 1999).

Processes of megaprojects discussed above have been criticised by many academics and civil society because of the impacts they have. Some of the criticisms are that they only serve the interests of the elites, entrench and increase inequalities, characterised by cost overruns and underestimates negative impacts. The following section discusses criticisms of impacts of megaprojects.

2.5.4 Criticism of Megaprojects

This section discusses the impacts of megaprojects; it is argued that megaprojects tend to have exclusive benefits for some groups while excluding majority of local population. Furthermore, this section argues that cost overruns, overestimation of benefits, underestimation of costs as well as lack of public participation and transparency are one of characteristics of urban megaprojects.

i) *Socio-spatial polarisation*

Most megaprojects are built with the assumption that they will enhance city competitiveness, and in turn, benefits will trickle down to the public. However, Fainstein (2008) argued that the manner in which the public would benefit from megaprojects depend on the government's commitments to socially and economically just policies during the planning process. In the case of Atlantic Yards presented by Fainstein (2008), there was a diversion from equity and well-being of low-income groups, and low-income people depended wholly on trickle-down effects to gain from the new project.

Moulaert et al. (2008) argue that the manner in which these megaprojects are undertaken, such as the partnership model is nothing more than privatisation, where public money is used for the construction of projects such as convention centres, shopping malls, gentrified housing for high-middle income people, which are semi-private. Hence, public funds act as a subsidy for private investments and developers, with hopes that cities will attract investments and be competitive.

Doucet (2013) notes that in the case of Glasgow Harbour megaproject the local population was opposed to planned developments as they were seen to be benefiting high-income residents and the developer. Doucet (2013: 2048) argues that this is often characteristics of urban entrepreneurialism, as it “promote(s) the creation of affluent (and therefore exclusionary) spaces, gentrification, and the commodification of the city and the privatization of space. These are goals which end up reinforcing, shifting or masking the pre-existing economic, social and spatial divisions within the city”. This is also accompanied by speculation with money budgeted for public services, and in a context of reduced municipal budgets, this is like gambling with the public money with no guarantee that projects will attract investments and create jobs (Doucet, 2013). There is always inherent risk involved during this speculation, and state involvement megaprojects and events have resulted in the transfer of wealth from government to the private sector (Harvey, 1989).

Majoor (2011) argues that many megaprojects fail to balance the needs of the local population and capital. The reason for this, argues Majoor (2011), is that design planning and management systems of most megaproject are inherently market-oriented and neoliberal. Neoliberal ideology is inherently profit-motivated, and with its beliefs in trickle-down economic effects, has a track record of marginalising local needs. In the initial stages of megaprojects, the rhetoric of public (economic and social) benefits is widely circulated in the media.

Furthermore, megaproject planning processes have proved to be undemocratic and deals are often made behind closed doors. In this way, Majoor (2011) argues that they are elitists who promote neo corporatist forms of governance. Instead of active citizen participation, they are carried out at very high speeds and urgency, focusing on how to stimulate private investments and tourism, and end up catering for the needs of the elite and private capital. One consequence of such processes is the increasing marginalisation of low-income class and transforming urban spaces into semi-private areas with malls, luxury office and residential apartments for high and middle-income groups.

Fainstein (2008), in her comparison Atlanta Yards in the US and megaprojects in the Netherlands, argues that the extent in which benefits from megaprojects are distributed to the wider public depends on the level of government involvement. In the Netherlands, where the state has a direct involvement during the planning and construction of projects, there is some evidence of public benefits (Fainstein, 2008). In the US, however, where there is limited funding commitment to low-income housing and social welfare, benefits are not equally distributed. Thus, strong governments, who are able to lobby for, and raise social benefits concerns, can influence the extent to which the public will benefit from megaprojects.

Contrary to Fainstein's argument above, Qian (2011) observes that in China, although the PPP model is increasingly being featured in megaprojects, the local state is still the main player in the new developments. But Qian (2011:18) also notes that:

for the purpose of profitability and competitiveness, luxury residences and hotels, office towers and shopping malls all become the main forms of development in the mega projects in Chinese cities, while the requirements for affordable housing and jobs for social just purposes have been kept at a minimum. The general public remains excluded from the decision-making process, except for some informing and nominal consultations. Local elitism, with little civil society in mega project development, is in contradiction with the recent political initiative in which the representation of ordinary urbanites' demands lies at the core of Chinese government's endeavours to build a harmonious society.

Megaprojects have not resulted in employment opportunities, social and fiscal benefits of cities (Leitner and Sheppard, 1998). Historical evidence suggests that the use of spectacular megaprojects cannot be regarded as a panacea for urban regeneration for various reasons. First, it is argued that private sector investment in cities has been low, undermining the claimed

benefits of megaprojects as catalysts for investment (Cochrane, 1999). Second, megaproject construction does not necessarily mean that there will be more local employment. Turok (1992) suggests that employment opportunities have been generated from low-skilled sectors which are associated with low-wages. The claim that the construction of megaprojects will result in benefits that will trickle-down to the masses has not materialised (Cochrane, 1999; Imrie and Thomas, 1999).

Hubbard and Hall (1998) argue that while megaprojects as an entrepreneurial strategy are assumed to enhance investments, this, however, has also increased wealth and income inequalities within the city population. Since most megaprojects are built with ideas of competition, branding, and image enhancement in mind, the socio-economic realities facing poor citizens are ignored or given less attention (Swyngedouw *et al.*, 2002; Evans, 2005). This suggests that the benefits of the new megaproject developments are almost exclusively reaped by powerful local and international players (Swyngedouw *et al.*, 2002).

While megaprojects overestimate their benefits, and exclude most members of the public from benefits, they are also characterised by cost overruns. This is discussed in the following section.

ii) Cost overruns in Megaprojects

Megaprojects generally result in cost overruns due to lack of accountability and democratic participation (Bornstein, 2010). Müller (2014) states the Sochi Games in Russia resulted in many socio-economic issues. Cost overruns, sustainability of stadiums, maintenance and operational costs became apparent. It was uncertain how stadiums built for the Olympics would be used after the games, as the after use of stadiums would require \$399 million annually for maintenance. The total cost for the games escalated 4.5 times to \$55 billion, from the initial amount of \$12 billion during the bidding process. Müller (2014) also notes that the Sochi Games became the second most expensive Olympics ever, but benefits were limited. Also, there were issues relating to hotel overcapacities and lack of a coherent plan for after use of infrastructural projects built for the games.

In a study of 258 transportation mega projects in 20 countries across five continents, Bent Flyvbjerg from the Oxford University estimated that 9 out of 10 projects overran their costs; some of these projects are shown in Table 1. Key observations made by Flyvbjerg *et al* (2003: 16) are that:

- Nine out of ten transport infrastructure projects fall victim to cost escalation (N=258);

- For rail average cost escalation is 45 percent;
- For fixed links (bridges and tunnels) average cost escalation is 34 percent;
- For roads average cost escalation is 20 percent;
- For all project types average cost escalation is 28 percent;
- Cost escalation exists across 20 nations and five continents; it appears to be a global phenomenon;
- Cost escalation appears to be more pronounced in developing nations than in North America and Europe (N=58, data for rail only);
- Cost escalation has not decreased over the past 70 years. No learning seems to take place.

Issues of costs overruns experienced especially in transport megaprojects are not absent in other megaprojects; other projects such as convention centres, energy projects, dams and waterfronts are also experience cost overruns.

Flyvbjerg states three reasons for cost overruns in most megaprojects: technical, psychological and political-economic explanations. Technical reasons refer to the use of outdated data, inaccurate forecasting models, technical errors, inexperienced forecasters (Flyvbjerg *et al*, 2002). Psychological reasons are what Flyvbjerg labels as a ‘planning fallacy’, where planners and promoters make decisions and predictions based on the delusional optimism rather than on the actual statistical evidence, historical gains and losses. This often results in the underestimation of costs and overestimation of benefits (Flyvbjerg *et al*, 2002). For political-economic explanation, planners and promoters deliberately undermine social, economic and ecological costs while overestimating benefits that will result from projects. This is necessary for them to manipulate the system for projects to be approved, be it by government or environmental authorities. There is manipulation and deception in “order to increase the likelihood that it is their projects, and not the competition's, that gain approval and funding” (Flyvbjerg *et al*, 2002: 26).

Table 1: Cost Overruns in Transportation Megaprojects

<i>Project</i>	<i>Cost Overrun (%)</i>
Boston's artery/tunnel project	196
Humber Bridge	175
Boston-Washington-New York rail	130
Great Belt rail tunnel, Denmark	110
A6 Motorway Chapel-en-le-Frith/Whale bypass, UK	100
Shinkansen Joetsu rail line, Japan	100
Washington Metro, USA	85
Chaneel tunnel, UK, France	80
Karlsruhe-Bretten light rail, Germany	80
Oresund access links, Denmark	70
Mexico City metro line	60
Paris-Auber-Nanterre rail line	60
Tyne and Wear Metro, UK	55
Great Belt link, Denmark	54
Oresund coast-to-coast link	26

Flyvbjerg et al. (2003: 14).

iii) Inaccurate Forecasting

Forecasters misinform and sometimes even lie about projected costs, benefits, and risks of megaprojects. During the initial cost-benefit analysis, huge benefits are often cited as a reason to support megaprojects. Flyvbjerg *et al* (2003) argue that for transportation projects such as roads, railways, bridges, and airports, traffic volume forecasts are often inaccurate, and tend to overestimate benefits and undermine costs. The results when the project is operational, however, reveal that there is lower than predicted traffic. In Durban, the King Shaka International Airport would be a good example, which is operating way below its predicted, maximum potential.

Flyvbjerg *et al* (2003: 30) make the following conclusions for 210 transportation megaproject study by the Aalborg University (Table 2):

- The average inaccuracy of rail passenger forecasts is -39 percent. Hence actual traffic was 39 percent lower than forecast traffic, meaning that forecasts were overestimated on average by 65 percent.
- There is a massive and highly significant problem with inflated forecasts for rail projects. For two-thirds of the projects, forecasts are overestimated by more than two-thirds.

- Inaccuracy in traffic forecasts is found in the 14 nations and 5 continents covered by the study.
- Inaccuracy is constant for the 30-year period covered by the study; forecasts have not improved over time.

Misinformation about costs, benefits, and risks of the frequency and size described above - and the related cost overruns and benefit shortfalls are the consequences of lack of public participation and oversight (Flyvbjerg, 2007) which is discussed below.

Table 2: Accuracy of Forecasting in Transportation Megaprojects

<i>Project</i>	<i>Actual traffic as % of the forecast traffic, opening year</i>
Calcutta metro, India	5%
Channel Tunnel, UK, France	18%
Miami metro, USA	15%
Paris Nord TGV line, France	25%
Humber Bridge, UK	25%
M65 Huncoat Junction, UK	35%
Tyne and Wear metro, UK	50%
Mexico Metro	50%
Denver International Airport	55%

Source: Flyvbjerg, et al. (2003:25).

iv) *Lack of Public participation and accountability*

Fainstein (2008) interrogates the case study of Atlantic Yards in New York; during the bidding process, other firms were not given an opportunity to bid for the project. Furthermore, the development was associated with negative impacts for the low-income groups and the environment, there was no consultation or public participation process, and public concerns were not considered in the planning process.

There have been concerns about accountability and democratic participation with most of the megaprojects; Doucet (2013) states that this is partly the result of partnerships and coalitions which are not accountable to the public. Costs generated are shifted to the public sector without rigorous scrutiny (Jessop, 2002; Keil, 2002).

In a case study of the Toronto Waterfront project, Lehrer and Laidley (2009) note the exclusion of the public: corporations responsible for the development of the waterfront were allowed to

go ahead with the project without sharing the details of the contract, thus undermining public accountability.

The involvement of PPPs in the design, planning and construction of megaprojects has also been criticised. The argument is that the process of partnerships is an unequal one, tending to rely more on property and real estate development while other issues such as unemployment and training and empowerment opportunities for the poor are not addressed. For Harvey (1989) PPPs are often speculative, thus shifting the risk from the private to the public sector. For this reason, Santamaria (2013) argues that PPPs “amount(ed) to little more than a subsidy for affluent consumers and corporations at the expense of local collective consumption for the working poor”.

International case studied discussed in this chapter suggests that megaprojects, regardless of the host city or nation, are characterised by similar problems. Some of the criticism of megaprojects are summarised in Table 3. South Africa has not been an exception; there has been extensive investments in transportation, property, sport, energy and water megaprojects. This is discussed in the following section.

Table 3: A Summary of Criticisms of Megaprojects

Criticism	Description
Increasing urban socio-spatial polarisation	<ul style="list-style-type: none">• Rooted in trickle-down effects• Little commitment to social and economic justice• Gentrification• Little economic and social benefits (employment) for low-income groups• Displacement of households
Lack of active public participation	<ul style="list-style-type: none">• Participation limited to business elites, professional planners and architects.• Exclusion of communities (elite capture)• PPP are the main players• Public takes risk for private investments
Cost overrun	<ul style="list-style-type: none">• Cost tends to be underestimated at the initial stage of megaprojects• Projects become spaces for corruption
Overestimation of benefits and undermining of costs	<ul style="list-style-type: none">• Socioeconomic benefits are exaggerated for projects to be approved by government and funders.• Social and environmental costs are ignored or undermined for projects to be approved

2.6 South African Urban Development

Since 1994, South Africa has come up with various policies and strategies to address the legacies of apartheid socio-economic and spatial policies. During this transition, there has been multiple legislative and policy changes aiming to fast-track socio-economic inclusion. In addition to trying to address past imbalances, however, the country needed to strategically position itself in the global economy. This has given the rise of recent pro-growth policies which have been adopted. The impacts of these policies have been widely debated.

Against this background, this section discusses the South African urban development experience. Emphasis is on transition from Reconstruction and Development Programme

(RDP) to Growth, Employment and Redistribution (GEAR) strategy. Furthermore, the section discusses the impacts of recent megaprojects undertaken in South Africa.

2.6.1 Apartheid Urban Geography

The South African urban historiography is characterised by inclusion and exclusion of some races in an urban space. Put simply, race was used as the inclusion and exclusion criteria in terms of residential location. This segregation was enforced through a wide range of policies and legislation that would ensure that racial and residential segregation. The 1913 Land Act resulted in meagre 13 percent of the land allocated for blacks, whereas the rest was allocated to the white population. In urban areas, the Group Areas Act of 1950 divided residential areas according to race. Black Africans, Indians and Coloureds were often located in townships while the white population lived in the suburbs and in the inner city (Rogerson, 2000; Williams, 2000; Donaldson, 2001; Maharaj, 2002).

The above-mentioned policies resulted in inequalities and segregation based on race; townships were often underdeveloped and lacked essential services such as appropriate housing and infrastructure. ‘African urbanisation’ was controlled through influx controls and pass laws, thus ensuring that the inner city remained white. Forced removals, in addition, were apparent during apartheid (Parnell, 1990; Beavon, 1998; Mabin, 1998; McCarthy, 1998). Examples of forced removals in Cato Manor, Sophiatown and District Six are familiar in the urban history literature.

The literature of South African urban studies cites a number of problems created by the apartheid city. First, the city remained segregated by race and restricted blacks from participating in the consumptive economy. Second, lack of infrastructure in townships restricted mobility of black people. The lack of transport infrastructure, for example, meant that people in the outskirts of the city found it hard to access the city or places of employment. Third, policies and regulation of employment and education meant that blacks were restricted to low paying jobs as cheap labourers. Collectively, such dynamics excluded the majority of the population in the productive and consumptive economy, and townships were left with little or no tax base (Maharaj, 1997; Crankshaw, 2008; Fiew, 2011).

In the mid-1970s, apartheid was increasingly being challenged through economic and political sanctions, growing social movements in the country, and unsustainability of the apartheid system. This era saw the gradual inclusion of blacks in the labour market. This was

accompanied by reforms in education and employment legislation for blacks (Crankshaw, 2008). In the post-apartheid South Africa, the RDP and GEAR were one of first policies adopted by the government. This is discussed in the following section below.

2.6.2 From RDP to GEAR

In the post-apartheid era South Africa's urban and spatial policies must take into consideration the above dynamics of racial, economic and social exclusion and segregation. The initial policy to address these challenges was the Reconstruction and Development Programme (RDP). The RDP was amongst the most influential post-apartheid policies which were designed as a basis for integrated and coherent socio-economic progress towards erasing the legacy of apartheid and the building of a democratic, non-racial and non-sexist future (Rogerson, 2000; Williams, 2000). Based on these ideas, Hart (2006) argues that RDP was rooted in Keynesianism, seeing the state as having a major role in the economy and social service provision.

Besides its radical and transformative ideas on a paper, RDP had many shortcomings with regard to its implementation. Critiques argue that the RDP was ambiguous and utopian when it came to meeting its targets. Blumenfeld (1996:3) argued that:

the government was unable to explain how it proposed to deal with the inescapable short-term and long-term conflicts between its stated objectives of faster output, export and employment growth, lower budget deficits, lower tax burdens, increased social welfare provision, and reduced income inequalities.

Many objectives and goals outlined in the RDP were largely unmet; large populations, especially in urban areas, continued to live in informal settlements on the margins of cities. Unemployment continued to increase, and health issues such as the rise of the HIV/AIDS. In 1996, RDP was abandoned in favour of Growth, Employment and Redistribution (GEAR), which is considered by many commentators to be a market-oriented macroeconomic reform strategy (Bond 2002 and Hart 2002). GEAR aimed to reduce the budget deficit and improve the overall performance of the economy. A critical role was given to the private sector, and this was seen as a vital strategy to increase employment and foreign direct investment.

Labour unions, particularly the Congress of South African Trade Unions (COSATU), have been vocal about the impacts of GEAR: "Labour's criticism, especially that of COSATU and its affiliates, is based on its analysis that GEAR contradicts and abandons the RDP, and that privatisation of state assets endanger the delivery of basic social needs and leads to loss of

employment” (Jerome, 2004: 9). GEAR encouraged the privatisation of state-owned assets, and encouraged the facilitation of PPPs, thus reducing the role of the state in the economy (Jerome, 2004).

Other critiques argue that there was a little difference between the GEAR and IMF/World Bank monetary policies (Bond, 2002). Since the introduction of GEAR, there has been the gradual shift to neoliberal policies of privatisation and rollback of the state in the economy and service provision. Several SOEs were privatised after the introduction of GEAR. Telkom, a telecommunications provider, was sold to the United States based SBS Communications Malaysia Bernald at a value of R750 Million. Six radio stations owned by the South African Broadcasting Corporation were sold. Sun Air was sold for R97 million to a Black Empowerment consortium: The new stakeholders were Rethabile Group (35%), coordinated network instruments (19%) and the National Empowerment Fund (15%) and staff (5%). A 20 percent stake in the Airports Company of South Africa (ACSA) which controls all major airports in South Africa was sold to Italy’s *Aeroporti Di Roma* (Jerome, 2004).

RDP and GEAR were national policies which had different impacts on cities. In each phase of policy implementation, there has been different urban development approaches. The South African urban development experience is discussed in the following section.

2.6.3 Urban Development Strategy and Urban Development Framework

In 1995, the Urban Development Strategy (UDS) became the new urban development agenda for the post-Apartheid South Africa. The UDS conformed to the principles of the RDP, with an emphasis on urban reconstruction, safe cities as well as social upliftment (Landman, 2004). The UDS’s agenda was based on integrated rural and urban development, desegregation, infrastructural development and service delivery, and cities as engines of growth (Landman, 2004). Furthermore, Maharaj (2002) states that UDS was based on five principles, that is, investing in urban development, building habitable and safe environments, integrating the cities and managing urban growth, promoting urban economic development and creating institutions for delivery.

From above, it is clear that UDS was influenced by RDP on its ideals of reconstruction and development as well as redressing spatial fragmentation resulting from apartheid urban policies.

After the adoption of GEAR, a new Urban Development Framework was introduced. The Urban Development Framework “reflected GEAR’s sentiments of urban competitiveness at local level” (Fieuw, 2011: 34). Recognising the changing nature of the global economy, cities were now seen as spaces of private investments. Indeed, the international literature suggests that cities are now faced with economic pressures such as capital flights, inner-city decline and de-industrialisation. It is not surprising, therefore, that post-apartheid development strategies have been shaped by neoliberal agendas. For example, Bond (2003) argues that South Africa’s urban policy has been in line with the mainstream approach that advocates for the competitiveness of cities and privatisation.

2.6.4 Post-Apartheid Urban Development Challenges

Since the 1994 democratic elections, the performance of the ANC in development and service delivery has been debated. On the one hand, the ANC has hailed itself for fighting against poverty. On the other hand, critiques have argued that neoliberal policies have reproduced past inequalities of apartheid. Neoliberalism is said to have been favoured over redistribution, thus reproducing inequalities of the past. Privatisation, the introduction of cost recovery, the growth of gated communities have been some of the consequences of neoliberal-led urbanisation (Bond, 2002; McDonald and Pape, 2002; McDonald, 2008).

South Africa continue to face major challenges. Unemployment in urban areas is increasing and more people are increasingly pushed into the informal economy. More commentators argue that apartheid socio-spatial and economic inequalities are being reproduced. Turok’s (2001) assessment of Cape Town reveals that more and more investments from the private sector are directed to affluent suburban areas whereas townships like Khayelitsha, Gugulethu and Nyanga continue to experience high unemployment and poverty. Maharaj’s (2002) case study on Durban suggests that although residential segregation according to race has been reduced, however, segregation according to class is the new phenomenon.

Since the adoption of GEAR as a national policy, privatisation of essential services such as water and electricity is imposed on urban dwellers (McDonald and Smith 2004; Bond 2002; Narsiah 2010; McDonald and Pape 2002; Watson 2002; Hart 2002). McDonald (2008) has highlighted the impacts of cost recovery measures (the user pays principle) in urban areas. There was widespread resistance and protests from communities against the privatisation of water and electricity.

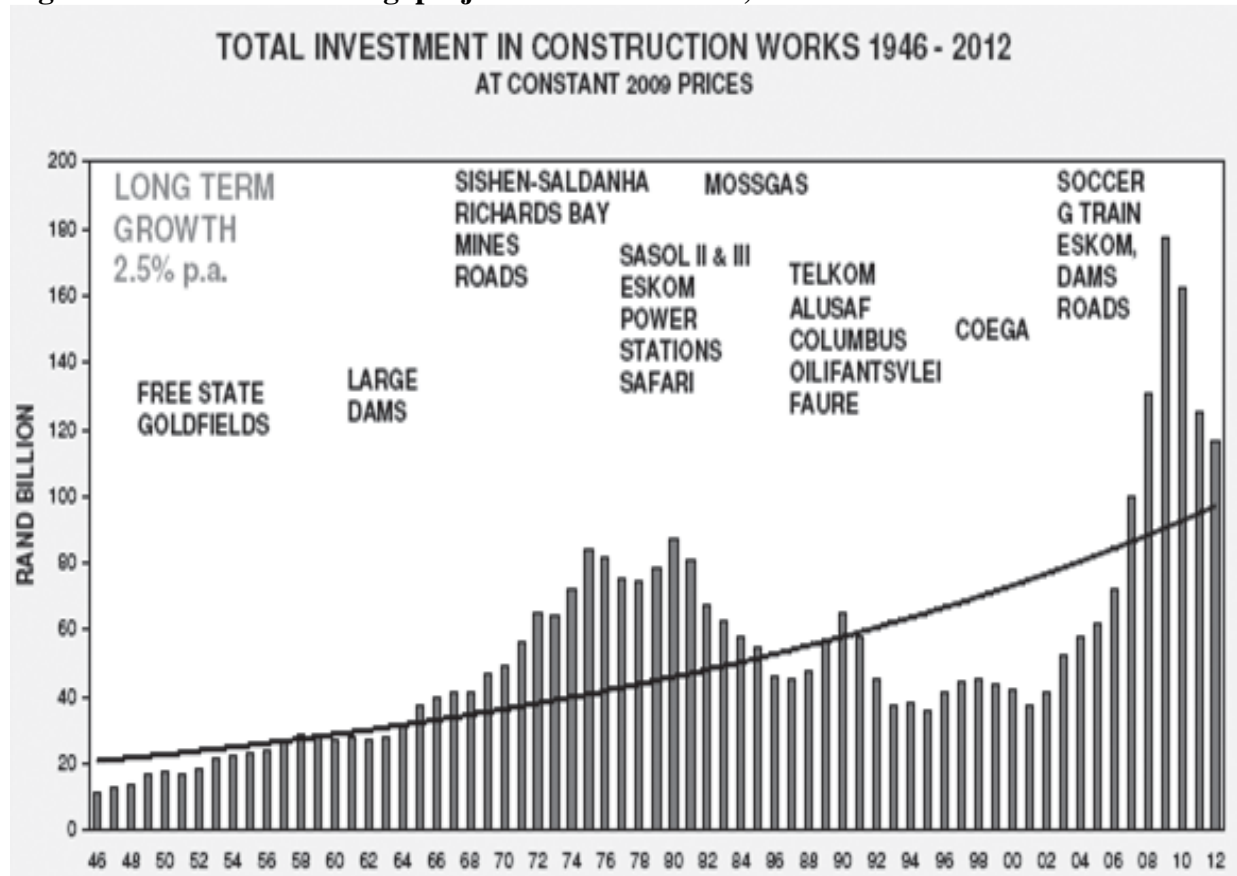
Notwithstanding the increasing poverty and inequalities in South Africa, there has been a lot of focus and investment in megaprojects. Some of the megaprojects include water projects, transport, stadiums, convention centres and theme parks. These are discussed in the next section.

2.7 Megaprojects in South Africa

The international experience reveals that, as argued elsewhere above, neoliberalism is entrenched and diffused at various spatial scales. It was also argued that cities are one of these spaces where the ‘actually existing’ neoliberal practices had been evident in recent decades. Megaprojects (and events) are some of the instruments used by governments, growth coalitions, partnerships and business to compete, locally and internationally, against other cities (Figure 1). This section contends that South African cities have used megaprojects as capital accumulation, marketing and branding strategies.

Various writers have noted that GEAR is aligned to macro-neoliberal economic policies, and was aimed to integrate South Africa with the world economy (Andrade *et al.*, 2014). In cities, this took the form of building partnerships with the private sectors in trying to stimulate growth, attract investments and create job opportunities. For Andrade *et al* (2014), it was against this background that PPPs emerged as powerful players at the municipal level, and megaprojects were adopted by many cities in South Africa as engines of growth. Some of these ventures included convention centres, theme parks, waterfronts developments and highways (Andrade *et al.*, 2014). More specific projects included “Gautrain, 2010 World Cup stadia, the industrial complex at Coega, the world’s third and fourth largest coal-fired electricity generators (Kusile and Medupi), mega-dams, and expansions to airports, ports, roads, and pipelines” (Desai, 2015:23). The next section briefly assesses the impacts of some of these projects.

Figure 1: Investment in Megaprojects in South Africa, 1948-2012



Source: Bond (2016:15).

2.7.1 2010 FIFA World Cup Stadiums

Infrastructural projects constructed for the 2010 FIFA World Cup are case in a point. There was a total of five new stadiums built for the world cup, and another five stadiums were upgraded. There were, similar to other megaprojects, cost overruns during constructions of stadiums (Table 4). Several large-scale stadiums overran their costs; examples are the soccer city stadium in Johannesburg built for R3.3 billion and experienced a cost overrun of 58% (Davie, 2010: online). Greenpoint Stadium in Cape Town experienced a 50% cost overrun (Van Gass, 2007). Moses Mabhida Stadium in Durban also experienced a cost overrun of 38% (Venter, 2009).

Cost overruns were not the only challenge faced by stadiums constructed for the world cup, but also the sustainability and after use of stadiums. It is reported that stadiums cost millions of rand for maintenance and servicing. Durban's Moses Mabhida Stadium made a reported loss of R34.6-million in 2013 and the Cape Town Stadium makes a loss of about R40-million each year (Baloyi, 2011).

Table 4: Budgeted versus Final costs of the FIFA 2010 stadia

<i>Stadium</i>	<i>Budgeted Cost</i>	<i>Final Cost</i>	<i>Cost Overrun (%)</i>
Soccer City – Johannesburg	R 2.2 billion	R 3.7 billion	41
Ellis Park – Johannesburg	R 240 million	R 253 million	5
Moses Mabida – Durban	R 1.6 billion	R 3.1 billion	48
Mombela – Nelspruit	R 600 million	R 1 billion	40
Green Point – Cape Town	R 2.9 billion	R 4 billion	28
Nelson Mandela Bay – Port Elizabeth	R 2.1 billion	Not known	
Peter Mokaba – Polokwane	R 1.3 billion	Not known	
Royal Bafokeng – Rustenburg	R 360 million	R 483 million	25
Mangaung – Bloemfontein	R 245 million	R 359 million	32
Loftus Versfeld – Pretoria	R 122 million	R 131 million	7

Source: Baloyi and Bekker (2011: 53)

2.7.2 The Gautrain

Partially linked to the 2010 FIFA World Cup was the construction of Gautrain rapid rail system in Gauteng. The Gautrain network connects Pretoria and Johannesburg, and Sandton and OR Tambo International Airport (Figure 2). However, the project has not been without criticism. First, many argue that the rail caters for the needs of affluent and wealthy residents and exclude the poor in townships:

...the route and stations of the Gautrain run along regions of the province that primarily service ‘professional’ individuals. The project was explicitly designed to promote public transportation for an elite class of citizens living in geographically distinct areas from the poor majority (Thomas, 2013: 84).

For Donaldson (2006: 349), the Gautrain project is based on the national neoliberal agenda:

Gautrans [sic] ... is based on the government’s policy of GEAR (growth, employment and redevelopment [sic]). This stipulates that public transport should be commercial and not a social service. From a social perspective, the most obvious criticism against the planned rail link is the mobility-related exclusion.

There were also cost overruns associated with the project. The total cost for the project was R30.462 billion compared to the initial projected cost of R7 billion (Fombad, 2015). Furthermore, in terms of PPP, Fombad (2015) notes that there was an estimated US\$22 million

set aside as a ‘patronage guarantee’ meant to cover some of the risks for the private investment in the project. This money came directly from the provincial department of transport’s budget.

2.7.3 The Gauteng Freeway Improvement Project (GFIP)

The Gauteng Freeway Improvement Project (GFIP) is the project by the South African National Roads Agency Limited (SANRAL) that aim to upgrade and renew major roads and freeways in Gauteng. The feasibility study argued that Gauteng is the economic hub of South Africa, and was experiencing increasing residential, office, business and retail growth which meant high road traffic volumes. The GFIP consists of upgrading and improving the existing road network in order to keep up with the growing traffic demands. This project, however, was met with challenges including major cost and time overruns and corruption. Costs escalated to R11.4 billion by 2008, a cost overrun of 254 percent from the initial budget of R6.8 million (Parrock, 2015).

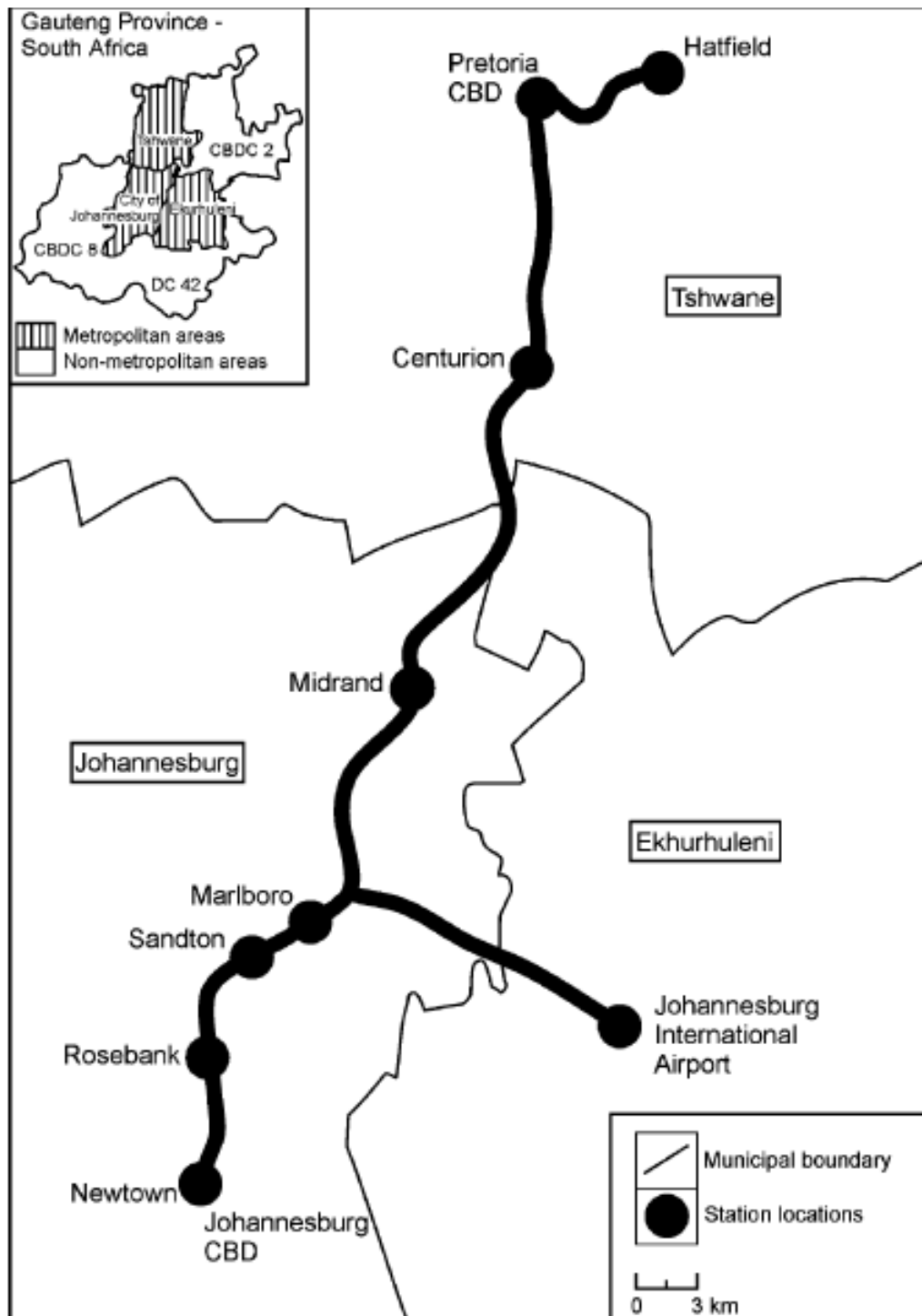
During the building of roads, the Competition Commission found that some top construction companies were involved in price fixing and collusion. As a result, firms such as Wilson Bayly Holmes Ovcon (WBHO), Murray and Roberts and others were fined a total amount of R1.46 billion (Table 5).

Table 5: Companies Fined during GFIP.

<i>Company</i>	<i>Fine Amount (in Rands)</i>
Wilson Bayly Holmes Ovcon (WBHO)	R311.29 million
Murray & Roberts	R309.05 million
Stefanutti – Stocks	R306.89 million
Aveng Group	R306.57 million
Basil Read	R94.94 million
Raubex	R58.83 million
Haw & Inglis	R45.31 million
Rumdel	R17.13 million
Giurcich	R3.55 million
Vlaming	R3.42 million
Tubular Technical Construction	R2.63 million
G Liviero	R2.01 million
Hochtief	R1.32 million
Norvo	R 714 897
Esorfranki	R 155 850
Total	R1.46 billion

Source: Adapted from Parrock (2015).

Figure 2: Gautrain Routes



Source: Donaldson (2006: 347).

2.8 Port-City Relationships

Ports have always played an important role in the development of cities, and provide important benefits to urban city economies, and are important gateways for global trade. Historically, port cities had a comparative advantage over non-port cities. Port cities had a lower cost of trade in terms of transportation, generated employment opportunities and attracted other economic sectors linked to the harbour.

Since the 1960s, however, the port-city relationship has been undergoing various changes including technological innovation, containerisation and globalisation (Bazan-Lopes, 2002). Since that period, the benefits which were presented by ports in cities are diminishing. Containerisation increased trade between countries at lower costs than before. This led to industries not depending mainly on port cities but could locate anywhere because of cheaper transport. Multinational corporations have taken advantage of low transportation costs and shifted their productions to developing countries where labour is cheap. (Dwarakish and Salim, 2015).

In western port cities, this was associated with the end of Fordism and cutting of labour markets in ports because of technology. The port activities in cities declined (especially in terms of employment) because of technology and automation (Berking, 2012). Containerisation and technological innovation have transformed the nature of work and labour around world ports. Many tasks there were previously performed by manual labour at the port sites are now performed by highly-skilled labour working with advanced technology and outside the port site. The old port cities faced de-industrialisation and shrinking labour demand and it was not surprising that they started waterfront developments to boost their image and attract new post-Fordist industries (Berking, 2012). Another phenomenon was the privatisations of ports, thus meaning governments and city authorities had little control over the functioning of ports.

The modern port environment and the shipping industry have undergone further changes. Contemporary ports are striving to be competitive and vessel sizes have increased. This means that modern ports must innovate in order to accommodate larger vessels. In the new competitive environment, ports can no longer rely on the fact they are natural gateways to rich hinterlands as a comparative advantage. Other factors such as port depth are now the biggest predictor about whether the port can accommodate larger vessels. For this reason, ports have now started to deepening port berths and channels in order to handle larger ships. Another

important factor is the turn-around time which is considered a major determinant of competitiveness of the port. Turn-around time basically means the “time it takes between the arrival of a vessel and its departure from port” (ITF/OECD, 2014: 75). The lesser time the ship stays in the port, the lower the traffic and port congestion which in turn, increase productivity and output.

The changing role of port in cities have been explained by different models and theories. Two of the most popular models has been the Anyport and port regionalisation models. These are discussed in the following section.

2.8.1 Port-City Development Models

Several models have been applied to explain various changes in the port-city relationships. These models have been applied globally to explain the changing role of ports in urban areas. Previously, ports were seen as an integral feature of urban development. Recently, however, this role of ports has been declining because of changes including liberalisation, containerisation and technological innovation. The section below discusses Anyport and regionalisation models.

