UNIVERSITY OF KWAZULU-NATAL

AN EXPLORATION OF THE CONCEPTUALISATION AND ENACTMENT OF REGIONAL ECONOMIC DEVELOPMENT THROUGH AN ANALYSIS OF THE DURBAN AEROTROPOLIS IN KWAZULU-NATAL, SOUTH AFRICA

BY

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Abstract

This study explores the conceptualisation and enactment of regional economic development (RED) through an analysis of the Durban Aerotropolis in KwaZulu-Natal, South Africa. The study is undertaken during a time where the process of globalisation is progressively increasing the importance of regional processes and the role of local actors in shaping development trajectories (Ascani, Crescenzi & Iammarino, 2012). These regional processes imply practical action going beyond the limits of traditional local economic initiatives (Amin, 1999) commonly referred to in the South African context and in other parts of the world as local economic development (LED). In this regard, the major problem prompting the enquiry in this study is the tendency of vagueness and ambiguity in the discourse of policy documents and government strategies relating to regionally inclined processes. More specifically, while the Durban Aerotropolis Strategy alludes to the impact of the Durban Aerotropolis on the development of the region and connecting regional economies, the conceptual vagueness of such allusions has consequences for both theoretical and empirical RED research as well as implications for economic development policy development and implementation. This calls for deconstruction of the relevant development discourse to provide a clearer conceptualisation of RED. The problems just mentioned are further compounded by a nomenclature shift in South African practitioner circles with incorporation of issues pertaining to the 'region' and associated difficulties, in what was hitherto confined to more specifically local issues of economic development. These difficulties relate to the way economic development practitioners proceed with their work in the absence of a context-specific conceptualisation of RED, coupled with lack of understanding of the nature of RED projects and of how they are implemented. To find solutions to these problems, the study examines the conceptualisation of the region inherent in RED through the Durban Aerotropolis. It seeks to understand the enactment of RED through collaborative and cooperative governance mechanisms and through agglomeration and clustering of business activity, and it explores coordinated investments for regional marketing within the Durban Aerotropolis. This was done using exploratory qualitative research within a social constructivist paradigm in which respondents were selected using a purposive sampling approach. The data was collected through in-depth, face-to-face interviews and analysed using a thematic analysis technique.

The findings of the study reveal that *function*, *form* and *scale* are central characteristics of the way that the region is conceptualised in the case of the Durban Aerotropolis as an instance of RED. Here, function is the purpose of a RED project, form refers to the kind of economic

development mechanism or strategy that could assist in fulfilling that purpose, and the scalar characteristics establish the extent, reach and magnitude of the project—factors that have a direct bearing on the practical enactment or implementation of RED projects. It also emerged from the study that regional conceptualisation should be done by the various stakeholders of the project who have a responsibility to see it succeed through collaborative and cooperative governance. Furthermore, RED enactment entails agglomeration and clustering of business activity which can be achieved by attracting people and investment. This, however, requires coordination of efforts for regional marketing in which stakeholders work on the competitive advantage of their region through development of infrastructure, skills development and capacity building, and provision of incentives. Overall, the study establishes that conceptualisation of RED entails defining the objectives of RED and that it precedes RED enactment. However, RED enactment requires two facilitative mechanisms which are collaborative and cooperative governance, together with coordinated investments and collaborative efforts for regional marketing – to achieve the desired outcome of RED, which is an agglomeration and cluster economy with its associated externalities. The study has thus contributed to the conceptual clarification of regionally inclined processes of the Durban Aerotropolis. This will subsequently assist in theoretical and empirical RED research as well as economic development policy development and implementation. The study will also help to establish clearer and simpler nomenclature shift and will impact the work of economic development practitioners by making provision for a context-specific conceptualisation of RED and will provide new knowledge that will add significantly to understanding of the nature of RED projects and their implementation.

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A qualification, it may be in the eyes of many but to me it was an opportunity through which I truly got to know myself. At times it felt as though I was losing the essence of who I am, but little did I know that the slowness of the progress was a time for me to discover who I truly am and the strength I truly possess. I'm known to find thrill in challenges but I never thought I was crazy enough to subject myself to one of this magnitude. It is without regret nonetheless because from this day onwards, I know for sure that there is NOTHING IN THIS LIFE I CANNOT FACE AND OVERCOME & I KNOW that ALL MY DREAMS (every single one of them) are VALID and ATTAINABLE.

This is a gift to myself, for all the hard work throughout my academic career. It's for all the sleepless nights, the headaches and the anxiety attacks. This is but one of the many seeds of greatness I am planting. **Thank you Heavenly Father, 1 John 5v13-15!**

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Acronyms and abbreviations

AAA- Amsterdam Airport Area

ACSA- Airports Company South Africa

ADC- Aerotropolis Development Corporation

AEXCO- Aerotropolis Executive Committee

AIA- Aerotropolis Institute Africa

AMU- Aerotropolis Management Unit

CEO- Chief Executive Officer

DTI- Department of Trade & Industry

DWC- Dubai World Central

EDTEA- Economic Development, Tourism & Environmental Affairs

ESID- Economic & Strategic Infrastructure Development

FDI- Foreign Direct Investment

GCO- Zhengzhou International Airport

GDP- Gross Domestic Product

GVC- Global Value Chains

HAD- Housing Development Agency

IATN- International Airport Tancredo

ICT- Information & Communications Technology

IDZ- Industrial Development Zone

INFRAERO- Infraestrutura Aeroportuária

IT- Information technology

KSIA- King Shaka International Airport

KZN- KwaZulu-Natal

LED- Local Economic Development

MEC- Member of the Executive Council

MNE- Multinational Enterprise

MoU- Memorandum of understanding

OECD- Organisation for Economic Co-operation and Development

ORTIA- O. R. Tambo International Airport

PGDS- Provincial Growth & Development Strategy

PSEDS- Provincial Spatial Development Strategy

R & D- Research and Development

RED- Regional Economic Development

RLED- Regional and local economic development

SEZ- Special economic zone

SMMEs- Small, Medium & Micro Enterprises

SIP- Strategic Infrastructure Project

THPD- Tongaat Hulett Property Developers

TKZN- Tourism KwaZulu-Natal

TIKZN- Trade & Investment KwaZulu-Natal

Chapter 1
Introduction

The challenge of addressing employment, poverty and inequality has become a notable concern for development in South Africa and around the world (Nel & Rogerson, 2005). In this regard, local economic development (LED) has emerged as an alternative to mainstream economic development, widely used throughout the developed and developing world, that, according to Rodriguez-Pose and Tijmstra (2005), simultaneously enhances economic growth and reduces poverty within localities. LED strategies offer a more people-centred and locally-centred alternative to mainstream economic development practices which seemingly fail to adequately address social and economic development problems of certain localities. According to Roberts (1993:36), "the disappointing results of traditional top-down and supply-side sectoral development strategies in combating the resulting rise in unemployment and regional inequality drove the search for alternative development strategies that would offer opportunities for growth to all areas".

Local economic development is clearly a complex form of development and may well give rise to problems (Blakely & Leigh, 2010; Akudugu & Laube, 2013). Being territorially based (i.e. specifically focused on a particular space, place, area), and being locally owned and managed to increase employment and economic growth (Lira, 2005), LED strategies are designed to approach development as a local rather than a sectoral problem. According to Canzanelli (2001:9), LED may be defined as

> a process where the local actors shape and share the future of their territory. We could define it as a participatory process that encourages and facilitates partnership between the local stakeholders, enabling the joint design and implementation of strategies, mainly based on the competitive use of the local resources, with the final aim of creating decent jobs and sustainable economic activities.

This enhances competition between localities because it puts the focus on subnational regions (meaning between localities) rather than countries which compete with each other for investment, economic activity and labour. This territorially based approach to economic development has two main consequences. The first is the wide variety of development strategies and the second is that LED policies that are territorially based tend to emphasise efficiency rather than equity in development (Rodriguez-Pose & Tijmstra, 2005). Simply put,

while traditional development sought and attempted to find balance between economic efficiency and territorial equity, LED prioritises efficiency of each locality; as a result territorial inequality arises as stronger and more prosperous localities are likely to outperform their less prosperous counterparts (Ascani, Cresenzi & Iammarino, 2012).

In the South African context, specifically, LED is notionally conceived as enabling the pursuit of both socio-economic redress and economic development (Nel & Rogerson, 2016). Because of the high levels of poverty in the country and increasing decentralisation in government, local governments are faced with the responsibility of both improving the formal market economy and fostering and supporting the informal or lower end of the economic spectrum (Nel & Rogerson, 2005). This binary is spoken of in terms of an alternative between pro-poor LED and pro-growth/pro-market LED. Pro-poor LED prioritises poverty alleviation as a significantly more vital policy issue on LED agendas (Harrison, Todes & Watson, 2008; Nel & Rogerson, 2005; Rogerson, 2004). Pro-growth or pro-market LED focuses on seeing economic development as a mechanism for creating a conducive environment for investment and expanding the established economic base (Nel & Rogerson, 2005). Pro-growth LED is said to be 'boosterist' (Nel & Rogerson, 2005).

This binary in LED discourse therefore plays a role in the complexity of LED practice where practitioners are unclear about whether they should prioritise pro-poor or pro-growth/market LED. The complexity comes in the form of local governments delivering more social rather than economic projects in the LED units (Nel & Rogerson, 2016; Rogerson & Rogerson, 2012; Rogerson, 2010). According to Nel & Rogerson (2016),

> Lack of clarity about this issue and lack of a uniform central state policy in this regard has impacted negatively on local understanding, delivery and outcomes by local governments, which are regarded as the key agents of LED delivery. Pro-poor agents continue to pursue community-focussed LED interventions while pro-growth would ideally prioritise engagement with the business community and economic role-players generally.

Before going further, it is vital to note that LED is an identified mandate which local government is required to pursue to improve the economic and social wellbeing of communities (Nel, 2001). LED is also a key element in local government planning processes (Abrahams, 2018; Rogerson & Nel, 2016; Bartik, 1991). In the South African context, local municipalities therefore become the seat of LED, and these are some of the areas that have been referred to by Rogerson & Nel (2016) as 'distressed'. This is because local governments (what we know

as municipalities) are the most undeveloped and deprived spaces in the country. Furthermore, although the definition of LED extends in part to include partnership between local governments, NGOs, community-based groups and the private sector (Helmsing & Egziabher, 2005), LED has come to be seen more as a local government function and less as a strategy grounded on principles of partnership and engagement with the private sector – with the possible exception of selective interventions in the larger cities (Nel and Rogerson, 2005; Rogerson, 2008). Engagement between the public and private sector has however been difficult, if it exists at all (Nel & Rogerson, 2016). This, again, is because of the inherent binary in the discourse and narrative of LED as a development alternative. It has led to unhelpful tensions rather than collaboration between the private sector and the local state (Nel & Rogerson, 2016).