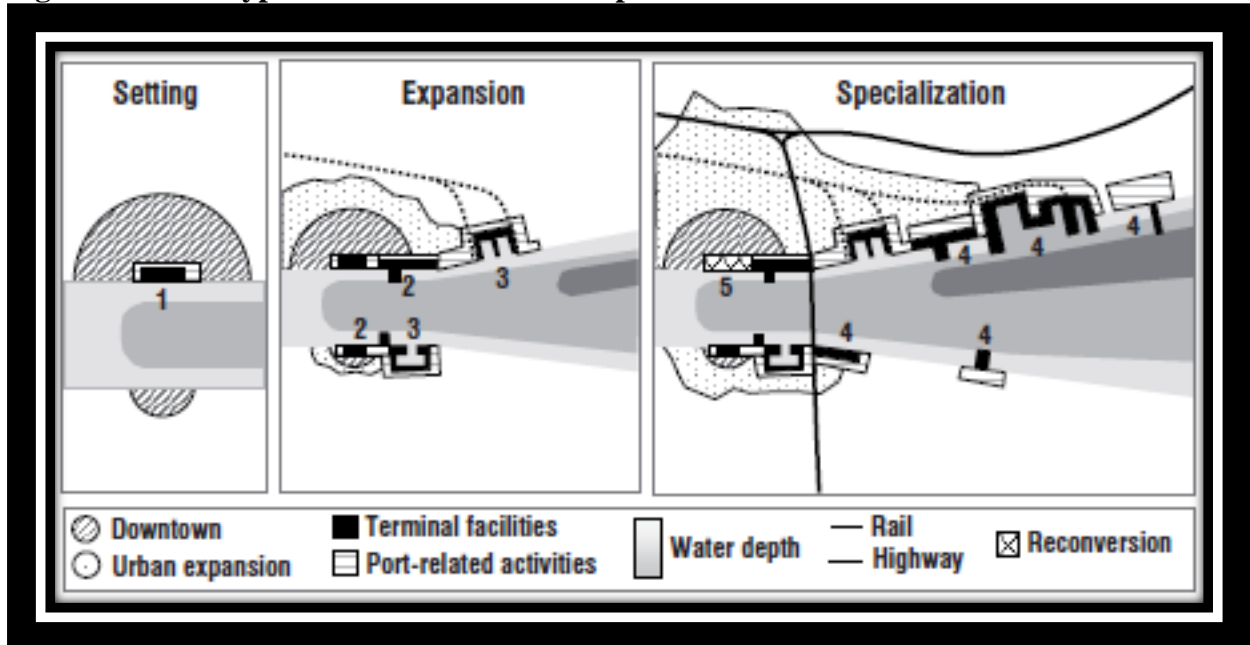
i) Anyport Model

One of the mostly known port models is the Anyport model (Figure3) conceptualised by Bird (1953). Bird proposed a three-step model to illustrate how a port in the city develops. The three stages are setting, expansion and specialisation. Throughout these three stages, maritime technologies change and improve, and this also characterised by changing spatial relationships between the city and the port. In the specialisation stage, port activities develop further away from the oldest port facilities. These three steps have five stages further discussed below and indicated in Figure 3:

- **Setting:** until the industrial revolution, the port was a key feature of urban centrality. The main activities were warehousing, wholesaling and shipbuilding, located near the port. The port evolves from the original site close to the city centre and is characterized by several simple quays (stage 1) (Rodrigue et al., 2006: 133).
- **Expansion:** the industrial revolution influences port activities. This step was characterised by the expansion and construction of quays that would handle increasing freight and larger ships (stage 3) (Rodrigue et al., 2006: 134). The ship sizes expanded,

and this triggered the construction of docks that would build larger ships (stage 3). This was also associated with the integration of rail to facilitate growing hinterland traffic as well as the expansion of industrial activities (Rodrigue *et al.*, 2006: 134).

Figure 3: The Anyport Model of Port Development



Source: Rodrigue *et al.* (2006: 133).

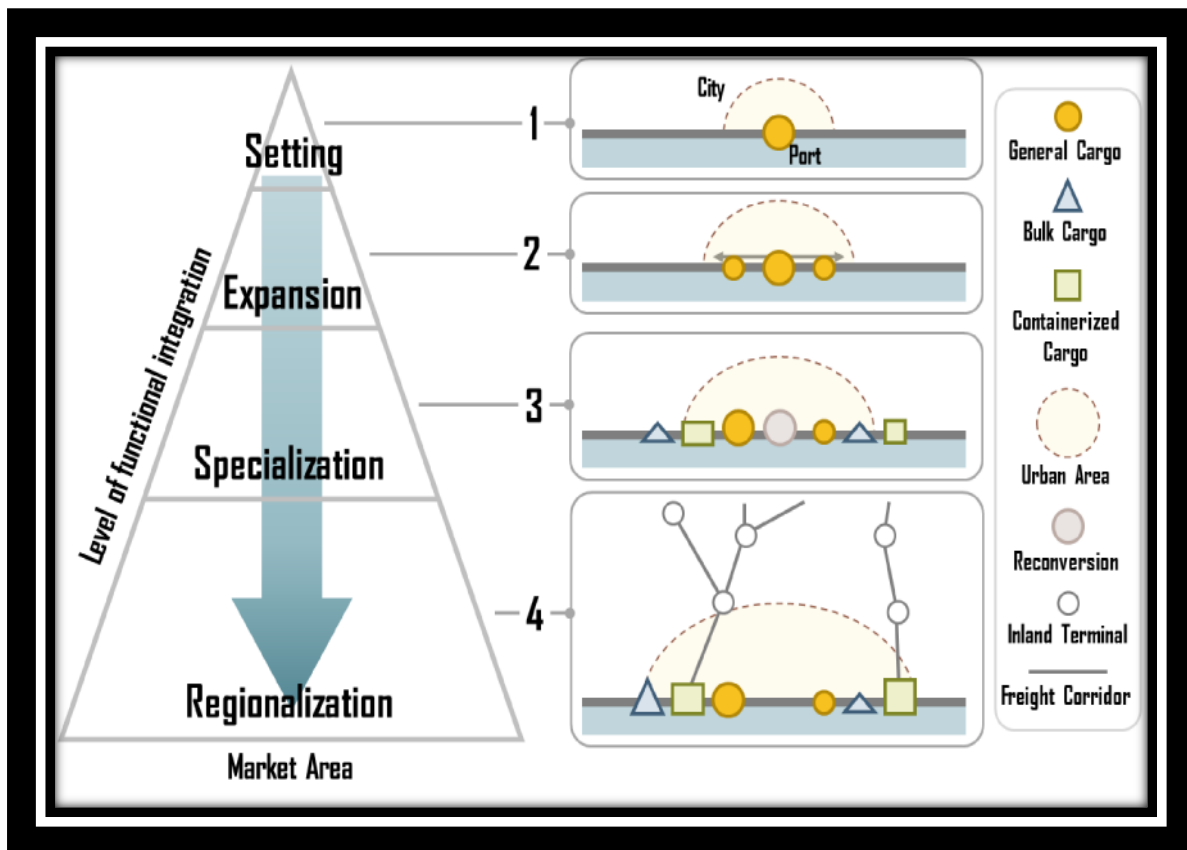
- **Specialisation:** This phase was associated with the building of specialised piers that would accommodate containers, ores, petroleum, grain and coal (stage 4). This also included the significant expansion of warehousing, larger ships that required greater depths. As a result, port activities moved further away from the city and old port environment. Old ports were abandoned, which led to many ports converting their activities to waterfront parks, museums and commercial developments (stage 5).

The classical Anyport model was extended to the port regionalisation model; this is discussed in the next section.

ii) *Port Regionalisation*

Notteboom and Rodrigue (2005) note that the Anyport model has some limitations in explaining the contemporary development of port and the spatial relationship between port and cities. For these reasons, they further extend the Anyport model to include the next step of spatial development of the port, called port regionalisation (Figure 4).

Figure 4: Port Regionalisation Model



Source: Notteboom and Rodrigue (2005: 298).

According to Rodrigue and Notteboom (2011: 11-14), the regionalization phase is “characterized by the joint and coordinated development of a specific load centre and multimodal logistics platforms in the hinterland, ultimately leading to the formation of a regional load centre network”. This is supported by two types of inland infrastructure:

- **Inland waterway ports:** These ports are either standard inland maritime or barge ports that are being integrated into hinterland services of coastal ports through shuttle services by barges or smaller coastal ships. This is particularly the case along the Rhine and in low income countries, where inland barge ports act as feeders for large ports in the Rhine-Scheldt Delta such as Rotterdam and Antwerp.
- **Inland terminals:** This is a rather more recent concept where a direct inland connection, particularly through rail, is established between an inland terminal and the port. It takes advantage of intermodal transportation and the improvements in the transshipment efficiency of port terminals. North America has seen the extensive development of

inland terminals and their associated logistics zones (Rodrigue and Notteboom, 2011: 14).

South African ports have also been not immune to changes experienced by ports internationally. South African ports, especially the Port of Durban, play a vital role in facilitating trade in Africa. The port of Durban continues to face challenges such as traffic congestion and high tariffs. The section below discusses the South African port system, the socio-economic and environmental impacts of the port of Durban as well as its competitiveness.

2.9 The Port of Durban

South Africa has a total of eight main ports: Durban, Cape Town Saldanha Bay, Ngqura, Mossel Bay, Port Nolloth, Richards Bay and Port Elizabeth. These ports can be categorised into three groups (Figure 5):

- *Western Ports.* Atlantic range ports, including Saldanha Bay, Cape Town, Mossel Bay and Port Nolloth.
- *Central Ports.* Ports mostly servicing the local hinterland with the expectation of the growth of transshipment activities at Ngqura as a new function.
- *Eastern Ports.* Pacific range ports mostly serving KwaZulu Natal and Gauteng, which are the most economically active provinces of the country (ITF/OECD, 2014).

The Transnet National Port Authority (TNPA) manages and operates all ports in the country. The main roles of the TNPA, as stipulated in Section 11 of the National Ports Act 12 of 2005, are to:

- own, manage, control and administer ports to ensure their efficient and economic functioning; TNPA as the landlord port authority must plan, provide, maintain and improve port infrastructure;
- control land use within the ports, make and apply rules to control navigation within port limits and approaches to ensure the protection of the environment and ensure safety and security within port limits;

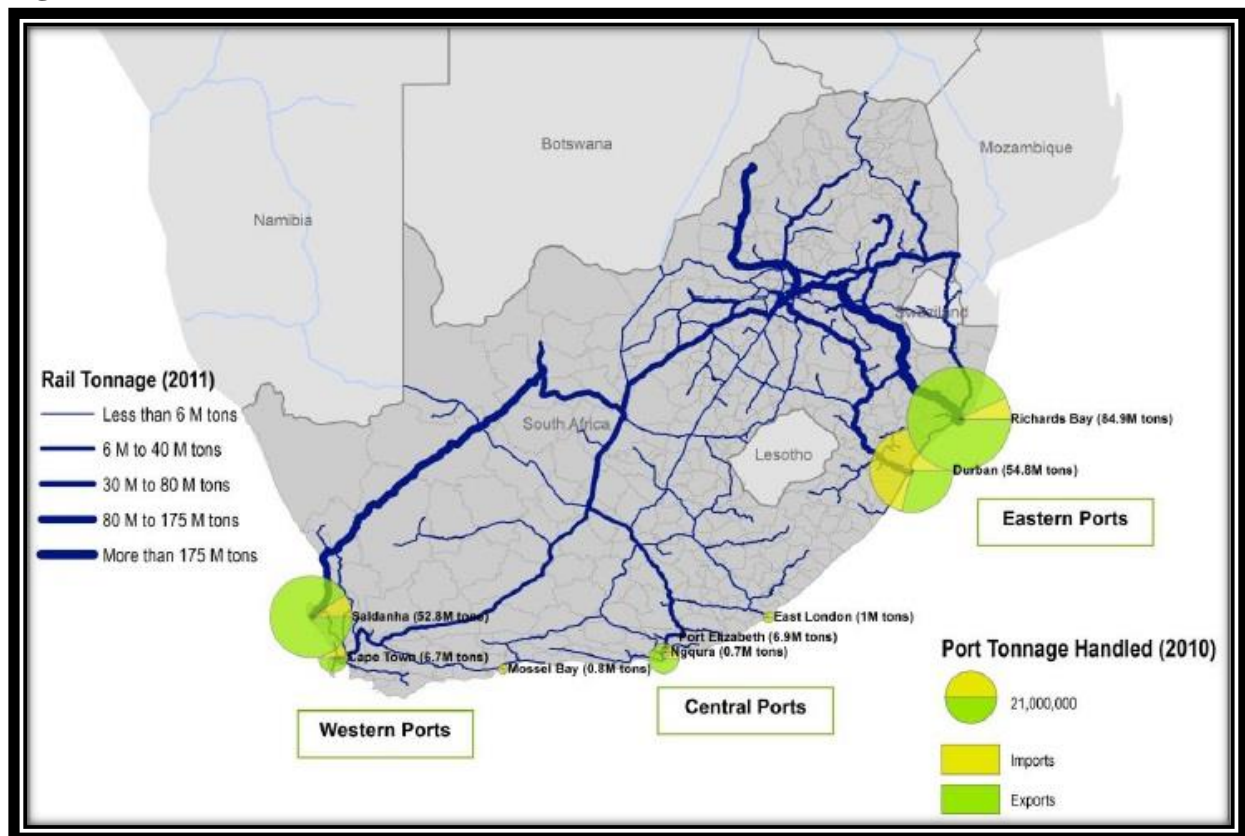
- ensure that port services and facilities are provided and enter into agreements or licence other parties to provide;
- ensure that adequate, affordable and efficient port services and facilities are provided for port users;
- ensure non-discriminatory, fair, transparent access to port services and facilities; and
- support advancement of previously disadvantaged people and promotion of representativeness and participation in terminal operations (OECD/ITF, 2014: 29).

The port of Durban is the largest port in the Sub-Saharan Africa, and the main gateway for South Africa. The port handles “two-thirds of the total container traffic to and from South Africa” (OECD/ITF, 2014: 9). Because of its location, the port plays an important role as the main gateway to Gauteng, the South Africa’s economic hub, but also the whole Southern African region. Scott (2003: 237) also notes that the port of Durban “is viewed as a key distribution node in the global economy linking the developed nations with the emerging Asian markets”.

According to OECD/ITF (2014: 35), the port of Durban has five main terminal facilities:

- *Point*: A multi-purpose break-bulk terminal as well as a Ro-Ro facility that handles most of the port’s vehicle trade. There is also a cruise terminal with plans to build a dedicated cruise facility.
- *Maydon Wharf*: Multipurpose break-bulk, dry bulk and liquid bulk-terminals adjacent to warehousing facilities owned (long-term lease) by several private freights forwarding companies. It is extensively used and accounts for a throughput of more than 6 million tons per year.
- *Durban container terminals (Piers 1 and 2)*: The main lessee is TPT, which operates the two main container terminals; Pier 2 Container Terminal (capacity of 2.7 million TEUs) and Pier 1 Container Terminal (capacity of 700,000 TEUs). The bulk of the container handling takes place at these facilities.
- *Island View*: Liquid bulk terminals mostly handling petroleum products.
- *The Bluff*: Dry bulk terminal mostly handling export coal and manganese.

Figure 5: South African Main Ports



Source OECD/ITF (2014: 32).

2.9.1 The Competitiveness of Durban Port

The port of Durban has a largest share of container traffic in South Africa, handling more than 60% of the freight. Furthermore, the port has a comparative advantage in terms of international maritime connectivity. However, contemporary ports have to be competitive and not only rely on their strategic position. Recent studies have indicated many challenges in the port of Durban, including traffic congestion, longer turn-around time, high costs and inefficiencies.

Costs of using the port is usually used to measure the efficiency of the port. According the OECD/ITF (2014: 38-39), there are three general type of costs (figure 7):

- Terminal handling charges (THC):** the fee collected by terminal operators from shipping lines.
- Cargo Dues (also known as Wharfage):** fee levied by the port authority to the users (exporters, importers or shipping lines) for the provision and maintenance of dry

infrastructure which facilitates cargo movement, i.e. quay walls, roads, railway lines, lighting and bulk services (outside terminal boundaries).

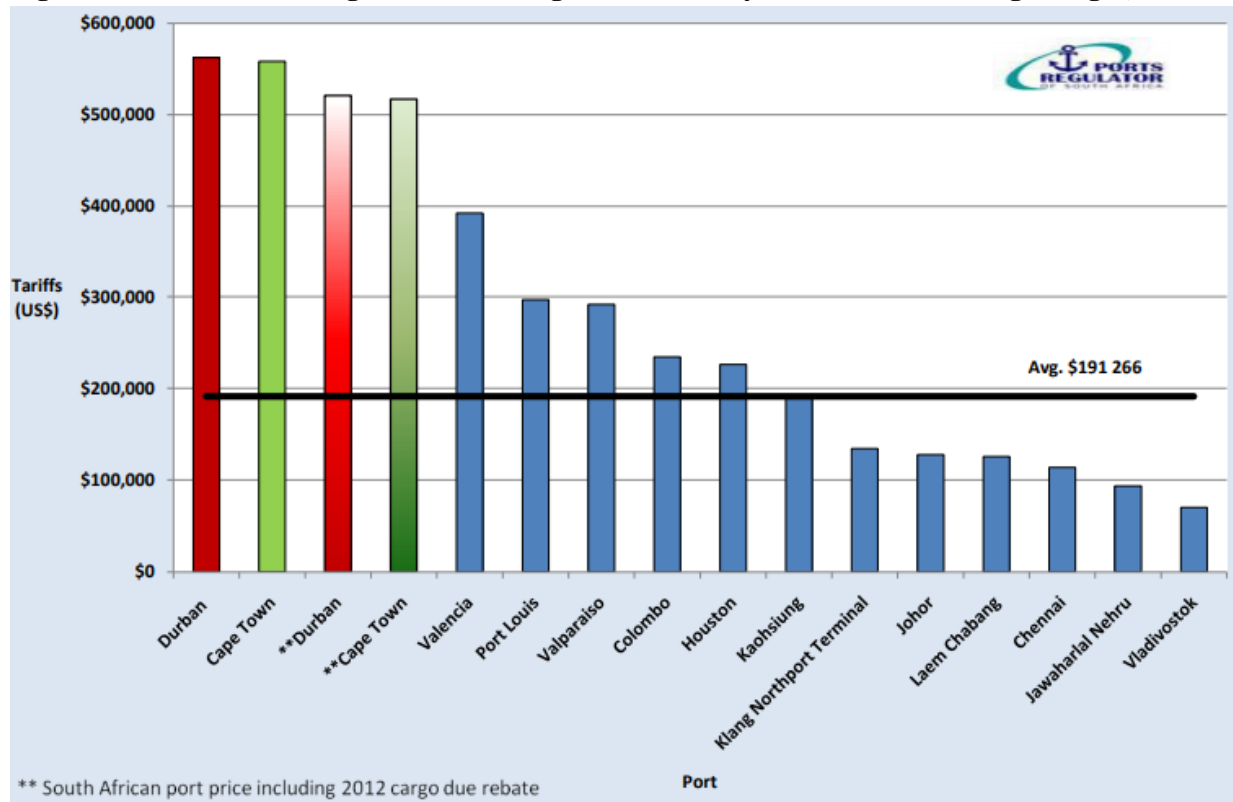
c) **Port Dues:** a charge levied by the port to all entering ships.

Figure 6: The Port of Durban



In terms of costs, the port of Durban is one of the most expensive ports internationally. OECD/ITF (2014) states that the reason for high costs is that TNPA is publicly owned and has a monopoly in the sector with no competition. Furthermore, it is stated that the port of Durban has higher waiting times, which increase the costs of exports and imports and impact negatively on the port competitiveness (OECD/ITF, 2014). For example, data from 2015/16 suggests that the turnaround time for ships in the port of Durban was about 2 days per call, higher than other international ports although better than African ports (Port Regulator of South African 2016). This has led to traffic congestions in the ports. Some sources state that land in the port has not been used to its maximum capacity, and if this was the case, the port would be more efficient in terms of costs and turnaround time (OECD/ITF, 2014).

Figure 7: Total Port Pricing (US\$) including Port Authority & terminal handling charges, 2012



Source: *Ports Regulator of South Africa* (2012: 9).

2.9.2 Port Impacts

i) *Benefits*

There are different sources about employment impacts associated with the Port of Durban. Maharaj (2013: 4) states that there are about 53 000 people employed in port services, with Transnet being the largest employer. Coller *et al.* (2007) estimated that 50 000 people were employed in port facilities. When looking at the indirect employment, Maharaj (2013) further states that there are about 50 000 people are employed by port-dependent firms.

The Port of Durban has significant multiplier effects on the economy of the metropolitan region and on the country's economy. There several are industries and manufacturing companies are linked to the port, directly or indirectly with manufacturing sector 21.7 percent. Durban is also home to big petrochemical industries such as SAPREF, Shell and Engen refineries, and automotive industries such as Toyota. These industries benefit significantly from the presence of the port in Durban. The conducive economic environment provided by the port of Durban has led to the growth of about 2000 firms (ITF/OECD, 2014).

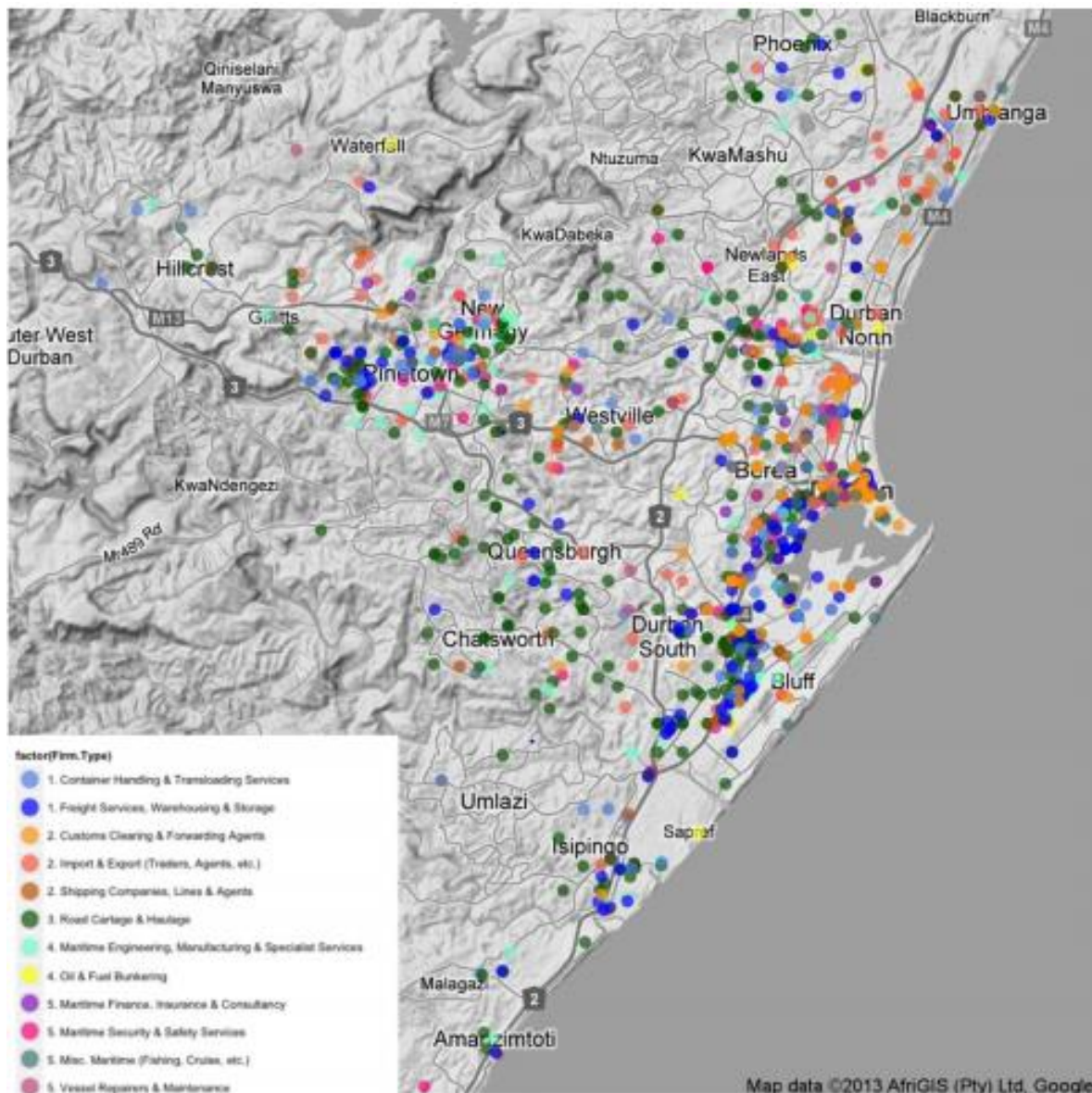
ii) Negative Impacts

The port of Durban is over-reliant on the trucking industry and road freights for transportation of goods from and to the port. This has various impacts on the economy and livelihoods of the city's population. This is visible through "congestion, pollution, delays to commuter traffic and road damage due to lack of control of overloading" (EThekweni Transport Authority 2013: 153). As a results road freight industry competes for land planned for residential and commercial purposes. Another concern has been the high number of accidents caused by trucks on the roads.

The expansion, deepening and widening of the port of Durban over the years has led to various environmental issues. Approximately 70 percent of the catchment area in the Bay of Natal is industrialized. There have been declines in the local biodiversity. Port expansions have led to dramatic declines in the local biodiversity, most notably with regard to the water birds that depend on the particular habitat located in estuarine bays, but several mass fish kills have also taken place due to water pollution and the hydraulic dynamics induced by the harbour infrastructure, most recently in 2007 (Forbes & Demetriades 2009).

There has been extensive literature on the role of the police and port authority in in excluding and displacing fisher folks in the Port of Durban. Maharaj (2017) argues that this is the results of neoliberal governance, appropriating public spaces for the use of the urban elites. Maharaj's (2017) is based on the Beachfront regeneration project in preparation for the 2010 FIFA World Cup. This indicates the role of megaprojects/events in the city: while in pursuit of the improved city image, however, such investments displace the livelihoods of ordinary citizens such as fisher folks and street traders.

Figure 8: Port-related economic clusters in the eThekweni metropolitan area (2007)



Source: ITF/OECD (2014: 62).

2.10 Conclusion

This chapter has illustrated the dominance of neoliberalism in urban policy and development. It was argued that the demise of the Keynesian in Western Europe and Northern America was associated with the creative destruction of the existing institutions in order to ‘roll-out’ neoliberalism. There have been several theoretical interpretations of this shift. The political economy approach viewed this as an ideological project. The post-structuralist perspective has focused on the governmentality of neoliberal practices and the entrepreneurial turn. Within the urban spaces, neoliberalism has been associated with various socio-spatial and economic configurations. This includes changes in the modes of governance such as the introduction of PPPs and quasi-public institutions. This has also brought new players whose interests, argued

some scholars, triumph rather than those of the citizens. The practices of neoliberalism in urban spaces include gentrification, conversion of port to water fronts, and mega-events and off-course, megaprojects. However, as discussed in this chapter, these megaprojects are speculative, built with the hope that they will generate more revenue and attract investments.

This chapter also discussed how megaprojects such as waterfronts, property developments, airports and ports are used as neoliberal practices to boost the image of the city and attract investments. In the era of globalisation and the dominance of neoliberalism, competitiveness is the new comparative advantage to attract investments. A large body of literature has criticised megaprojects, in that they are built by promoters and city managers with the assumption that the benefits will trickle-down to ordinary citizens. However, evidence suggests that megaprojects tend to increase socio-spatial and economic inequalities and can result in displacement of established communities. Furthermore, a significant number of megaprojects have been characterised by cost overruns, undermining socioeconomic and environmental concerns, inaccurate forecasting and lack of public participation. The case studies of South African megaprojects presented in this chapter have also been characterised by similar problems as the international experience.

This chapter argued that contemporary ports have changed, and the relationship between cities and ports has also changed. The port-city models presented in this chapter illustrated how ports became less dependent on cities and have developed outside city spaces. The introduction of new technology meant that automation displaced manual labourers and as a result, old port facilities were abandoned and transformed into waterfronts and museums. In South Africa, the port of Durban continues to play an important role in the city and the whole country, especially in terms of trade and employment. However, there are issues such as uncompetitive prices, lack of appropriate technology and environmental impacts.

The next chapter discusses design and methods used in this study and give a brief background of the South Durban Basin, background to the dig-out port, research design, methods and data sources used.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

The sub-discipline of human geography has undergone through paradigm changes, from the quantitative revolution to the cultural turn. This has impacted on how human geographers conduct research, including methodologies and methods used. According to Hoggart, Lees and Davies (2002: 310) the methodology:

embraces issues of methods of data collection and analysis when these are grounded in the bedrock of a specific view on the nature of 'reality' (ontology) and the basis on which knowledge claims are made (epistemology) (2002:310).

This has many implications for research processes, including research design, methods, data collection and sampling procedure used. Against this background, the aim of this chapter is to explain the research methodology and methods used in this study. First, the chapter start by giving the brief history and background of the study location, the South Durban Basin. Second, the chapter gives a brief background to the proposed dig-out port in South Durban. Third, the research design, which is the case study approach, is explained. This includes discussion of data collection instruments, procedures and sources used in this study.

3.2 Aims and Objectives

The aim of this study is to investigate the impacts of the proposed dig-out-port in Durban.

The objectives of this study are to:

- i. Review literature and critically analyse selected mega projects in Durban since 1994;
- ii. Assess the projected and socio-spatial, economic and environmental impacts associated with the -dig-out port; and
- iii. Examine the participation and ability of various stakeholders with regard to influence decision making in matters relating to the port.
- iv. Assess the perceptions of residents in adjacent areas towards the dig-out port.

3.3 Study Area: South Durban Basin

The South Durban Basin is located in the south-west of the Port of Durban. South Durban. South Durban includes many residential areas including Wentworth, Austerville, Bluff, Umlazi, Isipingo, Merebank, Clairwood, Jacobs, and Umbilo (Figure 9). The establishment of

these residential areas adjacent to industries emerged in 1938 when it was realised that a cheap labour supply was required. In line with the Group Areas Act of 1950, there was racial residential zoning.

3.3.1 History of Apartheid Planning in South Durban Basin

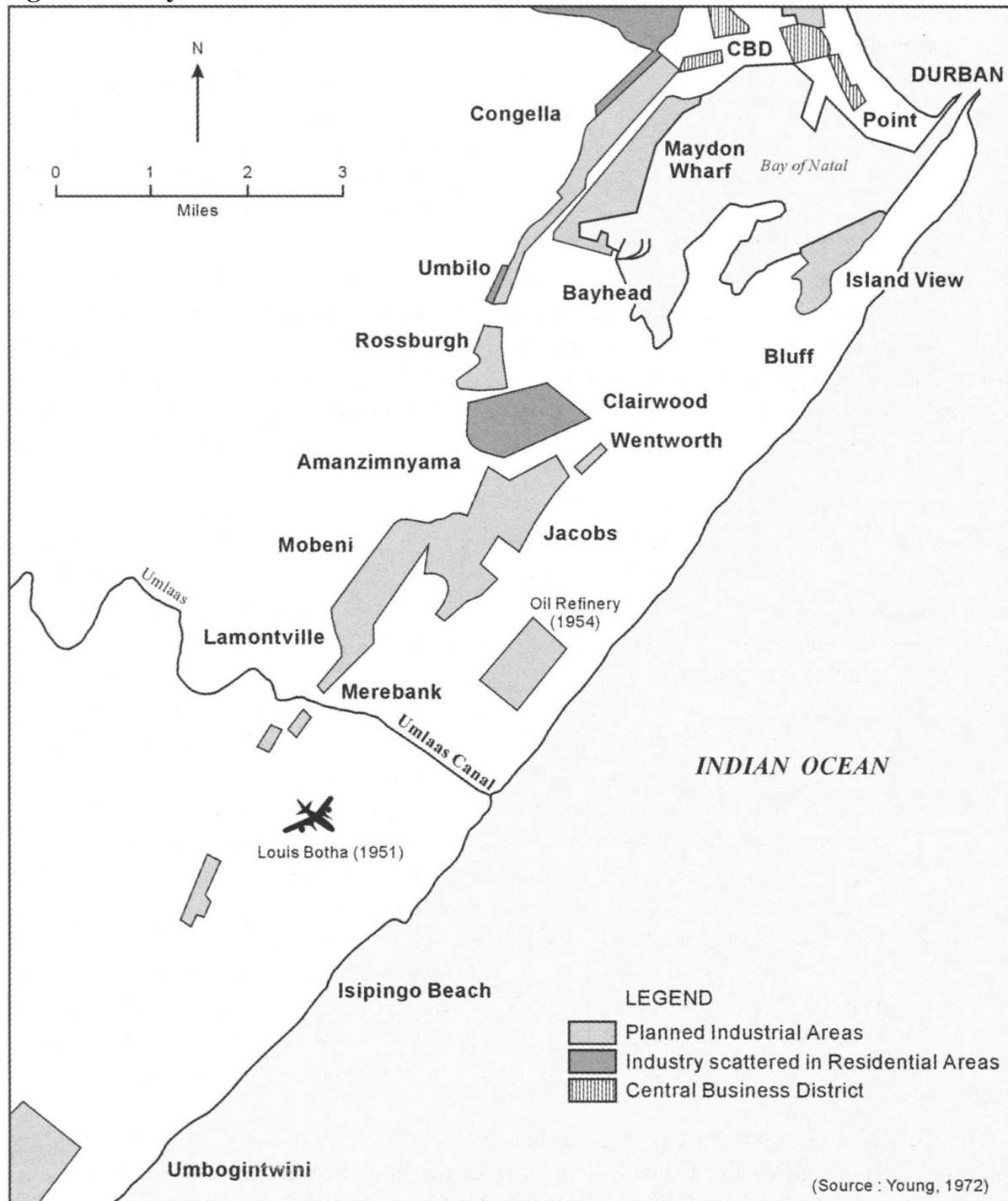
Before the First World War, economic activities in Durban was limited to port and commercial functions (Scott and Sutherland, 2009). The most important industrial development was the construction of Maydon Wharf around the port. By the 1920s, industrial activities increased around the port in the south of Durban. Industries could be found at Congella, Wentworth, Umbilo, Isipingo, Jacobs, Umbongitntwini, Merebank, Umbilo and Jacobs (Figure 9) (Scott, 2003).

After the 1930s, Maydon Wharf and Congella were fully developed industrial estates, and the area of South Durban became integrated with the Point following the construction of the new railway constructed in 1932 (Maharaj, 1996; Scott, 2003). More land was acquired by the city council in South Durban for industrial and residential purposes. However, the task of acquiring land in these areas was difficult as Indian populations had settled there after completing indenture (Scott, 2003). According to Scott (1994), fertile, free land in the south of Durban allowed the Indian population to grow vegetables; this land fell outside of the city's boundaries, and therefore, was beyond its jurisdiction.

In the 1930 the Durban Town Council established the Borough Boundaries Commission that recommended extension of the city's territorial boundaries and included incorporation of Clairwood and Cato Manor. The need for land was due to the expanding industrial interests in the area. The formation of the Natal Manufactures' Association (NMA) which later became the Natal Chamber of Industries) in 1905 also recommended an increase in secondary industries around the port (Scott, 1994). Scott (1994: 250) states that some of the recommendations of the Borough Boundaries Commission were:

the localization of industry in Durban to the south of the Bay; the integration of railways, shipping and industry in this location; the creation of African and Indian housing schemes to the south in Lamontville and Merebank to provide sources of labour for industry; and the necessity of undertaking reclamation, dredging and canalization to provide usable industrial land.

Figure 9: Early industrial and residential nodes in South Durban

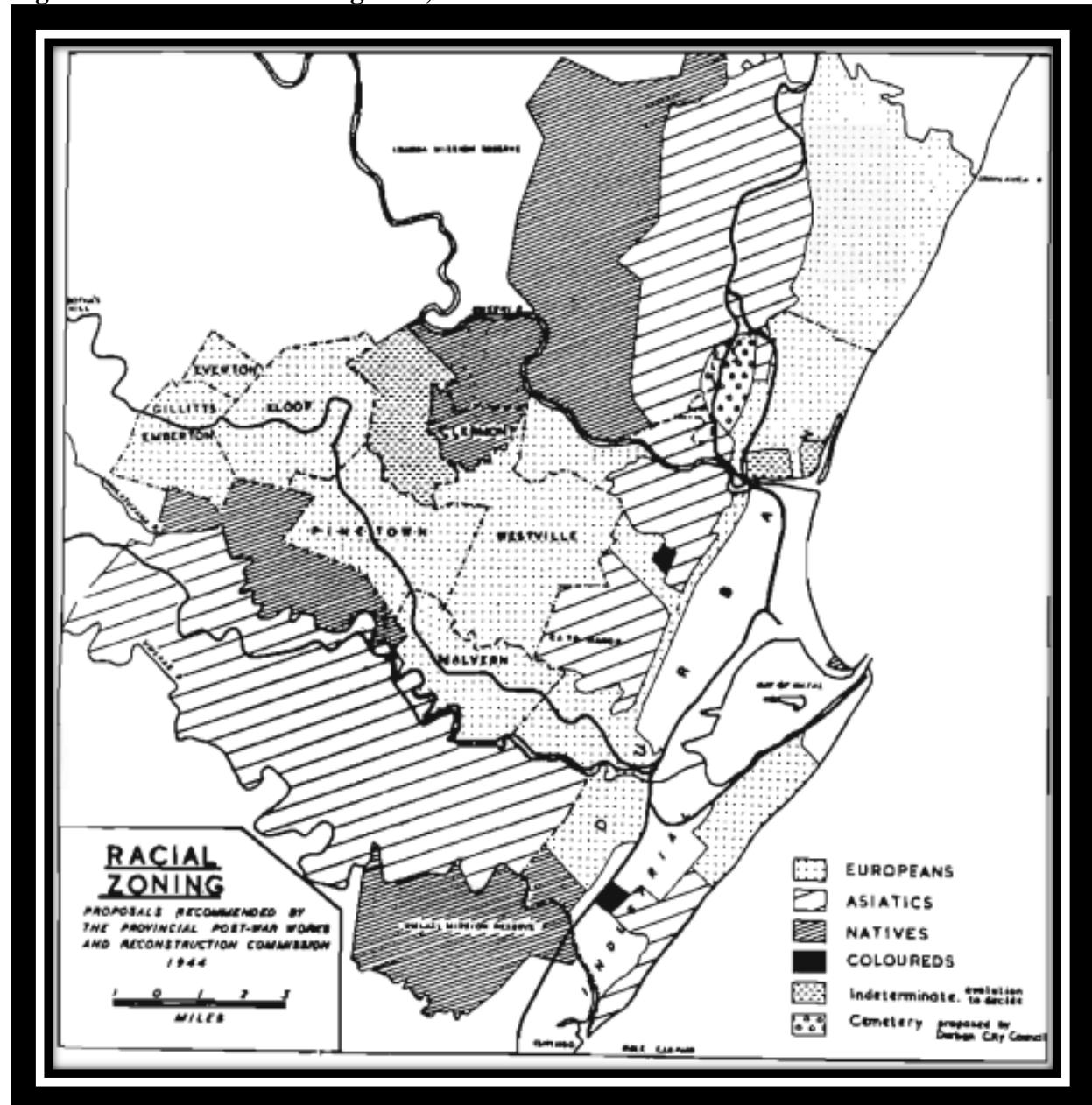


Source: Scott (2003: 243).

In 1944, a Racial Zoning Plan was initiated which recommended that whites occupy the northern Bluff, Indians the southern Bluff, coloureds in Wentworth and Africans occupy Lamontville and Umlazi Mission Reserve (Figure 10). It was argued that “racial zoning would result in the housing of each race in a separate area whereby the interests of all would be best

served” (Scott, 1994: 251). This racial zoning set the foundations for racial zoning of the city in terms of the Group Areas Act in 1950s.

Figure 10: The Racial Zoning Plan, 1944



Source: Scott (1994: 251).

The post-World War Two period saw further expansion of manufacturing industries, including Toyota and refineries in South Durban. There was also more zoning of industrial activities adjacent to residential areas (Scott, 2003). The contemporary area of the South Durban Basin is thus a hybrid product of apartheid planning and zoning, which included racial zoning and mixing residential and industrial areas through the Group Areas Act and forced removals.

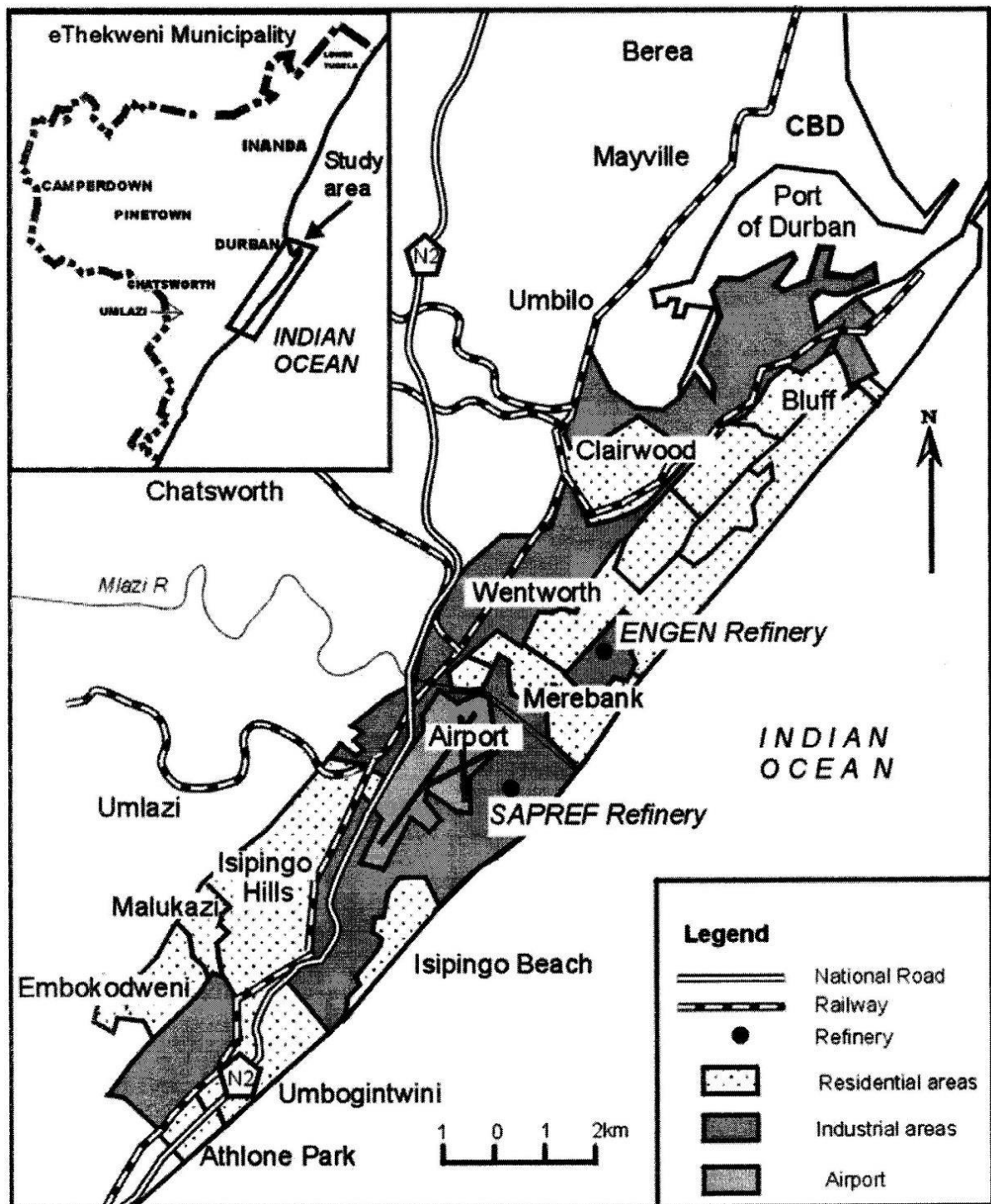
3.3.2 The Present South Durban Basin

The South Durban Basin is characterised by the concentration of industrial activity, which is the highest in KwaZulu Natal, and second largest industrial hub in South Africa (Scott and Sutherland, 2009). Major activities include heavy and light industries, petrochemical industries, warehousing, commercial business, the Port of Durban and the planned dig-out port at the old Durban International Airport (DIA). Furthermore, there are two large petrol refineries located in the SDB: Engen and SAPREF. The major industrial belts include:

- The Valley Industrial Belt (Engen, Mondi, Sapref)
- The Jacobs Industrial Belt
- The Navy/Mobeni Industrial Belt
- The Island View Industrial Belt
- The Umbogintwini Industrial Belt

It is this juxtaposition of residential and industrial zoning that characterise current social and environmental challenges such as pollution, health and traffic problems. Internationally, the SDB is known for air pollution and environmental hazards which have major health implications. For example, a study by the University of Natal Medical School found that children in the suburbs of South Durban are up to four times likely to suffer from chest complaints than children from other areas of the city (Kirk, 2000). The school children in South Durban also bear the public health costs of the petrochemical industries and have to contend with noxious odours generated by those industries (Carnie, 2006; Maguranyanga, undated). The study by the University of Michigan estimated that children living in South Durban were more likely have asthma compared to children living elsewhere in South Africa (Carnie, 2006). According to Kirk (2000), the levels of benzene recorded near the Engen Refinery were up to 15 times higher than World Health Organization guidelines and several times higher than recommended levels in the United States. The land use in the SDB also creates other social and economic externalities. It is estimated that about 20 % of all of the traffic generated in eThekwin have either its origin or destination in the SDB. The reason for this is the location of the Port of Durban and industrial activity. Examples of traffic impacts include congestion, pollution and most importantly loss of life in accidents.

Figure 11: Map of Industrial Areas in South Durban



Source: Scott and Barnett (2009: 376).

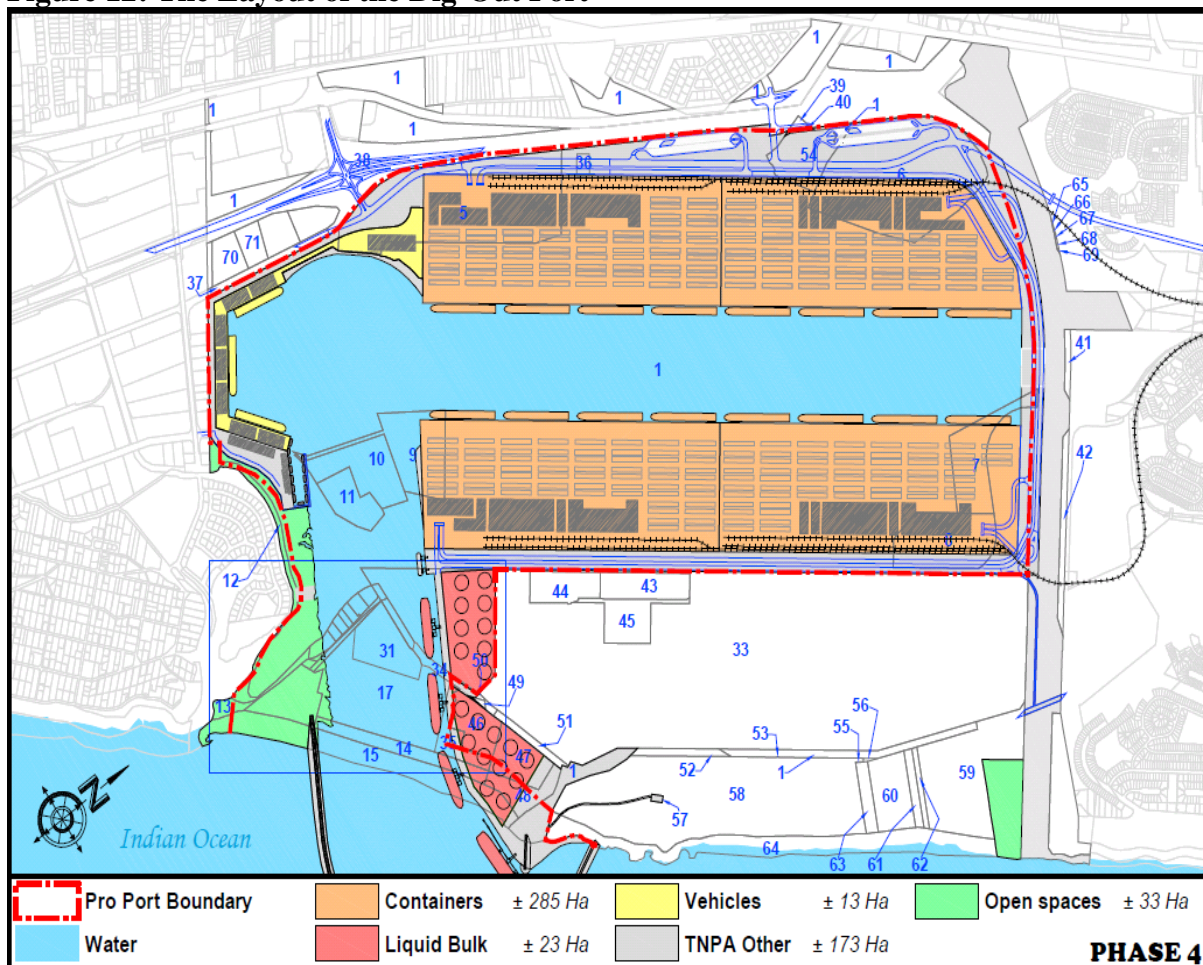
3.4 Background of the Dig-Out Port Project

Recent issues in the port of Durban such as traffic congestion, as well as forecasts that indicate growing freight in future have suggested that the port needed to increase capacity to meet demand (Transnet, 2011). A number of port expansion plans have been proposed, and the most significant one is the dig-out port at the old Durban International Airport (DIA) (Figures 12;

13). The port will be constructed by dredging out 75 million cubic meters of earth and building a 1.2 km breakwater out into the Indian Ocean. It will have of 16 container berths, three vehicle berths and four liquid berths and will have a total capacity of 9.6 million TEAU when completed Mather, 2013).

Transnet bought land in the DIA site from Airport Company South Africa at a cost of R1.8 billion in April 2012. According to Transnet the dig-out port will play a major role in handling cargo into and out of Durban as well as facilitating

Figure 12: The Layout of the Dig-Out Port



Source: Mather (2013: 19).

Figure 13: The Durban International Airport Site



Source: Transnet (2014: 1)

3.5 Research Design: Case Study Approach

This thesis is rooted in the case study approach. According to Simon (2009: 21) a case study approach is “an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, program or system in a ‘real life’ context”. Hence, a case study is not a method in itself, but a design framework where various methods can be incorporated. A case can be, therefore, studied “analytically, holistically, hermeneutically, culturally, and by mixed methods, but we concentrate, at least for the time being, on the case” (Starman, 2013: 32). A case study can be categorised into singular case and multiple or plural cases, and quantitative, qualitative and mixed methods can be used to investigate a particular problem.

This case study focuses on the Dig-Out Port proposed in the old Durban International Airport to understand the economic, social and environmental impacts of the proposed port expansion. Conceptually, this study was influenced by analyses of megaprojects in the transformation of urban spaces. The research does not aim to generalise findings to other case studies. However, there they can be comparisons to other case studies to explain the impacts of megaprojects in

urban areas, especially in South Africa. The study used on primary secondary sources to collect data, and these are explained below. Both quantitative and qualitative methods were used to collect, analyse and interpret data.

3.5.1 Primary Data Collection

i) Questionnaires

Questionnaires were used in this study to explore residents' perceptions and opinions about the proposed dig-out port. The questionnaire is one of the popular tools in social science research for gathering data on perceptions, attitudes and behaviour (Flowerdew and Martin, 2005). Within geography, in particular, the questionnaire has been used to gather information on a wide range of topics such as environmental perceptions and natural hazard research (Flowerdew and Martin, 2005).

The questionnaire included closed and open-ended questions. Closed-ended questions allowed for basic descriptive quantitative analysis and producing tabulations and graphics. Open-ended questions, on the other hand, allowed for qualitative analysis and free-form responses which invite participants to share their understandings, experiences, opinions and interpretations of, as well as their reactions to, social processes and situations (McGuirk and O'Neill, 2005). Overall, a combination of closed and open questions provides the survey write-up with quantifiable and in-depth results. Closed questions produce results that are easily summarised and clearly presented in quick-look summaries while open questions produce verbatim comments adding depth and meaning. The questionnaire consisted of a range of questions about socio-economic status, awareness of the dig-out port, perceived impacts and other opinions about the project.

The design of the research questionnaires was the refecction of multiple factors. Various literature, policy and media sources had extensively reported about the proposed dig-out port before the beginning of this study. The researcher first engaged with literature on megaprojects, both international and local, and became familiar with the politics, contestations and impacts of different case studies. Then the case study of the dig-out port was intensively engaged to gain important insights. This helped in developing the questionnaire. The questionnaire consisted of closed-and open-ended questions. Although the researcher had pre-coded questions, however, new emerging themes or insights were incorporated using open-ended questions.

The study adopted a convenience sampling method. Etikan *et al.* (2016: 2) define convenience sampling as a non-probability sampling technique “where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study”. It was not the purpose of this study to conduct a pure statistical inquiry where correlations, statistical significances and statistical reliability had to be made. Rather, the study aimed to understand a snapshot of the residents’ perceptions regarding the impacts of the proposed port.

Residents in Isipingo and Merebank were selected because of their close proximity to the proposed site for the dig-out port. There are, however, other areas in South Durban which will be impacted by the new port; these include Umlazi, Clairwood, Jacobs, Umbilo as well as other adjacent areas. It was not possible to collect data on these areas because of time and cost constraints using random sampling techniques. There was no key inclusion and exclusion criteria which was used by the researcher; households along the streets were visited and those who were not willing to participate were excluded. Therefore, 50 residents were selected from Isipingo and Merebank, respectively, based on convenience sampling. The sample makes no claims of representativeness and statistical reliability since the intention was to provide a snapshot of the perceptions of residents. The data on residents was collected in their households and all respondents were above 18 years.

ii) Interviews

Interviews were one of the important data collection method used for this study. Before the interview process, stakeholders had to be identified from a wide range of sources, including literature, newspaper articles, policy documents and suggestions from other interviewees. Key Informant Interviews (KIIs) were conducted with various stakeholders involved, directly or indirectly. Individuals and their respective organisations interviewed are indicated in Table 6. A total of six interviews were successfully completed. While most interviews were digitally recorded, some interviewees preferred not to be recorded, and the researcher had to take notes during the interview process. All interviewees’ privacy was guaranteed as per the consent form approved by UKZN Ethics Committee (see Appendix 5)). In the study respondents will not be referred by their names but as representatives of their organisations.

All interviews were semi-structured, comprising of open-ended questions, and aimed at understanding the role of megaprojects in eThekweni and South Africa in general. The intention

was to also understand the views of the different interest groups and stakeholders in the proposed dig-out port.

The interview method is “sensitive and people-oriented” (Flowerdew and Martin, 2005:111), thus offering respondents an opportunity to “construct their own accounts of their experiences by describing and explaining their lives in their own words” (Flowerdew and Martin, 2005:111). It also allows interviewees to raise concerns and issues that were initially not in interviewers’ mind.

Table 6: Stakeholders Considered for Interview

Respondent	Organisation	Date of Interview	Interview Status	Interview Coding
Respondent 1	Transnet	18/06/2016	Completed	Transnet/18/06/2016
Respondent 2	eThekwini Municipality	25/06/2016	Completed	ETM1/25/06/2016
Respondent 3	eThekwini Municipality	05/07/2016	Completed	ETM2/05/07/2016
Respondent 4	SDCEA	16/09/2016	Completed	SDCEA/16/09/2016
Respondent 5	UKZN	19/06/2016	Completed	UKZN/19/06/2016
Respondent 6	Earthlife Africa	11/08/2016	Completed	Earthlife/11/08/2016

iii) Business Meetings and Presentations

The researcher attended one business summit on Ports and Logistics organised by the eThekwini Municipality. The summit took place on the 19th February 2015 at the Moses Mabhida Stadium in Durban. Various stakeholders including Transnet, academics, the business sector and civil society organisations attended the summit. The aim of attending the summit was to hear the views of different stakeholders with regard to the Port of Durban in general and Durban Port expansions in particular. There were three key presentations by a) Professor Trevor Jones, an expert in port economics and a long-time researcher of the Port of Durban, b) Irwindra Naidoo, General Manager: Group Strategy at Transnet; and Jamie Simpson, an international port economist and researcher on ports, who was invited as a consultant by the eThekwini Municipality

3.5.2 Secondary Data Collection

i) Policy Documents and Statistical Databases

There are several documents that were used in this study. First, government (central and provincial, local) documents were utilised by this study for the purpose of understanding its position on the proposed dig-out port. Second, Transnet documents such as proposals, impacts assessment reports, baseline studies, supply-demand strategy documents were acquired from Transnet's website. Third, publications of eThekweni Municipality in relation to the port of Durban were acquired from the city's website. Other documents acquired were from consulting companies such as WSP, Urban Econ, Graham Muller Associates and civil society organisation such as groundWork and South Durban Community Environmental Alliance.

Transnet National Ports Authority updates the statistics on all South African Ports every month and annually. These statistics include exports and imports, port traffic and port demand and capacity. Consequently, these statistics formed an important component for data analysis for this study in terms of understanding the dynamics in the Port of Durban.

ii) Newspaper Articles

Since the initial announcement by Transnet, the media has reported widely on the proposal to build the dig-out port. It is against this background that news articles became another important resource for this thesis. The media has reported on the protest by communities as well as acted as a source of information for most of the news updates on the dig-out port. Google News search engine was used to search online news articles. Other websites used included Independent Online (which host local Durban newspapers such as The Mercury, Daily News and Sunday Tribune), Business Day Live, Engineering News, and Mail and Guardian.

3.5.3 Data Analysis

Quantitative and qualitative data generated from various sources influenced a mixed method approach in this study. Mixed method design is increasingly being used in research internationally and it can improve the reliability of findings and the quality of research. Triangulation of the qualitative, quantitative and documentary data was used and it reinforced findings of the study.

Data generated from the questionnaire was entered and analysed using STATA version 13 software. STATA is a powerful software for quantitative data analysis and it was used to

generate descriptive statistics and bivariate analysis of the dataset. Since the design of the questionnaire sample selection did not take into consideration the representation of the whole South Durban population, and marginal errors were not calculated, no statistical tests (eg. hypothesis testing, ANOVA, chi2, etc.) were performed. The aim of the questionnaire survey was to get the residents' perceptions of the impacts of the dig-out port. The second batch of quantitative data from the statistics databases such as Global Insights and port figures from Transnet website were imported using excel to generate tables and figures.

Qualitative data collected through interviews, documents and news articles were digitally recorded, transcribed and coded to identify common themes and trends. NVivo was used to generate codes and build themes from the qualitative data. NVivo was useful in searching for most used words, terms and phrases from the interviews. This helped to identify themes and patterns in the data. Although the researcher had some few predetermined codes and themes in mind, however, other themes emerged from the data.

3.5.4 Ethical Considerations

This study was conducted in line with ethical principles governing research involving human subjects at the University of KwaZulu-Natal. The research proposal for the study, with its instruments, and informed consent protocols was approved by the University of KwaZulu Natal Ethics Committee (Appendix 6). The respondents had to sign the informed consent form before the start of the interview. The consent form stated the nature, aim, objectives and procedures of the study, and made it clear that participation was voluntary, and respondents could withdraw from the interview if he/she feels uncomfortable. The anonymity of respondents was guaranteed, only organisations affiliated with individuals were mentioned. Names of officials and individuals collected from documents were, however, used as this was already in the public domain.

3.6 Limitations

There were some limitations, especially during the data collection phase of the study. Some interviews were cancelled by respondents, or the interviewees were not responding to requests. Several officials from Transnet did not answer to email requests for interviews, hence dependence on official documents and news media reports related to this stakeholder. There were also challenges during the questionnaire survey, as some houses were locked and fenced with high walls and were not accessible. Middle-class households were less accessible than low-income households. Notwithstanding these challenges, the qualitative, quantitative and

documentary information collected provided a rich database to analyse the impacts of the proposed dig-out-port in Durban, which follows in the next chapter.

3.7 Conclusion

This chapter has discussed the methodology adopted by this study. The case study is located in South Durban. South Durban is a hybrid of historical injustices and present poor environmental conditions. The former relates to the apartheid geography and practices such as forced removals whereas the latter refers to industries that continue to cause many environmental and health costs. This study has adopted a case study approach, and used the mixed methods to investigate impacts of the proposed dig-out port. Questionnaires, interviews, media sources and meetings were used to gather data. This was also combined with secondary material such as secondary data and documents from various organisations and news articles. This data was triangulated in the analysis stage to present results grouped into themes. The next chapter presents the findings from this study.

CHAPTER FOUR: FINDINGS

4.1 Introduction

The previous chapter explained the methodology adopted by this study to select, gather and analyse data from different sources. Data for this study came from: i) key informant interviews from organisations, ii) a questionnaire which was administered to households from two communities, iii) primary documents from organisations such as Transnet, eThekweni Municipality and other stakeholders, iv) news articles which were generated online, and v) attendance of one business meeting.

This chapter presents and discusses findings based on the objectives stated in chapter one. Findings are organised thematically. First, the chapter reviews processes and impacts of recent megaprojects in Durban (Moses Mabhida Stadium, King Shaka International Airport and Dube Trade Port). Secondly, the chapter analyses the rationale behind deciding to build the dig-out port, which includes consideration of employment, economic growth and competitive advantage of Durban. More specifically, the focus is on the projected and induced socio-spatial, economic and environmental impacts associated with the new port. Thirdly, the participation and power of various stakeholders with regard to influence decision making in matters relating to the port is assessed.

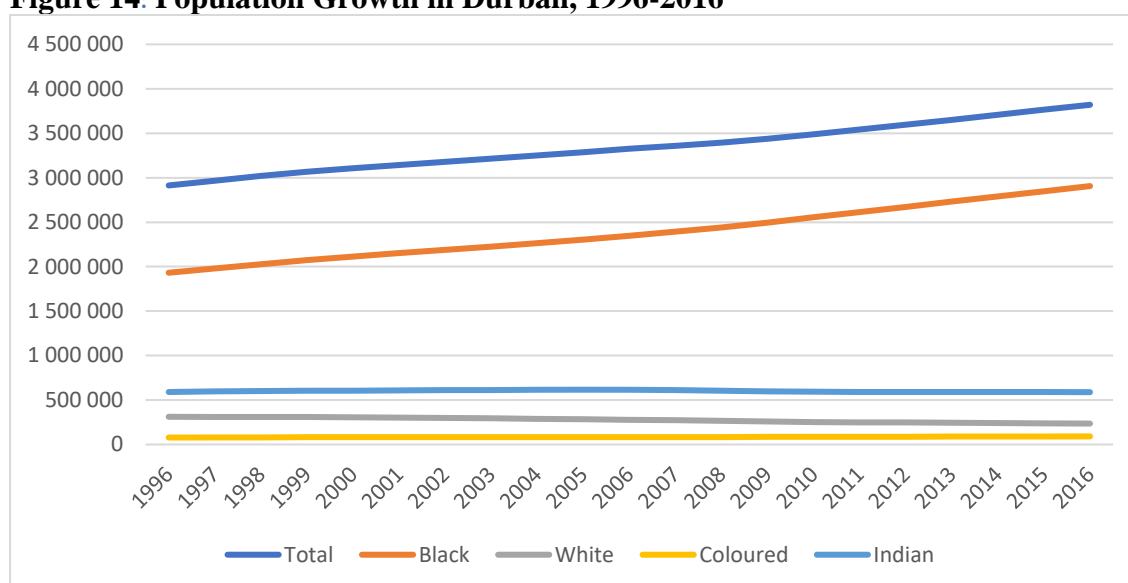
4.2 A Review Megaprojects in Durban

“By 2020 eThekweni Municipality will enjoy the reputation of being Africa's most caring and liveable city, where all citizens live in harmony. This Vision will be achieved by growing its economy and meeting people's needs so that all citizens enjoy a high quality of life with equal opportunities, in a city that they are truly proud of” (eThekweni Municipality IDP, 2012).

The city of Durban, administered by the eThekweni Municipality, is the largest metro in South Africa (after Johannesburg and Cape Town) both in its population and economic base. As illustrated in Figure 14, since 1994 Durban has experienced an increase in population (approximately 3.8 million in 2016), mainly because it has the highest concentration of economic opportunities in the province of KwaZulu Natal. Durban is a home to the Africa's biggest port and economic activities include manufacturing, transport and logistics, financial

services and tourism. Since 1994, like other cities in the country, Durban's economy has gone through series of changes including the economic recession of 2008.

Figure 14: Population Growth in Durban, 1996-2016



Data Source: Adapted from Global Insight (2016: 1).

Durban, like other post-apartheid cities, continues to experience a range of socio-economic development challenges including poverty, high unemployment rates, informal settlements, high rates of HIV/AIDS (SANC, 2016; Robbins, 2005). These issues are even more severe in black townships where life remain physically dangerous and economic opportunities are lacking due to crime and spatial exclusion (Freund, 2001). These issues are further explained by Maharaj and Ramballi (1998: 133) who argue that:

“Development crisis in the Durban region is illustrated by rapid population growth, a slow economic growth rate, housing backlogs, an increasing number of informal settlements, increasing poverty, high unemployment rates and an inadequate supply of basic services to the majority of the population”.

For the last 10 years, employment has declined from 18.4% to 11.6% (SACN, 2016: 96) and there has been a gradual decline of the number of firms in the city. Part of economic challenges and decline of employment opportunities in Durban has been further exacerbated by the decline of manufacturing as an important feature of the city (Table 7). Table 7 shows that the number of manufacturing firms declined by more than 27% from 2003 to 2014 (Robbins and Velia, 2015). Consequently, because of manufacturing has been an important feature in the city's economy, its decline meant less employment opportunities for the population.

Table 7: Changes in the numbers of firms sampled in 2002/03

Sub-sector	200/2003	2013/2014	%Change
Food processing & beverages	61	55	-9.8
Textiles & Clothing	152	97	-36.2
Paper and furniture	85	63	-25.9
Chemical products	123	92	-25.2
Iron and steel	8	19	137.5
Metal products	49	24	-51
Iron & Steel & metal	57	43	-24.6
Electrical & electronic machinery	31	14	-54.8
Vehicles & automotive components	41	24	-41.5
Leather & footwear	26	17	-34.6
Non-metallic mineral products & Other	24	28	16.7
Total	600	433	-27.8

Source: Robbins and Velia (2015: 10).

According to Hannan and Sutherland (2015), recent urban development frameworks such as the IDP and Spatial Development Framework (SDF) have proposed that megaprojects and urban regeneration projects will enhance the competitiveness of the city region in the global economy. Studies have suggested that urban development in the city of Durban has shifted from one occupied with the ideas of justice, reconstruction and pro-poor development to pro-growth, neoliberal ones (Bond, 2011; Houghton, 2010).

In 2009, the eThekweni Municipality placed a considerable attention to the Dube Trade Port and King Shaka International Airport and Moses Mabhida Stadium as three megaprojects that will “act as a major catalyst to the city's economy over the next 10 years” (Robbins, 2015: 196). This also revealed the multi-scalar governance strategies in infrastructural projects, often involving the local, provincial and national governments in partnership with the private sector (Robins, 2015; Sutherland *et al*, 2015). Similar to other international cases, promoters of these three megaprojects argued that they will contribute positively to the image of the city. All three projects were linked to FIFA 2010 World Cup.

According to Scott (2015), these megaprojects in Durban seems to influence the planning process itself, in that they are not only seen as strategic projects but a planning strategy on their

own. For example, in the 2008 Spatial Development Framework, the Dube Trade Port and King Shaka International Airport were not shown on the map. On the revised 2012/2013 SDF, however, these two megaprojects were shown on the map, thus “revealing the power of megaprojects, and their visions, in reshaping the city” (Scott and Sutherland, 2013: 4). Also, it is important to note the budget information in the document which specified the allocation of a sum of over R1, 262 billion for “Flagship projects” over the period 2002/2002 to 2005/2006, which included the following:

- uShaka Island (theme park and aquarium);
- Effingham / Avoca mixed-use industrial park;
- ICC Expansion (Convention centre);
- Point Precinct Development (inner city waterfront tourism and commercial investment);
- La Mercy Airport (later KSIA and the DTP).

4.3 Three Case Studies of Durban’s Megaprojects

i) King Shaka International Airport and Dube Trade Port

In the 1990s the KZN Provincial Government steering committee argued that the old Durban International Airport (DIA) site had its runway length constrained by other land-uses which made it unsuitable to handle newer classes of intercontinental passenger aircraft (Sutherland, *et al.*, 2013: 27). It was also argued that the location of the airport made it difficult to promote and expand tourism because of its location next to industrial areas of South Durban. The site in La Mercy was deemed as a potential airport site since the 1970s and could enhance tourism competitiveness of Durban (Crosby, 2013).

In 2006, after lengthy discussions within the Provincial Government, the city of Durban, national government, Airport Company South Africa (ACSA) and the private sector, the National Minister of Transport announced that the construction of the new Airport in the north of Durban was approved by the cabinet (Robbins, 2015). Also included in the plans was the Dube Trade Port, “a major land development project, with associated infrastructure to stimulate growth in airfreight-related economic activities, thereby increasing employment and economic growth prospects in the region” (Robbins, 2015: 198). The Dube Trade Port is owned by KwaZulu Natal Department of Economic Development and Tourism and consists of:

- The Dube Cargo Terminal

- Dube Trade Zone
- Dube AgriZone
- Dube City

The new airport received important recognition in eThekwin Municipality's documents. For example, the 2007 Integrated Development Plan (IDP) revealed that King Shaka International Airport and Dube Trade Port, together with its proposed Free Trade Zone, "is the most important economic project for the region" (Robbins, 2015: 198).

Besides the ambitions to build the new airport, there were several interest groups who were opposed to the new development:

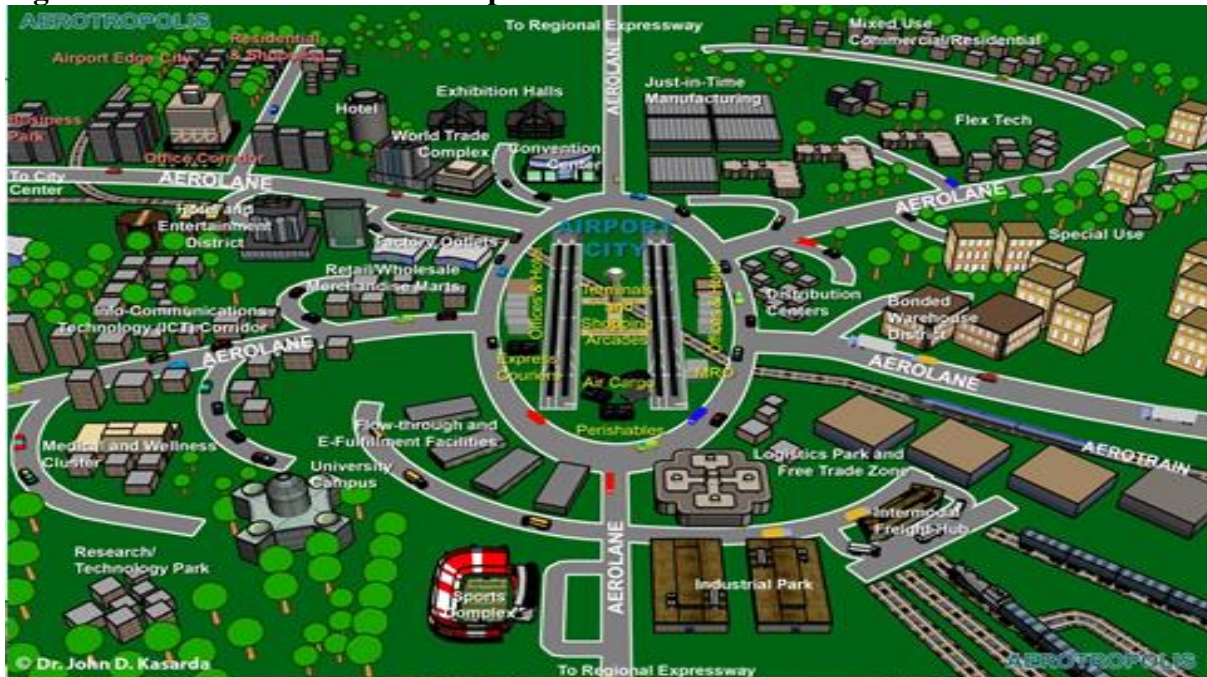
- Aeroporti di Roma (AdR – the Italian Airport Company and part owner in ACSA) who were not prepared to invest in the airport's development
- Environmental groups (including Lake Victoria Wetland Conservancy and the Wildlife and Environment Society of South Africa) who were concerned with the impact on the natural environment and ecology in the region
- People residing in surrounding areas (Umhlanga, Verulam, Tongaat, Mount Moreland) who were concerned about environmental damage, noise pollution and rate hikes;
- Agricultural landowners who were concerned with the loss of 'sense of place' and aesthetic appeal of the area (Crosby, 2013: 56).

While the development in KSIA and DTP is mainly state-driven, the private sector is strongly involved. The major owner of the land around the sites is the Tongaat Hullet Group which has been converting its sugar farmland for commercial and residential development over the past two decades.

The King Shaka International Airport and the Dube Trade Port were marketed and branded as the 'Durban Aerotropolis'. The model of Aerotropolis was conceptualised by Kasarda (2008), and referred to cities that are developing around airports (Figure 15). Previously, airports were developed outside of, and not integrated to, major cities. However, this paradigm is changing, and airports are not just limited to where planes land and take-off, but are beginning to be spaces of "regional, multi-modal surface-transportation nodes and as magnets for business locations, commercial transactions, information exchanges and leisure activities" (Kasarda, 2008: 50). Kasarda continues to argue that:

As their terminals transform into shopping malls and artistic venues, airports are spawning aviation-linked clusters of hotels; convention, trade and exhibition facilities; corporate offices; and retail complexes along with culture, entertainment and recreation centres. Air gateways, in short, have become as much commercial destinations as places of departure: they are urban realms in their own right, driving and shaping the very fabric of the new cities they are creating (Kasarda, 2008: 50).

Figure 15: Schematic of an Aerotropolis



Source: Kasarda (2008: 54)

In the aerotropolis, airports emerge as important spaces of global flows and has major impacts on the growth and development of metropolitan areas. As such, Kasarda argues that they have become one of the major employers, sometimes employing more than 50 000 daily workers. Hence, the view that the aerotropolis should be categorised as metropolitan cities on their own according to the United States census definitions (Kasarda, 2008).

The KwaZulu Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA), through the King Shaka International Airport and Dube Trade Port, wanted to develop the KZN Aerotropolis by applying Kasarda's model (Figure 16). The EDTEA argued that the Aerotropolis will be more than transport complex, but a:

constellation of physical, institutional, economic and policy interventions which upgrade local assets, reduce ground-based transport times and costs, and expand

ii) *Moses Mabhida Stadium*

After the successful bid by South Africa to host the 2010 FIFA World Cup, there was a need to build new, and/or renovate old, stadiums. The City of Durban chose to build the new Moses Mabhida Stadium (Figure 17). The planned capacity of the stadium was 85 000. To the city authorities, however, Moses Mabhida was not just a stadium, but also an urban development project that would attract tourists and investors after the world cup.

Figure 17: The Moses Mabhida Stadium, Durban



Source: SA History Online (<http://www.sahistoryonline.org>).