Table 1-1 highlights the differences in the enactment or implementation of LED from the pro-poor and the pro-growth/market views. The list provided is not exhaustive; it is merely to paint a picture of what each of the approaches entail. The table comprises aspects presented in Nel & Rogerson (2016).

Table 1-1 Pro-poor vs pro-growth/market LED

Pro-poor LED	Pro-growth/market LED
Small towns / municipalities / distressed areas'	Larger cities / metropolitans
Cooperatives	Investment strategies
SMMEs	Infrastructure investments
Agriculture	Support for formal business activity
Informal Sector	Marketing / place promotion

Author's own

Nel and Rogerson (2016) refer to pro-growth/market strategies as being more diversified and comprehensive as they resonate with more sophisticated policy and strategy development processes pursued in metropolis areas. At the larger city or metropolitan area level, there is evidence of public–private partnerships, and working with the private sector does take place (Houghton, 2011). Nel and Rogerson (2016) refer to pro-growth/market LED as chiefly being "macro-spatial interventions" such as "transport associated infrastructural development corridors, Industrial Development Zones and Special Economic Zones". This list highlights the

stark differences between pro-growth/market LED, which is about macro-spatial intervention, and pro-poor LED, which is representative of sub-sectoral interventions (e.g. agriculture, the informal sector, SMMEs, cooperatives) located within the poorer parts of the country and, in particular, local municipalities.

What has happened in South Africa, however, and particularly in KwaZulu-Natal, is that the factors mentioned above have led to incorporation of the regional aspect in economic development. This is exemplified in the regional and local economic development (RLED) initiative in which local governments have been attempting to stimulate and maintain business activity (and prioritise efficiency) while attending to social issues. Regional economic development (RED) *per se* – as distinct from RLED – offers a cooperative development approach for inter-local relations (i.e. relations between neighbouring local governments), in contrast to the LED and RLED approaches in which local governments would compete with each other in seeking to attract resources and investment (Olberding, 2002:480).

Set against the background outlined above, this study investigates how RED is conceptualised and enacted through the Durban Aerotropolis in the eThekwini and iLembe District municipalities in KwaZulu-Natal (KZN), South Africa. The investigation was preceded by a scrutiny of how the stakeholders involved in this Durban Aerotropolis project have conceptualised the region in the context of RED within the KZN policy and practice arena. In turn, the review of literature explored the fundamentals of space, place and the region. The objective was to establish a better understanding of the developments that are linked to these concepts. Another interesting dynamic in this enquiry is the reality of the shift in nomenclature from *local economic development* to nomenclature that incorporates the regional aspect in understanding shifts within the economic development space in South Africa.

An important stimulus for this study was a reading of Doreen Massey's (2005) book *For Space*, which made it apparent to the researcher how important the implicit assumptions are that we make about space. According to Massey, the way in which we imagine space carries with it social, political and economic effects. One dangerous ramification of conceptualising space in this way is that it can lead to conceiving of other places, peoples and cultures simply as phenomena 'on' this surface. In this way, Massey suggests, many are deprived of their histories and are relegated to marginalised spaces where they are further deprived of opportunities and responsibilities. In the understanding of space brought about through globalisation, "geography turns into history and space into time" (Massey, 2005: 5). This too has social and political

effects as it can imply that places do not have trajectories, histories and potential of their own. Lastly, Massey adds, space can be conceptualised in the sense of *place*. Here, place is a political term which is usually evoked as 'local place', said to be the sphere of the everyday and a geographical source of meaning (Massey, 2005).

In essence, Massey (2005) emphasises that space is a contested concept and argues that it is also very important to the process and progress of our globalised economy. There is, however, recognition that space offers a combination of political and economic opportunities (Massey, 2005). In this regard, spatial development planning therefore emerges as a method used, largely by the public sector, to influence the future distribution of activities in 'space' (Van den Brink, 2007). Spatial development planning involves the identification of long- or medium-term objectives and strategies for territories, dealing with issues of land use and physical development as a distinct sector of government activity, and with the coordination of sectoral policies such as transport, agriculture and the environment (Koresawa & Konvitz, 2001).

The KZN Provincial Growth and Development Strategy (PGDS) which directs the course of development in the province, recognises that there is uneven distribution of social need and economic development and that spatial disparities are sustained due to a lack of fairness in the spatial distribution of natural resources, historical imperatives and cultural factors. Furthermore, the KwaZulu-Natal Spatial Development Framework identifies historical spatial planning as an aggravating factor in these disparities (KwaZulu-Natal Provincial Planning Committee, 2011). In response to these inequalities, the PGDS is strategic and targeted in nature, requiring specially-crafted interventions to be undertaken within specific geographical areas of need and potential. As a result, various provincial strategies aimed at promoting growth, development and job creation are being developed, following a thorough investigation of the existing profile of the province and an analysis of the strengths, weaknesses, opportunities and threats of the current situation. These include infrastructure development, investment attraction, business development and spatial economic development. One catalytic programme launched through the impetus of the PGDS, and which is the focus of this study, the Durban Aerotropolis. It is anticipated to be a job driver and a catalyst for economic development. The Durban Aerotropolis was specifically selected as a case of analysis in this study because it is a greenfield project which is currently at its planning phase. This, means that it allows for a clear demonstration and understanding of the governance mechanisms, the clustering and agglomeration dynamics and the coordination of efforts for regional marketing. All these factors are critical for exploring the conceptualisation and enactment of RED.

The draft KZN Integrated Aerotropolis Strategy reveals that the KZN provincial government adopted the aerotropolis as a project geared towards advancing industrialisation and driving economic development in the province (Department of Economic Development, Tourism & Environmental Affairs, 2015). The mandate for pursuing this project has been assigned to the KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA). There is acknowledgement that although the Durban Aerotropolis is a big infrastructure project and is spatially situated in the eThekwini and iLembe municipalities, it is also a provincial project which requires the cooperative and joint efforts of the various provincial governments, relevant district and local municipalities, and development agencies. While it is thus clear that the space which this project occupies is in defined political jurisdictions, the question that remains is how the project will foster development as per the vision below.

> The Aerotropolis project is identified as one which will promote the gateway status of the province while engendering economic growth and job creation. This is expected to turn the region into a bustling hive of economic activity and become a regional economic powerhouse. The department is ardently pursuing the development of an Aerotropolis that impacts the entire province through connecting KZN regional economies to South Africa, the Southern African region and the entire global economy through King Shaka International Airport. (EDTEA, 2015: viii)

1.1 Problem statement

This study is being undertaken at a time when globalisation is progressively increasing the importance of regional processes and of the role of local actors in shaping development trajectories (Ascani et al., 2012). The literature shows that regional processes imply practical action which surpasses the limits of traditional local economic initiatives (Amin, 1999). This is because regionalisation entails the co-presence both of actors themselves and of their capacity to 'come together', which, one can assume, would be the case regardless of spatially-related constraints (Cloke, Philo & Sadler, 1991). From these regional processes emerges regional economic development, necessarily underpinned by spatially-bounded, localised forces that trigger economic development and push wealth and welfare to agglomerate in specific locations within the country (Ascani et al., 2012). Furthermore, successful innovation and related economic development mostly occurs regionally where the systematic and repeated interactions between relevant actors, encouraged by a favourable institutional framework, shape the innovative capacity of specific regional contexts (Ascani et al., 2012).

In considering the factors outlined above, the major issue prompting this enquiry is vagueness and ambiguity in the discourse of policy documents and government strategies. Conceptual vagueness in allusions by the KZN Integrated Aerotropolis Strategy (2015) to the potential impact of the aerotropolis on the development of the region and connecting regional economies has consequences for both theoretical and empirical research and implications for policy implementation (Van Langenhove, 2013); hence the need for deconstruction of the development discourse used there. A second issue is that clearer definition of the region is still needed in the context of KZN provincial government, which will help to cement understanding of the spatial scale of development within which the aerotropolis has impact. A third issue is the nomenclature shift involved in moving from the concept of specifically "local" economic development to a more extended incorporation of the "region"; this is a concern because absence of a context-specific conceptualisation of regional economic development and inadequate understanding as to what constitutes an RED project and how such projects are implemented potentially affects the way that practitioners in economic development proceed with their work.

Given this three-faceted problem, the investigation conducted in this research utilised the Durban Aerotropolis as a lens of analysis through which to arrive at an understanding of applicable discourse and clarify the conceptual framework used, in this way making it possible to build on the knowledge and literature relating to RED in this specific context. This was further prompted by the emergence of a gap in the literature in relation to the way RED is conceptualised and enacted in the aerotropolis project. A fuller understanding was evidently needed about the specific importance RED-related processes of agglomeration, innovation and growth of the aerotropolis for ongoing economic development of a "region". Also needed was in-depth understanding of how a spatial development initiative housed in one locality can be catalytic for economic development of the region as a whole. Lastly, if, as stated by the Dube TradePort Corporation (2017a), the aerotropolis is said to be a project which positions KZN as a key business point in the country, what is it doing to facilitate coordinated investments in regional marketing? How does this relate to available incentives and infrastructure as well as local capacity in terms of skills availability and potential for further education and training?

1.2 Aim and objectives

The main aim of this study is to explore the conceptualisation and enactment of regional economic development through an analysis of the Durban Aerotropolis in KwaZulu-Natal. Accordingly, the study seeks

1. To examine the conceptualisation of the 'region' inherent in regional economic development through the Durban Aerotropolis.
2. To understand governance mechanisms for regional economic development in the case of the Durban Aerotropolis stakeholder relations and partnerships.
3. To interrogate agglomeration and clustering of businesses as a feature of regional economic development, in relation to their enactment in the Durban Aerotropolis.
4. To explore regional marketing as a characteristic of regional economic development through the coordinated investments in the Durban Aerotropolis.

1.3 Study questions

The study questions are as follows:

- What is the conceptualisation of the 'region' inherent in regional economic development through the Durban Aerotropolis?
- What regional economic development governance mechanisms are present in the Durban Aerotropolis stakeholder relations and partnerships?
- How does the Durban Aerotropolis facilitate clustering and agglomeration of businesses as a feature of regional economic development?
- How does the Durban Aerotropolis project facilitate coordinated investments in regional marketing?

1.4 Significance of the study

Because the conceptualisation of the region is problematic in its nature (Van Langenhove, 2013), this research seeks to investigate how the region is conceptualised by different stakeholders of the Durban Aerotropolis, including policy makers and implementers. If the conceptualisation of the region is taken for granted it can cause conceptual vagueness that has consequences for the theoretical and empirical quality of research and for policy making and development (Van Langenhove, 2013). Without a clear view of what constitutes a region, the

concept of regional development remains clouded; conceptual clarification is needed for policy makers and development actors and for drafters of strategy document drafters at work in the province of KwaZulu-Natal. This research engages with local specificity in the way that the concept of region is being applied. Although literature shows various ways in which region is conceptualised and understood, it is very important to understand how it is conceived within the local context, more especially as RED gains ground in policy and project arenas in KZN and the wider South Africa. Hence the endeavour to bring about conceptual clarity that will enable better understanding of RED and of the way regional projects should be implemented by practitioners.

The study also seeks to understand what coalesces to make the Durban Aerotropolis a successful catalyst of RED. This aspect of the study was pursued by identifying the characteristics of RED in current literature and assessing the Durban Aerotropolis in terms of these characteristics. These include the way the Durban Aerotropolis facilitates clustering and agglomeration of businesses, which are both known characteristics of RED (Koo, 2005), and more specifically how knowledge diffusion between firms is enabled, how innovation and entrepreneurship is promoted and encouraged and how value chains are developed. The study further examines how the Durban Aerotropolis promotes resource mobilisation for sustainable development and competitiveness of the region by looking at its facilitation of coordinated investments in regional marketing (Karlsson & Rouchy, 2015). Also considered are inputs in infrastructure, skills development and capacity building, along with incentives to attract business activity to the Dube TradePort as a special economic zone and to the wider Durban Aerotropolis. More broadly, the study aims to augment knowledge relating to engagement with spatial boundaries in the facilitation of economic development by a place-based initiative. There is also an argument that localised kinds of development processes and their subsequent initiatives are linked to spatial inequalities (Ascani et al., 2012) and as such we ask how initiatives of this nature are used to impact on the wider region, and not just the locality within which they are located.

In taking account of the above factors, the study makes a contribution to literature on the conceptualisation of RED, and particularly in relation to RED in the South African context. It contributes to literature on how the region is conceptualised by economic development practitioners (which in this case are the various stakeholders of the Durban Aerotropolis) and by policy makers in South Africa. Understanding this conceptualisation is crucial in the bigger picture of thinking about RED as helps to clarify the reach of impact of a spatial development

project which is regarded as a catalyst for development of a region. The study also enables definition of scale in reference to a region or its economic development. The study will thus be of benefit in the work done by the various public sector servants who currently have to contend with a nomenclature shift from "local economic development" to a more expanded incorporation of the regional aspect. This will in turn help to resolve some of the unanswered questions about what project implementation entails under the banners of RED and RLED.

1.5 Structure of the dissertation

Chapter 1: This chapter introduces the study.

Chapter 2: This is a background chapter which reviews literature relating to the aerotropolis concept, incorporating King Shaka International Airport and the Dube TradePort.

Chapter 3: This literature chapter reviews the concepts of space, place and region. It establishes the basis according to which these three concepts are understood as it discusses the key literature as well as related debates. These concepts are all deemed as complex but it is important that we study them because they are crucial in helping us understand place-based economic development processes in emerging economies. Also in this chapter is a discussion of the various development approaches linked to the ideas of space, place and region. This chapter therefore critically engages with economic development approaches that are spatialized in nature.

Chapter 4: This chapter reviews literature on RED. It defines RED, unpacks complexities in its enactment and indicates its basic tenets. Furthermore, the chapter introduces the various ways in which RED is implemented through the science and economics of agglomeration and clustering of businesses. It also explores the externalities of clustering of economic activity, which include knowledge diffusion, innovation and entrepreneurship, and value chains. Also included in this chapter is a discussion of regional marketing as a strategy and approach to RED. The chapter continues with an exploration of governance for RED, outlining its components, principles, dimensions and indicators that are crucial for the success of regional projects. To conclude, various aspects of marketing for investor attraction such as the business climate, image and identity, infrastructure, incentives, capacity building and skills development are also considered.

Chapter 5: This chapter on research methodology outlines the methods adopted in the study and explains why they were considered. An account is given of the exploratory research design that was adopted, undertaken within a social constructivist paradigm and using a purposive, non-probability sampling to derive a sample from which primary data would be sourced to address the research objectives and the problem being investigated. The data was collected through in-depth, face-to-face interviews and was analysed using the Miles and Huberman (1994) approach. The analysis subsequently led to the interpretation of the findings of the study, which are presented in the next set of chapters.

Chapter 6: This is the first of four chapters presenting analysis of data and discussion of findings in relation to the various objectives of the study. This particular chapter looks at the conceptualisation of the region inherent in RED as instanced by the Durban Aerotropolis.

Chapter 7: This chapter presents the governance mechanisms and governance dynamics of the Durban Aerotropolis project. It highlights the importance of collaborative multi-stakeholder relations, productive networks, and mutually reinforcing relationships in resource mobilisation for a successful RED. It explores the concerted efforts and actions of policy makers, businesses and communities in driving the Durban Aerotropolis project. As highlighted in the literature, RED processes facilitate communication and create an environment which favours frequent interactions and flows of ideas; the governance dynamics of this project are shown as reflecting this point.

Chapter 8: This chapter explores clustering and agglomeration of businesses in the Durban Aerotropolis. This is shown as being crucial RED enactment in that it fosters a concentration of economic activity (firms, industries and the workforce) in a region. The chapter goes on to show that because economies of agglomeration are mainly driven by sharing and matching mechanisms that enable firms to reduce their production costs, other agglomerative advantages or benefits include better knowledge sharing, a creation and development of value chains as well as innovation and entrepreneurship. These issues are discussed in this chapter.

Chapter 9: This chapter discusses regional marketing as a characteristic of RED. It does this through an exploration of the coordinated efforts and investments in some regional determinants of both foreign direct investment and local investment. Essentially, this chapter provides an account of what the stakeholders of the Durban Aerotropolis have done to position their project as a site of business activity and a cluster of economic activity through investing in infrastructure, skills development, capacity building and incentives.

Chapter 10: This chapter provides the conclusion and recommendations for the study.

This chapter has provided the problem of this study which is the point of departure in this enquiry. The aims and objectives here-in describe what the study intends to do and how this will be undertaken. The justification for this study as well as a breakdown of the chapters that are to follow are also included in this chapter. Chapter Two below presents the background of the aerotropolis concept.

Chapter 2
Background on the Aerotropolis

2.1 Introduction

The study uses an aerotropolis development as a case through which to analyse the conceptualisation and enactment of regional economic development (RED). This chapter provides background on the aerotropolis as an economic development mechanism. The discussion begins with an examination of what an aerotropolis is and indicates why and how the concept came about. This is followed by an exploration of international experiences of aerotropolis implementation which extends understanding of airport city developments around the world and establishes a platform from which to consider various objectives that have been set out in this enquiry. Cited aerotropolis case studies include Schiphol, Memphis, Belo Horizonte's Tancredo Neves Airport, Dubai World Central, and Zhengzhou Aerotropolis in China. This is followed by an exploration of African aerotropolis examples: Cairo International Airport, Nigeria's Minna Airport City and two in South Africa's aerotropoli – O. R. Tambo Aerotropolis in Ekurhuleni and the study's central focus, the Durban Aerotropolis.

2.2 The 'aerotropolis' concept – the airport city

According to Toffler (1990), one indisputable law to determine competitive success is "survival of the fastest". This is to say that while the production of high quality goods at competitive prices is still necessary, it is no longer sufficient for economic success because speed and agility have taken centre stage (Kasarda, 2001a). With this in mind, it is very important to note that modern businesses increasingly emphasise intra- and inter-firm networking, international sourcing, sales and so on. Kasarda (2001b) argues that the combined thrust of forces of an increasingly fast-paced, economically networked world are changing the rules of industrial competition and business location, creating a new economic geography altogether. In essence, it is argued that the competitive advantage lies in networks of globally-dispersed firms whose integrated supply chains move via air (Kasarda, 2006).

In terms of movement by air, airports have increasingly been economic development engines as they are one of the central factors in businesses' ability to compete, given the intensified role of logistics and distribution in meeting customer and shareholder expectations (Arend, Bruns & McCurry, 2004). Airports are seen as key nodes in global production and commercial

systems and are engines of local economic development, attracting air-commerce-linked businesses (Kasarda, 2001b). Initially, airports served aircraft passengers and cargo. This has however changed and given way to a broader and more encompassing conceptualisation of airports. According to Kasarda (2006), there has been recognition that in addition to their core aeronautical infrastructure and service, airports have developed non-aeronautical commercial facilities and services. While airports have incorporated a variety of commercial functions into passenger terminals, they have also developed their landside, with research parks, district-zoned spaces for specific industrial activity such as foreign trade zones, entertainment and conference facilities, and residential developments (Arend et al., 2004).

Airports have thus become complex multi-functional enterprises, serving both aeronautical development (traditional airport functions) and commercial development (terminal and landside activities) (Kasarda, 2006). With the rise of airports' non-aeronautical function and activity, there has been a transformation of city airports into airport cities (Kasarda, 2006; Peneda, Reis & Macário, 2011). An airport city can be called an 'aerotropolis' (Kasarda, 2008), which is is essentially an airport-driven urban development node (Kennedy, Robbins, Bon, Takano, Varrel & Andrade, 2014). The thinking around the aerotropolis concept is that developments associated with the airport facilitate the emergence of corridors, clusters and spines of airport-related businesses that will create new urban forms as much as 100 kilometres or more from major airports (Arend et al., 2004; Kasarda, 2000).

As an aerotropolis, the airport functions as "a multimodal convergent nucleus and commercial nexus of airport integrated urban complex, analogous to the function central business districts play in the traditional metropolis" in which commercial and business activity is concentrated (Kasarda, 2001a: 44). As shown in Figure 2-1, the aerotropolis can be viewed schematically as a "subregional economy where the airport city is the anchoring economic hub associated with a concentrically expanding mix of clustered uses" (Hanly, 2015:1).