The Moses Mabhida Stadium was seen as an iconic and flagship project that would enhance the city's competitiveness. As Maennig and Du Plessis (2009), "Durban wants [*wanted*] to become a destination for local, provincial, national and international events (venue of choice in Africa). The city regards the 2010 FIFA World Cup as a stepping stone on its way for future bids for the Commonwealth Games or Olympic Games". Indeed, in 2015, the city of Durban bid to host the 2022 Commonwealth Games, however, in 2017, the Commonwealth Games Federation stripped the city their rights to host the event after the city failed to meet several deadlines. As many urban scholars have argued, mega events have become a popular strategy for cities to market themselves. The city of Durban also wanted the stadium to attract tourists through its iconic and world-class architecture. According to Maennig and Du Plessis (2009: 72), this is not unpopular for cities to boost their image through stadiums:

...international stadium architecture is becoming markedly more significant. Internationally renowned architects are commissioned around the world in the pursuit of stadia that may achieve synecdoche for their respective cities, as has been seen for representative cultural projects.

4.4 Socioeconomic and Spatial Impacts

Promoters of megaprojects often overestimate the benefits and undermine costs for projects to be approved. As discussed in chapter two, this is an international phenomenon. Similarly, provincial and city governments argued that these three megaprojects will create jobs for poor people and contribute to spatial integration. However, one respondent argued that the idea of Aerotropolis in Durban has done little in terms of including poor communities:

...the Dube Trade Port and the city need to collaborate to create things like training colleges, housing opportunities very close to those facilities, you can say Cornubia is part of that, but it is 12 km away from the airport, it was never conceived originally as being part of the airport, in fact, air noise impacts which very unusual thing, in Boston Airport, airport pay for residents to have noise proof. We have highest noise standard that applies to that airport than any other major airports in the world. So you could either say we world-class airport or we made a silly decision because that pushes people away from the project, all the public assets that should be nearby. It is like having an island of poverty... (UKZN/19/06/2016).

The respondent added that the airport, “in the way which the project was motivated, has not really yielded the impacts that were promised which is not unusual for big projects” (UKZN/19/06/2016).

Another issue is that the Dube Trade Port is owned by the KZN provincial government and therefore was dependent on public funding. From 2008/2009 to 2009/2010, the Dube Trade Port received approximately R3.5 billion from the provincial government (Robbins, 2015) and “this has been the largest single capital project on the Provincial government's balance sheet and amounted to around 15% of total capital expenditure by the Province for the specific years” (Robbins, 2015: 200).

While the development in KSIA and DTP is mainly state-driven, however, the private sector is strongly involved. The major owner of the land around the site is Tongaat Hullet Group which has been converting its sugar land for commercial and residential development in the

past two decades. However, such projects appear to do little in the way of contributing to improved urban integration (Robbins, 2015).

It is important to note that R158 million had been spent to upgrade the old DIA in 2005 (Luke, Savage, Jenkins and Fransman, 2017) amidst discussions to build the KSIA. It is evident that the decision to build the new airport was fast-tracked, and greatly influenced by the rush to cater for the 2010 FIFA World Cup. Indeed, recent evidence suggests that the airport was built by ACSA without the feasibility study (SA Commercial Prop News, 2016-10-02; Luke *et al.*, 2017). ACSA CEO, Bongani Maseko defended this, arguing “a feasibility study had not been necessary, as plans to relocate the airport dated back to the 1970s” (SA Commercial Prop News, 2 October 2017).

Recent evidence suggests that the KSIA has not been making a profit since the beginning of its operation. Before tax and interest, the profit for 2015/2016 financial year was R93m. However, to pay its loans taken for construction (approximately R9 billion), “King Shaka’s loss for the 2016 financial year is [sic] approximately R1bn” (SA Commercial Prop News, 2017: 1).

In the case of Moses Mabhida Stadium, evidence suggests that there were cheaper options than building a new stadium such as upgrading the existing Kings Park/Absa rugby stadium. Indeed, the initial official FIFA bid assessment report listed Kings Park as the main stadium that was going to be used for games in Durban:

In the opinion of the Inspection Group, if the 2010 FIFA World Cup were to start on the date of submission of this report, three stadiums in South Africa would easily be suitable for the 2010 FIFA World Cup. They are: Cape Town (Newlands), Johannesburg (Ellis Park) and Durban (King’s Park), which have been venues for world events such as the Rugby World Cup (Sole, 2010: 175).

However, the city of Durban and the KZN Provincial Government wanted the iconic stadium, specifically designed for soccer:

Absa Stadium is a rugby stadium and we need a specialist soccer stadium for 2010 and beyond ... We, as a city, are grateful to Absa Stadium for the way they helped us clinch the right to host the World Cup finals, but they will appreciate that Durban needs a new home for soccer (Mayor Obed Mlaba quoted in Sole, 2010: 176).

Officials also argued that the Kings Park stadium did not comply with FIFA rules; however, there was no evidence to back this assertion. One of the strong criticisms of building the new stadium was that soccer games have lower attendance than rugby, suggesting that the new stadium not be sustainably utilised after the world cup. For example, in the “2004/2005 season, the Golden Arrows soccer team, based in Durban, drew a maximum attendance of just over 18 000. Average attendance was just over 2 600” (Sole, 2010: 191). This was affirmed by another critic:

What the hell are we going to do with a 70,000-seater football stadium in Durban once the World Cup is over? Durban has two football teams which attract crowds of only a few thousand. It would have been more sensible to have built smaller stadiums nearer the football-loving heartlands and used the surplus funds to have constructed training facilities in the townships (Trevor Phillips quoted in Maharaj, Desai and Bond, 2011: 419).

There is a view in the literature which suggests that megaprojects and events must not be viewed merely as projects, but as planning strategies. Referring to the Moses Mabhida Stadium, one respondent interviewed in this research suggested that:

I think all of our cities got carried away by hype the world cup, and off course globally the world cup is often associated with the construction of brand new facilities that people feel they can show to the world and demonstrate that they got brand new world-class facilities (UKZN/19/06/2016).

The above quote reveals that megaprojects/events still dominate today’s planning approaches even in South Africa.

After the world cup, as expected by most critics, the Moses Mabhida Stadium was struggling to keep up with operational costs. Rugby teams have continued to use the old Kings Park stadium instead of the new stadium and local soccer clubs attract a small audience (Alm et al, 2016). Moses Mabhida Stadium had a record R34.6 million loss in 2015 because of government cutting the world cup subsidy (Alm et al, 2016).

Giampiccoli, Lee and Nauright (2015) have compared the economic impacts tourists’ expenditure for sports mega-events such as the FIFA World Cup and small sports events in

KZN province: Midmar Mile, Dusi Canoe Marathon and Comrades Marathon (Table 8). Results indicated that the estimated total tourist expenditure for KZN during the 2010 World Cup was R989, 064,200. For a period of five years, three small events generated approximately the same economic impacts for the province.

Table 8: Revenue of three small sports events in KZN Province

	Midmar Mile	Comrades Marathon	Dusi Canoe Marathon	Total
2008	R32,833,733.00	R76,209,076.00	R9,479,417.60	R118,522,226.60
2009	R42,956,157.00	R118,744,282.90	R2,587,461.00	R164,287,900.90
2010	R24,984,876.00	R145,633,619.00	R2,331,578.00	R172,950,073.00
2011	R29,249,648.00	R198,251,393.00	R4,696,333.00	R232,197,374.00
2012	R35,854,363.00	n/ae	R4,421,050.00	R40,275,413.00
Grand total for five years of small local event				R728,232,987.50

Source: Giampiccoli, Lee & Nauright (2015: 243)

The following section analyses the motivations for the dig-out ports. It reveals that Transnet, eThekweni Municipalities and government had various ambitions for with the dig-out port.

4.5 Motivations for the Dig-Out Port

There were many factors that motivated Transnet to propose the building of the dig-out port. First, Transnet stated that current forecasts indicates that the port will face rising demand which could lead to the port not able to have required capacity. Secondly, it was argued that contemporary large vessels (Panamax and post-Panamax ships) will dominate the shipping industry in the near future which in turn will need the port to invest in technology and infrastructure can handle such ships. Thirdly, the dig-out port was stated as aligned to various national government policies and strategies such as National Development Plan (NDP), the New Growth Path (NGP) and Strategic Integrated Projects (SIP). This section therefore analyses in detail these factors.

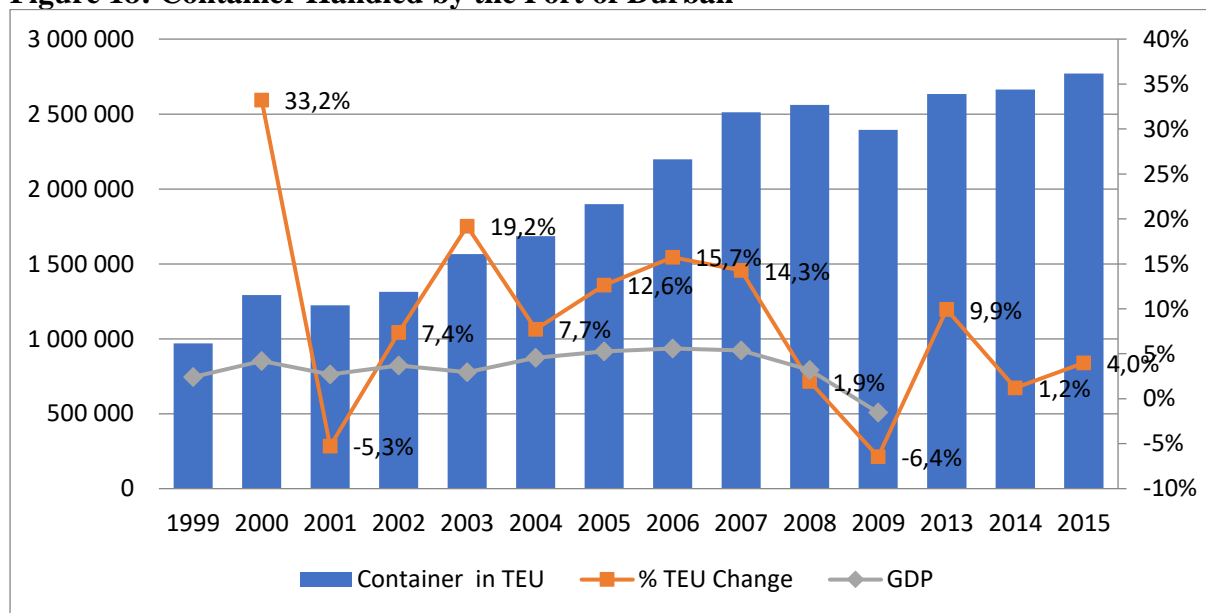
4.5.1 Meeting the Supply Ahead of Demand

Since 2006, plans to build the new dig-out port in Durban started circulating in documents of the eThekweni Municipality and Transnet (Mather and Reddy, 2008). This was after the formation of the working group called Transnet eThekweni Municipality Planning Initiative

(TEMPI), a joint planning process between Transnet and eThekweni Municipality. The 2005 Port of Durban Master Plan had indicated that high growth in container volumes in the port of Durban in the preceding decade will lead to major demand and supply challenges in subsequent years. Later, the Transnet Market Demand Strategy (Transnet, 2012) indicated that in 2011 the port handled 2.7 million TEUs, an increase of a 7.3% from the 2.5 million TEUs in 2010 (Maharaj, 2013). Nationally, Transnet has argued that container volumes from all South African ports will increase from 4 million TEUs in 2010 to about 20 million TEUs in 2040 (Transnet 2012, Transnet, 2013; Maharaj, 2013). Durban is still expected to handle most of the increase in container volumes in the country.

In 2009, the port of Durban handled 2 395 000 TEUs, a growth 1 426 000 TEUs (60%) from 1999 (Figure 18). The growth in TEUs is related to the GDP growth of the country. Container handling growth can be divided into low-growth and high growth scenarios. The increase in container handled by the port was associated with high GDP growth, especially between 2006 and 2008. From 2008 onwards, however, the GDP growth rate started to decline due to the global recession (Figure 18).

Figure 18: Container Handled by the Port of Durban



Source: Constructed from TNPA, 2014 and Global Insights, 2016 Datasets

Figure 19 shows the demand forecast for the port of Durban as calculated by Transnet. By 2043, Transnet expects the port to handle more than 8 million TEU of containers (TNPA, 2014). Marc Descoins, the Transnet's programme director for the dig-out port project, added that the port of Durban is expected to experience increased container volumes ranging from 9

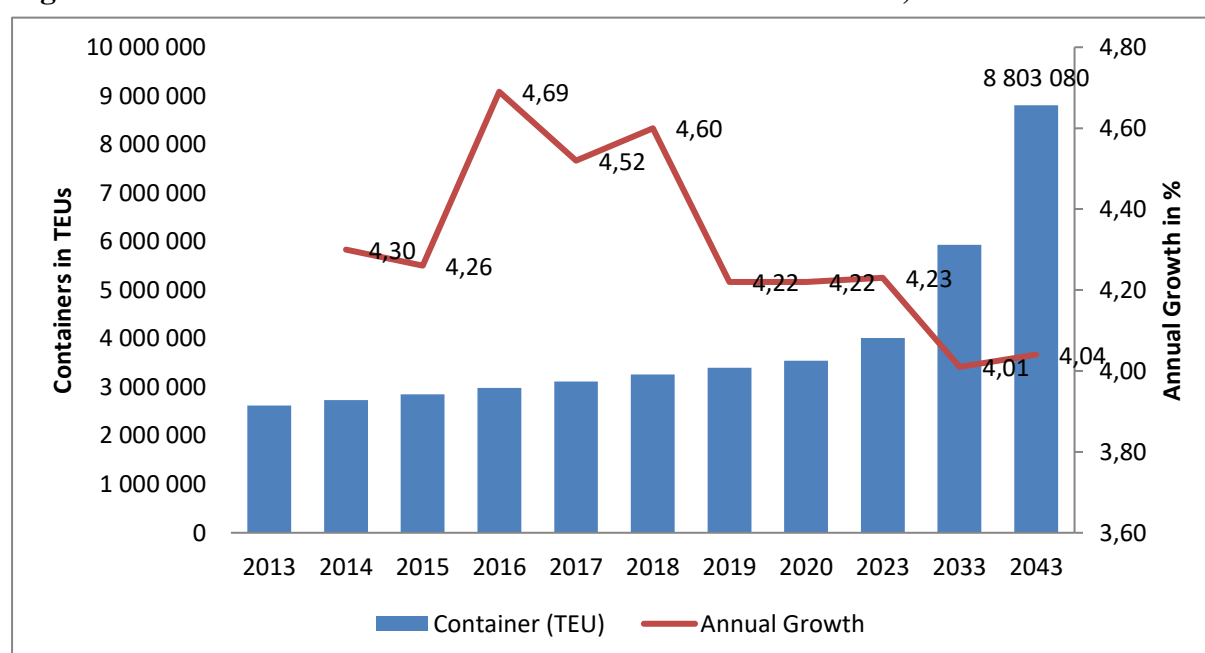
million to 12 million TEUs by 2040 (Breytenbach 2014). For Transnet, if the dig-out port is not constructed, the port will not be able to meet the demand by 2020 (Maharaj, 2013; Steyn, 2013).

According to Maharaj (2013:7), even if berths at the current port are deepened and widened and container terminals are re-engineered, it was still important to start the process of preparing for the dig-out port because in order to address the supply ahead of the demand:

... it is anticipated that the existing port will run out of capacity by 2019. The failure to address the demand proactively may create a choking point in the economy which will ultimately drive up the cost of goods ... in reality, the demand for container handling tends to grow faster than anticipated and supply processes tend to take longer than anticipated, resulting in congestion and an increased waiting time for vessels, which consequently drives up costs (Maharaj, 2013: 7).

It was the above dynamics that led to the proposal of various forms of port expansions in Durban, including the proposal of the new dig-out port in Durban. Even though there were some expansions going on in the port of Durban, it was argued that Durban will still run out of capacity by 2020 if these expansions and new dig-out port did not go ahead.

Figure 19: Container Forecasts for the Port of Durban 2013-2043, in TEUs



Source: Adapted from TNPA Dataset (2014: 1).

groundWork, a civil society group that has a long history of championing environmental rights and social justice in South Durban, contended that Transnet's projections were exaggerated:

Transnet's projections, however, are scarcely credible. They are essentially based on extrapolating from the demand growth in the 15 years to 2008. This period saw an unprecedented expansion in global trade driven by the global restructuring of production and the Ponzi boom produced by finance capital. And for South Africa, the period opens with the end of apartheid and international isolation. It is not surprising then that trade expanded faster than GDP in this period (groundWork, 2014: 44).

With problems and inaccuracies in traffic forecasting highlighted in the literature (see Flyvbjerg, 2013 in chapter 2), it can be argued that groundWork is justified for their concerns on Transnet's projections. For example, Graham Muller and Associates projected that container volume for the port of Durban will be 3.36 million in 2010 (Maharaj, 2013); however, the actual volume was 2.5 million TEUs.

A related motivation for the project was the need to accommodate larger vessels. It is argued that these ships reduce the turnaround time and reduce costs. The dig-out port would accommodate such large ships. This is discussed below.

4.5.2 “A deeper channel floats all boats”¹: the demand for the Panamax shipping facilities

The second motivation for developing the dug-out port was the need for deep-sea shipping facilities, which could handle large ships known Panamax and post-Panamax ships. The latest generation of ships can handle containers ranging from 12 000 to 18 000 TEUs. Transnet argued that current port of Durban has the limited capacity in handling bigger container ships, and the dig-out port will be designed specifically to handle bigger ships:

The latest of these purpose-built container ships will carry 18,000 twenty-foot equivalent units (TEUs) or containers and have a draft ranging from about 14, 5 metres to 15,5 metres. These ships will require a deepwater port and the other facilities which

¹ Jaffee, D., 2015. ‘A deeper channel floats all boats’: the port economy as urban growth engine. *Environment and Planning A* 2015, 47, 783 – 800.

the proposed new port will offer, transcending the present port's draft limitations (Transnet website, 2014).

According to Marc Descoins, the dig-out port Programme Director, developing a new dig-out port that could handle larger container ships was critical if the port of Durban was to keep its status as the gateway to Africa: *If we don't proactively develop deep-water shipping facilities in response to key drivers, then South Africa will lose its relevance as a gateway into Southern Africa" (Steyn, 2013: 1).*

Furthermore, Descoins argued that *"South Africa won't be able to compete with ports in the region who are heavily investing in infrastructure"* (Joubert, 2014: 1). By building the dig-out port, Durban will hold its status of being the *"Africa's largest deep-water container terminal"* (Creamer, 2013: 1). TPNA CEO Khomotso Phihlela stated that the dig-out port was urgent, as the current port cannot handle larger vessels, and this causes larger ships not using the Durban:

"The ships are getting bigger and are not calling in enough because we don't have the facility to accommodate them. We are really desperate and the dig-out port is only coming in 2019-20. It's a setback." (Ensor, 2014: 1).

According to Transnet, the design of the port that could handle large and deep vessels would save costs; a ship that can handle 10 000 TEUs, for example, can reduce the costs by 50.2% (see Figure 20) (Naidoo, 2015:19). According to Naidoo (2015), the benefits of building the dig-out port which will cater for larger ships will be an increase of productivity, reducing turnaround time and traffic congestion and saving energy (Naidoo, 2015).

According to the port expert, Terry Hutson, however, Durban does not need these ultra-large vessels simply because the demand is not there:

In South Africa, for several reasons, the bigger container ships that have been moved onto these trades simply because there's no place else for them, arrive and sail half empty. While there's talk of the ports not being able to handle fully loaded ships of this size, the reality is that the business simply isn't there to fill 8 000 or 10 000 TEU capacity ships (quoted in groundwork, 2014: 47).

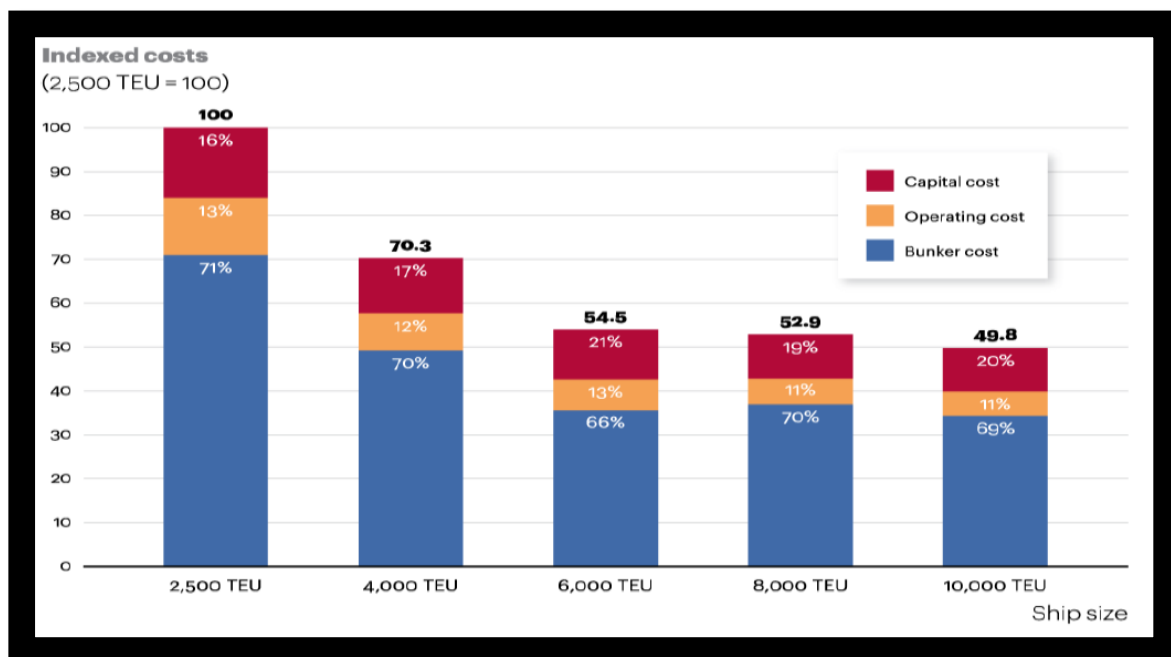
South African national policies since 1996 have always favoured pro-growth development strategies. The dig-out port was also presented as a strategy to promote national economic growth. This is discussed below.

4.5.3 National Government Policies

Besides the dynamics of supply and demand as well as the then need to build facilities for large ships, there were other dynamics which justified or supported the construction of the proposed dig-out port. New Growth Path (NGP) and Strategic Integrated Projects (SIPs) are both government strategies which Transnet argued that the proposal dig-out port is aligned to:

For the government, Transnet and the eThekweni Municipality, the proposed expansion of the Durban harbour is a no-brainer: it's an integral part of the national development strategy; it will promote trade, create jobs and bolster economic growth (Späth, 2013: 1).

Figure 20: Shipping Costs by Ship Size



Source: Naidoo (2015: 19).

Transnet claims that the construction of the port will be the realisation of the NGP's goals (Transnet/18/06/2016). Adopted in 2011, NGP set a target of new five million jobs to be created by 2020 through investment in infrastructure and other sectors. Transnet sees the dig-out port as "vital for the economic growth, the transformation of the South African economy and job creation in line with the government's New Growth Path (NGP)" (Transnet, 2013: 3). For

Transnet, the dig-out port was seen as one of the most critical infrastructural projects in the country's economy, and thus, should the port not go ahead, *"then the government's goals, as set out in the NGP, will be substantially put at risk"* (Transnet Website, 2014: 1). The National Development Plan (NDP) was adopted after the NGP.

The NDP was adopted by the government in 2013 as a socio-economic development strategy for the country. The NDP aims to eliminate poverty and reduce inequality by 2030", and the focus is on economic growth, unemployment, social protection, inclusive economy, education, health, urban and rural development, sustainability and low-carbon economy, etc. (National Planning Commission, 2013: 14). Included in the National Development is the National Infrastructure Plan (NIF) which aims to eliminate unemployment and accelerate service delivery through building new and upgrading existing infrastructure. Within the NIF are 18 different projects known as Strategic Integrated Projects (SIPs) which included the of the dig-out port.

Eighteen Strategic Integrated Projects (SIPs) have been approved by Cabinet and the Presidential Infrastructure Coordinating Commission (PICC) to support economic development and to address service delivery. The identified projects will provide new infrastructure, rehabilitate and upgrade existing infrastructure and also play a crucial role in facilitating the regional integration for African cooperation and economic development on the African continent (PICC, 2013).

The SIPs are further categorised into several thematic projects: Five Geographic Strategic Integrated Projects, Three Spatial Strategic Integrated Projects, Three Energy Strategic Integrated Projects, Two Social Infrastructure Strategic Integrated Projects, One Knowledge Strategic Integrated Project and One Regional Strategic Integrated Project (see Appendix 2 for more detailed list of all 18 SIPs). Of a particular interest in this study is SIP 2 which is named Durban-Free State-Gauteng logistics and industrial corridor. Some of the proposed projects under Durban-Gauteng corridor include:

- Development of cargo nodes in Harrismith, Cato Ridge, Tambo Springs, and Dube Trade Port;
- Upgrade of City Deep, Pyramid,
- West Rand and Sentrarrand cargo nodes;
- Expansion of rail capacity and rolling stock to meet forecast demand;

- Development of the Ekurhuleni Aerotropolis (surrounding OR Tambo International Airport) as a service, manufacturing and cargo node;
- Upgrade of roads, principally the N3 route as well as feeder roads and the N2;
- Expansion of the current Durban Port;
- Development of the proposed Durban Dig-Out Port (DDOP), and
- Development of Cornubia Integrated Human Settlements (Transnet, 2013: 3).

The proposals for the new port were initiated in 2006, and the SIP 2 (Gauteng-Durban Corridor) subsequently supported the proposal to build the dig-out port. Although Transnet would be responsible for the full construction and operation of the port, the dig-out port would be “overseen by the SIP 2 steering committee and, ultimately, the coordinating commission” (Steyn 2013: 1).

The Durban-Gauteng corridor will experience high growth of road and rail freight, and as a result, the dig-out, port with its associated road and rail expansion, would be necessary to handle this freight (Figure 20):

The Durban–Gauteng corridor, by far the most important economic corridor in the country, is expecting massive increases in freight volumes. In 20 years, we will have double the amount of freight. We have to make sure that infrastructure can keep up. We don’t want to get into a situation – particularly on the port side – where we find that demand is outstripping capacity. Then we start to get congestion and unreliability, which has a whole lot of negative implications (le Guern, 2013: 1).

The Durban-Gauteng Corridor, thus, is seen the most critical in the country because road and rail freight will increase by 152 percent:

...from 762-million tons a year in 2011 to 1.93-billion tons a year in 2041 at a 3.1% compound annual growth rate. At the ports, he said they had been dealing with 2 600 vessel-equivalent units a year (or 3 864 actual vessels) in 2011. This was expected to grow to 7 000 vessel-equivalent units (le Guern, 2013: 1).

Irvindra Naidoo, Transnet’s General Manager, added that there will be a further increase in the road freights (figure 21):

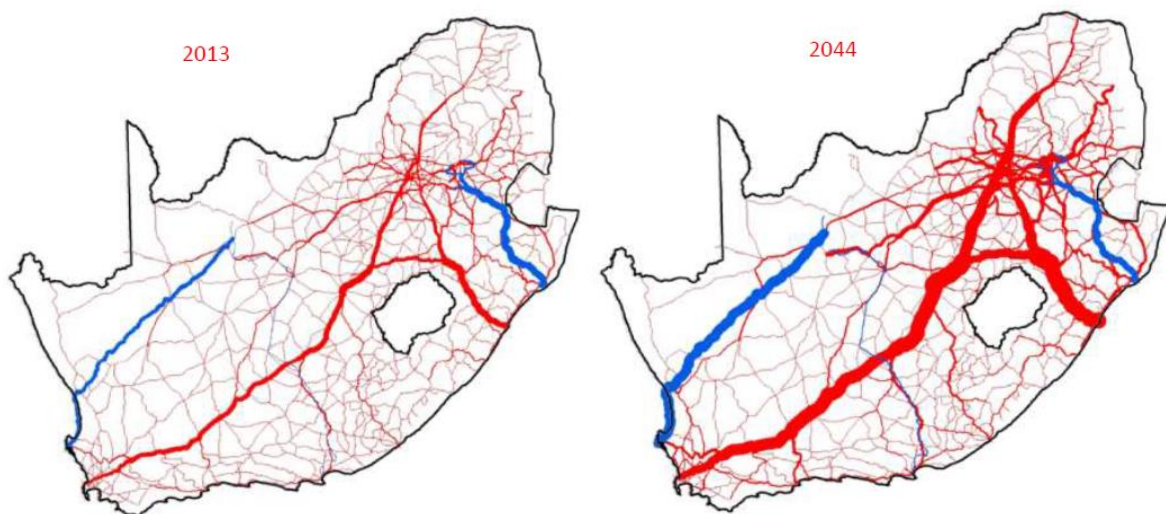
In the hinterland, we are dealing with 2 800 trucks. We are expecting this to grow to 8 300. If we look at the Gauteng corridor, in particular, we currently have around 4 200 trucks going up the corridor to Gauteng (le Guern, 2013: 1).

4.6 The Alternative of Using Other Ports

A relevant issue was why the DIA site was deemed an appropriate location for the new port over the existing ports of Richards Bay and Ngqura. Transnet argued that the main reason for not using these ports is high logistics costs (Transnet/18/06/2016; Transnet, 2013; Maharaj, 2013). The eThekweni Municipality similarly argued that DIA site was “the most cost-effective and economically competitive ... for the economy, and it would add R9 billion to costs to switch from Durban to Richards Bay (Maharaj, 2013:10). In addition:

“the cost of shifting from Durban to any of the other ports along the coastline would have substantial implications in terms of job losses as businesses in KZN and Gauteng would become less competitive” (Maharaj, 2013: 10).

Figure 21: Freight Demand Forecast from 2013-2044²



Source: Naidoo (2015: 5)

At a Business meeting held at Moses Mabhida Stadium, when questioned about possible alternate locations, Irvintra Naidoo, Transnet’s general manager, maintained that the expansion of the port would benefit the existing eThekweni Maritime cluster:

“Okay, do we now go off somewhere else and develop a new maritime cluster around Richards Bay or somewhere else, or do we try to embed or strengthen the cluster... (by

² Total freight on the South African surface is expected to increase from 761mt to 1 970mt. Flows through the port system will increase from 239mt to 565mt and cross-border traffic from 31mt to 70mt (Naidoo, 2015).

extending) the Durban port?’ That’s what this dig-out port really is about. It’s an extension of an existing cluster” (Manda, 2015: 1).

It is evident from Table 9 that the cost analysis of using the port of Richards Bay compared to Durban will add a cost of R89 billion due to higher operational and logistics costs (Ross, 2010). Furthermore, it is argued that there will also be an increase in the cost of transporting goods between Richards Bay and Johannesburg.

Table 9: Costing Analysis between Durban and Richards Bay (in ‘000 000 Rands)

	<i>Durban</i>	<i>Richards Bay</i>	<i>Difference</i>	<i>% Increase of Durban Cost</i>
Capital Costs	R 24 845	R 30 368	R 5 523	22.20%
Supply Chain Costs	R 857 404	R 935 140	R 77 736	9.10%
Economic Opportunity Costs	-R67 241	-R61 270	R5 970	-8.9%
Environmental Costs	R 517 717	R 517 717	R 0	0%
Net Cost	R 820 725	909 955	89 229	10.90%

Source: Adapted from Ross (2010: 80).

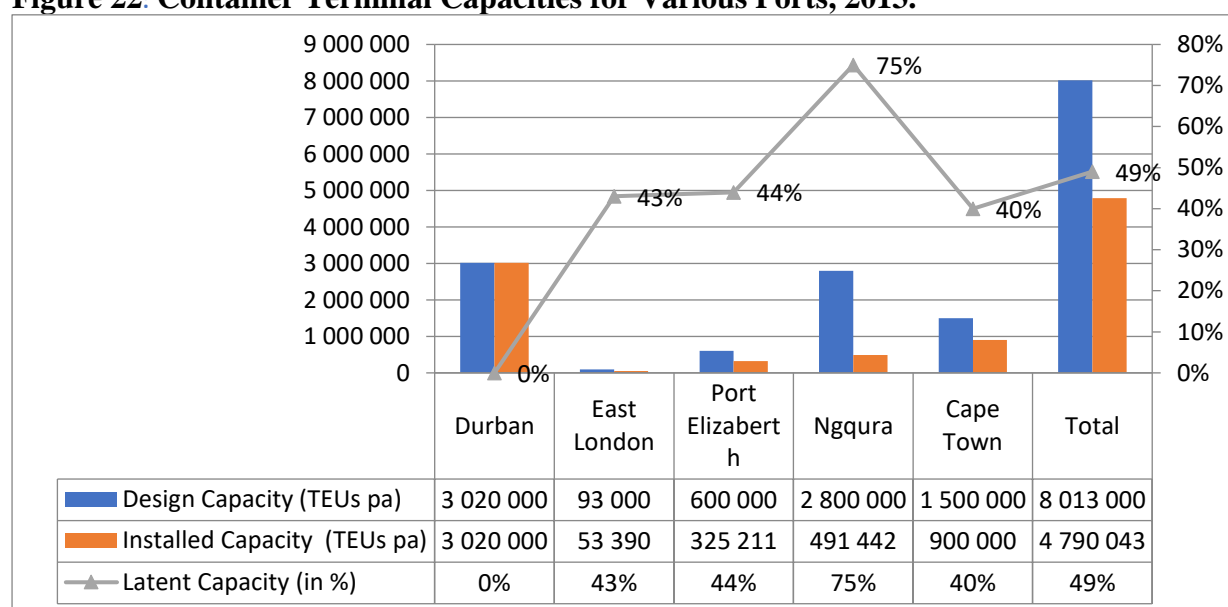
Another argument is that, the ports of Richards Bay and Ngqura focus on exporting and importing coal, manganese, hinterland containers and automotive products. Consequently, the DIA site is more appropriate for expanding the port because Durban is already an established premier container handling port in Southern Africa, with the associated competitive advantages (Maharaj, 2013). Furthermore, it was stated that the port of Durban is well integrated in the national economy, especially in serving the Gauteng City Regions, the economic hub of the country (Transnet/18/06/2016; Maharaj, Naidoo, 2015; 2013).

Figure 22 below shows 2013 capacity analysis of different ports in South Africa. The port of Ngqura was not being used to its maximum holding ability with 75% latent capacity:

Ngqura Container Terminal, which, as discussed, has been earmarked as a transshipment hub and will be expanded from 800000 TEUs to 2 million TEUs by 2018/19 in order to meet anticipated volumes. Ports such as Ngqura have container capacity available to meet demand that cannot be met by Durban (Maharaj, 2013: 10).

The port of Ngqura, however, was also rejected as the alternative port as, like Richards Bay, it was associated with higher costs when transporting goods to Johannesburg. Furthermore, it was argued that “carrying lines (shipping companies) accord preference to Durban and are willing to forego time frame inconveniences and inefficiencies in order to dock at Durban” (Maharaj, 2013: 10). Hence, economic efficiency and minimising additional transport the costs for business seemed to the dominating factors in making the decision to build the dig-out port at the old DIA. Other costs such as possible displacement of residents, and negative environmental impacts on the quality of life were given less importance over economic ones.

Figure 22: Container Terminal Capacities for Various Ports, 2013.



Source: Port Regulator of South Africa (2016: 7).

4.7 Socio-Economic Development Imperatives of the Dig-Out Port

Officials from Transnet, government and municipality argued that the dig-out port, like other megaprojects in South Africa and internationally, will result in many socio-economic benefits for the country, KZN province, the city of Durban and even for the households located in the city. This section present findings on these socio-economic impacts which include employment impacts, economic growth and enhancing competitiveness of Durban.

4.7.1 Job Creation

One of the justifications for dig-out port, similar to many mega-projects, was that it would create jobs. In a country with massive unemployment, the promise of job creation makes it easier for megaprojects to be approved by policymakers. As Flyvbjerg (2013: 1) has argued,

“it is not the best megaprojects that get chosen, but those that look best on paper”. The proponents of dig-out port argued that jobs will result during the construction and operational stages of the project. This job creation discourse is central to Transnet and eThekweni Municipality’s agenda, and has been used to justify the costs and other negative socio-ecological impacts associated with proposed developments.

According to Transnet explanations, it is expected that there will be “64 000 jobs during the construction phases and 28 000 full-time jobs when fully operational” (Mather, 2013: 39). One respondent from Transnet stated that as a state-owned entity it had government mandate to contribute to the realisation of New Growth Path’s objectives (Transnet/18/06/2016), one of which was the creation of five million jobs (Transnet, 2013).

Ajiv Maharaj (2013), eThekweni Municipality’s Head for Economic Development and Investment Unit, argued that the port will absorb unskilled and semi-skilled labour force because it will boost the manufacturing sector:

The port expansions offer a unique opportunity to the lagging manufacturing sector which continues to be one of the largest private sector providers of jobs. The existing skills profile of the labour market is such that many people will not be able to enter the skilled labour market. Manufacturing growth offers the opportunity to absorb semi-skilled labour and train the unskilled in order to be able to enter the labour market. The City must use this platform as the basis for a renewal of labour absorption into the formal manufacturing economy (Maharaj, 2013: 28).

Another imperative was to give more opportunity to the ‘previously disadvantaged population’ in the form of tenders, as the dig out port will result in the development of small black businesses in the form of BEE (Transnet/18/06/2016). However, one of the respondents indicated while there will only be job creation during the construction phase of the project, similar to the recently completed Dube Trade Port:

Obviously, the benefits will be; there will be construction employment, and there will be new employment in the port facilities, but if you look at the Dube Trade port, it has not really added new employment in the city (UKZN/19/06/2016).

And even if the dig-out port does create employment, another respondent was worried that jobs will be created at the expense of other negative impacts (UKZN/19/06/2016). As discussed

above, Transnet has not invested in infrastructure in port surrounding areas; this ultimately cost the municipality to maintain infrastructure, which put burden on the taxpayers.