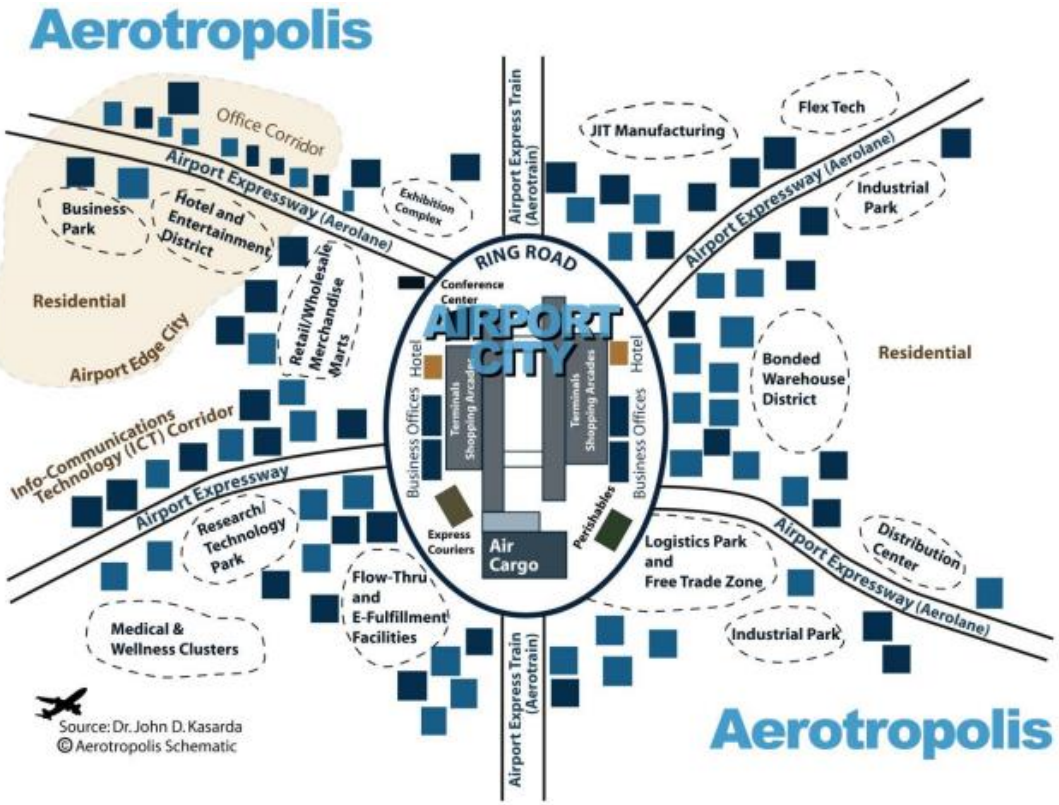

Figure 2-1 The Aerotropolis schematic (Adopted from Hanly, 2015: 43)

As mentioned above, the combined forces of aviation, digitisation and time-based competition positions gateway airports as engines of the new economy. In this regard, Kasarda (2001a) views airports as the drivers of air commerce and e-commerce. He further explains that air- and e-commerce imperatives centre on speedy, agile and reliable business processes. To meet the crucial demands for speed, agility, and reliability in order fulfilment, e-commerce distribution centres are being built near gateway airports that have extensive flight networks (Kasarda, 2001a). However, it is not only time-sensitive goods-processing and distribution facilities that are being drawn to gateway airports (Freestone, 2009). The aerotropolis model also envisages corporate headquarters, regional offices and various professional organisations that require their staff or people in their employ to undertake considerable long-distance travel (Kasarda, 2001b).

The aerotropolis is a rational system based on the time and cost required to gain access to the airport. Overall, Kasarda (2000) explains that the development of the aerotropolis model was meant to replace location with accessibility as the organising principle of commercial real estate. The successful functioning of the aerotropolis is believed to lie in proper planning

because of the notion that form follows function (Kasarda & Appold, 2014). Strategic infrastructure planning which seeks to address arterial bottlenecks such as heavy traffic volumes is thus used to plan aerotropoli (Kasarda, 2001a; Falcocchio & Levinson, 2015). Such strategic infrastructure planning is intended to reduce costs and speed access to airports.

According to Wang, Chou and Yeo (2013), a successful aerotropolis requires coordinated investments in land use and multimodal ground transportation that leverage each other to the economic and environmental benefit of businesses, land owners, local governments, and the broader region. They further identify a growing relationship between air transport and sustainable development, integration of air transport with all surface modes of transportation, and impact of air transport on regional economic growth as the criteria for evaluating air services (Graham & Guyer, 2000, Wang et al., 2013).

Wang et al. (2013) also highlight factors that are important in measuring the service quality of the aerotropolis. The first factor, and of utmost importance according to Wang et al., is airport access through a multimodal transportation system. Furthermore, multimodal transportation is crucial in solving the issue of congestion caused by clustering of industries and thus assists in accelerating the intermodal transfers of goods and people. Next in importance is having an airport which is a transfer hub. This kind of airport has more flexible flight selection and more open air traffic rights that enable passengers and cargo to get to their destination promptly and on time. The third important factor is government policy planning. Wang et al. explain that governance of an aerotropolis plays a crucial role in its success. Further to that it must integrate airport planning, urban planning and business site planning as shown below in Figure 2.2. Thus, planning for the aerotropolis cannot happen in silos. There has to be integration between urban plans, airport plans and business plans to enable greater coordination.

Government funding plays an important role in providing multimodal transportation and sufficient land, along with strategic infrastructure and national policy services to the private sector (Wang et al., 2013). Further, government should be involved in attracting business investment to the aerotropolis from the private sector, thereby generating employment and economic growth, and also establishing public–private partnerships, which creates a synergistic effect as per Figure 2-2

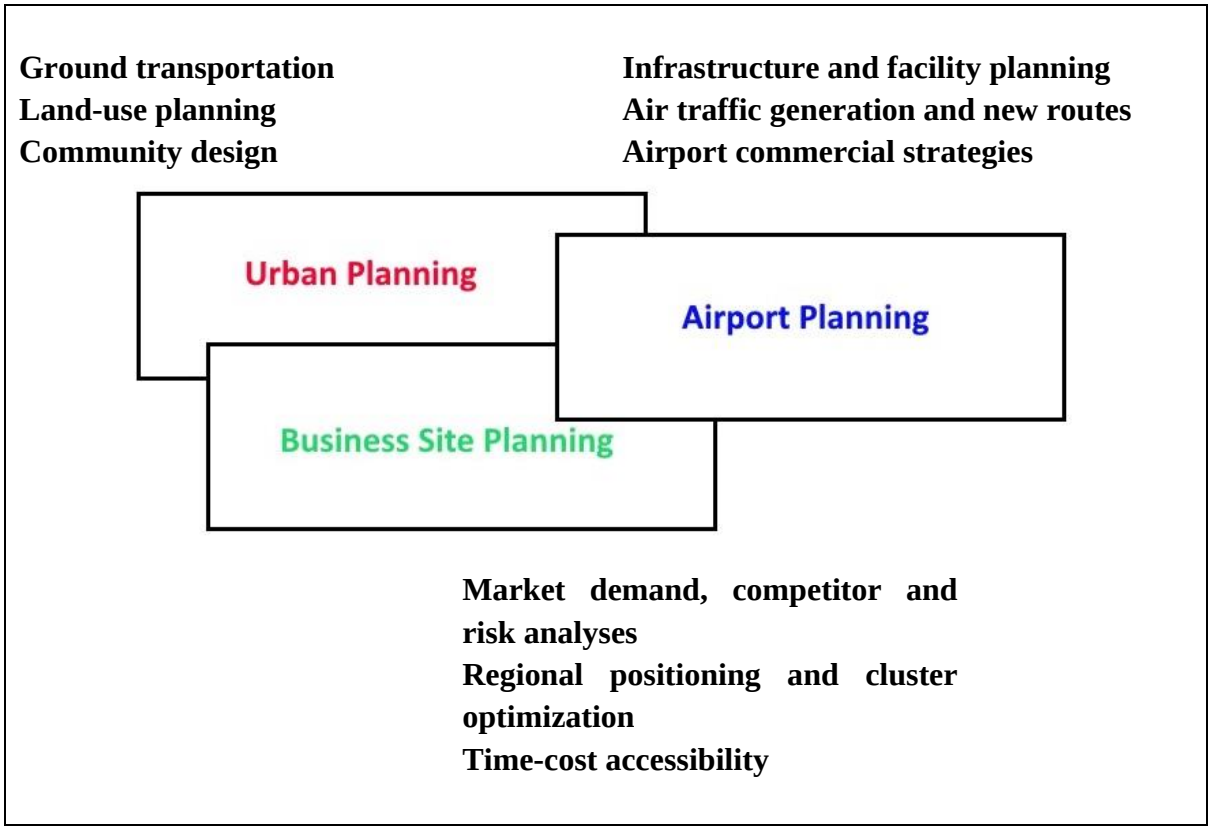

Figure 2-2 Integrated aerotropolis planning (Adapted from Kasarda & Apold, 2014)

According to Knippenberger (2010), air connection and volume of air traffic are also important factors in enabling an airport to develop into an 'airport city' or aerotropolis. For operation and offering passenger services like shopping and restaurants, there is a certain minimum number of passengers and cargo that needs to go through an airport (Knippenberger, 2010).

The discussion above has provided background and context on what an aerotropolis is, the emergence of this form of development, and some of the important aspects of its planning and governance. The next section considers some examples of aerotropolis implementation globally and in Africa continent and South Africa, including the Dube TradePort which is the case analysed in this study. Aspects of the study objectives are highlighted where they occur in the literature, including conceptualisations of region, governance issues, business clustering, externalities of agglomeration and the role of regional marketing in attracting investment in the aerotropoli. A gap became apparent in the literature in relation to conceptualisations of region and regional marketing.

2.3 International aerotropolis experiences

This section provides an account of international aerotropolis experiences. According to Hanly (2015), the aerotropolis concept was initially implemented in the United States, followed by experiments with its implementation in Europe. It has since been embraced in the rapidly emerging countries of the Gulf and Asia-Pacific. Kasarda (2010) cites 38 operational and developing aerotropoli in North America, 20 in Europe, and 14 in the Asia-Pacific region. In this study, examples to be discussed include Schiphol, Memphis, Belo Horizonte, Dubai and Zengzhou, China (see Figure 2-3), selected as globally recognised implementations of the aerotropolis concept and therefore worth examining to establish what conceptualisations of region, governance mechanisms, clustering and agglomeration of businesses, and regional marketing consideration feature in each case as issues in aerotropolis development.

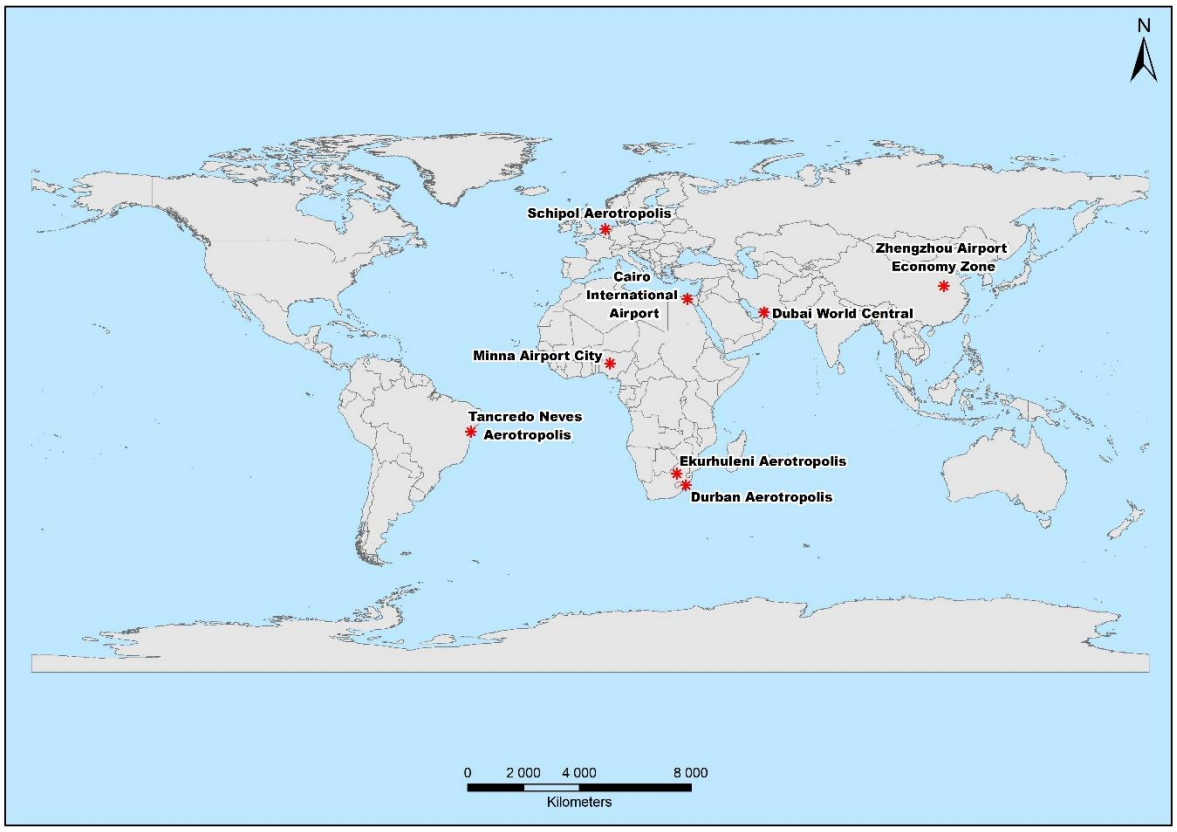

Figure 2-3 Global location of the aerotropoli discussed in this study (Author's own)

The cases discussed herein are some of the known implementers of the aerotropolis concept in the world and are examined for the purposes of establishing existing conceptualisations of the

region, the governance mechanisms, clustering and agglomeration of businesses as well as the role of regional marketing as features of aerotropolis developments.

2.3.1 Schiphol (Airport City) Aerotropolis

In the 1980s, the airport city concept was explored as a marketing concept for the Schiphol terminals in Amsterdam, Netherlands. The goal at that stage was to ensure that passenger stay was as comfortable and convenient as possible and that the income from terminal shops was able to complement the income from airport taxes and parking fees. The Schiphol Group has since built on and extended the concept to become a guiding principle for all spatial development on the airport landside. Schiphol Group is a privately run company that is also a public trust with Amsterdam, Rotterdam and the Dutch Federal Government as shareholders (Kasarda & Lindsay, 2011). This group owns Schiphol Area Development Company, which plays a role in delivering land mostly owned by Schiphol Real Estate.

In 1994, a partnership called the Amsterdam Airport Area (AAA) was formed by various stakeholder groups interested in acquiring a stake in the airport city project (Kasarda & Lindsay, 2011). A mega-aerotropolis was defined by the AAA encompassing the airport, port, city of Amsterdam and the surrounding provinces, and through the AAA, participant companies were recruited from sectors such as electronics, aerospace, flowers and fashion (Kasarda & Lindsay, 2011).

According to Conventz and Thierstein (2014), this investment, along with subsequent economic activity around the Schiphol airport, came about in response to a recognition that the 1989 masterplan was too big to finance from the airport charges alone. The solution then emerged as a plan for extensive landside developments of hotels, offices and other establishments. From then onwards, Schiphol was developed as an urban space and railway station connecting the existing and subsequent new terminals, the underground train platforms and the commercial buildings on the landside (Conventz & Thierstein, 2014).

In an interview, Kasarda referred to Schiphol as an exemplary airport because it exhibits all the aerotropolis characteristics: an observable multimodal airport city commercial core, along with corridors and clusters of aviation-linked development that stretch outward from its boundaries (Hans & Yin, 2011). Others have gone on to say that Schiphol is one of the best aerotropoli in the world (Zamanov, 2013) and that, more than just a gateway, it is now potentially the

financial engine of the Netherlands (Kasarda & Lindsay, 2011). Interestingly, Schiphol predates the aerotropolis concept labelled as such, and has had extensive time to mature into its current success.

Extensions to the Schiphol aerotropolis included the Triport offices, the Sheraton Hotel and the Schiphol World Trade Centre (Kasarda & Lindsay, 2011). Many businesses and companies in the Amsterdam region that are dependent on air transport are now located in close proximity to the airport. This includes international headquarters, international transport and distribution, big international enterprises, 4 and 5 star hotels, business and financial services as well as technology institutes (Kasarda & Lindsay, 2011).

Krul (2011) identified the crucial success factors for growth and development of the Schiphol aerotropolis as connectivity, the importance of the network, a competitive region and market place, a clear strategy and business model, value and quality of the site, and regional governance.

In relation to connectivity and network, the Netherlands has a long history in transport and trade, with the country's main ports being the Port of Rotterdam and Amsterdam Airport's Schiphol (Knippenberger, 2010; Krul, 2011). Within Schiphol's core is a strong network supporting international business, logistics and tourism (Krul, 2011). Figure 2-4 shows that core reinforcement of a global network covering destinations and frequency through route developments enhances airport competitiveness in relation to visit costs, reliability, accessibility and swift handling of either people or cargo. More broadly, this helps to establish a competitive airport city region in relation to working and living conditions, accessibility, and further reinforcement of the location (in this case Amsterdam) as a destination. An internationally competitive business climate is thus cultivated through further infrastructural and business sites developments. The network is said to be the major asset of the aerotropolis and the most import driver of the development (AirLED, 2014.). Furthermore, connectivity should include international road and railroad connections. Conventz and Thierstein (2014) note that a key pillar of success for Schiphol is its hub airport network (as of 2013) of over 300 direct destinations.

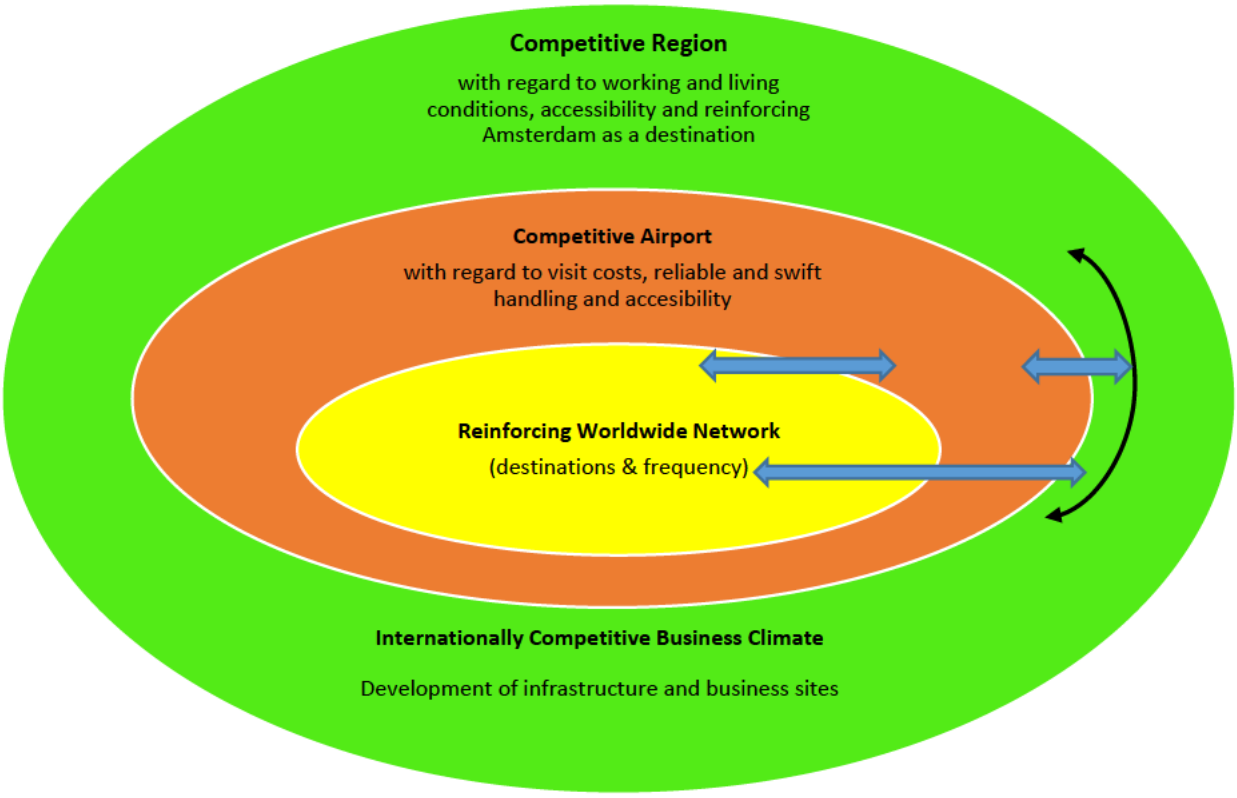

Figure 2-4 Ripple effect of a strong network (Adapted from Krul 2011)

The airport city development, the wider aerotropolis and the region function as an economic engine reinforcing the competitiveness of the region and market place. The Schiphol network is seen as an essential asset for national business and trade. Schiphol ranks third among airports in Europe in connectivity, fifth in passengers, and second airport in cargo. Schiphol contributes 2% of national gross domestic product (GDP) and 12,5% of regional GDP. It has created 120 000 direct and indirect jobs, which make up 12,5% of total national employment, and has 1 800 foreign companies (Krul, 2011).

Schiphol's strategy and business model highlight and emphasise its ambition to remain as Europe's preferred airport in connectivity and quality for passengers, airlines and the wider community (Krul, 2011). The airport is also committed to having the best network, offering excellent visit value for passengers and airlines, and ensuring sustainable growth by reducing emissions and mitigating all nuisances. The four business sectors which underpin the airport city establishment are aviation, consumers, real estate, and alliances and participations.

To ensure value and quality of the site, a long-term masterplan for Schiphol serves an important purpose in structuring space for future aviation needs but also available for non-aviation activity. Unused land offers potential for airports to generate additional revenue and can could

be used for such things as meeting future transportation demand (Krul, 2011). New projects are encouraged as they enhance the position for high-yield segments to enlarge the value of the site.

Under regional governance, Krul (2011) identifies the aerotropolis' strategic partnerships with stakeholders as one of the drivers of its success. For Schiphol to be the world-renowned airport that it is, connectivity has been crucial, requiring negotiations between government and airlines that enable further routes to be developed. Maintaining Schiphol's hub status for area development (see Figure 2-5) requires communication between local authorities and the business community to fast-track economic development of the business location. All in all, there must be a shared vision of future development, alignment of interests and cooperation between all relevant stakeholders.