The environmental NGO groundWork similarly argues that it is unlikely that the dig-out port construction will favour labour-intensive methods over capital-intensive options:

Construction at the airport dig-out would be capital-intensive, with large machines and skilled operators brought in from elsewhere and little opportunity for local workers. Given the scale and cost of the SIP 2 projects, it is most likely that speed of construction will be favoured over labour-intensive methods (groundWork, 2014: 55).

According to the political economist Bond (2014: 1), it is evident from international experience that there is low labour absorption in ports and the shipping industry:

In contrast to promises, the taxpayers' money spent by Gigaba [Minister of Finance] and his successor will result in a much more capital-intensive port complex in part because of Transnet's privatisation fetish and in part because of the shipping industry's tendency towards mechanisation. Walmart's new 15 000-container robot ship now crosses from China to the US with only 13 crew.

Bracking (2013: 7) contends that the employment projections of the dig out port do not consider thorough cost-benefit analysis:

...neither consultants give an assessment of job creation which accounts for the current jobs, business and livelihoods lost", and therefore "the top down planning documents of the 'perfect port' are ... not put in the context.

This was echoed by the by the voice of various civil society groups which, on 29th March 2014, presented a memorandum of concerns to Transnet and eThekweni Municipality. In the memorandum, protestors stated that the project will displace small businesses:

Small labour-intensive businesses are already and will continue to be forced out of areas close to the port expansion, including Clairwood and Jacobs, which will increase unemployment and outweigh any job creation by this project. The estimates of permanent jobs that will be created are entirely unrealistic, because of the rapid mechanisation of the shipping industry (Bond, 2014: 22).

Another factor which must discussed about the need and viability of the dig-out port is that the demand for the shipping industry has significantly decreased since 2008. Recently, Maersk, world's biggest container-ship operator, announced that it would cut 4000 jobs and cancel the

purchase of six Triple-E vessels as a result of the economic slowdown (Paris and Hovland, 2015).

This raises serious questions regarding impact assessment studies and cost-benefit analysis which suggested the growing demand in the shipping industry justified the development of the dig-out port. Furthermore, can the serious consequences such as displacement of existing business and livelihoods, the land-use changes and ecological impacts be justified?

Thus far it appears that there is a strong relationship between place of work and place of residence in the South Durban Basin and adjacent suburbs. People both live and work in this area. Displacement of businesses will, therefore, have high social impacts (Sutherland and Scott, 2009: 96).

The cost-benefit analysis and impact studies do not consider what would have happened if there was no dug-out port. In other words, what would be the cost of displacing other activities compared to the benefits to be provided by the port? This also highlights that cost-benefit analysis over-prioritised economic gain at the expense of negative environmental and social impacts.

4.7.2 Dig-Out Port as the Driver of Economic Growth

One of the central arguments provided by proponents is that megaprojects will attract investments, thus ensuring economic growth in the city. This view contends that the multiplier effects of these megaprojects will ‘trickle down’ to the local population. This was also a dominant imperative with regard to the dig-out port. The economic growth imperative was the key theme in most data sources including interviews, media articles and policy documents used in this study (Mather, 2013; Maharaj, 2013; Steyn, 2013; Transnet, 2013; Huisman, 2014; Naidoo, 2015).

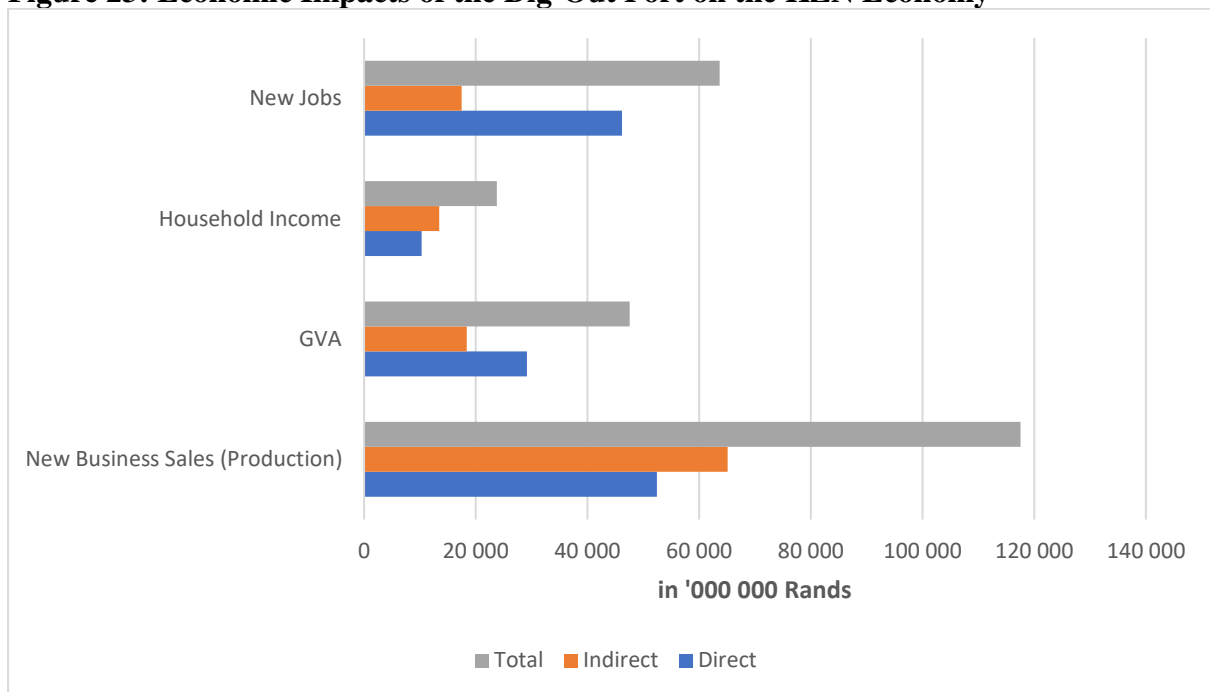
According to Transnet the dig-out port will make positive contributions to the economy, both in construction and operational phases:

South Africa's GDP will be positively impacted by approximately R47 billion through the capital expenditure to construct the port, and it is anticipated that, when fully operational, the DDOP will positively impact the Nation's GDP by around R56 billion per annum (Transnet website, 2014: 1).

Mather (2015: 39) summarises the economic benefits that will result from the dig-out port as follows (figure 23):

- Expected Capex Impact on GDP of R 48 billion
- Expected Operational Impact on GDP of R 56 billion (per annum at full operation).
- Income/wages generation during construction – KZN impact estimated at R 24 billion
- Expected to create approximately 64 000 construction jobs
- Expected to create approximately 28 000 operational jobs
- Reduced total logistics cost

Figure 23: Economic Impacts of the Dig-Out Port on the KZN Economy



Data Source: Adapted from Transnet (2011: 1).

The discourse of multiplier effect is also popular amongst the promoters of megaprojects to justify the high costs. The dig-out port, argued proponents, will increase the multiplier effect in the local, provincial and national economy. Maharaj (2013) argues that the dig-out port will have positive impacts, especially for Durban and the automotive sector in particular:

The automotive sector is one of the key sectors that will benefit from the development of a specialised container port at the DIA site and a concerted effort must be made to assist that industry in its growth efforts. The real benefits for Durban of a new port will be the locational advantage for business, and not simply in providing an efficient conduit for goods to Gauteng (Maharaj, 2013:27).

Globally, ports provide major benefits to the economy and the current port of Durban contributes enormously to the local economy as indicated in Table 10. Many firms in transport, logistics, warehousing and shipping are supported by the presence of the port.

Table 10: Firms in the eThekweni maritime cluster by sector and sub-sector, 2007

Business Category	Total	Share Percentage
1. Cargo/Logistics		
Transport	454	23%
Cargo Handling Equipment	106	5%
Cargo Logistics	86	4%
Cargo Services	248	13%
Cargo Trade	276	14%
Warehousing & Distribution	228	12%
Sub-Total	1398	71%
2. Mixed Cargo/Shipping		
Harbours, Ports & Railways	8	0%
Marine Services & Supplies	85	4%
Sub-Total	93	5%
3. Shipping		
Shipping Companies & Operators	116	6%
Boating & Fishing	110	6%
Ship Engineering & Repairs	120	6%
Shipping Services	126	6%
Sub-Total	472	24%
GRAND TOTAL	1963	100%

Source: OECD/ITF (2014: 60).

However, one respondent argued that while there are benefits, the costs and negative impacts of the ports are shifted to taxpayers as the damage of the infrastructure such as road is a sole responsibility of the municipality:

Although Durban benefits as a city from having the port here, which creates employment and other positive economic impacts, it also imposes substantial costs on the city. The city has to invest very heavily in infrastructure to support the port, and there are no direct mechanisms by which Transnet and the city can share some of the costs. So the benefits accrue from the ports is very dispersed to business who do business and pay tax back to the city, the costs that accrue, accrue very directly on the city, and the city has to in turn impose that on a wider society, and Transnet around

about 70 percent of their profits for much of the last decades has been generated in this port, only a fraction of that get re-invested in the port itself, almost nothing in the ports surrounds and even functions like environmental management of the port is at the moment poorly done by Transnet (UKZN/19/06/2016).

This was supported by the municipal official who stated that “there is no sharing of the costs, Transnet only pays for what is in the port, and the city takes care of the infrastructure” (ETM1/25/06/2016). When compared to other ports around the world, the port of Durban spent very little on the areas surrounding the ports:

In Amsterdam, for example, they work on a model that for every 10 euro they spend on the port itself, they tend to spend 2-3 euros in areas of port influence, to either manage the negative consequences of what they have done or to improve the assets available to communities around the port. We do not have that model...areas around the port look abandoned to be honest (UKZN/19/06/2016).

The reason for this, according to the respondent, is that during past years there was little communication and working relationship between Transnet and the city of Durban:

There was a very little interaction between them and the city, so it has improved but as I said, the engagement that happens is very much on Transnet terms, and the issues that could be on the agenda for discussion are not there because Transnet deem them to be irrelevant to them or non-negotiable (UKZN/19/06/2016).

This raises questions about the benefits such as GDP growth, multiplier effect and job creation. While the benefits of the current port cannot be denied, the projected economic benefits of the dig-out port do not fully take into account the cost of destruction of infrastructure and impacts on communities. Furthermore, the areas around ports continue to face the problems of drug abuse, poverty, and unemployment:

Unemployment is very higher in the municipal area. When we compare to other cities, unemployment is very higher, poverty levels are higher than other metros. There are other various challenges such as issues of skills development is not high as it should be (ETM1/25/06/2016).

With the dig-out ports and its predicted impacts, one respondent stated that while advantages are classified under umbrella terms of economic benefits and job creation; there is no sense on how poor communities will benefit:

The only way one should try and do these projects is to think of port development as part of the urban development plan and that is invisible to people. There is no sense of how uMlazi, Lamontville, UMbumbulu, UmMbuguthwini, Merebank, Bluff is going to become a new fantastic suburb with all these amenities and universities and schools, that will be good place for people to live and work (UKZN/19/06/2016).

According to Bond (2014:1) the gains from the GDP growth will be exclusionary and inequitable, and will be directed to the few individuals, business and state elites:

The resulting ownership patterns are not going to deracialise and broaden our society's wealth; instead, because the proposed "Dig Out Port" at the old airport aims to be 100% privatised, government once again is favouring large multinational corporations with global networks, perhaps augmented with local construction tenderpreneurs like Jay Singh or the Mpisanes, or the collusion-tainted Stefannuti Stocks which last week won a huge port contract.

Furthermore, Bond (2014:1) continues that:

Economic localisation will suffer, not prosper, because of an import tsunami from the Durban harbour expansion – from 2.5 million containers the last few years, to the National Development Plan's desired 20 million per annum by 2040 – will hasten SA's deindustrialisation (Bond, 2014: 1).

In chapter two, it was stated that the port of Durban is one of the highest expensive ports in the world. This has reduced the competitiveness of the port. Bond (2016) questions the rationale behind expanding the port, arguing that expanding the port will not solve the issues of inefficiency and high tariffs:

As it stands, Durban's costs of processing freight are the highest in the world, at \$1080 per container, or \$280,000 per typical ship. What port advocates have not been able to do is explain how an additional \$25 billion in investments (no doubt much more what with recent trends tripling original estimates) will cut operating and maintenance costs

to competitive levels. Repaying the principle, interest on the capital, and all the additional costs will force much higher container handling charges, leaving the real prospect of another white elephant (Bond, 2016: 14).

This suggests that the port will not have meaningful impact on the economy if it continues to charge high prices. This view was echoed by Jamie Simpson, an international port economist, who argued that for the port to contribute to economic growth it must first focus on inefficiencies in the current port, and any ideas about expansion must come second (Simpson, 2015).

The dig-out port was branded as a strategy to market Durban as a competitive, world class port city.

4.7.3 World Class-Mega-Port' for the 'World City': Marketing and Branding Durban in the Global Economy

Durban as a brand is not strong enough to simply say 'come and invest in Durban'. What it needs to attract investors are big projects. Durban needs to keep ahead of the competition. China is building ports they don't even know when they will use. If return on investment is the line of thinking we may never see the infrastructure' (Toyota SA CEO, Johan van Zyl, The Mercury, 8 February 2014).

The above statement is embedded within the dominant urban neoliberal hegemony which advocates for competitive cities in the global economy. Megaprojects such as the proposed dig-out port are considered to be important for city marketing, branding and competitiveness. Indeed, the circulating discourse in Transnet's documents was that the dig-out port in Durban was necessary for SA to retain its status as 'a world-class port' and the primary shipping gateway into Southern Africa (DDOP Discussion Document, 2013; Mather, 2015). Transnet also maintained that

The old Durban International Airport (DIA) site provides South Africa with the opportunity to develop a world-class container port, enhance the SIP2 supply chain, and maintain South Africa's position as the regional logistics superpower (Transnet website, 2014: 1).

Zeph Ndlovu, the president Durban Chamber of Commerce and Industry, argued that it was important to keep up with other African countries such as Nigeria, Mozambique and Namibia as they were also expanding their port capacities, and to use international competitors as a benchmark:

“Nigeria has five active ports and they have two other ports under construction, likely to increase their capacity from one million Twenty-foot Equivalent Units (TEUs) to 3.5 million TEUs. Namibia is also expanding, and in all these examples, China is actively funding and building infrastructure... We postpone the plans at our peril” (Comins, 2015: 1).

It was evident that Durban was threatened by the expansions taking place in other African ports and felt the need to keep up. However, several commentators argued that the dig-out port was not needed nor economically feasible:

Other ports in the region have expanded, not just Ngqura, but Maputo, Dar es Salam, Mombasa, Mauritius and those ports are all reaching the economy of scale which means that a lot of traffic which always come to Durban ... get re-routed to say Dar es Salam. So the model that was used to say the dig out port is necessary is obsolete by the fact that those other ports have invested in expanding their capacity. At the moment I don't think it is feasible and it won't make sense for the city (UKZN/19/06/2016).

This argument was supported by a social activist, who argued that Transnet and eThekweni Municipality were prioritising competitiveness of the city rather than the needs of the poor population:

We have Richards Bay, Ngqura. They want to make Durban port the gateway to Africa, but we are competing with the port of Mozambique, they are already going through with huge upgrades, then what are we trying to achieve by economic development if it is not taking into the consideration the needs of the people (SDCEA/16/09/2016).

The competition, marketing and branding imperative was also emphasised by Pravin Gordhan, the Minister of Finance, who stated at a public meeting that South Africa and Durban are in race with Mozambique, and the local community had to allow for various port expansions, including the dig-out port and the logistics park at Clairwood (Bracking, 2013). For Bracking (2013: 1), the Minister's view represents a neoliberal and conservative approach of *“There Is No Alternative (TINA) School of economics that is forever in favour of free markets – for Big Oil, for mining companies and for an unsustainable future of ever-increasing amounts of consumption and global warming”*.

But a senior city official challenged the notion that Durban was competing with other ports in Southern Africa:

Statements around Maputo being a competitor to Durban are largely unfounded. Maputo cannot handle large vessels, nor does it have substantial container facilities. Maputo also supports a much smaller economy and its levels of internal and external connectivity are significantly lower than Durban. Hence, it is not a competitor for Durban...The immediate regional economy that it services is also significantly smaller. In terms of infrastructure, these African countries are not yet able to develop their own modern, well-connected port facilities. Thus, the port of Durban presents the opportunity of achieving substantial economies of scale in order to serve Africa's growth agenda (Maharaj, 2013: 10).

Besides its intended benefits, however, there were many negative socio-economic and environmental impacts that concerned residents, social and environmental justice groups other stakeholders. The social and environmental concerns relating to the dig-out port is discussed in the next section.

4.8 Social and Ecological Impacts Concerns

Opposition and criticisms have come from a wide range of role players. These stakeholders have raised concerns about serious negative impacts the dig-out port will have on the society, economy and the environment. This section present findings on these concerns; they are related to the lack of public participation and active citizenry, fear of displacements from their residential areas and businesses because of the port, increase traffic and road congestions and ecological impacts.

4.8.1 Lack of Public Participation

Since the announcement of the dig-out port project, there have been several protests in opposition to the new port, and also the back of the port expansion. One of the activists stressed the exclusion community and civil society organisations, even during the initial design and drafting of the proposal to build the new port:

The decision was taken by Transnet in conjunction with the eThekweni municipality; the municipality was involved in the planning process. There were various officials from the municipality as well as the Council Executive. They were all kind of happy of what was happening, they developed the joint vision, so the decision to go for the dig-

out port was taken jointly between the city and Transnet, but adjacent communities were excluded (SDCEA/16/09/2016).

The activist stated that regardless of the large scale of the dug-out project and the impacts it will have on the community and the whole region of South Durban Basin, neither Transnet nor the eThekweni Municipality consulted them:

Having an entirely new dig-out port in a completely new location is causing a lot of chaos in terms of where does the community stand in that process because, from the beginning, they were not consulted by Transnet or local government (SDCEA/16/09/2016).

The respondent added that though they tried to engage with Transnet, they were simply ignored and alienated. Transnet decided to engage them after public protests and media reports, after all the decisions had been finalised and concluded:

At the beginning, it was very difficult, we were completely disregarded and ignored in this process, they did not want to meet with us, they denied us access to their development strategies, and they were not being transparent on what they wanted to do. Only recent years they decided to talk with the communities. Unfortunately, they had their plans and reports done, we had to analyse and comment (SDCEA/16/09/2016).

Subsequently, communities were given one month to comment on the dig-out port plans:

We managed to comment with the inputs from the public on the plan. Following submissions, we had zero feedback from the municipality on how they are taking our concerns into account. We were promised a consultative forum by the mayor and that never materialised. There have been some meetings, but we do not get notices until the last minute and we do not get feedback. That is not participation. There has not been participation on many developments taking around the harbour (Earthlife/11/08/2016).

SDCEA (2013: 1) affirmed this, citing the alienation and exclusion of the community and the civil society:

The people who will be affected by this R250 billion project have repeatedly demanded that planning must be interrogated as one holistic public participation process, to create a development vision and plan for an all the people of South Durban. Up until

now, the fragmented strategy of government and Transnet has prevented a holistic perspective on the scope of the project. The result is an extremely high level of alienation by affected residents, and a sense that the consultation process is being manipulated.

Furthermore, SDCEA argued that even when they tried to organise public meetings, and invited various officials from the city and government, such attempts were unsuccessful:

On March 12 2013, we invited the municipal manager, the mayor, the Premier of KZN, the Minister of Public Enterprise, the Minister of Finance as well as Transnet to a meeting on the 20th April 2013. The purpose of this meeting was to initiate an inclusive process and for government and Transnet to present their plans. This invitation was not accepted (SDCEA, 2013: 1).

The above indicates the lack of democratic accountability and the disregard for the rights of communities in the initial planning of the dug-out port and mimic the planning of megaprojects internationally. Harris (2014) has argued that lack of democratic participation is one of the characteristics of large-scale development projects.

It is important at this stage to illustrate the structure of, and representation in, the TEMPI (figure 21) as it had a big influence on future port expansions in Durban (Mather and Maharaj, 2008: 1). According to Mather and Reddy (2008:1), there were two key decisions that were taken to increase the capacity at the existing port:

- the Bayhead dig-out which will provide 2.5 million TEU's;
- the dig-out port on the Durban International Airport site which will provide 3 million TEU's, a new strategic petrol and oil storage facility and a direct export berth for Toyota.

According to Mather and Reddy (2008), the TEMPI process commenced in 2008, involving stakeholders from Transnet and eThekweni Municipality. Its main aim was to reconcile the differences in the objectives both organisations with regard to port expansion. Transnet, as a managing entity of ports in South Africa, was mainly interested in expanding the port and ensuring port efficiency. EThekweni Municipality, on the other hand, as a local government structure, had a mandate of ensuring broader socio-economic development and well-being of its population, as well as managing the efficient land use within the city boundaries. For Mather

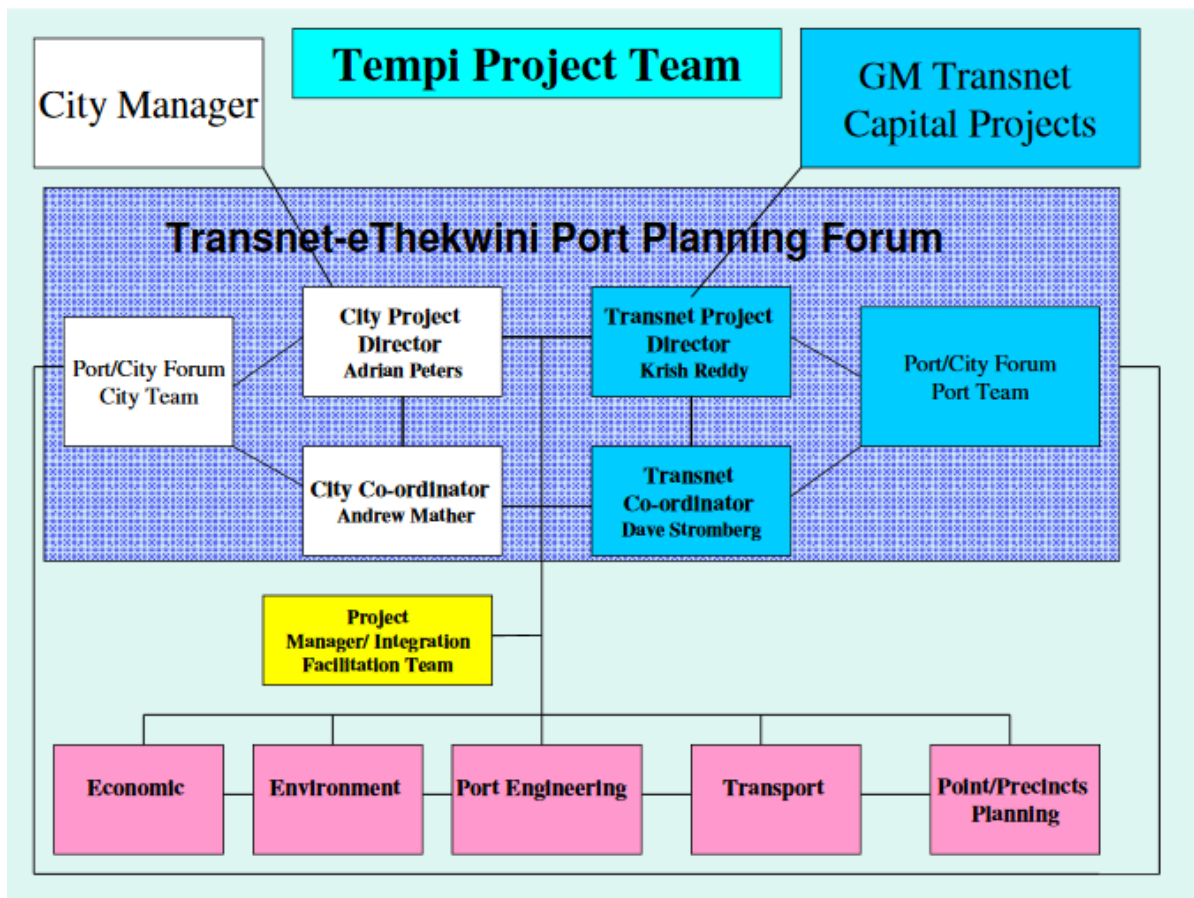
and Reddy (2008) these conflicting interests between the city and Transnet led to the adoption of the TEMPI process.

In Figure 24, it is evident that representation from civil society and the community in the TEMPI process was omitted, which comprised only of officials from Transnet and the municipality (Mather and Reddy, 2013). It was the lack public participation that led to a wide range of protests by communities and civil society organisations. Subsequent stakeholder engagements organised by Transnet were merely nothing more than top-down transmission of information about decisions that were already made. This was emphasised by a SDCEA statement after a meeting they had with the municipality:

Adrian Peters of the eThekweni Municipality then gave a presentation on SIP2 and the port expansion. This made clear that the big decisions are already made. The primary purpose of 'consultation' is to get community buy-in (SDCEA, 2013: 1).

Regardless of these concerns raised by community representatives, Transnet and the eThekweni Municipality maintained that they had concluded: “the first in a series of early stakeholder engagement sessions with local organisations on the Proposed Durban Dig-Out Port project” (Transnet, 2013: 1).

Figure 24: Organisational Structure of TEMPI



Source: Mather and Reddy (2008: 6).

According to Transnet (2013: 1), the stakeholder engagement took place between 11 and 14 March 2013, and comprised of representatives from local business, property, environmental and civic associations”. However, SDCEA (2013: 1) argued that they were “notified of the community engagement on Thursday 11 [11 March 2013]”. SDCEA claimed that many communities and other NGOs were not informed about these stakeholder engagements:

No public notices inviting local people were posted in Merebank, Isipingo, Umbilo, Amanzimtoti, and Umlazi or anywhere else. None of the residents’ organisations and community groups from Clairwood, the Bluff, and Wentworth, Umbilo or other settlements were notified. None of the other participants in the campaign against the port expansion, such as Earthlife Africa eThekweni, groundWork or the UKZN Centre for Civil Society were informed of the meeting. Only a handful of people from Wentworth came because they were walking nearby and happened to hear about this meeting. The councillor of Ward 68 was only informed on the morning about a meeting occurring at the community hall (SDCEA, 2013: 1).

For SDCEA (2013: 1), the ‘proper’ community (or stakeholder) engagements that were well organised was with the people from the business sector:

In contrast, it seems that a SIP2 engagement with business on Friday 12th March 2013 was organised well in advance. SIP2 is about the eThekweni-Gauteng transport corridor and the port expansion. The Saturday meeting included Minister Gigaba, KZN MEC for Economics Mike Mabuyakhulu and the Premier’s spokesperson Cyril Xaba, the speaker of the eThekweni Municipality, Logie Naidoo, and Transnet’s Chairperson and CEO, Mafika Mkwana and Brian Molefe.

Similarly, Desmond D’sa, SDCEA activist, question Brian Molefe, then the CEO of Transnet, about the negative impacts of the dig-out port, the CEO responded by asking: “Do you want to take us back? Do you want to deny black people jobs and development, just to save some frogs”? (Späth, 2013: 10).

Molefe, who resigned from ESKOM in 2016 because of serious allegations of corruption, defended the port using the race card, arguing that by opposing the dig-out port D’Sa was denying black people jobs. Ironically, D’sa is a veteran activist working with African, Indian and Coloureds communities to fight against environmental injustices and to improve the quality of life of the poor.

Even though the issues between Transnet, eThekweni Municipality and communities were not resolved, Transnet started drilling “boreholes in Isipingo to collect samples to test for traces of contamination, metals and other elements that could affect the construction phase” (Mkhize, 2014: 1).

SDCEA (2013:1) argued that the lack of public participation and consultation in planning the dig-out port ignored the opposition from the South Durban community who are concerned “about the added pollution, the forced displacement of people starting with Clairwood and Merebank, and the likely intensification of real socioeconomic problems (SDCEA, 2013: 1).

i) Resistance from the Community and Protests

With this poor public participation and the failure by Transnet and the city to engage local communities, it is not surprising that there has been resistance and protests from the social and environmental activists. Table 11 indicates the list of public protests that have taken place in Durban in opposition of the port. The opposition mainly came from the communities and civil

society organisations in the south Durban basin, and there were concerns about the lack of transparency, participation and proper stakeholder consultation (SDCEA/16/09/2016).

Table 11: Public Protest Opposing Port Expansions in Durban.

Protest	Concerns	Sources
1 December 2012; Langerberg Road, corner of Bayhead, Durban Residents from Bluff, Clairwood, Glenwood, Isipingo, Umlazi, KwaMakhutha, uMbumbulu, Folweni, uMlazi, Umbilo and Wentworth	<ul style="list-style-type: none"> • 'Port Lock Down' protest • Lack of proper stakeholder engagements from Transnet, eThekweni Municipality and government • pollutant-induced illnesses • environmental degradation 	SDCEA, 2013SDCEA, 2013
3 September 2012; TSS hall in Merebank SDCEA	<ul style="list-style-type: none"> • community mobilisation for mass protest "Port Lockdown" 	SDCEA, 2013
2012/12/05 Coastlands Hotel, Musgrave, Durban	<ul style="list-style-type: none"> • A Public meeting and handing of memorandum to Public Enterprises' Minister • Forced relocations or constructive evictions • Environmental degradation 	SDCEA, 2013.
27 April 2016, Langerberg and Bayhead Road near the Port of Durban	<ul style="list-style-type: none"> • Unsustainability of the port surrounding areas and the impact of heavy industries • Anti-democratic nature of Transnet engagements • rights of fishing and farming livelihoods • destruction of food security and local economy 	ECR News, 27 April 2016
14 November 2013; Refinery Road, Prospecton, Durban SDCEA, Airport Farmers Association,	<ul style="list-style-type: none"> • Displacement of farmers at the airport site • Climate change and pollution • Land grabs by big corporations 	Mngoma N, 2013, Daily news 15

Protest	Concerns	Sources
29 March 2014, City Hall South Durban Community Environmental Alliance (SDCEA) and, Centre for Civil Society, Right 2 Know; Green Alliance Squad, Diakona Centre, KZN SFF,	<ul style="list-style-type: none"> • Objections to the dig-out port and the back of port project • The projects characterised as neoliberal and will benefit government and large corporations. • Impacts of trucking in residential roads • Displacement of farmers from the Old Airport site • Health issues and pollution • Worries about climate change • denial of fishermen access to the beachfront and various piers • Port will become a 'white elephant' and site for corruption • Residential displacement and social decay 	Cole, B (2014) IOL News; Bond (2014)
25 April 2016 SDCEA, Earthlife Africa. Manning Road Methodist Church, 450 Che Guevara (Moore) Road, Glenwood	<ul style="list-style-type: none"> • pollution, noise, congestion, accidents • Trucking and road accidents • Carbon emissions and climate change • Concerns of massive costs and corruption associated with the dig-out port 	Bond (2014)

On the memorandum presented to the eThekweni Municipality and Transnet in 29 March 2014, the protesters were raising concerns of lack of consultation from Transnet:

In December 2012, Minister Gigaba promised that there will be meaningful participation regarding South Durban's future planning. We have an audio recording

of this commitment. Despite this, there has been no one coherent process to engage with all the people of South Durban on the proposed port and petrochemical expansions (Bond, 2014: 19).

Protesters also opposed the port on the basis that it will have negative socio-economic and environmental impacts on the residents of South Durban:

Residents consider the expansion and dig-out port projects to be unsustainable since they are not meeting the needs of poor South Africans, but rather support a dependence on exports and imports that suppress balanced development of our local economies....The port will affect community social life, cause loss of income and livelihoods of subsistence farmers and fisher folk, pollute our community and especially the vulnerable residents who are disproportionately black and women, reduce our area's biodiversity and hasten environmental degradation (Bond, 2014: 19).

The residents also argued that poor people's needs from South Durban are ignored in favour of the needs of the wealthy. They argued that some of previous development projects have been redirected to South Durban because of resistance from wealthy suburban areas:

The eThekweni Municipality, the KwaZulu-Natal Provincial government, Transnet and national government continue to meet behind closed doors with major industries planning the port and petrochemical expansion. This has gone on since the early 2000s without wider public consultation. At that point, for example, the R6 billion Durban-Johannesburg oil pipelines was meant to go through Hillcrest and Aloof– but after resistance by wealthier residents, it was re-directed through black communities in South Durban and Umbumbulu (Bond, 2014: 20).

One of the concerns raised by residents of South Durban is the possibility of displacements because of the dig-out port. This is discussed below.

4.8.2 Fear of Displacements

Officials from Transnet have dismissed any claims of displacements, suggesting that they will work with the community to find the best solution for them (Transnet/18/06/2016). However, several sources have suggested that port expansion megaprojects will displace thousands of residents who will be forced to relocate to other areas (UKZN/19/06/2016).

According to social activists from SDCEA, Transnet was probably technically correct that there will be no forced removal of residents to other areas. However, they will continue to build the port in the middle of the residential areas, thus forcing residents to ‘voluntarily’ relocate:

Industries tend to come to residential areas, they tend to change the fabrication of what the society is, and they tend to make industrial impacting in the lives of residents. They are basically saying we not going to relocate or remove as it was done in the past, we not going to give you a letter to vacate, what they tend to do is what lawyers call ‘constructive eviction’, bring development right at your doorstep to make it unbearable for you to live there, and eventually you will want to force yourself out that situation (SDCEA/16/09/2016).

Indeed, the municipal official acknowledged that there will be a major demand for logistics and warehousing industries which cause several spatial and social conflicts in the area:

Around the ports, there will be a change from residential and business to warehousing and logistics uses. We want to try and maintain a lot of manufacturing activity rather than making it shift to logistics uses. There will be increased demand for logistics use and it will come not conflict with the residential component, it needs to be managed (ETM1/25/06/2016).

The above refers to what is known as development-induced displacement and resettlement (DIDR) as a result of megaprojects (Terminski, 2013).

For the community of South Durban, this will not be their first displacement as they were forcibly removed by the apartheid government to south Durban:

Local communities have an unhappy history. The south Durban basin, which houses 70% of the region’s industry, including hundreds of oil and gas refineries, chemical companies and paper mills, was originally populated by indentured servants working in local sugar plantations. The apartheid government forcibly relocated additional residents there to create a pool of cheap labor [sic] for the emerging industrial economy (The Economist, 2014: 1).

In their study of the possible impacts of port expansions (dig-out port and back of port project) in Clairwood, Bracking and Diga (2015) interviewed 1000 residents and one of the questions

was the willingness to move in light of these proposed port expansions. They identified six types of respondents (see Table 12) in terms of their willingness to move. Those respondents who indicated that they are willing to move (46.6%) showed low attachment to Clairwood area and thus could relocate provided that there was appropriate compensation. Those who did not want to relocate under any circumstances (22.3%) showed high levels of attachment to the area. Other respondents were not willing to move and demanded very high monetary compensations (0.8%), would only move if they were forced (26.1%) and those who wanted to relocate because of other problems in the areas (3.1%).

The Bracking and Diga (2015) study suggests that those who were willing to move might have been motivated not only by financial needs but also problems in the areas such as crime and environmental quality:

“I have lived here all my life, but would still want to move because of the crime taking place. Would like for the crime rates and drug abuse to stop” (Female20130158, Pine Road Clairwood in Bracking and Diga, 2015: 38).

“House robberies and truckers causing more pollution. If compensated I will gladly move to buy a house in another area, truckers causing more pollution,” (Female 20130856, Ganesh Road Informal Settlement in Bracking and Diga, 2015:38).

“I don’t want trucks because they are dangerous and cause a lot of pollution,” (Female 20130139 Dayal Road Clairwood in Bracking and Diga, 2015:38).

Table 12: Willingness to Relocate Because of Port Expansions, n=1000

Type of Respondent	%	Description
Type 1	46.6%	Willing to relocate provided that they are compensated. They show low attachment to the area. Amount of compensation ranges from R20 000 to R5 million.
Type 2	22.3%	They refuse to relocate and would not agree even if they are compensated. They have attached high non-material value to Clairwood.
Type 3	0.8%	Unwilling to relocated and give unrealistic demands in terms of compensation, ranging from R20 million to R1 billion.
Type 4	26.1%	Unwilling to move and can only do so if forced; they gave realistic demands of compensation.

Type 5	1.1%	Neither agree nor disagree to relocate
Type 6	3.1%	Willing to move but due to other socio-economic problems in the area, not necessarily because of port expansions.

Source: Adapted from Bracking and Diga (2015)

Second, those who were not willing to relocate attach some kind of non-material values to the area. This is explained in statements such as these:

"I was born here, my mother and father died here. I will die here too,"(Female 20130017, Horsham in Bracking and Diga, 2015:38).

"Clairwood is who we are [...] Clairwood is more than just an area, it is our life,"
(Male 20130092, Sastri Rd informal settlement in Bracking and Diga, 2015:38).

The issue of displacement does not only apply to residential areas but also to 31 small farmers and over a hundred of labourers who have been using the land adjacent to the old airport to provide fresh vegetables to the community for 20 years. If they are forced to move from the land it would mean the loss of livelihoods for them and the workers.

Transnet have not denied that they will not move the farmers; however, they have argued that they will engage with the farmers:

In the interim Transnet remains committed to a process of constructive engagement with these farmers and will endeavour to accommodate their farming for as long as possible within the timeframes of the proposed DDOP (Durban dig-out port) project (Huisman, 2014: 1)

However, farmers have suggested that initially Transnet had not engaged with them and they only heard about port expansion plans in the media:

Sarojini Devi, one of the farmers, said the city hasn't even spoken to the farmers about what will happen with the land; they only read about the port plans in the paper (Steyn, 2013).