According to Fain (2014), boundaries between Schiphol Airport and the metropolitan region of Amsterdam have been becoming blurred. As a result, the traditional forms of government have not been able to cope with the newly developed interdependencies. This confirms the regional economic impact of Schiphol Airport as an important hub in intercontinental airline networks (Hakfoort, Poot & Rietveld, 2001). In Europe as a whole, Schiphol Airport ranks fourth among airports and third in terms of freight. The airport's economic impact also covers the Greater Amsterdam region but also extends to other cities such as Rotterdam, The Hague and Utrecht (Hakfoort et al., 2001).

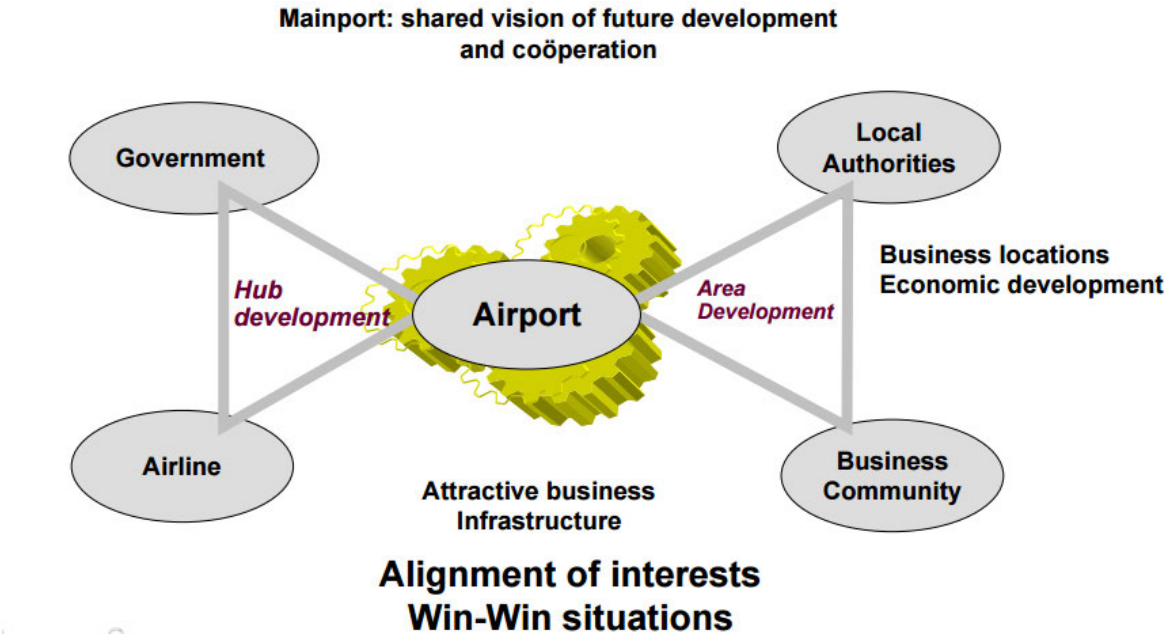

Figure 2-5 Strategic partnership model for Schiphol (Adopted from Krul, 2011)

Estimations of the employment effects of Schiphol Airport show that the largest share of employment is created by aircraft carriers, aircraft manufacturer Fokker, and the security services of the airport, including the military (Hakfoort et al., 2001). All these employment opportunities emanate from the fact that Schiphol aerotropolis is seen as a complex industrial enterprise with various activities which are brought together to facilitate the interchange between air and surface transportation for passengers and freight (Hakfoort et al., 2001; Warffemius, 2007). The firms that are located at or very close to Schiphol offer a wide range of supporting services and facilities and because of this, the Schiphol agglomeration provides what Warffemius (2007) calls the "airport product" or a service package for the airport functions.

In relation to RED conceptualisation and enactment, the governance of Schiphol aerotropolis is a public–private partnership between Schiphol and the Dutch government. The airport city has managed to attract companies from various sectors indicating how Schiphol agglomerates economic activity and is a cluster of businesses. Its success can be attributed to air connectivity, an extensive network, a clear strategy and business model, and a competitive region and market. All these factors have also been crucial selling points of the Schiphol aerotropolis and have been hugely influential in attracting further investment. Bundled together, they boost the regional marketing strategy and assist the Schiphol aerotropolis to compete effectively as a global player. Overall, Schiphol aerotropolis has had a great impact on the wider metropolitan region of Amsterdam. This has essentially challenged traditional forms of government which were unable to cope with the interdependencies that include other cities such as Rotterdam, Hague and Utrecht.

The next section considers the Memphis Aerotropolis in the United States.

2.3.2 Memphis Aerotropolis

According to Cox (2009), Memphis, America's premier aerotropolis is said to be on the brink of redefining global logistics. Memphis itself has branded itself as America's Distribution Centre (Greater Memphis Chamber, 2009). From an earlier history distributing cotton and lumber to the United States and the rest of the world (Greater Memphis Chamber, 2009), it

now focuses on time-critical medical distribution – in particular, biologistics and personalised medicine (Cox, 2009).

In 2006 Memphis airport declared itself as an aerotropolis; positioning itself in world aviation and economic development as America's aerotropolis (Cox, 2009). Although this was during a period of national downturn, Memphis capitalised on the fact that even in such times, efficiency in distribution becomes and remains of great importance (Cox, 2009). The rationale cited was that "fragmented distribution channels add cost to global logistics and so a community that can provide the most efficient distribution environment will have a competitive advantage over others" (Cox, 2009:150). This is a competitive advantage that saves time and money.

Because Memphis is also home to some of the world's greatest performers and artists, the city attracts tens of thousands of tourists from across the globe (Cox, 2009). This is what drives up demand for passenger air service (Cox, 2009). In addition to the booming tourism sector, Memphis is known to business as a distribution hub with runway, road, rail and river as forms of distribution (Cox, 2009). The Greater Memphis Chamber (2009) defines this as quadramodal logistics: procurement, maintenance and transportation of material involving four modes of transportation.

The first of the newest wave of investors to recognise Memphis's potential was FedEx, a logistics company which set up its world headquarters in the city in 1973. From this beginning, air cargo has since come to be known as the heartbeat of the city's community. Currently, over 4 million tonnes of cargo passes through Memphis every year, indicating ample capacity to provide business and cargo air services solutions Cox, 2009). According to the Greater Memphis Chamber (2009), 94% of this cargo is due to FedEx, which processes over 2 million packages per night. Furthermore, Memphis has approximately 300 daily national and international cargo flights that ensure that the hub covers the globe. Through its active role in logistics and tourism, Memphis Chamber is of the view that the aerotropolis is "the physical and spatial manifestation of these tourist, supply chain and corporate enterprise networks" (Greater Memphis Chamber, 2009:14).

Because of its quadramodal infrastructure, Memphis evolved as an aerotropolis. Investment and job growth, as a measure of success, sat at around 37 000 new logistics jobs between 2005 and 2007 (Cox, 2009). According to the Greater Memphis Chamber (2009), the economic impact of Memphis Aerotropolis has been considerable: of an overall $22 billion impact on the

economy by the airport, $19,5 billion resulted from air cargo activities. A total of between 166 000 and 220 000 jobs in the metro have been attributed to airport city activity (Greater Memphis Chamber, 2009; Cox, 2009). Overall, the business community indicated that they saw their economic future as being closely linked to the airport (Memphis Chamber, 2009).

Given what has been discussed above, Sheffi (2013) argues that the Memphis Aerotropolis is more than an aerotropolis built around FedEx services. This is because what agglomerates clusters together through this hub are other transportation and logistics options; intersecting interstate highways and trucking companies are afforded ease of doing business while the rail hub connects Memphis to the Gulf Coast, Chicago and all of Canada.

According to the Greater Memphis Chamber (2009), the development of the Memphis Aerotropolis was spontaneous and haphazard, which detracted from its economic efficiency as its aesthetic appeal and environmental sustainability were not of commensurate standard. A decision was then taken to improve the airport city development through strategic infrastructure planning (Greater Memphis Chamber, 2009). According to Cox (2009), stakeholder engagement and community cooperation played a key role in the materialising of the Memphis Aerotropolis vision. MemphisED is the community's economic development initiative, which has involved more than 2500 businesses, community leaders and multimillion dollars in support of the multiphase, multiproject initiative (Cox, 2009). In addition, Memphis Aerotropolis formed a project steering committee to capitalise on the region's aviation and logistics assets and address airport area issues, including social and physical infrastructure gaps in the region that had potential to limit the effectiveness and growth potential of the aerotropolis (Greater Memphis Chamber, 2009). What is also important in the governance of Memphis Aerotropolis is collaboration, a shared vision and mobilising of resources (Greater Memphis Chamber, 2009).

The Memphis Aerotropolis is a cluster of economic activity founded upon logistics and distribution and strongly reliant on Memphis's quadramodal logistics platform in which procurement, maintenance and transportation of goods involves four modes of transportation. At the centre of this cluster is FedEx, which is responsible for approximately 94% of the cargo that goes through the Memphis Aerotropolis every year. The Memphis Aerotropolis has built its competitive advantage from its quadramodal infrastructure and its intensive flight network of approximately 300 daily national and international cargo flights. Governance dynamics in the Memphis Aerotropolis include channels for stakeholder engagements and community

participation which play a role in the materialisation of the aerotropolis vision; MemphisED and a steering committee also play a role in the governance of the Aerotropolis.

The next section considers the Tancredo Neves Airport in Belo Horizonte, Brazil.

2.3.3 Tancredo Neves Aerotropolis, Belo Horizonte

The International Airport Tancredo Neves (IATN) is located in the Confins municipality in the Belo Horizonte metropolitan area, Brazil. This airport was designed in the late 1970s and built by Infraestrutura Aeroportuária (INFRAERO) in the early 1980s (Ramos, 2012). INFRAERO is a Brazilian enterprise for airport infrastructure responsible for managing and supervising national airports (Ramos, 2012). The main purpose of this airport was to reduce and manage congestion at Pampulha Airport (another smaller airport located closer to downtown Belo Horizonte).

Before IATN came into operation, Pampulha Airport was the main operating airport for the state of Minas Gerais. According to Kasarda (2013a), Pampulha's traffic expanded substantially in the latter parts of the 20th century and by 1970 it had reached capacity. Because the airport's reaching capacity coincided with urban expansion of Belo Horizonte surrounding the airport, further infrastructure development was ruled out. Furthermore, the airport did not meet international standards and as a result it could only host domestic flights. Because of poor accessibility plans, routes to the airport were complicated and the one avenue that led to the airport was already congested with excessive vehicle flows (Ramos, 2012). With Pampulha having reached saturation point and no longer able support the rapid growth in cargo and passenger movements (Braga & Moneira, 2011), the federal government decided that there was a need for a much bigger airport that would accommodate the growing demands for air transportation in the region; this left the local authorities with no option but to construct a new airport (Ramos, 2012; Kasarda, 2013a).