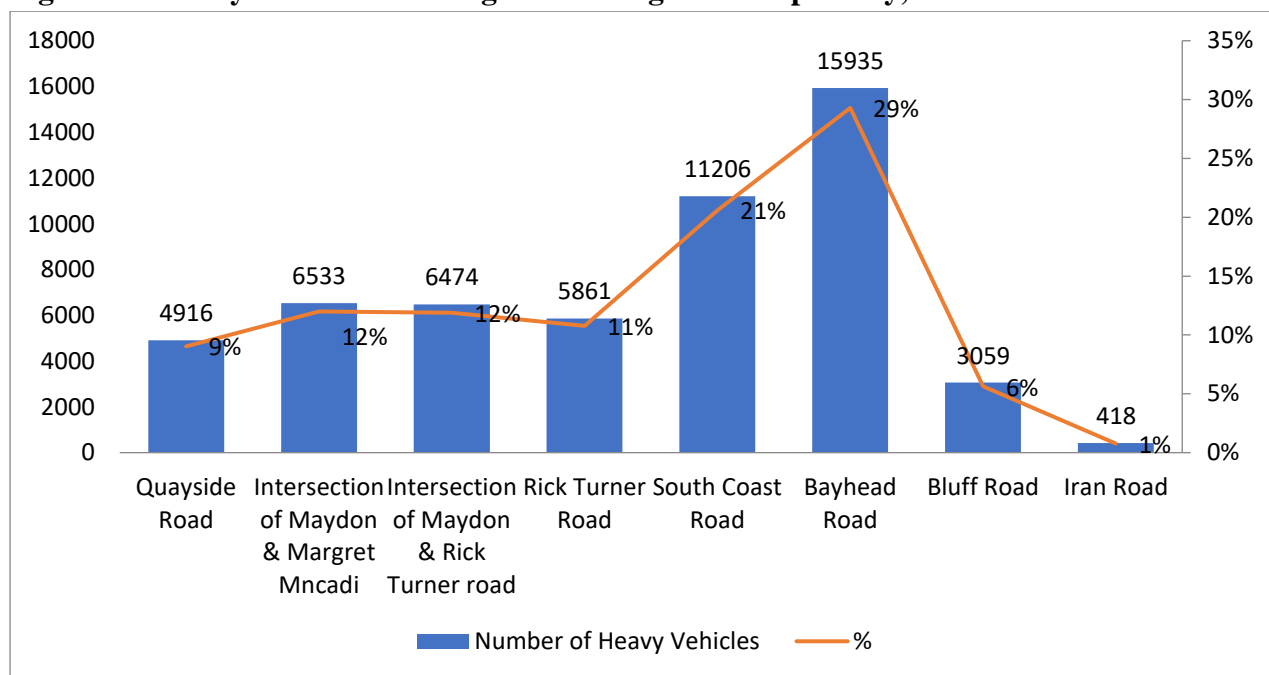
There would be several negative impacts to the livelihoods of the farmers and workers as well as to the local economy if farmers are removed. For example, one of the farmers stated that:

The land means the world to me in the sense that I'm here six days a week from 7am till 5pm. When I get home, it's only my farm that I think of and nothing else. So, it's my livelihood and I would like to remain on the land (Mkhize, 2013:1).

4.8.3 Traffic Congestion, Trucking and Accidents

The dig-out port and the back of port in Durban is expected to increase the number of road freight during the construction and operational stages. Major roads around the port already handle large volumes of both passenger and goods vehicles a day. For example, a traffic survey conducted by Kunene (2013) found that 83009 heavy/light vehicles entering and 80189 heavy/light vehicles exiting the Port per day. Figure 25 indicates that there was a total of 54402 vehicles along major roads entering and exiting the port per day.

Figure 25: Heavy Vehicles Entering and Exiting the Port per Day, n=54402



Source: Adapted from Kunene (2013:68)

Other sources estimate that there are approximately 8000 heavy vehicles passing the roads entering and exiting the port:

Currently, 2.6 million TEU per annum move through port, resulting in +/- 8000 daily container related heavy vehicle movements around the Bayhead Area (Naidoo, 2015: 15).

Mulla and Bester (2016) have modelled the costs and impacts of heavy trucks on congestion, the infrastructure and accidents. Their model considered the forecasted growth of container traffic in the port of Durban until 2042. Their results show serious negative impacts of heavy trucks on the economy:

The 2012 analysis shows that Port related traffic account for almost 25% of the total congestion costs due to the movement of all heavy vehicles within the city of Durban. The annual cost of congestion for Port related traffic is estimated at R130 million annually in 2012 and R135 million annually in 2019...by 2042, congestion due to Port related traffic is estimated to cost the economy approximately R377 Million annually. (Mulla and Bester, 2016: 568).

When it comes to the infrastructural costs, Mulla and Bester (2016: 568) predict that “the road infrastructure requires for the port expansion in 2019 and 2042 is expected to be approximately R30 million and R7 billion respectively”. The costs of road infrastructure will affect the eThekweni Municipality negatively since the municipality and Transnet do not have a cost-sharing model to fix road infrastructure. This means that more taxpayers money being channelled to road infrastructure. With the new port developments there is no doubt that road freight will increase dramatically. This will further increase the costs associated with congestion and infrastructure. This will not only be influenced by the port expansions, but also by the proposed developments in the Durban-Gauteng Corridor:

....freight volumes on the Durban-Gauteng corridor will grow from 762 mtpa (million tons per annum) in 2011 to 1927 mtpa in 2041. Road freight is estimated to grow over the same 30 year period at 2.7% per annum, which means that road freight will grow by 123% to approximately 1.2 billion tons by 2041. Over the same period, the growth on rail is planned to be higher, at 3.5%, putting the overall growth at 220% and approximately 690 million tons per annum (Maharaj, 2013: 15).

...with a dig-out port at the old Durban International Airport site, the containers could reach 8.2 million TEU by 2040, resulting in about 17 500 heavy vehicle movements daily in the South Durban Basin (Manda, 2015: 1).

While Transnet and City of Durban see this increase as good for the economy, however, many complaints have come from the community about the impacts of trucks on the lives of residents:

In terms of trucks the health, safety and well-being of the people in the south Durban area is compromised. We are looking at traffic congestion, our roads are not conducive to this type of vehicles. In our research and communication with government and industries, especially Transnet, we have asked about rail, instead of roads why we cannot use rail so that all these containers posing threats to people are shifted to rail (SDCEA/16/09/2016).

One of the impacts of this increase in freight movement, in addition to noise pollution, will be the increase number of accidents on many roads entering the port around residential areas. In Bracking and Diga's (2015) study, many respondents complained about the impacts of trucks on their residential areas:

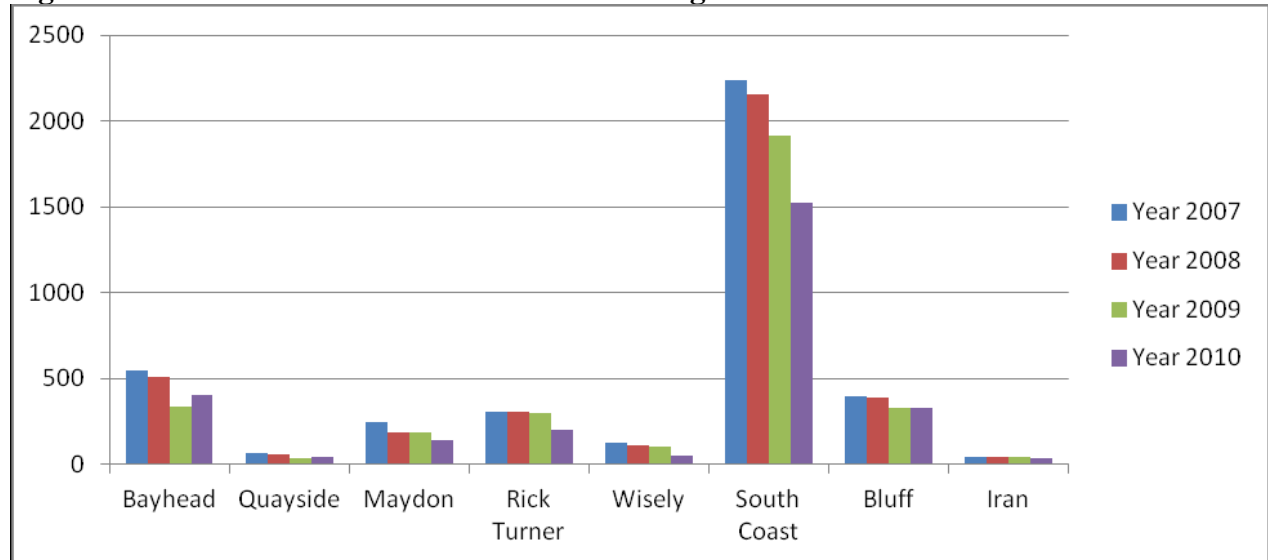
Respondents feel that these commercial vehicles pose a danger to their lives and the lives of their children. There are constant truck accidents on Clairwood roads where trucks strike down pedestrians. Illegal trucking operations are also starting to encroach into the residential space which degrades the residential area, and this development is not welcomed by residents (Bracking and Diga, 2015: 12).

The issue of trucks has also been reported in the media and by the civil society:

...problem highlighted was trucking. The point made at the meeting was that, according to the city, there were 7 379 accidents involving trucks on municipal land last year, which resulted in 72 deaths and 210 injuries (Mail and Guardian, 2012B:1).

Kunene (2013) estimated that there was a total of 3972 road accidents in 2007 and this decreased to 2729 in 2010 (Figure 26). This was only accidents that occurred in roads entering the port and excluded other collisions that occurred outside the roads surrounding the port.

Figure 26: Number of Accidents in Roads Entering the Port of Durban



Source: Kunene (2013:74)

Although Transnet has reported that will increase it railway capacity from 25% to 73% (Gedye, 2012B), however, this will not decrease congestion on the road:

Even if you have high growth in rail, you still in the next 15 years will double the amount of cargo going in roads simple because they are not compatible with rail. We have to improve on the road networks (ETM1/25/06/2016).

...But this "reduction" in road freight is relative and will not reduce the number of trucks on the road - that is expected to increase by 123% over the next 30 years, while rail freight is expected to grow by 220% (Gedye, 2012: 1).

Truck-related deaths and injuries are a weekly occurrence across the Bluff, Clairwood, Jacobs and Wentworth. Years of lobbying local government has yielded nothing for beleaguered communities. The proposed link roads, part of the Port Expansion Project, are not anticipated to alleviate this problem. In fact it is likely worsen the situation with at least eight times the number of trucks expected to pour into what remains of our suburbs if this development goes ahead, increasing exhaust fume and noise pollution by a corresponding amount. If the municipality cannot police the problem now, how will they address an eight-fold escalation in traffic contraventions? (Umbilo Action Group, 2012: 1).

It is estimated that there are approximately 1320 logistics companies located within eThekweni Municipality and "1,021 (77%) are trucking related" (Kerry Seeping Environmental, 2013: 20).

Furthermore, sixty percent of these trucking companies, “are located within 15km of Durban Container Terminal (DCT)” (Kerry Seeping Environmental, 2013: 20). These figures are expected to further increase during the operation of the dig-out port and the back-of-port projects.

Taking the above evidence, one would argue that, with the construction of the new port megaproject and the Clairwood Logistics Park, the residential areas of South Durban will gradually turn into industrial/logistic areas, thus resulting in the displacement of businesses, livelihoods and households. For example, Desai (2011) states that from 1960 to 1970, the population of Clairwood declined from 50 000 to 5000 as a result of big industrial developments in the area. This trend is likely to continue.

One consultant stated that:

...if the dig-out-port went ahead, it would be the incredibly disruptive, I mean there is no other project that we have done in South Africa that would be such a huge infrastructure in the middle of densely occupied city face (UKZN/19/06/2016).

In addition to the human costs and threats of displacement, these megaprojects will also impact adversely on the environment.

4.8.4 Environmental Impacts

The dig-out port was also branded as a green, sustainable port “that balances environmental challenges with economic demands and provides socio-economic opportunities to surrounding communities” (Transnet, 2013: 6). However, the reality was very different. Bond (Mail and Guardian 02 May 2014) describes the South Durban basin as Africa’s Armpit with “a noxious, racist Umlazi landfill and fighting petrochemical pollution at the Wentworth-Merebank site of the continent’s largest oil refinery complex, as well as other toxic flotsam from Africa’s busiest port”. South Durban has a recorded history of pollution and other environmental impacts resulting from large industrial activities. The environmental impacts will further be exacerbated when the construction and operation of the dig-out port begin as evident by Graham Muller and Associates, one of the consultants contracted by the eThekweni Municipality to conduct impact assessments stated that:

A significant area will be displaced; compensation may require remaining areas of coastal grassland such as the racecourse in addition to significant areas outside the area. The loss of habitat associated with port development may not be replaceable in the location. It may be necessary to conserve other areas within the Municipal Area (Graham Muller Associates, 2009: 2-3).

According to Dyer (2014: 35) “50% of affected grasslands and water sources have to be conserved in the DIA/Back of Port sites for hydrographical, ecological, flooding and climate change mitigation reasons”. A number of sources have raised concerns about the negative impacts of the dig-out port. However, Transnet has argued that the port project will conform with the constitution of South Africa, that guarantees the protection of the environment, as well as the implementation of mitigation strategies when the environment has been disturbed (Transnet/18/06/2016). Furthermore, Transnet has argued that it will develop a Sustainable Port Development Framework (SPDF) “that could guide the further development of this programme” (Transnet, 2013: 2). However, many residents and NGOs have dismissed this pejoratively as a public ‘greenwashing’ stunt.

The former Durban International Airport site is rich in biodiversity and contains many areas that have not been developed. Some of the most important and indigenous flora and fauna are presented in Table 12 and Figure 27, respectively.

Table 13: Flora and Fauna Species in the DIA Site

Fauna	Flora
9 species of mammals	3 distinct forest communities
93 bird species	85 species of indigenous trees, (five of which are protected under the National Forest Act)
10 reptilian species	17 species of alien trees
Freshwater turtle, which is presently listed as endangered	124 species of indigenous flowering plants
KZN Dwarf chameleon,	
Spotted Shovel Nose frog	
Pickersgill’s Reed frog being investigated by specialists	

Source: adapted from Transnet (2013b: 13) and Dyer (2014).

Figure 27: Dwarf Chameleon, Spotted Shovel Nose Frog and Pickersgill's Reed Frog (From Left to Right)



Source: Transnet (2013b:13)

Environmental NGOs have indicated that industrial development in South Durban has accelerated and this has had negative ecological impacts. There was concern that although all these developments have been legally approved (in terms of EIA), the long-term, holistic impacts assessments have not been conducted:

They are all piecemeal of new impacts assessments for each development project... there is no one inclusive assessment of the whole area of South Durban Basin (Earthlife/11/08/2016).

This suggests that the EIA for the dig-out port might not take into consideration the cumulative environmental impacts of other developments in the South Durban Basin.

We must not look at the dig-out port in isolation because it is part of the broader system that includes the back of port project, Umbilo, Glenwood, Isipingo, new feeding roads, the consequences will be trucking increase. All these impacts relate to climate change, air pollution, and sea pollution as a consequence of increase shipping (Earthlife/11/08/2016).

According to the environmental justice organisation, groundWork, the EIA process for the dig-out port may be even a 'greenwash' strategy (groundWork, 2014). The reason for this view is that projects that have been declared as SIPs are given a special status by the Infrastructure Development Act that was signed into law in May 2014:

The law gives legal status to the Presidential Infrastructure Coordinating Commission (PICC) and is intended to remove any impediment to any project that the PICC declares a 'strategic infrastructure project' (SIP), including overriding objections from municipalities or local people. It lays down time limits for "processes relating to any approvals, authorisations, licences, permissions and exemptions and processes relating to any consultation and participation" [s.17] and the Department of Environmental

Affairs (DEA) has been instructed to amend the EIA regulations accordingly (groundWork, 2014: 21).

According to groundWork (2014: 21) this will not result in intensive and thorough EIAs as the law fast-track infrastructural projects classified as SIPs:

The full process, including EIAs, may not take longer than 250 days – irrespective of the need for some EIAs to assess ecological impacts through all seasons and hence over a year. Public consultation is squeezed into two periods, 30 days for initial consultation “on the application and project plan” and 44 days “on the development and mitigation plan and review by the relevant authority” (groundWork, 2014: 21).

For the dig-out port, which is declared as the Strategic Integrated Project by the Presidential Infrastructural Coordinating Commission (PICC), it means that it will be given special privileges by the law. It is against this background that it is predicted that thorough impact assessments may not take cumulative environmental impacts of industrial activity in South Durban.

Environmental activists in South Durban, have long observed environmental changes in the area.

The environmental impacts are huge, in terms of the land, our green spaces, our open spaces, we rely on, especially in South Durban being surrounded by these industries there are no more trees, there are no more green spaces to trap these chemicals and purify them naturally, and that is not considered (SDCEA/16/09/2016).

There have a couple of times where fish have died in the bay and Isipingo River, and farmers have given us evidence of dead fish off-shore (Earthlife/11/08/2016).

The Bay of Natal is one of the natural habitats which has been affected by the industrial expansion in Durban, including the port activities. According to Mather and Reddy (2008: 9), the Bay has a huge role in maintaining the ecosystems in Durban: “the bay plays a role in waste assimilation particularly when the existing sewerage systems are compromised during rainfall events and power failures”. Furthermore, it has an important role in terms of leisure, recreation and tourism, food production and increasing proper rates (Mather and Reddy, 2008). Over the years, however, the Bay has undergone serious changes (Figure 28) in that 57% of the bay area

has been transformed into other land-uses, 3% of mangroves remains and 4% of the shoreline is left (Mather and Reddy, 2008: 9).

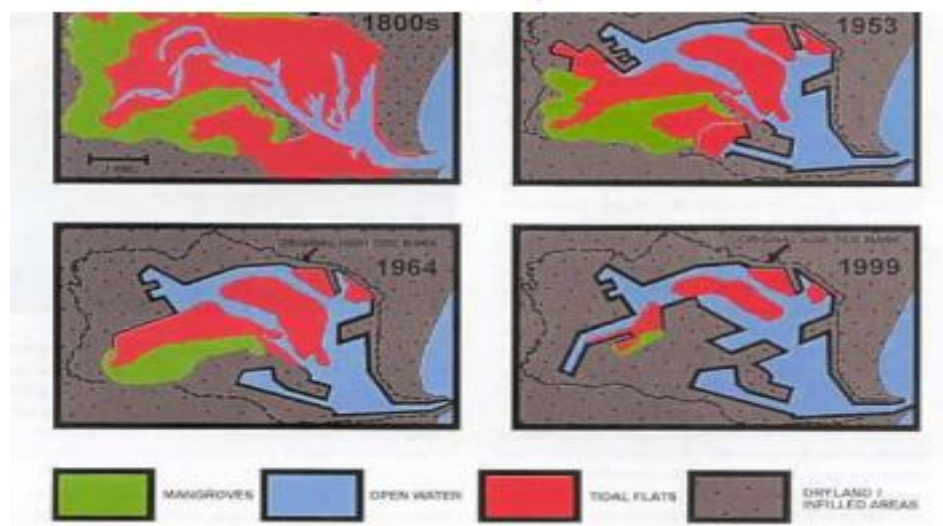
These environmental changes have led to researchers, activists and other interested parties to be concerned about the future the South Durban Basin, where industrial activities are having impacts on the environment and health of the residents. Given the scale of the projects, there was concern about major environmental impacts. According to Transnet, the construction of the dig-out port will include:

- Using 800 hectares of land;
- Dredging of 70 million m³ material;
- Removing 3.5 million tonnes of rock; and
- Using 2.5 million m³ of cement (Transnet, 2013b: 29).

Consequently, various port expansions put further pressure on the Bay:

Durban Bay, in which the harbour is situated, is struggling to cope with the pollution loads from harbour and associated activities, contaminated riverine and storm-water inflows. The expansion will require further removal of aspects of the Bay's ecosystem, which will in turn further reduce the assimilative capacity of this threatened and fragile estuary (Bond, 2015: 15).

Figure 28: Changes in the Bay of Durban, 1800-1999



Source: Mather and Reddy (2008: 10)

According to the environmental NGO, the dig-out port will consequently pose a threat to the remaining biodiversity in the area:

There will be a further threat to the few remaining and fragile estuarine habitats in the region, including mangrove forests, tidal flats and sandbanks, all of which are important to a number of endemic and migratory marine and bird species (Earthlife/11/08/2016).

This development will harm a number of species, bird species, animal species, and insect species. The airport land has Frogs, which are tiny frogs type which are only habitual to this environment, what about mangroves and sandbanks that will be destroyed, they host a number of species (SDCEA/16/09/2016).

*There will be a loss of biodiversity and unique ecosystems – the area of the old Durban airport happens to be one of the largest remaining home ranges of Pickersgill's reed frog (*Hyperolius pickersgilli*), one of world's rarest frogs (Spath, 2013: 1).*

The dig-out port would also impact on the sandbanks:

There will be impact on the sandbanks, which will affect the marine life on the sandbanks, especially fish breeding. In the harbour it will also affect the flow of water, we have already seen impacts with extra storm damages. There will be additional impacts if the harbour is expanded and this could destabilise the sandbanks completely (Earthlife/11/08/2016).

During the time of writing this thesis, most important environmental impacts assessments were in their phases (Transnet/18/06/2016)). However, there was some agreement that the port will add to the environmental stress in South Durban, and ultimately, the entire city. Most importantly, it has been argued that Transnet and the city have underestimated the contribution of the new port to climate change:

Climate change is being brushed under the carpet, and now it is being more evident than before that we have now noticed the impacts of climate change (SDCEA/16/09/2016).

According to Bond (2014), since inception, the planning processes of port expansion and the back-of port logistics project have been characterised by climate denialism:

.... in addressing the obviously adverse ecological implications of their project, Transnet hired Nemai Consulting, an EIA specialist with no apparent climate consciousness. They in turn hired a sub-contractor, an official of the SA Council for Scientific and Industrial Research, whose 2011 report, 'Modelling of potential environmental change in the port marine environment', also completely ignored climate change (Bond, 2014: 11).

The impacts of increases freight, especially from heavy trucks, are expected to increase emissions (Spath, 2013). According to the Academy of Science of South Africa (ASSAF, 2011) the transport sector is vital in reducing emissions and transitioning to a low carbon city. However, Durban has made little progress in reducing road freight:

The transport sector is pivotal to the transition to a low carbon city. The current transport pattern in the city, with its heavy reliance on private transport as opposed to the public transport, and the central role of the port as an attractor and generator of freight, the vast majority which is transported by road, do not support the fundamental principles of the low carbon city (ASSAF, 2011: 108).

This suggest that has not made significant investments to transition to low carbon economy. In fact, it may be argued that the city is failing to change its change its carbon-intensive economy (Bond, 2014).

This suggest that has not made significant investments to transition to low carbon economy. In fact, it may be argued that the city is failing to change its change its carbon-intensive economy (Bond, 2014).

4.9 Residents' Perceptions of the Dig-Out Port

This section present findings from the quantitative questionnaire administered in the areas of Isipingo and Merebank. The total sample size was 100 respondents, with 50 in each community. The aim of the questionnaire was to get residents' perceptions in relation to the dig-out port. This section will describe the socio-economic status of respondents and their households and the challenges experienced in communities. This is followed by respondents' awareness of the proposed dig-out port, their perception of impacts and whether they support the proposed port.

i) Socio-economic Characteristics of Residents

The socio-economic characteristics of respondents is summarised in Table 13. Fifty three percent of respondents were male. Black Africans comprised the majority respondents (63%) followed by Indians (25%) and coloureds. The majority (38%) of respondents completed secondary education. Unemployment (41%) was high among respondents, and 27 percent were formally employed. At the household level, 79 percent of respondents indicated that they depend on salaries and wages from employment, followed by child social grant (CSG) and income from businesses. The average household size was 4, including adults and children (Table 15).

Table 14: Household Roster, n=94

Variable	%	n
Gender		
Male	53%	50
Female	47%	44
Population Group		
Black	63%	59
Indian	24%	23
Coloured	13%	12
Age		
19-29	48%	45
30-39	36%	34
40-49	6%	6
50+	10%	9
Level of Education		
No Formal Education	7%	7
Primary	11%	10
Secondary	38%	36
Certificate Diploma	29%	27
Undergraduate degree	15%	14
Occupation		
Formally Employed	27%	25
Unemployed	41%	39
Self-employed	16%	15
Retired	6%	6
Student	10%	9
Sources of Income		
Salaries and Wages	79%	74
Income from Business	19%	18
Remittances	10%	9
Old Age Pension	9%	8
CSG	24%	23
Other	4%	4

Table 15: Household Size and Average Employment, n=94

<i>Variable</i>	<i>Min</i>	<i>Median</i>	<i>Mean</i>	<i>Max</i>	<i>SD</i>
Household Size	1	4	4.1	8	1.9
HH Members Employed	0	3	3.4	6	1.3

Figure 29 shows the monthly income categories all households. The majority (28%) of households had a monthly income of between R1000 and R2000. This was followed by the income band of between R2001 to R4000. There was a relatively large number of household that had income below R1000, thus indicating poverty in the area. As indicated in figure 28, the majority of households could be categorised as low-income households. This is evident by the perceptions of household economic status in figure 30 as 71 percent stated that they fall within the low-income category.

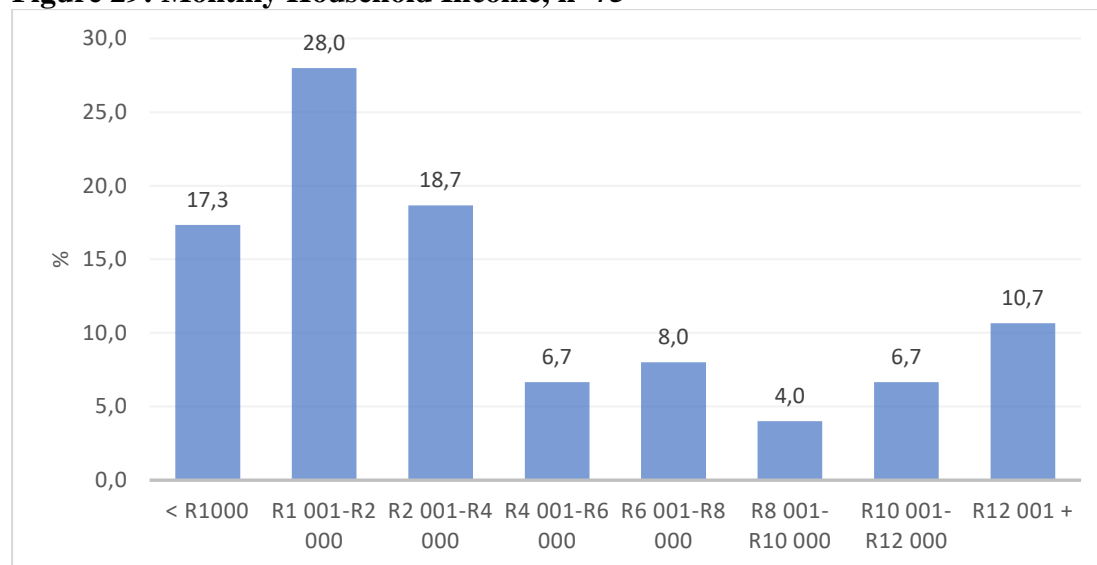
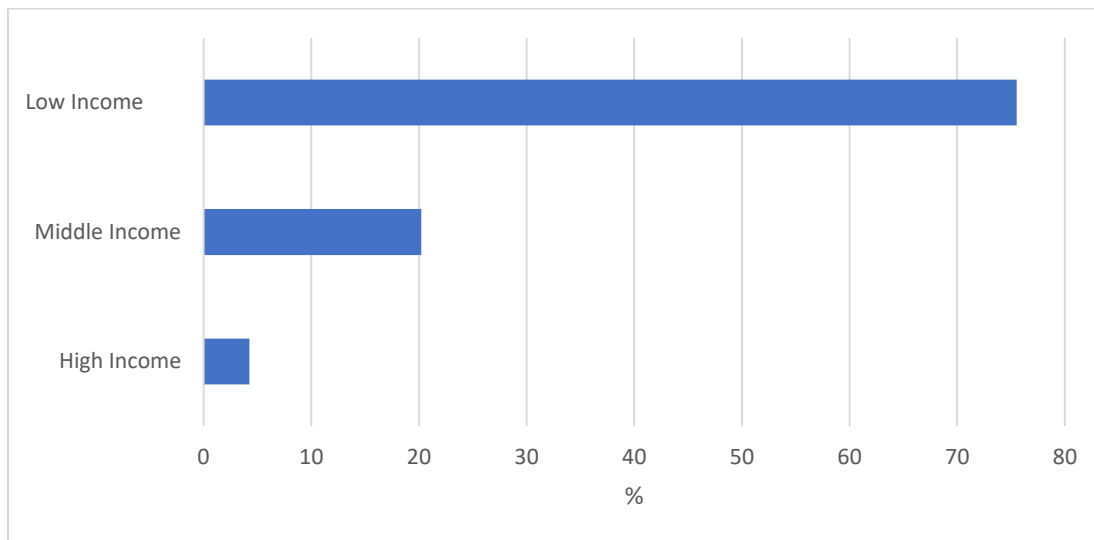
Figure 29: Monthly Household Income, n=75

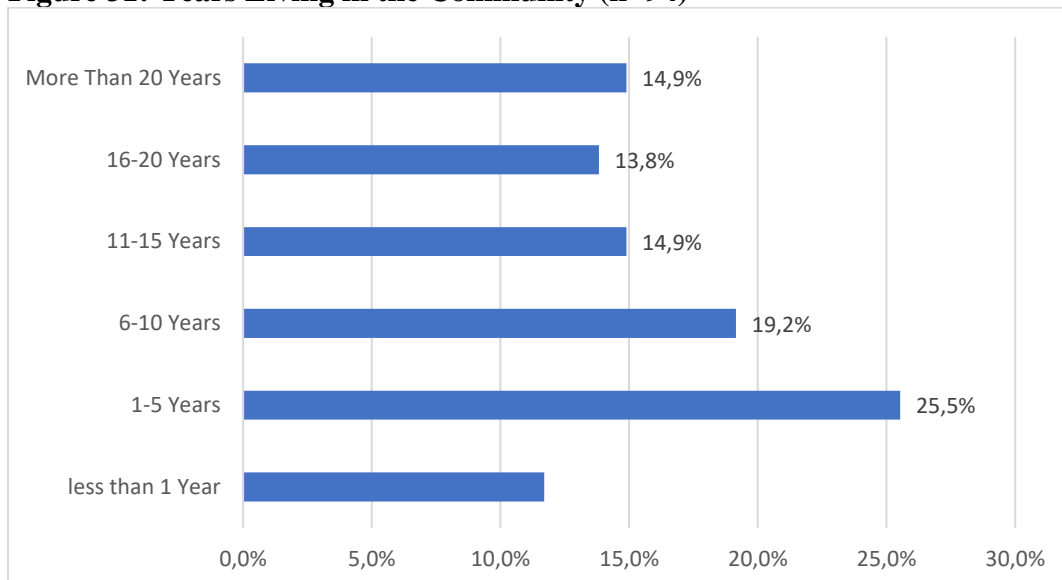
Figure 30: Household Income Class Categories as Perceived by Respondents, n=94



ii) Length of Residence in South Durban

The majority (26%) of households have been living in the area for a period of between 1 and 5 years (Figure 31). This was followed by 19 percent of households who have been living in the area for 6 to 10 years, and 15 percent have been residing there for 11-15 years. Significantly, about 29 percent of residents interviewed have been living in the area for more than 15 years.

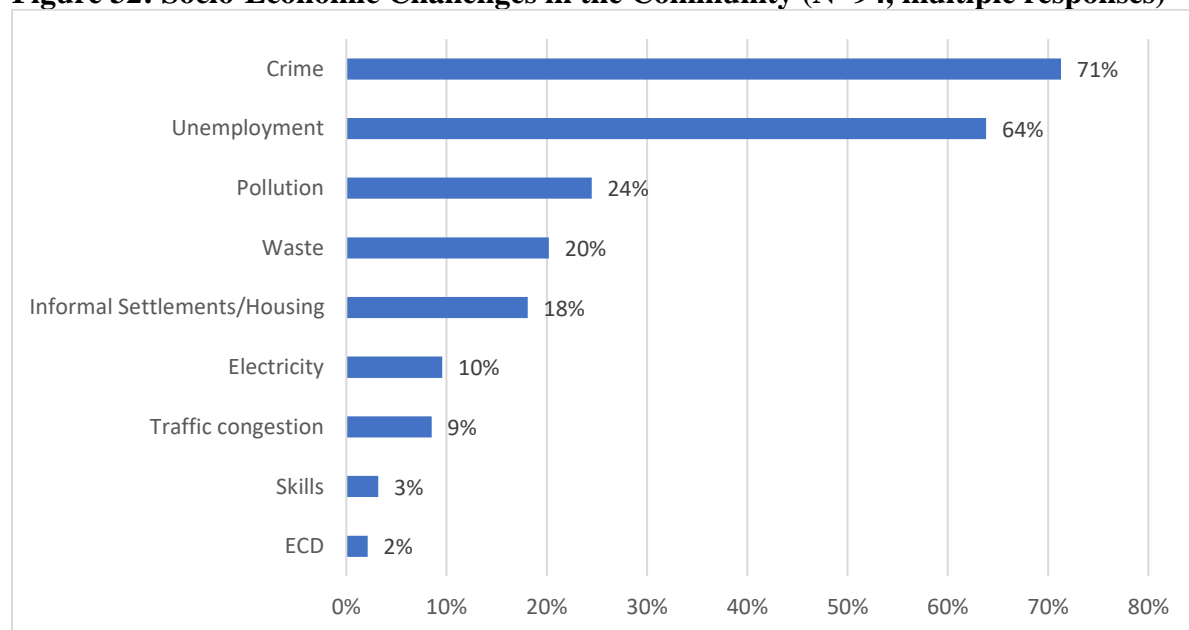
Figure 31: Years Living in the Community (n=94)



iii) Socio-economic Challenges in the Area

Respondents were asked to rank the socio-economic challenges that exist in the area (Figure 32). A significant number (71%) of respondents listed crime as the most serious issue in the community. Unemployment was listed as the second (64%), followed by pollution (24%), waste disposal (20%) and informal settlements/housing (18%). These findings resonate with other studies on the socio-economic issues in South Durban. For example, Sutherland and Scott (2009) list unemployment, pollution, crime and traffic/trucking as the main issues reported by the community of South Durban.

Figure 32: Socio-Economic Challenges in the Community (N=94, multiple responses)



iv) Awareness of the Dig-Out Port

Fifty seven percent of the respondents stated that they knew about the proposed dig-out port. The popular source of information regarding the dig-out port was word of mouth (49%), followed by the media (35%), and public meetings (Table 16). When asked about whether Transnet or eThekweni Municipality had engaged or informed them about the proposed dig-out port, all respondents stated that they have not met with these organisations or received any information. Civic and NGO organisation like SDCEA and Groundwork had also complained about the lack of consultation by Transnet and municipality.

Table 16: Are you Aware of the Dig-Out Port

<i>Variable</i>	<i>%</i>	<i>n</i>
Aware of the Dig-Out Port	57%	54
Not Aware of the Dig-Out Port	43%	40
Sources of Information		N=54
Word of Mouth	49%	27
Media	35%	19
Public Meeting	9%	5
Local Councilor	7%	4

v) Support for the Dig-out Port

Respondents were informed about the details and estimated costs of the dig-out port, and were asked if they thought is it worth it to build use the money to finance the dig-out port. Sixty five percent of the respondents stated that they thought that it was worth the money to build the dig-out port (Figure 33). However, it is important to note that this was not a blank cheque or unqualified support for the dig-out port project, as there were concerns about displacement, relocation and environmental degradation, and this will be discussed later in this section.

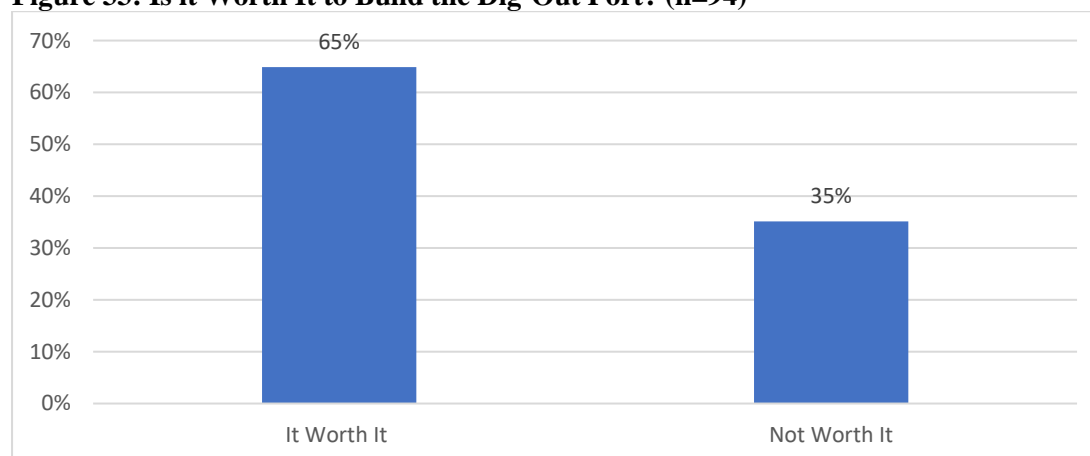
Figure 33: Is it Worth It to Build the Dig-Out Port? (n=94)

Figure 34 below shows the support for the dig-out pot in terms of the employment status of respondents. The perceptions about the dig-out port were not influenced by gender, racial group or level of education. However, it is important to note majority of respondents who classified themselves as students tended not to support the dig-out port (67%). A possible reason for this is that educated young people have a greater understanding about the negative social and environmental consequences associated with the port.

Figure 34: Is it Worth It to Build the Dig-Out Port? By Employment Status (n=94)

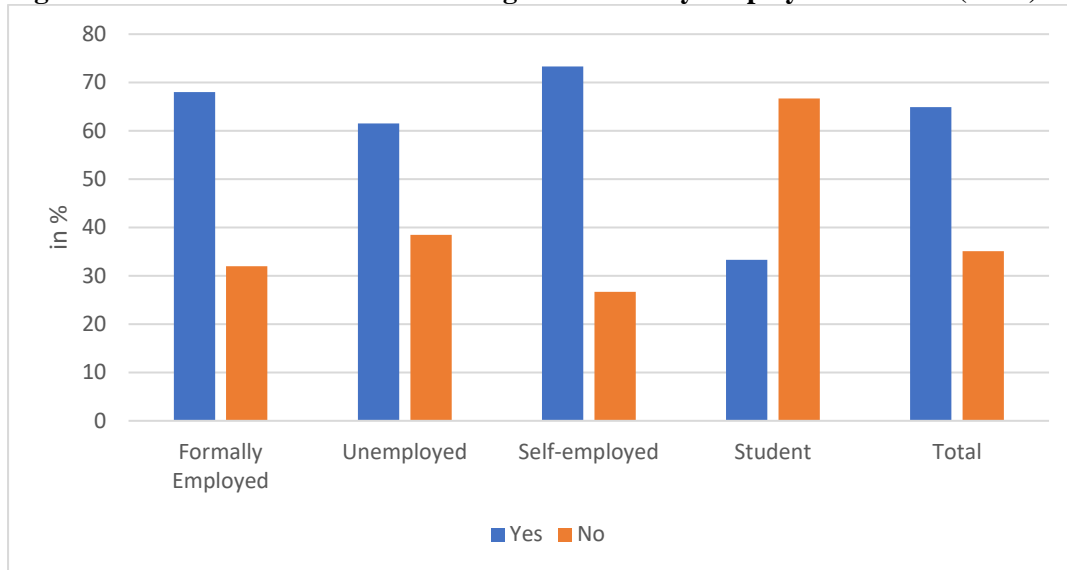
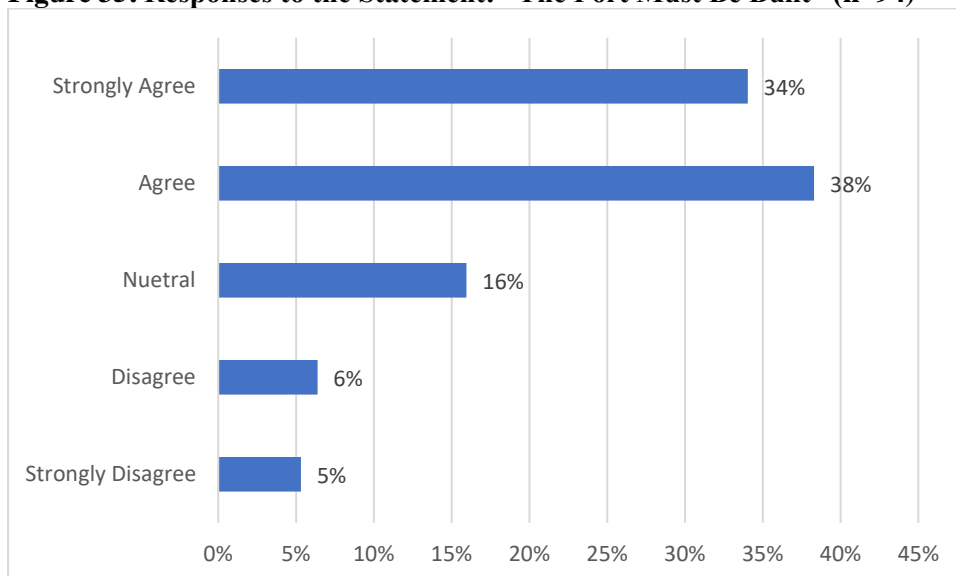


Figure 35 below further confirms that majority of respondents thought that the dig-out port should go ahead (34% strongly agree and 38% agree).

Figure 35: Responses to the Statement: “The Port Must Be Built” (n=94)



Reasons for supporting the port were mainly economic. Many people felt that the dig-out port will create jobs for the local community. Others thought that the port will result in the strong economic development in the area and create opportunities for local businesses. For those with negative perceptions, many thought that the port will force residents to move out of the area, thus disrupting their lives. Many respondents felt that the port will be characterised by corruption and will favour certain politically connected individuals and not the wider

community. Others thought that the money allocated for the dig-out port should be used to improve social services like housing, education and health (Table 17).

vi) Perceptions about Impacts

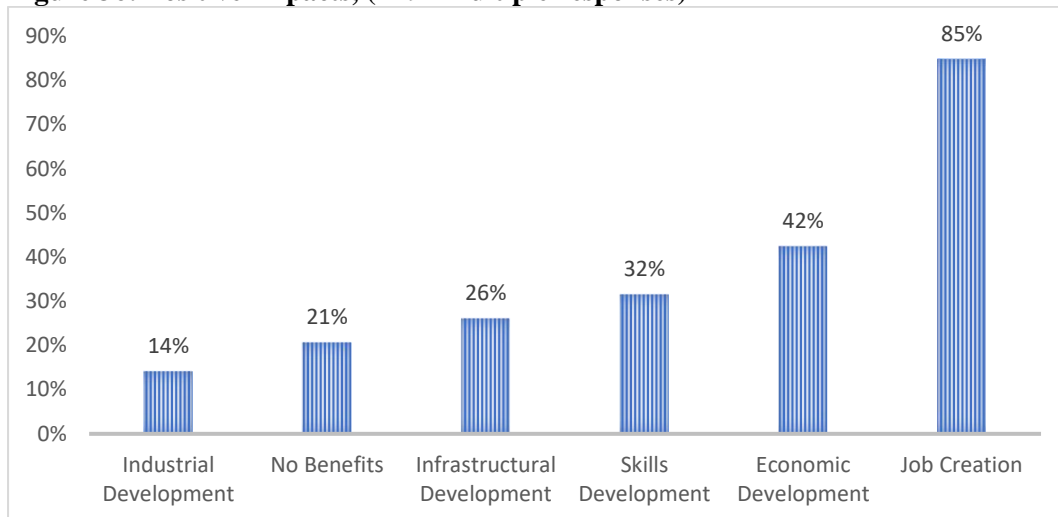
Figure 36 shows the perceived positive impacts should the dig-out port. A relatively large number (85%) of respondents saw job opportunities as the most important impact of the dig-out port. In the area where unemployment is very high, and with the prevalence of social issues like crime and drugs, it is not surprising that most people would demand jobs from the project. Forty two percent of the respondents expected the dig-out port to boost economic development of the areas, and others believed that there will be skills development (32%) and infrastructural development (26%).

Table 17: Positive and Negative Perceptions of the Dig-Out Port³

Positive	Negative
The port will create many job opportunities	Many lives will be disrupted. People will have to move their children to new schools and new residences
The port will boost the economy of the area	There will be corruption and nepotism
There will be opportunities for small businesses	There will be no jobs created, money will be stolen
This investment will generate more money when the port is operational	People will have to relocate
Property value will increase	Only a few people will benefit
infrastructure improvement	The amount of money can be used for community services
	Less green spaces
	Increase of road accidents
	Environmental degradation

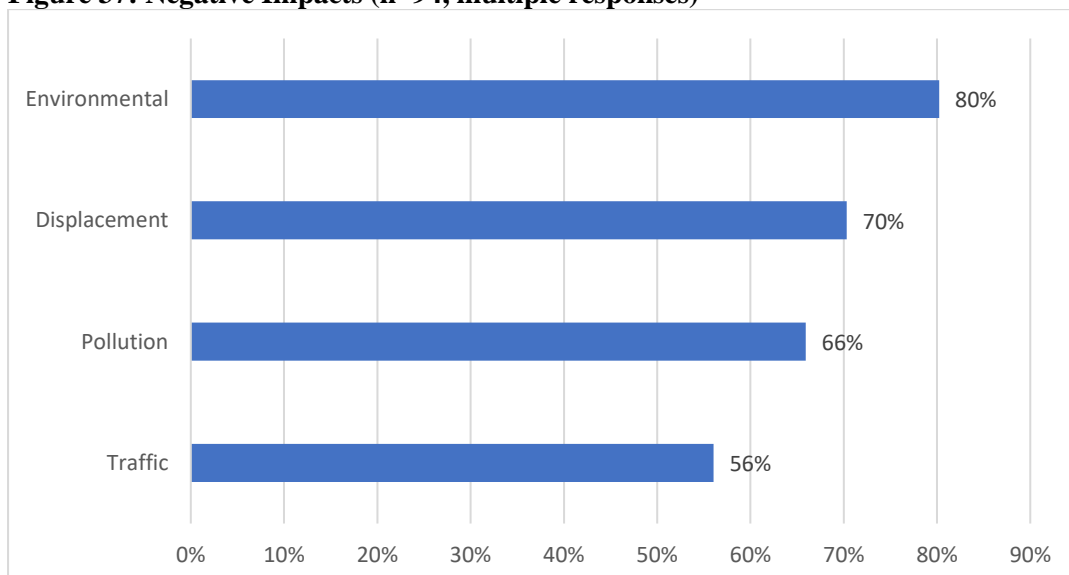
³ Comments are ranked by frequencies

Figure 36: Positive Impacts, (n=94 multiple responses)



Regarding the negative impacts associated with the dig-out port, the majority (80%) of respondents thought that it will result in environmental destruction or degradation (Figure 37). A related issue, pollution was also regarded as one of the negative impacts (66% of respondents). This was not surprising as the most respondents saw pollution as one of the major problems in the area. The second issue was displacement (70% of respondents); most people thought the port will result in the relocation of residents. The third issue was an increase in traffic and trucking in the area (56%).

Figure 37: Negative Impacts (n=94, multiple responses)



While there was some support for the dig-out port, people had a strong sense of attachment to the area as they did not want negative impacts to increase and were not willing to move to other areas. For example, one respondent stated that “even if there are benefits, I will not be willing

to move to another area”. Another respondent argued that local, uneducated people will not benefit from the dig-out port: “they will instead employ their friends who speak English and not us, yet we will be the ones who are affected by pollution, they are selfish”. Other most common reported negative perceptions were: crime, corruption, destruction of oceans, less green/open spaces, and noise.

It was stated earlier in this section that although about 65 percent of respondents who thought the port is worth the money, however, it was not an unqualified support. Figure 38 indicates that among those respondents who supported the dig-out port, most of them were worried about the impacts the project will have on the society and the environment. For example, 79 percent stated that the port will negative environmental impacts; 59 percent were worried about displacements while 60 percent thought the port will increase pollution (Figure 38). These results indicate that, due to socio-economic challenges such as employment, poverty and lack of service delivery, respondents thought that the port will create job opportunities and will with improve their socio-economic status. However, residents had strong feeling about the negative impacts the port will have on their livelihoods, neighbourhoods and environment.

Figure 38: Perceptions of Negative Impacts among those who support the port, n=54

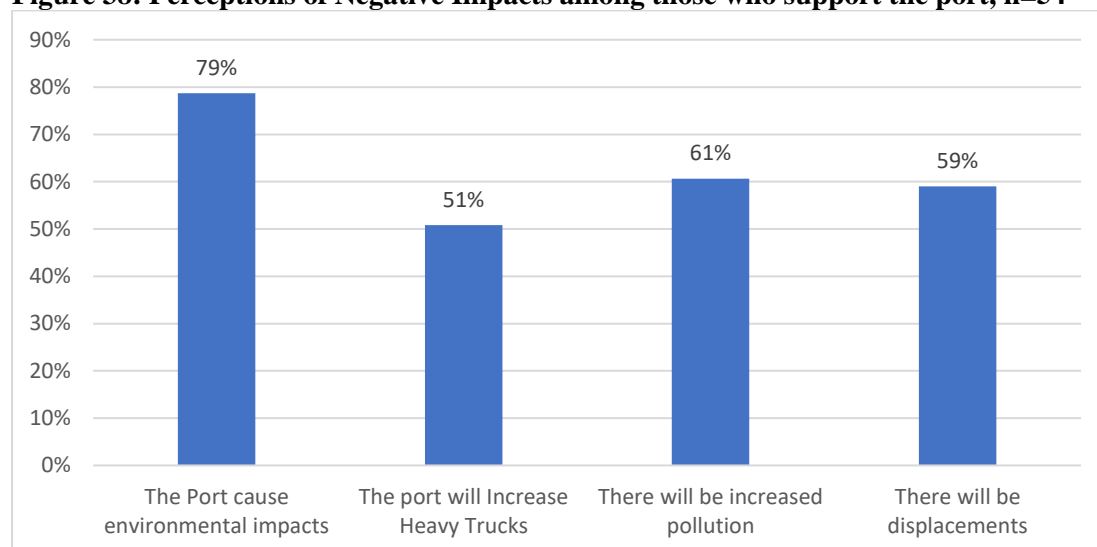


Figure 39 indicates the opinions of respondents on various issues. On the statement: “the dig-out must be built”, most respondents had a positive perception (38% agree and 34% strongly agree). The reason for this agreement was that majority of people thought that the port expansion will increase job opportunities in the areas (55% agree and 31% strongly agree). There was a strong feeling among respondents that the port must benefit local people, youth and local businesses, and statements such as these were more common: “the local people must

be skilled and given employment in the new harbour”; “the community should be considered for employment”; “the port must benefit the youth with skills and employment”; “there must be benefits for small business people”.

Figure 39: Level of Agreement/ Disagreement with the Following Statement (n=94)

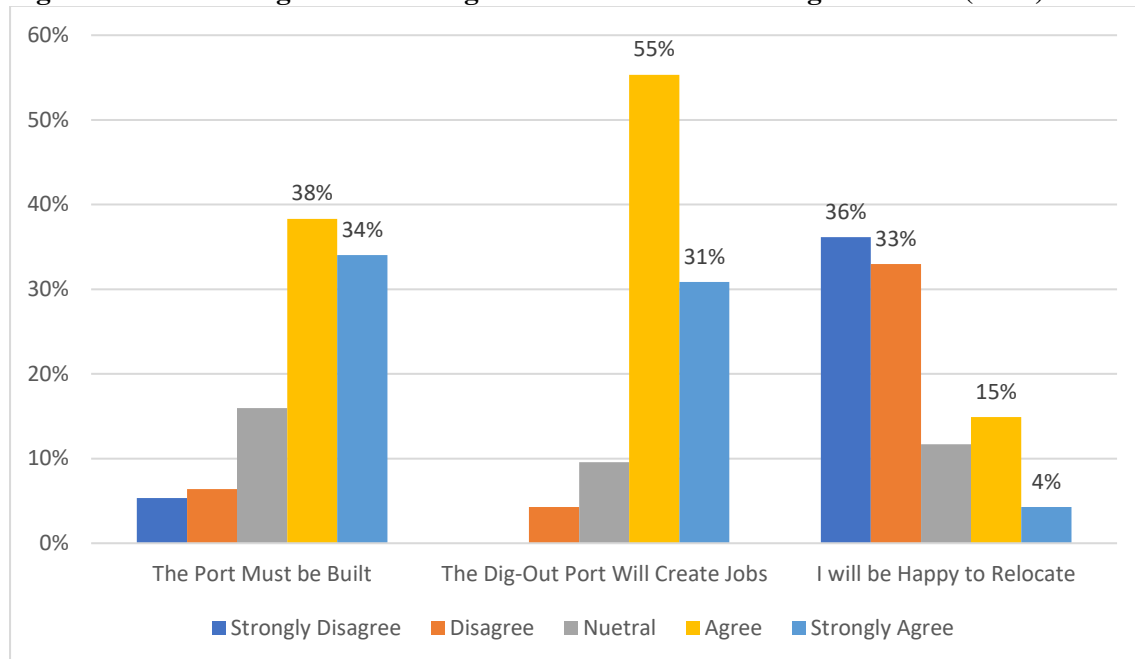


Figure 39 also shows the level of agreement to the statement: “*I will be happy to relocate provided that I am well compensated*”. As shown in figure 39, the majority of respondents were not willing to move to other areas to make the way for the dig-out port to be built (36% strongly disagree and 33% disagree). There is also a strong attachment to place (Table 18). In another recent study in South Durban, Bracking and Diga (2015) have similarly argued that people have a very high sense of place and attachment to the area. Also, people have social ties and bonds with one another (Sutherland and Scott, 2009) (Table 18).

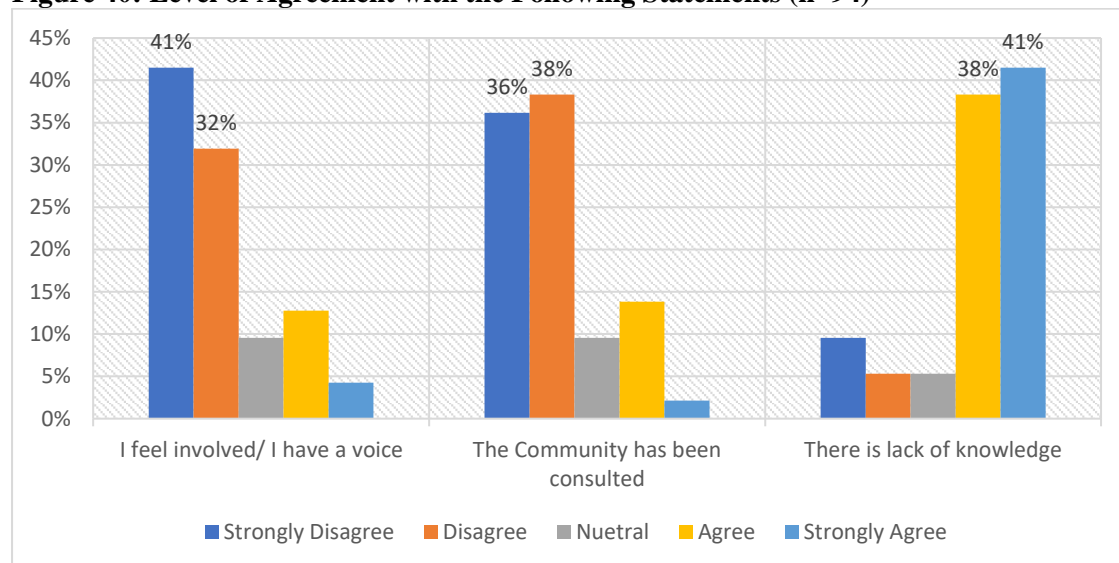
Table 18: Attachment to place in Isipingo

<i>Meaning</i>	<i>n</i>	<i>%</i>
It means everything	16/49	33%
Convenient, close to everything	3/49	6%
Family life and history is here	6/49	12%
Friends and neighbours, community spirit	5/49	10%
Good place to live, happy comfortable life	3/49	6%

Source: Sutherland and Scott (2009: 64)

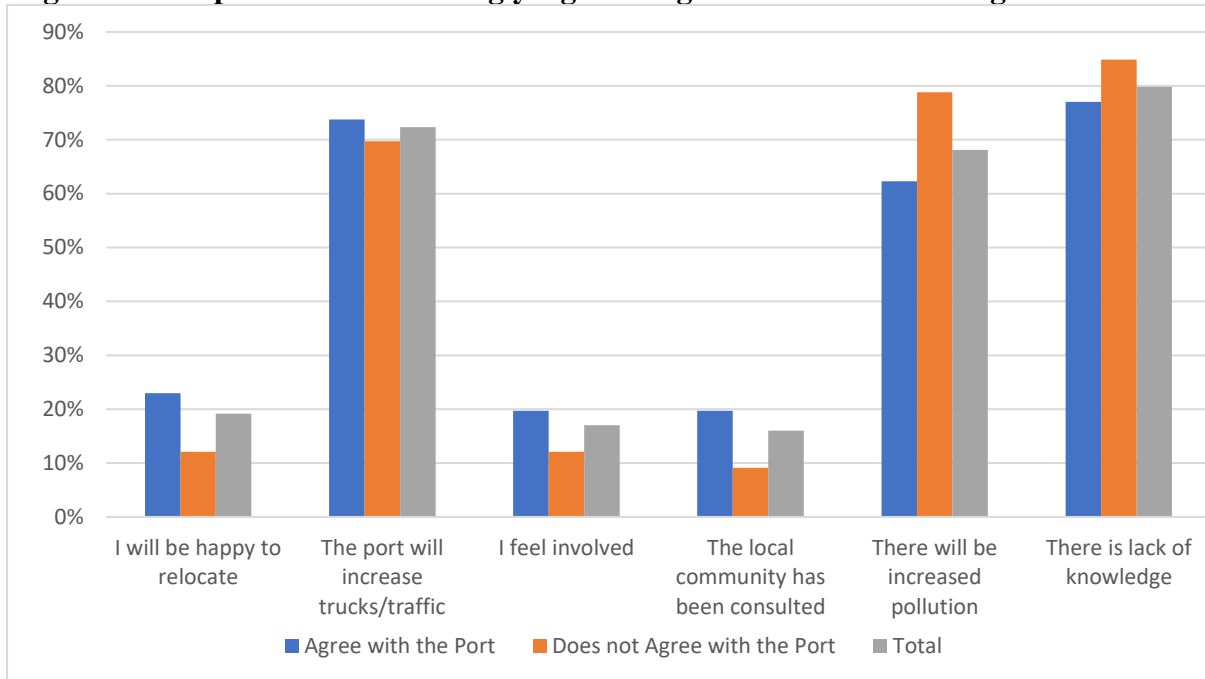
Figure 40 reveals the level of satisfaction regarding participation in the various decisions concerning the dig-out port. Reacting to the statement, “*I feel involved in / have a voice in the decisions taken regarding the dig-out port*”, most respondents felt that they had no influence in the decisions taken by the officials (41% strongly disagree and 32% disagree). Furthermore, the majority of respondents stated that they have not been consulted and consequently, they lack knowledge/or do not have information about the new port.

Figure 40: Level of Agreement with the Following Statements (n=94)



It would be expected those who supported (n=54) the port project will have positive perceptions about the project. This was not the case; respondents were generally concerned about the negative impacts and felt that there was lack of participation. For example, of those respondents who stated that they supported the project, only 23 percent strongly agreed/or agreed that they would relocate to make the way for the project (Figure 41). Furthermore, both groups were concerned about the impacts of heavy vehicles on the road (Figure 41). This resonates with the argument stated above that residents are strongly concerned about the impacts of the port regardless of the benefits it shall bring. It was also clear that support for the dig-out port was not unqualified.

Figure 41: Respondents who Strongly Agreed/ Agreed with the following statements



4.10 Conclusion

Durban has used megaprojects for urban regeneration and as instruments for becoming competitive. Large capital expenditure has been directed to megaprojects, thus revealing their power to influence the spatial planning policies in the city. Some of the examples include the Dube Trade Port, KSIA, Moses Mabhida Stadium, and the International Convention Centre. As indicated in this chapter, these megaprojects they configure social and economic spaces while having significant impacts on the natural environment. In the case of the dig-out it's the planning process has been characterised by exclusion of the public. Furthermore, findings indicated that Transnet and eThekweni Municipality have undermined socioeconomic and environmental costs while emphasising the benefits of the port.

This chapter has highlighted that Transnet proposed the new port in hope it would solve challenges of congestion in the existing port. However, it was also argued that the decision was taken without extensive stakeholder consultation. By making this decision, Transnet only considered economic efficiency and disregarding environmental and social costs.

The final chapter presents the evaluation and conclusion to the study.

CHAPTER FIVE: EVALUATION AND CONCLUSION

5.1 Introduction

Megaprojects play a major role in transforming urban landscapes. They are viewed as powerful instruments to ‘market’ and ‘sell’ cities as spaces of investments. A large body of literature has suggested that neoliberalism, urban entrepreneurship and globalisation play a huge role in influencing city governments to undertake big infrastructural megaprojects. South African cities have also followed this international trend in adopting megaprojects, and the proposed dig-out port is a case in point.

This chapter evaluates key findings of this study in terms of the conceptual and theoretical discussion presented in chapter two. To recap, the aim of this study was to investigate the impacts of the proposed dig-out port. The objectives of this study were to:

- i)* Review literature and critically analyse selected mega projects in Durban since 1994;
- ii)* Assess the projected and socio-spatial, economic and environmental impacts associated with the -dig-out port; and
- iii)* Examine the participation and ability of various stakeholders with regard to influence decision making in matters relating to the port.
- iv)* Assess the perceptions of residents in adjacent areas towards the dig-out port.

The following section summarises key findings from this study.

5.2 Key Findings

This study found that planning of the proposed dig-out port was not different from other megaprojects in the country. Hence, the project is likely to have similar impacts. However, because of the scale of the project and the existing conditions of the South Durban Basin, the dig-out port will have even more negative consequences for the citizens and the environment. The aim of this section is to summarise and evaluate key findings presented in chapter four.

5.2.1 The Need for the Dig-Out Port

There were three reasons given by Transnet on the need to build the new dig-out port. First, the need to keep up with the demand of increasing container freight in the port; this would reduce congestion. Container traffic is predicted to rise between 9 and 12 million TEUs in 2040, while the current port will be able to handle a maximum of 4.8 million TEUs. Second,

there was a need to build the dig-out port that will accommodate larger, modern vessels that require greater depth. Third, forecasts predict increased trade and freight in the Durban-Free State-Gauteng Corridor (SIP2) and the dig-out port would play a significant role in facilitating trade in the corridor.

However, predictions of increased freight are based on previous years of high economic growth before the financial crisis of 2008. Given the current low-growth rates in the country, there is a risk that the proposed port can become another white elephant megaproject. Also, forecasts about two recent megaprojects (Moses Mabhida Stadium and King Shaka International Airport) in Durban have been proven to be inaccurate. The Moses Mabhida Stadium is depending on taxpayer's money for operational and maintenance costs since it has not attracted soccer spectators. The King Shaka Airport is not making a profit.

Furthermore, the 2016 port statistics indicated that the port is actually handling fewer containers than previous years but continues to face issues of congestion and longer turnaround time. This suggests that the root causes of congestion are not due the lack of capacity, but rather inefficient operations. Transnet has been adamant that it will not explore the use of other ports such as Richards Bay and Ngqura, citing high costs of using these ports. However, in their calculation of costs, they ignore non-monetary costs of social and environmental impacts of building the new ports. As shown in chapter four, roads accidents, pollution and displacement will increase with the construction and operation of the dig-out port. Furthermore, given that Transnet does not maintain the road infrastructure, and such maintenance costs will be borne by the municipality and ultimately residents.

5.2.2 Benefits overestimated?

“The experience of Durban’s capital spending for economic development purposes has, to a large degree, lacked in intent to impact meaningfully and directly on the lives of the poor” (Robbins, 2005:70).

The above quote resonates with the substantial evidence in the literature noting the overestimation of benefits by promoters of megaprojects. According to Flyvbjerg (2007), misleading the public with inaccurate information is a known tendency in almost every country included in his study. This is a deliberate strategy used to gain support from the public and approval from investors. This has been the experience for most megaprojects in South Africa,

including the 2010 FIFA World Cup stadiums, transport and energy infrastructure. This section interrogates the exaggerated benefits associated with the dig-out port, including job opportunities and economic growth.

i) The Promise of Jobs

Transnet and eThekweni Municipality have promised thousands of jobs and billions in economic impacts. More specifically, they have estimated that 64 000 and 28 000 jobs will be created during construction and operational phases, respectively. Furthermore, new business opportunities in manufacturing, logistics, warehousing automobile industries will be created. There will also be new businesses in the form of tenders for the previously disadvantaged population. According to Transnet, the port megaproject will have multiplier effects in the economy, increase property rates and improve household incomes for Durban and KZN. Furthermore, Transnet argues that the port will improve the locational advantage and attract new industries to be based in Durban because of the dig-out port and the back of port logistics project.

The employment statistics estimated by Transnet have not taken into account jobs, businesses and livelihoods displacement that will result from the dig-out port (Bracking, 2013). This is one of the shortcomings of feasibility studies and cost-benefit analysis in megaprojects. There is a tendency to undermine non-monetary values and social challenges, and favour benefits in the form of revenues and profit. Issues relating to the quality of life, social capital and environmental sustainability are ignored. Those opposed to the dig-out port have suggested that job estimates are exaggerated as construction will favour capital-intensive (as opposed to labour intensive) strategies to speed up operations (Bond, 2014; groundwork, 2014). As Bond (2016: 4) argues, past capital-intensive investments at Transnet has led to the loss of employment and de-industrialisation:

The argument in favour of the port is mainly that jobs will be created and SA will have world-class infrastructure for export-led growth. But rising capital intensity at Transnet along with trade-related deindustrialization may result in fewer manufactured exports as well as net employment loss. This has been the norm since 1994 when democracy also ushered in economic liberalization after SA joined the World Trade Organization. Subsequent port expansion and Transnet restructuring did not create new jobs, but rather destroyed employment (Bond, 2016:4).

The idea that the port will increase property rates and household incomes is rooted in trickle-down economics which argues that investment in capital will scale down benefits to the local people. This hypothesis, however, has been proven wrong in many megaprojects.

ii) *Economic Growth at All Costs?*

The ‘economic growth at all cost’ narrative was evident from supporters of the megaproject. The narrative presented by Transnet and the municipality is that the dig-out port is not only necessary for addressing capacity but also for the economic growth of the region (Durban and KZN). However, other alternatives of using already available ports were not fully explored. Beyond rhetoric, there were no detailed plans on how jobs would be created in South Durban. Currently, the area of South Durban Basin is characterised by many social issues, including poor health originating from pollution, crime, poverty and unemployment. Transnet and allied industries have not invested enough to strategies that would reduce poverty in South Durban. Residents raised similar concerns about unemployment, crime and pollution.

These problems were not unique to Durban. Grobar (2008) in her survey of socio-economic conditions surrounding port areas, found that these zones had higher poverty and unemployment levels than the greater metropolitan areas:

When we compare port districts to their surrounding metropolitan areas, we find that unemployment and poverty rates are significantly higher in port districts. Thus, the presence of a large container port has not served as an engine of growth for the local area surrounding the port; in fact, the reverse appears to be the case... A possible explanation for this observed trend is that if large container ports generate significant local negative externalities, this may drive down rents in the vicinity of a port, thereby attracting low-income households. (Grobar, 2008: 513).

Harris (2014) claims that, in a city concerned with marketing and competitiveness, megaprojects have become a new planning strategy. Such megaprojects are built with the primary aim of attracting investments. However, when competitiveness is the primary ambition, then social and environmental justice is often ignored. The case studies of the Moses Mabhida, King Shaka International Airport and Dube Trade Port confirm the thesis by Bond (2011) that development strategies in the city of Durban have moved away from social welfare and redistribution to profit accumulation, which is often reaped by the business elites. Early planning and design of the dig-out port suggest that the profitability of the port of Durban and

other related business was the primary aim rather than addressing poverty in port-surrounding areas.

The following section discusses key findings on the underestimation of socio-economic and environmental costs of the dig-out port.

5.2.3 Cost Underestimated?

Early planning processes of the dig-out port revealed signs of ‘megaproject syndrome’, that is, deliberately underestimating costs (Flyvbjerg, et al., 2003). This is done by using outdated data, inaccurate forecasting models, technical errors, inexperienced forecasters (Flyvbjerg *et al*, 2002). This section summarises key findings on the underestimation of socioeconomic and environmental impacts.

According to Swyngedouw *et al.* (2002), most megaprojects are built with ideas of competition, branding, and image enhancement in mind. This leads to the socio-economic realities facing poor citizens to be ignored or given less attention (Evans, 2005). The ‘economic growth at all cost’ narrative was visible when Transnet dismissed any criticism of displacements of established residents, livelihoods, businesses and environmental impacts. In all documents accessed from Transnet, the emphasis was on job creation, economic growth and building green, sustainable port. The voices of the citizens, through formal requests for information and meetings, and public protests about the concerns about the negative impacts of the dig-out port were never heard by officials.

There were some agreements that there will be many spatial and land-use re-configurations as a result of the dig-out port. With these land-use transformations, displacement of residents, business and farmers would be inevitable As Watson (2014) argues, new urban development projects have a large impact on the poor and tend to create ‘exclusive’ benefits for the few:

Attempts to implement these fantasy plans within existing cities will (and is already) having major exclusionary effects on vulnerable low-income groups through evictions and relocations (Watson, 2014).

According to Doucet (2013: 2048), the results of entrepreneurial megaprojects is the further entrenchment of socio-economic and spatial inequalities as they promote

... the creation of affluent (and therefore exclusionary) spaces, gentrification, the commodification of the city and the privatization of space. These are goals which end

up reinforcing, shifting or masking the pre-existing economic, social and spatial divisions within the city.

In the case of the dig-out port, the exclusion of the public from participating in planning and decision-making processes suggests that benefits may be directed to powerful groups in the city, while residents continue to face socio-spatial externalities such as displacements, increased road accidents, loss of livelihoods and social and environmental decay. This argument is supported by (Majoor, 2011) who claims that megaprojects are carried out at very high speeds and urgency, focusing on how to stimulate private investments and tourism, and ending up catering for the needs of the elite and private capital. One consequence of such process is the increasing marginalisation of the poor (Majoor, 2011).

Another unresolved issue is that of airport farmers that occupy the DIA site. Transnet has suggested that there will be a solution to the issue of the airport farmers, but the views of the farmers and the civil society indicated the opposite. This will also impact on the livelihoods of farmworkers who are employed. By applying the wider value chain, while not investigated by this study, there will be impacts to the lives of residents who buy vegetables as well small businesses who purchase fresh produce from the farmers.

Evidence also suggested that Transnet will not remove residents by force, but various developments will be implemented, thus impacting negatively on the communities and forcing them to relocate. Results from Bracking and Diga (2015) and the community questionnaire indicated that residents have attachments to their places and social networks. Furthermore, many residents, although they agreed that the port must be built to increase employment opportunities, stated that they were not willing to relocate to other areas. This applied to many households irrespective of the socio-economic status such as employment, education and household income.

Another factor which could lead to the relocation of residents is likely to result from the increase of traffic and heavy vehicles around the port surrounding areas. This will be also intensified because of the logistics park proposed in the back of port. Currently, the impacts of heavy freight on people, infrastructure and environment are widely reported by community members, researchers and civil society. Although Transnet has stated that it will increase rail capacity, however, with the traffic predicted to increase beyond 120%, this will make a small difference in reducing heavy traffic flows around communities of South Durban. As 77% of all

logistics companies are truck-related (Kerry Seeping Environmental, 2013: 20), it would be costly and not an easy task to migrate the road freight to rail. With these impacts, road accidents and the destruction of infrastructure, are likely to lead to displacement of residents, which will inevitably mean the loss of livelihoods of poor households.

Environmental impacts were regarded as of less importance in the decision to build the new port. Past evidence has indicated that port and industrial activities had significant negative consequences for the Bay of Durban, which has been declining over the years. As argued in chapter four, though there will be impact assessments (social and environmental), however, these will not take into the consideration past ecological stress that has been accumulating over the years in South Durban. The issues of environmental justice, health and safety are ignored, and this suggests that residents will continue to burden with these negative externalities.

The South African National Environmental Management Act (NEMA) requires every new development to undergo various impact assessments (EIA and SIA). The Infrastructural Development Act passed in 2014, however, gives permissions to the PICC to remove any impediments that could delay infrastructural projects declared as SIPs. Since the dig-out port falls into this category, this could mean that the dig-out port could be fast-tracked, with no critical impact assessments. This could also lead to inadequate public participation in major decisions which will impact on the communities for many decades to come. A major issue is the lack of public participation.

5.2.4 Whose Development? Participation and Power

This study also focused on the politics of public participation in the decision making made regarding the dig-out port. One of the findings was that civil society and other concerned parties were not initially consulted when the decision to construct the dig-out port was made. Several sources reported that Transnet and eThekweni Municipality, through the partnership known as TEMPI, were the main players in the decision making. Furthermore, the organizational structure of the TEMPI process lacked the representation of a wide range of community organisations.

Both Transnet and the eThekweni municipality were reluctant to share information and documentation with the public. As a result of protests from civil society organisations resident Transnet and municipality initiated community engagement meetings. This was just a process of informing the community of the decisions taken during ‘high level’ meetings.

Consequently, many decisions were made in closed doors and boardrooms, thus indicating lack of transparency and democratic decision-making. This is not exclusive to the case of the dig-out port. Many megaprojects around the world are viewed as less democratic, adopt top-down decision-making approaches and driven by elites. For example, Flyvbjerg et al. (2003) argued that “citizens are typically kept at a substantial distance from megaproject decision-making”.

When some meetings took place, activists who raised critical points about the impacts of port expansions were dismissed as denying jobs for black people and ‘caring for frogs’. This was also confirmed by the researcher logistics summit organized by the eThekweni Municipality; it was filled with representatives from the business, Transnet, academics and city officials. Questions regarding the impacts of port expansions were regarded as unimportant. By revising the classical model of participation (Ladder of Citizen Participation) by Arnstein (1969), it can be argued that the degree of citizen participation relating to the dig-out port ranged from non-participation, informing, consultation to placation.

In Figure 42 the various stakeholders involved in the dig-out port project is mapped, though this is not an exhaustive list. Firstly, Transnet is the main player in the dig-out port, having more power for procurement and is, therefore, a key maker of most decisions. While the South African Road Agency Limited (SANRAL) is not directly involved, however, it will play an important role in the construction of the road infrastructure. Together, Transnet and SANRAL comprise SoEs (Figure 42).