The site selected for the new airport was Confins, a semi-rural municipality 38 km north of Belo Horizonte. The new airport's operations began in 1984 as Brazil's first modern airport, with a terminal with a passenger carrying capacity of 5 million (Kasarda, 2013). Contrary to earlier forecasts which predicted that IATN would be handling up to 20 million passengers by 2020, in 2004, the airport was still underutilised (Ramos, 2012), handling less than 400 000

passengers per annum, surpassed in growth by Pampulha whose traffic continued to escalate (Kasarda, 2013a).

According to Ramos (2012), until 2004, all passengers and cargo had to use other major airports in Brazil to reach the state of Minas Gerais. During this time, Pampulha's passenger volume grew from about 737 000 to around 3 million, which was nearly four times its official capacity, while IATN's passenger volumes fell from 900 000 to 388 000 (Ramos, 2012).

The main challenge for IATN was accessibility, positioned 38 km from downtown Belo Horizonte in comparison with just 8 km for Pampulha. Furthermore, the road infrastructure to and from IATN was not poor because of congestion and dangerous intersections (Kasarda, 2013a). This meant that it took longer to get to the airport and the taxi rides were expensive. In essence, it was the time-cost accessibility that had to be revised (Ramos, 2012). This was a bottleneck to the development and it hampered competitiveness of intra-state businesses (Ramos, 2012). This shortcoming was a disincentive for foreign investment and put businesses at a competitive disadvantage against other regions and cities in the country with international connections (Ramos, 2012).

In 2005, work began on upgrading the 18 km segment of the highway from IATN into downtown Belo Horizonte, making it a four-lane expressway starting near the airport (Kasarda, 2013a). Several other upgrades were done resulting in shortening of travel time from downtown to the airport.

While changes were effected in the strategic direction of IATN, other strategic decisions were taken to attract industry, foster business development and create jobs at, and extending from, IATN. These included setting up special economic zones (SEZs) at IATN, making it Brazil's first airport to activate the country's new industrial airport policies. A major maintenance repair facility was set up by one of Brazil's largest airlines (Kasarda, 2013a). Furthermore, an administrative city was constructed to accommodate approximately 60 000 state government job workers. IATN also decided on the aerospace industry as a major target with an expansive aerospace training and technology centre being developed in Lagoa Santa, 6 km from the airport (Kasarda, 2013a).

With regard to its economic impact, Braga and Maneira (2011) suggest that IATN has not had substantial impact on the economy of the state of Minas Gerais as it had only been able to generate a very small number of direct and indirect jobs by 2011. Currently, a holistic view of IATN sees the success of the airport as dependent on its airport city or aerotropolis (CAPA

Centre for Aviation, 2016). IATN is said to be one of the principal gateways into Brazil and it has strategic importance as it lies between the two main coastal cities and the capital.

Unlike Schiphol and Memphis, IATN's story is one of challenges in aerotropolis enactment. The issues outlined above indicate that the governance of IATN was poor, the planning haphazard and management of the aerotropolis substandard. These problems are linked to infrastructure-related problems and failure to attract numbers in passengers and cargo. Since 2005, however, these challenges have been addressed through the adoption of an altogether new strategic direction, with plans to attract industry and foster business development.

Next is a discussion of the aerotropolis implementation in Dubai.

2.3.4 Dubai World Central

According to Kasarda and Lindsay (2011: 287), "Dubai was the first aerotropolis nation (with) an airline, an airport and a city attached to it". Although many assume that the greatest asset for Dubai is oil, it has been argued that it is their geographical positioning that is their greatest asset (Kasarda & Lindsay, 2011; Thierstein & Conventz, 2014). This geography is defined not by contours of any map but by the flying times of modern airliners. Dubai has since been called the "the navel of the middle world" meaning that it is well positioned for flights flying to anywhere in the world (Kasarda & Lindsay, 2011).

Building on existing successes, according to Bach (2015), the biggest aerotropolis in the world is currently in the works in Dubai. With over 140 km^2 of covered area, Dubai World Central (DWC) is designed to be a self-sustained economic zone upon its completion. This zone will support a number of economic activities including aviation, logistics, humanitarian commercial exhibition, residential and other related businesses.

The DWC core is Al Maktoum International Airport, which is projected to be the world's biggest airport with a planned annual capacity of 16 million tonnes of cargo – more than three times that of Memphis International Airport (Saidi, Scacciavillan, Ali & Prasad, 2010) – and over 220 million passengers. With the expansion of Al Maktoum International, Dubai International Airport and DWC together can handle up to 360 million passengers a year (Reuters, 2017). Al Maktoum's projected completion is 2027 and being located near Jebel Ali Free Trade Zone (FTZ) it serves as the hub for Emirates' new superjumbo aircraft and overhaul centre. The airport plans also project employment of about 700 000 workers in all its facilities

and service sectors (Saidi et al., 2010; Theirstein & Conventz, 2014). This is said to be the most ambitious project of its kind as it will also have the first and only integrated sea-air corridor, which enables containers to be offloaded from ships and be airborne in two or three hours (Saidi et al., 2010).

DWC is planned to serve different Middle Eastern and North African countries, South-Eastern Europe, Africa, South Asia and the Commonwealth of Independent States. Put briefly, it aims to be the world's largest integrated logistics cluster and supply chain hub (Thierstein & Conventz, 2014; Bach, 2015). It aims to do this by remaining a world-class facility which provides access to warehouses, space for freight forwarders, logistics businesses, offices and commercial buildings, all within a free trade zone offering hundred percent ownership and zero taxes (Thierstein & Conventz, 2014).

Saidi et al. (2010) advise that a clearly specified governance scheme is required for a project of this magnitude together with a regulatory framework to supervise the behaviour of key infrastructure service providers with monopolistic positions. They further explain that such regulatory structures would help create clearer expectations about the long-term strategy of government in this development (Saidi et al., 2010). One thing they note as lacking is local skilled workforce, and although there are educational institutions, their impact is still limited (Saidi et al., 2010). The recommendation was that since the country invests so much in infrastructure, investments should also be channelled to specialised education and research development in fields such as logistics, engineering, robotics and architecture (Saidi et al., 2010).

The Dubai Aerotropolis has an airline, an airport and a city. Its geographical location, has enabled it to redefine global connectivity through its extensive flight network, and in this way greatly extending its regional reach. The Dubai Aerotropolis is a cluster of economic activity that brings together aviation, logistics, residential provision and other related businesses. The competitive advantage of this aerotropolis, which is its selling point, would appear to be in the projected annual capacity of Al Maktoum at an estimated 16 million tonnes of cargo and 220 million passengers. A further asset is for the Dubai Aerotropolis is its proximity to the Jebel Ali Free Trade Zone. Overall, this aerotropolis exhibits the characteristics of good governance in the way it is planned and managed.

The next section considers implementation in China's Zhengzhou Aerotropolis.

2.3.5 China

China has overtaken the United States as the world's top destination for foreign direct investment, and helping to boost this investment are large government-promoted development zones. Unlike China's traditional industrial zones, dominated by factories producing toys, shoes, apparel and furniture, these new economic enclaves offer advanced business services, aerospace, biomedicine, software engineering and telecommunications. The largest of these zones in China is Zhengzhou Airport Economy Zone (ZAEZ) centred on Zhengzhou International Airport (IATA code: GCO) (Shepard, 2016). GCO serves as a domestic hub for Henan Airlines and as a secondary hub for China Southern and Shenzhen Airlines, and is also a cargo base for Cargolux Airlines. Being centrally positioned and located, it provides airlines with the shortest flight time to major domestic markets. Air cargo and passenger growth have been commended. Between 2010 and 2014, cargo volume expanded from 8 500 metric tons to 370 000 metric tons while the annual passenger traffic increased from 8,7 million to 15, 8 million (Kasarda, 2015).

The site for ZAEZ was approved by central government in October 2010 and further approval of the expansion to 270 km^2 was given in November 2011 (Kasarda, 2015). In March 2013, government doubled the size of ZAEZ. An international logistics hub was built at CGO and there has been a development of clusters of "high-end manufacturing and high-value business services, supported by well-designed urban centres, western-styled educational institutions and green recreation areas" (Kasarda, 2015:74). All of this forms a modern aerotropolis that is seen as a dynamic growth pole for economic advancement in Central China.

Thus far, the zone has seen remarkable growth in industrial investment, economic output and trade volumes. The leading investor, employing over 250 000 workers, is Foxconn, a Taiwan-headquartered contract manufacturer for Apple's iPhones (Shepard, 2016; Kasarda, 2015; The Economist, 2015). In 2014, they produced an estimated 104 million iPhones, accounting for nearly 80% of all iPhones sold globally. This makes ZAEZ the world's largest single site for smartphone production (Shepard, 2016).

Since 2013, 48 major industrial projects have been completed. This amounts to fixed real-estate investment of $6,3 billion in 2015 (Kasarda, 2015). Value added by large-scale industries reached 5,4 billion dollars, with ZEAZ's GDP growing at an annual compound rate of 49,5% since 2010 (Kasarda, 2015). Combined, ZAEZ's imports and exports reached $5,9 billion in 2014. The zone ranks second in value of trade among China's 48 free trade zones (Kasarda,

2015). In 2015, 155 projects had been affirmed for the ZAEZ as a whole, with 39 signed between January and August. These were estimated to have a total value of $9,4 billion dollars (Kasarda, 2015).

Like some of the other aerotropolis cases reviewed in this chapter, ZAEZ is also an international logistics hub and a cluster of high-end manufacturing and high-value business services. Essentially, ZAEZ is an economic enclave with an extensive flight network that handles a large number of tonnes of cargo and passengers. It also houses part of the world's most established global value chain through its leading investor Foxconn, a company manufacturer for Apple's iPhones. And development of value chains is an important characteristic of RED.

The international examples presented thus far exemplify some of the important aspects of RED enactment – in relation to governance, cluster dynamics, and the kinds of industries associated with them, and also their selling points in each case, which have important significance in the context of regional marketing. There is a gap however in the conceptualisation of the region from these cases.

The next section considers examples of African aerotropoli.

2.4 African aerotropolis experiences

According to Kasarda (2013b), Africa has four airport cities: four developing "aerotropoli". One is in Nigeria (northwest of Minna) and another is Egypt's Cairo International Airport. Two are in South Africa, where in the past five years both Ekurhuleni's Oliver Tambo International Airport (ORTIA) and Durban's King Shaka International Airport (KSIA) have aligned their Metropolitan Spatial Development Frameworks with the aerotropolis concept. While Africa may have been later than other places in embracing the aerotropolis concept, the continent has progressed beyond initial difficulties in the development of these commercial, airport-oriented cities (CAPA, 2014a).