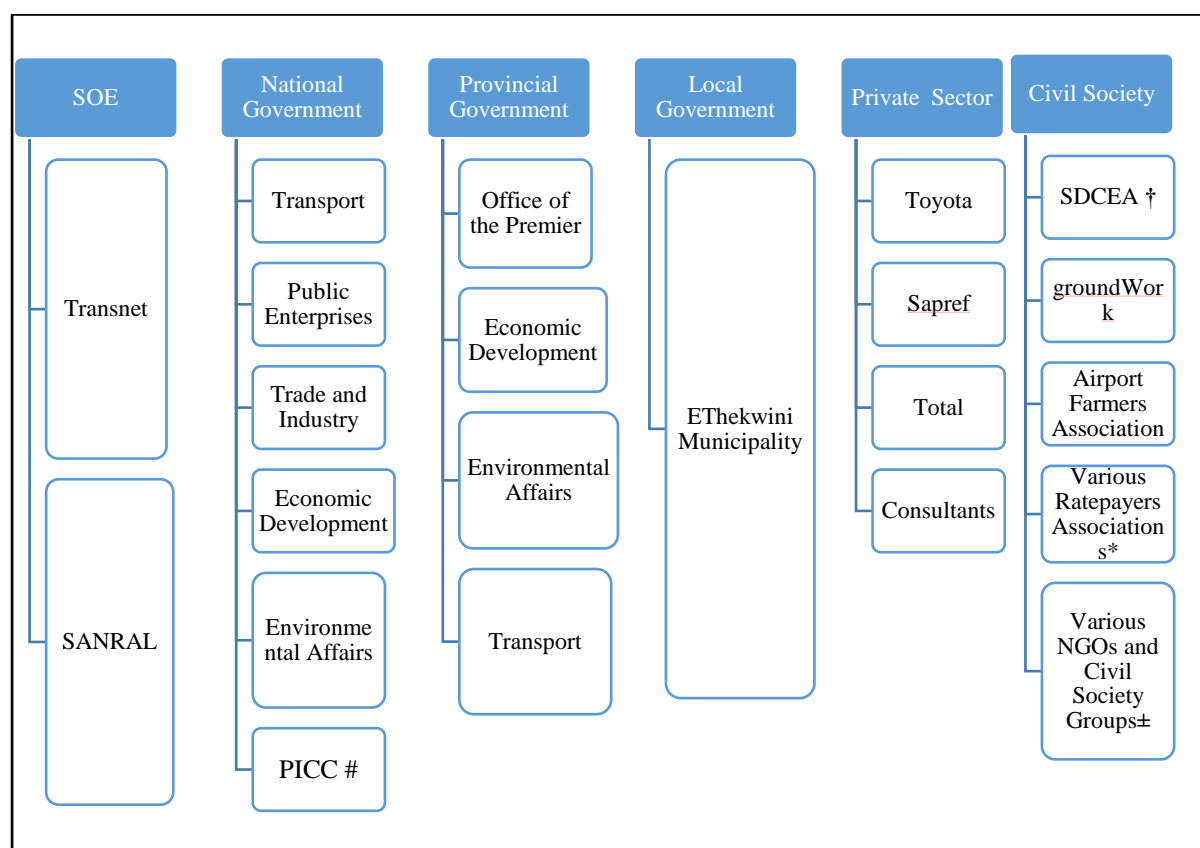
The next set of stakeholders are various national government departments that are (will be) involved in many decisions. The Strategic Integrated Projects (SIPs), in which the dig-out port and the Durban-Free State-Gauteng Corridor are falls in, are already managed by the national government. Furthermore, the KZN government has already indicated support for the dig-out port, and other megaprojects such as King Shaka Airport and Dube Trade Port. The eThekweni Municipality is also an important main player, often making key decisions with Transnet, and there appeared to be mutual endorsement between the organisations.

The private sector had a voice in influencing decision-making. The main reason for developing the dig-out port was to attract private sector investments. Consultants are important as they are procured to provide assessment services (EIA and SIA), which invariably favour megaprojects. Lastly, the civil society organisations that represent various and diverse interest groups ranging from wildlife, environment and social justice advocacy. Civil society organisations were the only group of the six stakeholders that opposed the dig-out port and represented residents and

community associations whose voices were muted. Collectively, civil society organisations like SDCEA provided a public platform for the voiceless and marginalised to mobilise and articulate their opposition to the dig-out port project. However, in terms of the ability to influence decision-making, the power of civil society changes the decision to develop the dig-out port was ultimately unsuccessful because of the overpowering influence of the other five stakeholder groups (Figure 42). It is evident that the retrospective ‘public participation’ undertaken by the eThekweni Municipality and Transnet was elusive and at best tokenistic. Similarly, the community of South Durban has viewed the process of stakeholder engagement as “a rubber-stamping exercise” (Späth, 2013: 1).

According to Fainstein (2008) megaprojects generally operate under business-oriented forms of governance. Bruzelius et al. (2002) further argue that megaproject governance processes lack adequate mechanisms to penalise poor performance. Consequently, where democratic participation and transparency are lacking, accountability is undermined (Majoor, 2008). In the case of the proposed dig-out port, the exclusion of the civil society structures and organisations, the lack of transparency and failure to provide the public with adequate information about the project since inception, and the collusion between political, business and bureaucratic elites, suggest that there will be little public oversight and accountability, especially with the inevitable cost overruns.

Figure 42: Stakeholders in the Durban Dig-Out Port⁴



5.2.5 Residents' Perceptions

It was evident from the survey that there were high levels of unemployment among the respondents. Furthermore, the majority of respondents reported their household income was less than R4000 per month, suggesting high levels of poverty. Recent statistics from Statistics South Africa (2016) confirms that poverty runs deep in South Africa. This also supports the view by Robbins (2015) that port-surrounding areas in Durban are characterised by poverty, crime and unemployment. In this thesis, it was argued that Transnet has not invested in areas surrounding the port (UKZN/19/06/2016). Residents also complained about environmental

⁴ † South Durban Community Environmental Alliance * Clairwood Residents and Ratepayers Association, Bluff, Isipingo, Merebank Residents Association, Umbilo Action Group ± Earthlife Africa, Centre For Civil Society, KZN Subsistence Fisherfolks, Airport Farmers Association, Silverglen Civic Association, Unemployed Movement of Umlazi, Lamontville Informal Settlement, Clairwood Informal Settlement, Right2Know KZN # Presidential Infrastructure Coordinating Commission

issues such as pollution; as noted in the literature, South Durban is often described as a toxic hub of South Africa (SDCEA, 2013; Bond, 2014; groundwork, 2014).

More than half of respondents were aware of the dig-out port, and word of mouth was one of the major sources of information, rather than communication from Transnet and the city of Durban. Most respondents stated that they do not have a voice/say in terms of decision-making about the dig-out port. Furthermore, most of the respondents stated that the community had not been consulted and they did not have enough information and knowledge regarding the dig-out port. These dynamics are not unfamiliar in most megaprojects. For example, Vento (2016) argues that participation in development projects is exclusive and is limited elite groups such as planners, architects, business elites, financiers and politicians. These decision makers have a tendency of imposing pre-planned decisions rather than involving people from the beginning (Joseph). Furthermore, the process of public participation is seen as too expensive and time consuming for the planners of megaprojects (Bearfield and Dubnick 2009). Also, mass public mobilisation could jeopardise entire projects.

Results from the residents' questionnaire suggested that about 65 percent of respondents stated that they would agree with the dig-out port if it provides jobs and improvement in their socio-economic status. These findings suggest that people expect megaprojects to be labour intensive and able to absorb a low-skilled workforce. However, as discussed earlier, such promises of benefits and jobs are often short-term, and often not fulfilled at all, and are only offered as sops to gain public approval (Flyvbjerg et al, 2003). According to Bond (2015), due to mechanisation and capital-intensive investments, the dig-out port will only benefit big businesses and local elites.

This study explored various theories and reviewed the literature on megaprojects. The study focused on the theories of neoliberalism and speculative urbanism and reviewed literature in human and urban geography on the nature, processes and impacts of urban megaprojects. The following section contextualises the case study of the dig-out ports within these theoretical frameworks.

5.3 Theoretical Reflections

Theories in human geography contend that neoliberalism has become ideological and hegemonic (Jessop, 2010; Peck and Tickell, 2002; Harvey, 2005; Barnett, 2010). From this perspective, urban areas have become spaces of neoliberal experiments. This has changed

governance in cities and city governments have adopted neoliberal practices to attract investments. Megaprojects are one of these practices. Furthermore, Goldman (2011) argues that these neoliberal practices are speculative. Against this background, this section revisits the theoretical frameworks and contextualises the case study of the dig-out port within these frameworks.

5.3.1 Neoliberalising Space

As indicated in chapter two, “neoliberalism promotes and normalizes a ‘growth-first’ approach to urban development” (Peck and Tickell, 2002: 394) and other strategies concerned with social welfare and justice must come second after the cities have secured investments. Findings from this study indicated that the dig-out port was conceptualised within this framework of *growth first* approach. The overriding themes circulating from those promoting the dig-out port were of economic growth, job creation, and competitiveness. Indeed, literature and empirical evidence suggest that it often megaprojects that look good on the paper that get approval from the public, government and investors (Flyvbjerg et al, 2013; Harris, 2014). In the case of the dig-out port, and documents from Transnet, the issue of meeting the ‘demand ahead of the supply’ was mostly emphasised. It was argued that this will result in thousands of jobs during the construction and operational phases.

The dig-out port is expected to result in higher multiplier effects and increased GDP, especially on the local economy. Eventually, it is argued that these benefits will ‘trickle-down’ even at the household level. Harvey (1989) argues that this is the tendency in the neoliberal urban development; by focusing on the “political economy of place rather than of territory” (Harvey, 1989:7). These placemaking strategies also have the habit of becoming such a focus of public and political attention that they divert concern and even resources from the broader problems that may beset the region or territory as a whole” (Harvey, 1989:8). These placemaking strategies also have “the habit of becoming such a focus of public and political attention that they divert concern and even resources from the broader problems that may beset the region or territory as a whole” (Harvey, 1989:8). Hence, the emphasis is on flagship projects like convention centres, theme parks and festival for international tourists and needs of residents come second. The new approach to urban governance is concerned with re-positioning cities and places within the global economy, and megaprojects are one of the instruments used to achieve this goal. By marketing the dig-out port as an investment and job creation strategy, Transnet and eThekweni Municipality argued that the port will solve problems such as

unemployment and poverty. However, the negative consequences related to displacements and social decay of residential areas are ignored. Furthermore, drawing from Harvey's argument above, recent megaprojects in Durban like the International Convention Centre (ICC) and the uShaka Marine World have failed to attract investments and create promised jobs, and in turn, subsidised from the public purse.

In the political economy literature, concepts of spatial fix and accumulation by dispossession are extensively debated. It is argued that the dispossession, displacement and other externalities visible at local scales are the results of macroeconomic contradictions. Bond (2016:4) argues that "global contradictions are often amplified at lower scales, especially when intensified metabolisms of capitalist commerce and energy threaten widespread displacement, pollution and community unrest". For years, evidence has suggested that South African ports are underperforming as results of high costs, long-turnover times and lack of efficiency. Furthermore, these inefficiencies have led to the port of Durban to be unable to cope with the rising demand. The solution for Transnet, then, was to look for 'value' somewhere else and this would be achieved by geographical expansion into the dig-out port. Additionally, the recent impacts of megaprojects in Durban such as the ICC, Moses Mabhida Stadium, etc. have indicated that these externalities become a burden to taxpayers when such investments fail to raise the projected revenue.

5.3.2 Speculative Megaprojects

Brenner and Theodore (2002) have suggested that various spaces experience variations of 'actually existing neoliberalism'. This suggests that neoliberalism is diffused differently at different spatial scales and that geographies of neoliberalism are variegated. In the case of the proposed port, one is able to point out actually existing neoliberalism, as articulated by scholars in Western Europe and North America, is practised differently. Indeed, Goldman (2011: 575), drawing from the case study of megaprojects in Bangalore, India, argues that:

These highly inequitable spatially diffused dynamics are not well explained by new urban theories focusing on the recent shifts experienced in Western cities, moving from an earlier Keynesian managerial stance to denationalized (Sassen, 2006), revanchist (Smith, 1996), neoliberal roll-back/roll-out (Peck and Tickell, 2002) or entrepreneurial (Harvey, 2005) models.

Goldman here makes the important notes of the strong involvement of parastatals in megaprojects in Bangalore:

...the newly empowered and internationally debt-financed parastatals oversee the rapid expansion of the city boundaries, the congealing of rural governments into a world-city one, and projects of land acquisition, airport and highway construction, housing townships, and new water and sanitation infrastructure (Goldman, 2011: 557).

Similarly, debt-financed Transnet has been the dominant player in processes related to port expansion. With the billions of rands of capital expenditure, Transnet has embarked on a journey of landing megaprojects in the country, including the pipeline project between Durban and Johannesburg and the proposed dig-out port. Such processes are beyond the explanation by models of neoliberalism provided by, for example, Harvey (1989), Brenner and Theodore (2002) Peck and Tickell (2002) and others. The case of Durban, however, showed that state-owned companies play an important role in landing these megaprojects and forging relationships between the private sector and government. As Bayliss, Fine, Robertson and Saad-Filho (2016:31), argue:

The state has long intervened to promote the interests of particular capitals against the interests of others, or capital as a whole against potentially destructive competition. That this remains the case under neoliberalism implies that the state does not privatise everything, does not rely exclusively on private finance, and can even exclude it in order to pursue other interests – not least, those of productive capital.

This suggests that neoliberalism is more than just the dominance of the private sector in the economy. In their study of thirteen case studies of megaprojects in Europe, Swyngedouw *et al.*, (2002: 552) argue that “despite the rhetoric of market-led and privately covered investments, the state is invariably one of the leading actors in the process: in ten of the thirteen cases discussed in this paper, its role is outspoken”. According to Barnett (2010: 8), neoliberalism is variegated and is diffused differently:

What remains unclear is why, if neoliberalism never appears in pure form, and when it does appear it is always a compound with other projects and processes, the outcome of any neoliberal ideational project should continue to be called ‘neoliberalization’.

In the case of the SOEs in South Africa, neoliberalism has been branded as an important BEE strategy. However, BEE has failed to redistribute economic opportunities to the previously

disadvantaged communities. Instead, BEE has been characterized by cronyism and favouring politically connected elites (Bond, 2014). International case studies suggest that corruption is the elephant in the room for most of the large public projects. There is no indication of how the dig-out port will reduce corruption experienced in other megaprojects such as Medupi, Kusile and Coega (Bond, 2014; groundWork, 2014).

The case of the dig-out port also illustrates the new accumulation strategy under neoliberalism. Transnet argued that the new port will be the green port, built under the ethos of sustainable port strategies. However, as Moody argues:

Port extensions and the huge “back of the port” logistics centres are gobbling up land and communities, often moving further and further inland. This in return requires new transport “corridors.” It isn’t just merchant capital because these relate to manufacturing production supply chains as well and, of course, commodities export. Pollution is massive. It was interesting to see that the apologists for all of this use the same bogus argument: less pollution or CO2 per container or product [because of economies of scale] (Moody, 2015, cited in Bond 2016: 3).

5.3.3 The Dig-Out Port and Branding Durban

The dig-out port was branded along the lines of creating economic opportunities for the communities, boosting the GDP and economic growth of the country and Durban in particular. Furthermore, various benefits were promised for the city residents and the population of KwaZulu Natal. Flyvbjerg *et al.* (2003) have argued that megaprojects generally overestimate their benefits in order to get approval from the public. The cases of the King Shaka Airport, Dube Trade Port and Moses Mabhida Stadium also indicated that benefits were overestimated (Crosby, 2012; Maharaj, 2011) which turn, resulted in the eThekweni Municipality paying for the operation of the stadium. Sager (2013:153) argues under neoliberalism, issues of social exclusion are justified as the neoliberal governance “uses the processes of symbolic inclusion, yet also relies on the processes of material exclusion”.

It is evident that a combination of factors directly or indirectly influenced the idea to build the new dig-out port. First, there were issues of supply and demand and exaggerated concerns that the port of Durban will not be able to cater for increasing future demands. Second, Transnet insisted that the global shipping industry was increasingly being dominated by large vessels, and therefore the dig-out port was necessary to accommodate these new ships. Third, there was

large influence coming directly from the national government through various policies and strategies such as the New Growth Path and Strategic Infrastructure Projects (SIPs). Forth, TEMPI was a coalition between Transnet, the city and other players.

One also finds that although there were other options of using already existing ports of Ngqura and Richards Bay. Such options were not fully explored. Also, it was argued that Durban was an already existing corridor with efficient logistics, that the new port would have enormous benefits for the city population, and ensure that Durban is the leading port not only in South Africa but also in Africa. In the face of other expansions in other ports in the southern African region, such as in Tanzania and Maputo, the dig-out port would ensure that Durban is still a dominant route for international freight. For the city of Durban, the port is a growth engine of the city, supporting a wide range of businesses such as manufacturing and logistics, while also proving backwards and forward linkages.

Consistent critical evidence in the literature suggest that megaprojects reflect the power and influence of business elites on government (Harris, 2014), and this is presented as PPPs. The ambition to market and ‘sell’ places and to create a globally competitive port would divert funds for serious community needs by local government (Harris, 2014). Evidence suggests that megaprojects in Durban (Moses Mabhida, KSIA, DTP and ICC) were heavily influenced by ambitions to create a competitive city. Similarly, the dig-out port seeks to attract major shipping lines and affirm to international investors that Durban is still Africa’s gateway to Africa and the world. In the entrepreneurial urban governance mode, the eThekweni Municipality has also utilised the proposed port as means to sell Durban internationally so that it is integrated into the global economy. Hubbard and Hall (1998) argue that while entrepreneurial megaprojects are assumed to increase investments, there is no ‘trickle-down’ of benefits to the poor, who often experience higher levels of deprivation.

The undertaking of megaprojects brings in new role players from the private sector in the governance of the city. This results in the change of urban governance and planning and public officials are expected to run on the ‘enterprise model’. This is the issue discussed in the next section.

5.3.4 Megaprojects and Urban Governance

The city of Durban has embarked on implementing megaprojects to enhance its competitiveness. Consequently, this has meant working with a wide range of actors in building

megaprojects. The dig-out port, Dube Trade Port and King Shaka International Airport are cases in point. These megaprojects have included provincial and national governments, the private sector and state-owned companies who have proposed various planning strategies in the city of Durban. Furthermore, the city has forged new coalitions with the private sector in ensuring the implementation of megaprojects. However, there are signs of exceptionalist and top-down governance, characterised by “characterised by less democratic and more elite-driven priorities” (Swyngedouw et al, 2002: 195). This was visible through the exclusion of the civil society in the planning of the dig-out port, and failing to respond to concerns raised by the public. This indicates lack of transparency, public accountability and exclusion of the citizens in sharing of key information influencing the decisions.

The partnership model in the initial planning of the dig-out port showed the signs of multi-scalar governance, with partnerships from the business, the city, and government. Moulaert *et al.* (2008) argue that such partnership models are nothing more than privatisation where public money is used for the construction of projects, while profits will accrue to the business elite. For this, public funds act as a subsidy for private investments and developers with hopes that cities will attract international capital and be competitive.

The case of the dig-out port, KSIA, DTP and Moses Mabhida Stadium indicates the changing nature of urban governance in Durban. Whereas at the dawn of democracy in 1994 the emphasis was on social welfare and provision of basic needs such as health, housing and education (Bond, 2002), with the GEAR neoliberal approach local government has shifted to advocating for efficiency, competitiveness and integrating the city to the global economy. This is not unusual for cities in the era of neoliberal globalisation:

Neoliberalism licenses an extrospective, reflexive, and aggressive posture on the part of local elites and states, in contrast to the inward-oriented concerns with social welfare and infrastructure provision... Today, cities must actively—and responsively—scan the horizon for investment and promotion opportunities, monitoring “competitors” and emulating “best practice,” lest they be left behind in this intensifying competitive struggle... (Peck and Tickell, 2002: 394).

The above case studies also highlight the role of neoliberalism and entrepreneurialism in creating ‘efficient’ urban governance. This brings us the role of neoliberal governmentality, which does not mean the withdrawal of the central or local state: “while neoliberalism may mean less government, it does not follow that there is less governance” (Larner, 2000:12). This

is ensured by enforcing different kinds of rationalities and technologies such as budgets, cost-benefit analysis and impact assessment processes:

setting targets and monitoring outcomes; transforming the ethos of governance from bureaucracy to business; giving agencies autonomy to act as long as they are accountable; and creating calculable spaces to monitor outcomes (relying heavily on auditing, targets, and rankings) (Leitner et al, 2007:3).

The governance of megaproject planning in Durban has been characterised by similar processes, where citizens are expected to respond to the dig-out port plans through written, formal public comments. The city refers to this as public engagement and consultation. When the concerned groups go through other channels such as street protests, they are disregarded as ‘caring about frogs’ and denying jobs for black people’. According to Ferguson and Gupta (2002), this is characteristic of neoliberal urban governance which runs on the enterprise model.

5.4 Recommendations

The City of Durban aims to be the “Most Caring and liveable city” by 2030 (eThekweni Municipality, 2012). The following objectives will help the city realise this goal:

- Ease of movement in the city.
- A safe environment in all parts of the municipal area.
- Access to economic opportunities.
- Resources to afford what the city offers.
- A clean and green city.
- Homely neighbourhoods.
- Access to services, in particular municipal, health and education services (eThekweni Municipality, 2012: 6-7).

However, this study suggests that the city is moving in the opposite directions, especially when one studies the impacts of megaprojects and the associated large-scale capital spending (Robbins, 2015). Economic opportunities for ordinary citizens, through the implementation of megaprojects, are being swept away (Watson, 2009). Large investments around the port areas have created social and environmental externalities, threatening established residential communities with displacement.

Against this background, this study offers the following recommendations:

- With their pace and scale of implementation, locally and internationally, megaprojects are here to stay. One of the key concerns was that civil society contributions were ignored. This calls for the appropriate and democratic planning of megaprojects, involving the public in the early stages. This would require accountability and transparency, and making information and documents available to the public.
- Promoters and planners of the dig-out port might argue that impact assessments would come up with appropriate impact mitigation. However, in the South Durban Basin, these assessments ignored the cumulative environmental and social impacts of industrial development. This calls for a more holistic approach to impact assessments. This would also require impact assessments to take into consideration the intrinsic value of the environment, quality of life, social capital and place-attachment.
- The advantages associated with the dig-out port have been very vague, and economic modelling and forecasts frequently overestimate benefits. The key recommendation would be to consider jobs, livelihoods, health, quality of life, displacements and other negative impacts which may not be quantified in monetary terms.
- International and local case studies have shown that big projects are prone to corruption. The planning stage of the dig-out port indicated a similar trend in other megaprojects in South Africa. Thus, anti-corruption mechanisms must be put in place to avoid cost overruns and abuse of taxpayers' money.
- Lastly, economic costs were only taken into consideration when exploring other alternatives such as the existing ports of Richards Bay and Ngqura. Improving efficiency at multiple levels at the existing, original Port of Durban may render the proposed new, dig-out port at the old airport in DIA superfluous.

5.5 Conclusion

The analysis of the proposed dig-out port in Durban demonstrates the power and the role of megaprojects in transforming urban spaces. This study contended that megaprojects are used urban development strategies to market and brand cities. Megaprojects reflect the changing nature of urban governance and the shift to neoliberal urban policy. In this case, neoliberalism is presented as hegemonic (Harvey, 2005). However, Brenner and Theodore (2002) have

argued that neoliberalism is diffused differently at different scales; this what they refer to the ‘actually existing neoliberalism’.

Megaprojects were also presented as an example of speculative urbanism (Goldman, 2011). While the aim of megaprojects is to integrate cities within the global economy and attract investment, however this is not guaranteed, and benefits are exaggerated. It is within this context that many scholars have described megaprojects as favouring the interests of investors and disregarding impacts for the ordinary citizens. Some of the impacts of speculative megaprojects are the underestimation of costs, overestimation of benefits, lack of participation and transparency and cost overruns.

The decision to develop the proposed dig-port in Durban was based on demand forecast. These forecasts, however, did not fully explore other options for using the ports of Richards Bay and Ngqura, which are not being used to their maximum capacity. The argument was that it would be expensive to expand these ports and Durban was chosen as the cost-effective option. This reflected the ‘economic growth at all costs’ ideology as social and environmental impacts were given little, if any, importance.

The Durban dig-out port is likely to follow the ‘megaproject syndrome’. First, initial planning showed that the public was excluded from the decision- making process. This could lead to cost overruns as there would be little public oversight. Second, the negative social and environmental impacts were underestimated, while benefits were overemphasised. Issues of pollution, displacement and loss of livelihoods were seen as ‘manageable’. Planners and officials have not learnt from past case studies of megaprojects in Durban where some are fast becoming ‘white elephants’. The dig-out port may well turn out to be yet another ‘white elephant’.

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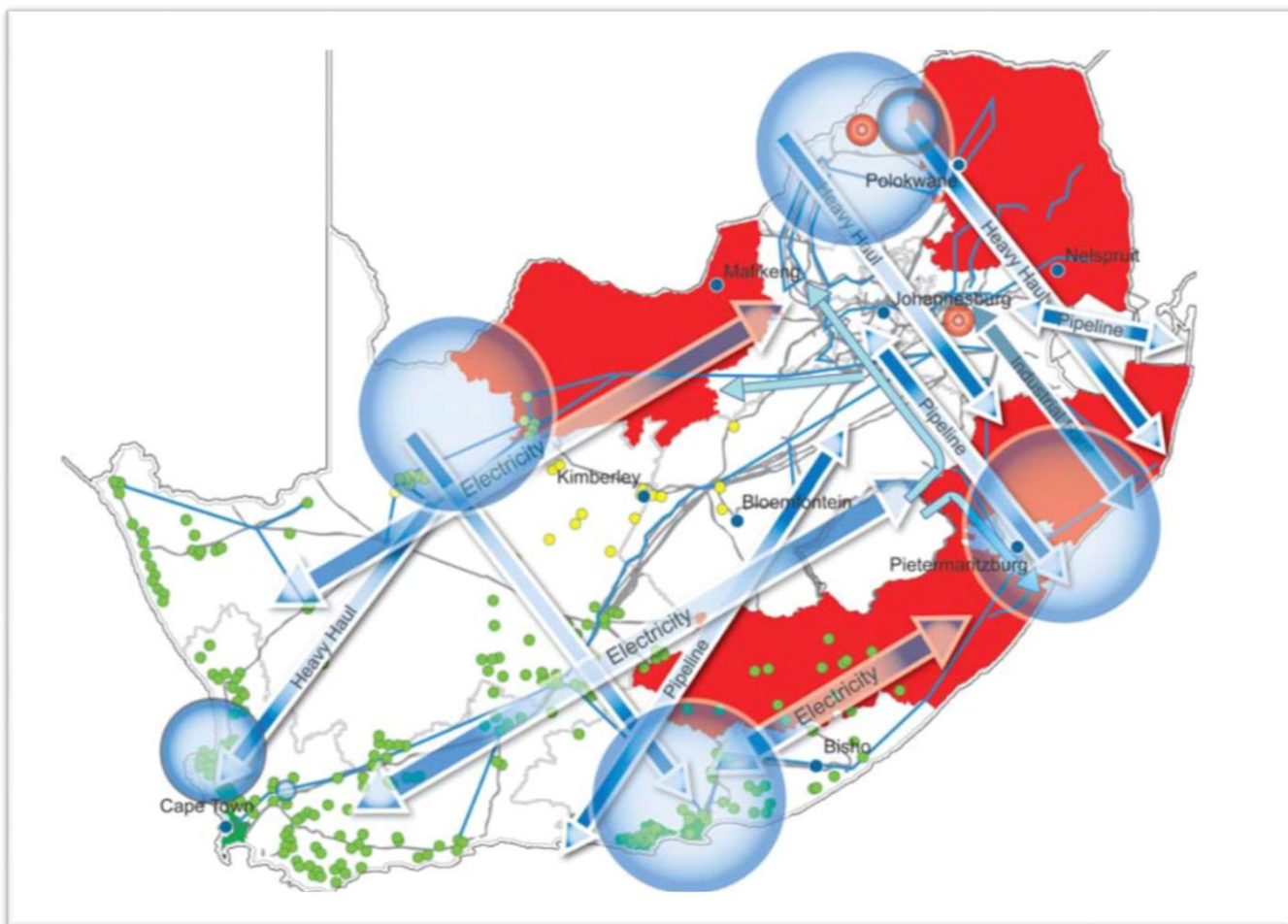
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APPENDICES

Appendix 1: SIP Framework



Appendix 2: SIP 2-Gateung Durban Corridor



Appendix 3: Community Questionnaire



Good day, Aubrey Mpungose is doing a study about the new **Dig Out Port/Habour** to be built in the old Durban International Airport site. I would like you to participate in this study. May I ask you a few questions in this regard? Your answers will be treated confidentially and anonymously. If any time during the interview you do not wish to continue, please feel free to do so. Thank you for your participation.

SECTION A: SOCIO-ECONOMIC PROFILE

A1. Gender):

1. Male	2. Female
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A2. Age (in years) _____

A3. Race Group

1. Black	2. Indian	3. Coloured	4. White	5. Other
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A4. Relationship to Head of the Household

1. Head	2. Wife/Husband/Partner of the Head	3. Son/daughter of the head	4. Parent of the head	5. Grandchild of the head	6. Other, specify
---------	-------------------------------------	-----------------------------	-----------------------	---------------------------	-------------------

A5. Marital Status

1. Never Married	2. Married	3. Divorced	4. Widowed	Traditional marriage/lobola	
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A6. What is your highest level of education completed?

1. No Formal education	2. Primary school	3. Secondary school	4. Certificate/Diploma	5. Undergraduate degree	6. Postgraduate degree
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A7. What is your employment status?

1. Formally Employed	2. Unemployed	3. Self-employed	4. Retired	5. Medically boarded	6. Student
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A8. Which of these following sources of income does your household get? (**Tick all that apply**)

Salaries/wages	1. Income from the business	2. Remittances	3. old age pension	4. child support grant	Disability grant
Other, please specify,					

A10. What is the total household monthly income (in Rands)?

1. Don't know	2. <1000	3. 1000-2000	4. 2000-4000	5. 4000-6000	6. 6000-8000	7. 8000-10000	8. 10000-12000	9. >12000, specify
---------------	----------	--------------	--------------	--------------	--------------	---------------	----------------	--------------------

A11. How would you classify your level of household income?

1. Low income	2. Middle income	3. Upper income
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A12. How many people, including adults

and children, currently reside in your household?

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A13 How many members of the household are currently employed?

--

A14. How long you have been living in this area?

1. <1 year	2. 1-5 years	3. 6-10 years	4. 11-15 years	5. 16-20 years	6. >20 years
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SECTION B: SETTING THE COMMUNITY CONTEXT

B1. In your opinion, what are the three key challenges/problems that exist in your area?

1.	2.	3.
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B2. Are there any strategies you know (or heard of) to address above challenges? Please mention.

1.	2.	3.
----	----	----

SECTION C: THE NEW PORT: PUBLIC CONSULTATION

C1. Are you aware of the new **port or harbour** that will be built in the Airport site?

1. Yes	2. No
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C2. If yes in C1, how did you hear about the plans to build a new port?

1. Media	2. Local Councillor	3. Public Meeting	4. Word of Mouth	5. Other, specify
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C4. Have you heard of any meeting or gathering about the new port taking place in the community?

1.Yes	2.No
-------	------

C5. If yes in C3, Did you attend?

1.Yes	2.No
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C6. If yes in C4, to what extent were you satisfied with the outcome of the meeting?

1. Very satisfied	2.Satisfied	3.Neutral	4. Not Satisfied	5. Very Dissatisfied.
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C7. Can you remember the representatives/officials who attended the meeting? (**Tick all that Apply**)

1. Transnet officials	2.Government Ministers	3. EThekweni Mun. Officials	4. Local Councillor	5. SDCEA	6. Ground Work	7. Other, specify
-----------------------	------------------------	-----------------------------	---------------------	----------	----------------	-------------------

SECTION D: Impacts of the new Port

D1. When the old Airport was existing, what were there benefits provided by the port to your household?

1. None	2. Job creation	3. Economic development	4. Infrastructural development	5. Skills development
6.Industrial development	7.Other, specify			

D2. How have these above changed since the airport moved out of the area?

D4. What do you think will be the main benefits of the new port/harbour? (Multiple responses permitted)

1. None	2. Job creation	3. Economic development	4. Infrastructural development	5. Skills development
6.Industrial development	7.Other, specify			

D5. How do you think the chosen benefits above will be achieved?

D6 The construction of the port is projected to cost more than R100 billion, do you think it is worth it to build this port?

1.Yes	2.No
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D8. Please give a reason for your answer above

D9. If no in D2, what is the best alternative for the use of the land?

1. Farming/agro-processing	2. Light manufacturing industry	3.	4. Infrastructural development	5. Skill development
6. Industrial development	7. Other, specify			

D.10 Please give a reason for the above choice.

D11. What do you think will be negative impacts of the new port? (Tick all that Apply)

1. Environmental	2. Increased traffic congestion	3. pollution	4. displacement	5.
6.	7. Other, specify			

D13. For you, what will be the key benefits do you think will be brought by the new port?

1.	2.	3.
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D14. In your opinion, what will be the three key negative impacts to be brought by the new port?

1.	2.	3.
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SECTION E: ATTITUDES AND PERCEPTIONS

E1. Please rate your level of agreement or disagreement with the following statements with regard to new port within your community:

1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly agree

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Disagree
a. The new port must be built					
b. The new port will create job opportunities for this area					
c. I will be happy to relocate somewhere else for the new port to be built					
d. The new port will increase traffic congestion					
e. I feel involved / have a voice in the decision making with regard to the new port					
f. The local community has been consulted and stated their opinions with regard to the new port					
g. There will be increased pollution and other negative environmental impacts when the new port is built					
h. There is lack of knowledge regarding the new planned port					

E2. Do have any other comments you would like to share?

Appendix 4: KIIs Interview Questions

GENERAL

- a) Can you please give a brief description of Transnet? **Probe:** When was it started? Is it publicly or privately owned? What kind of operations and projects does it undertake? What is your current role in the company? What are you responsible for?
- b) In your opinion, what is the value of Transnet in the country? What are some socio-economic that country faces and how Transnet is currently responding to them?
- c) What is the role of the Transnet National Port Authority within the company? How are South African Ports managed? Can you give a brief outline of the stakeholders involved in the management of port?
- d) What is the role played by South African ports in the economy and society? How have South African ports performed in relation to other ports in Africa and the rest of the world?
- e) What is the role of the Port of Durban in the national, provincial and local economies? What are some positive and negative impacts of the Port of Durban? What has been the performance of the Port of Durban recently? **Probe: what are problems currently experienced by the port of Durban?**

DESCRIPTION OF Dig out Port

- a) Please provide a brief description of the dig-out port? What was the catalyst for the project? What are the different stages and what are the expected start and completion dates?
- b) I now want to find out more about the specific activities that will be undertaken. Please provide a description of the activities/inputs/resources that will be needed for the new port? **Probe:** How was the budget for these activities determined? What is the estimated total cost of the project?
- c) What is the role of Transnet in the planning, design and implementation of the new dig out project? What are other important stakeholders involved in the project?
- d) What is the funding model for the new project? Who will be the principal funder of the project? **Probe:** will it be publicly or privately funded (or partnerships)?

- e) What are the expected developments or changes associated with the new port (eg. Railways, roads, relocation of business)?

Benefits of new Port

- a) What are the main benefits of the new port?

Type of benefit	During the construction	After the construction

- b) What will be the breakdown of benefits **during the construction of the port** according to the stakeholders below?

Stakeholder	Benefits
Business/Private sector	
National economy	
Provincial economy	
Local economy/eThekweni	
Communities	
The Port of Durban	

- c) What will be the breakdown of benefits **when the port is operational** according to the stakeholders below?

Stakeholder	Benefits
Business/Private sector	
National economy	
Provincial economy	
Local economy/eThekweni	

Communities	
The port of Durban	

- d) Please briefly list various impact assessments that have been undertaken for the new port.
What have been the results of the various impact assessments?

4. Negative Impacts of the new Port

- a) In your opinion, and from various evidence, what are the key negative impacts that will result from the new port?

Social:

Economic:

Environmental:

- b) What mitigation strategies are planned for the negative impacts:

Social impacts:

Economic impacts:

Environmental impacts:

- c) Generally, how will the new port change the social and spatial setting of the area? (railways, roads, traffic). What is the possibility of relocation of businesses and residential areas?

5. Planning Process, Stakeholder Engagement and Decisions

- a) How was the land for the new port acquired? At what cost? Is there any additional land required? How will it be attained?
- b) How has the community and civil society responded to the proposed new port? How have they have been involved in the process of decision-making?

Appendix 5: Consent Form

Hello, my name is, I am from the School of Agricultural, Earth and Environmental Sciences (University of KwaZulu Natal and I am conducting a study for my Masters in Geography on the impacts assessment of the **new dig-out-port** to be built in Durban. Given your **knowledge/involvement in this project/as a member of the community where the new port will be built**, I would like to take up some of your time to ask you a few questions.

I am kindly requesting you to participate in this study and would like to explain this consent form to you and then let you choose if you would like to participate.

The Formal Title of my Thesis is: Social, Economic and Environmental Impacts of proposed Port expansion in Durban.

Study Procedures

I am interviewing several stakeholders participating in, or have knowledge of the new port to be built in Durban.

I would like to digitally record the interview in order to ensure that your responses are adequately captured. The digital record will be maintained on a computer in a central data base and will be available to me and my supervisor and is intended for the use for analysing the data collected for this study. This data will be stored in a safe location for the period of 5 years, and may be disposed afterwards.

Possible Risks

The information provided by the respondents will be archived and used for research work now and in the future in ways that will not reveal who you are. No major risks as a result of your participation in this research are envisaged. Your identity will be kept confidential. Your name will not be attributed to any of the comments made in the final report.

Possible Benefits

There will be no direct benefits to you from this research. We hope that our research findings will assist all the stakeholders involved in the new port project in enhancing the benefits of the project and informing the policy making about the perceptions and expectations of various stakeholders.

Voluntary Participation

Participation in this study is entirely voluntary and you may choose to withdraw your participation at any time. You may choose not to participate in this study, and this decision will be respected. Furthermore, you have the right to choose if you would like to answer a question or not.

Questions

Any study-related questions, problems or emergencies should be directed to the following people:

Mr Aubrey Mpungose: 081 881 8688/031 542 5522; email: ampungose@hsrc.ac.za and/or

Prof. Brij Maharaj (supervisor): 031 260 1027/ maharajB@ukzn.ac.za

CONSENT

I hereby agree to participate in research into the Social, Economic and Environmental Impacts of the proposed Dig-Out Port. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to benefit me personally in the immediate or short term. I understand that my participation will remain confidential.

.....

Signature of participant

Date:.....