According to the former Chief Executive Officer of Dube TradePort in Durban, South Africa (CAPA, 2014b), Africa has been lagging behind in both aviation and airport city developments, and a further concern is that Europe may have overlooked opportunities in Africa generally, and more specifically those which have to do with better international and intercontinental connectivity, given its prospects for those kinds of developments.

Estimates by some economists see Africa as having grown to be the world's next major destination for business and tourism, thereby offering opportunities for the creation of regional and international travel hubs. However, issues of safety, security and transportation costs are still problematic and remain a priority for aviation professionals in Africa (CAPA, 2014b). Furthermore, the continent as a whole is not doing well in investments in infrastructure development and its air transportation has thus been subject to criticism. Concerns have been raised about lack of investment, lack of a proper strategic vision, and tactical mismanagement, leading to decaying infrastructure, outdated equipment and unsafe systems on the ground (CAPA, 2014b). This confirms Africa's need for assistance from international funders.

Strong growth in air traffic over the past years has provided stimulus for investment in airport infrastructure in some parts of Africa with passenger traffic recorded at 163 million passenger journeys, increased African airline profitability, increased aircraft movements and anticipated annual average growth of 6% over a five year period (CAPA, 2014b).

Even with positives like the growth in airport megacities such as Lagos and Johannesburg and the significance of Airports Company South Africa (ACSA) as a reputable operator and investor in South Africa and abroad, Africa still accounts for only 2,85% of global air passengers in spite of being the second largest and second most populous continent (CAPA, 2014b). It remains the case that the disadvantages outweigh the advantages in the eyes of investors, who have been reluctant to invest in the continent because of inadequate infrastructure, exorbitant passenger charges (partly caused by fuel taxes), failure of airline privatisation and a lagging aviation industry (CAPA, 2014b).

Four African aerotropoli are discussed below: Cairo International Airport, Minna Airport City in Nigeria, Ekurhuleni's O. R. Tambo Aerotropolis in Johannesburg and the Durban Aerotropolis.

2.4.1 Cairo International Airport

According to EHAF Consulting (2016), the World Bank lent 280 million dollars to the government of Egypt to finance extension of Terminal Building Two at Cairo International Airport as part of the Cairo Airport Development project to prepare for transitioning into an airport city. An assessment was undertaken of the potential for Cairo Airport areas to develop a business with a commercial real-estate development focus; this, in combination with planned

investment in Cairo Airport's own needs, will lead to the preparation of a development strategy and a strategic masterplan for Cairo Airport City (EHAF, 2016).

Although the airport's website has not been updated to indicate what progress has been made on the terminal upgrade (Cairo Airport, 2017), it is said that the intention is for Cairo International Airport to become the gateway to Africa and the Middle East as well as a regional hub for millions of visitors coming to Egypt. Thus far, the airport has a hotel and a cargo 'city'. According to Worldfolio (2015), the aerotropolis is expected to provide about 30 000 direct jobs and 90 000 indirect jobs. Confidence has been expressed that Egypt will maintain its position as the leading aviation hub in Africa (Worldfolio, 2015). Volume of investments is expected to reach 80 billion pounds and revenues from the project to reach 422 billion pounds by 2040. Egypt's Minister of Civil Aviation is hopeful that the project will be a huge success because they have plans to start with a business centre, then an entertainment park like Disney World. Additionally, there will be game courts, a water park, 18 cinemas and several restaurants (CAPA, 2014b).

2.4.2 Minna Airport City, Nigeria

In Nigeria, the idea of the aerotropolis was proposed by Princess Stella Oduah who was Minister of Aviation. She projected the creation of 10 million jobs and generation of 100 billion nairas per annum for airport-centred commercial activity, with potential to transform the economy and living standards of rural farmers through cargo exports and manufacturing free trade zones (Williams, 2015). The envisaged airport cities are in Lagos, Abuja, Port Harcourt and Kano. Having attracted over 400 million dollars investment across all four cities, the government stakeholders are expecting these cities to rank alongside the likes of Dubai (Williams, 2015).

There are concerns however that the country may not be sufficiently prepared for the establishment of the aerotropolis because of existing security and power-supply concerns. Clashes between the terrorist group Boko Haram and the Nigerian army may hinder any plans for the Abuja Aerotropolis (Williams, 2015). Furthermore, questions remain as to whether existing laws and regulations are sufficient to support an airport city; migration policy, for example, may need to be reworked to support the huge influx of people expected after the completion of projects. According to Shogbesan and Monye (n.d.), the airport city development plans have been criticised by Nigerians as just another opportunity to waste public funds, and

Shogbesan and Monye comment that “despite the viable economic potentials of the aerotropolis, the motives of the initiators are questionable”.

From the two cases discussed above, it is clear that both airport cities are still in the process of being developed and are facing a number of constraints. O. R. Tambo Aerotropolis and Durban Aerotropolis in South Africa are discussed in the next section.

2.4.3 The South African aerotropolis experience

These two cases considered here are relatively new, with the Ekurhuleni Aerotropolis and the Durban Aerotropolis both having been established in 2014.

2.4.3.1 Ekurhuleni O. R. Tambo Aerotropolis

O. R. Tambo International Airport is situated in the City of Ekurhuleni in Gauteng province. It being one of the largest and busiest airports in Africa, the decision was made by government to transform O. R. Tambo in line with changing global requirements. An opportunity was identified to develop an aerotropolis which would centre commercial activity on O. R. Tambo (Ekurhuleni Municipality, 2017). In 2014, the contract to develop the Ekurhuleni O. R. Tambo Aerotropolis was awarded to a consortium led by the Aurecon consultancy firm, with the added advantage of extensive experience working on planning and infrastructure projects in the Ekurhuleni locality (Boshoff, 2014). In November 2015, the City of Ekurhuleni unveiled the Aerotropolis Masterplan to the local and international business community, intended to guide the airport city development objectives (Ekurhuleni Municipality, 2017).

2.4.3.2 Durban Aerotropolis

The Durban Aerotropolis, which is the case of reference for this study, is described by the Dube TradePort Corporation (2017b) as a hub of trade and business in Africa, “about to become South Africa’s new gateway to the Southern African region”. This initiative has attracted the direct and indirect involvement of various stakeholders, ranging from provincial and local government structures to organised business in the private sector. The aerotropolis has, as its base, the Dube TradePort and the King Shaka International Airport. With its state-of-the-art infrastructure, the aerotropolis is represents significant government investment in public–

private partnership for positioning the region as a key business and investment space (Dube TradePort Corporation, 2017b).

What sets the Durban Aerotropolis apart, according to Dube TradePort Corporation (2017b), is that it is a freight-oriented development, with a purpose-built, world-class cargo facility, and incorporating a 'greenfield' site. In addition, its coastal location improves the potential for cost-effective logistics. The proposed airport city component, the Dube TradePort together with the existing seaport infrastructure in Durban harbour, facilitates access to numerous global destinations and linkages to countries within the Southern African Development Community region, and it positions KZN as a key business point in the country (Dube TradePort Corporation, 2017b).

Both O. R. Tambo and the Durban Aerotropolis are in their developmental phases, which is an additional reason for the exploration in this study of the implications for RED in relation to aspects such as conceptualisation of the region, governance dynamics, agglomeration and clustering, and regional marketing, as further discussed in Chapters 6 to 9.

2.5 Conclusion

Background detail on the aerotropolis concept has been provided about airport city developments, highlighting previous foundational studies and giving examples that inform the underlying issues in this study and help to define its key components. What is lacking in the literature is more detail on how RED is conceptualised and enacted in the aerotropolis model; the chapter indicates where this gap exists that the study seeks to address.

In addition to the problem statement provided in Chapter 1, an attempt has been made to engage with literature that it is reflective of the proposed objectives. Although it is clear that some aerotropoli conceptualise and enact RED in the context of their airport city developments through clustering and agglomeration of business activity around airports, it is less clear how this works out in detail: what dynamics in the planning of these clusters enable knowledge diffusion, whether and how innovation and entrepreneurship is promoted, and whether these are the objectives. With Memphis and Dubai, it is clear what value chains they are specifically focused on: in each case, logistics and supply chain. With others, however, the objectives are more mixed and diversified, and this indicates, perhaps, that each aerotropolis has a different story to tell and that each is built to suit its particular context. What emerges in common for

most of the examples, however, are governance mechanisms that encourage concerted efforts from both public and the private sector. The nuances of how the aerotropolis facilitates coordinated investments in regional marketing have not been explicitly detailed although they have been alluded to in cases such as Schiphol, Memphis and Dubai. In regard to understanding the 'regions' inherent in the related RED of the various aerotropoli, for Schiphol, the reach of impact is said to be the entire Netherlands, in that it is recognised as the engine of the country's economy. For Memphis, there is an understanding that the reach of development may extend to various parts of the world because of the nature of the logistics business; locally, however, the business community sees its future as closely linked to the aerotropolis. Dubai World Central asserts that its reach is expected to cover macro-regions and regionalisms such as the Middle East and North Africa and the Commonwealth of Independent States.

This chapter has pointed to the gap identified in the conceptualisation and enactment of RED through the aerotropolis. The next two chapters consider the concept of RED and spatial theory for understanding RED.

Chapter 3
Spatial theory as a basis for understanding regional economic development

3.1 Introduction

This chapter explores the socially constructed concepts of space, place and the region, and their related developments – spatial development, place-based development and regional development – in their overarching relation to regional economic development. The first two concepts – space and place – are addressed to get a better understanding of *region* as a spatial concept that is implicit in regional economic development (RED). These concepts are important in this study because it is in 'space' and 'places' that the Durban Aerotropolis and its concomitant agglomerations, clusters and value chains are embedded as economic activities and spatial developments.

Space, place and region all represent specific spatial scales. Hence the need to consider the politics of scale, since the study seeks to engage with the problem of conceptual vagueness in government policy discourse that has consequences for economic development theory and practice. Because RED is a manifestation of the new economic geography and new integration of the world through collaborative and cooperative governance (Ascani et al., 2012), the measure of the scale referred to as the *region* in RED becomes pertinent in seeking to understand how stakeholders in the Durban Aerotropolis conceive of the region as a scale of analysis for economic development.

The chapter goes on to consider development interventions linked to ideas of space, place and region. These include strategic spatial planning for spatial development, place-based development and regional development.

3.2 Conceptualising 'space' and 'space'

The relatively recent rediscovery of space and territory as crucial economic factors springs from the increasing awareness that variations across regions in economic growth and performance are ultimately dependent on a set of relatively immobile resources—knowledge, skills, institutional and organisational structures—whose role has now been recognised as very

important (Breschi & Malerba, 2001). Space, however, remains a difficult concept to pin down and should thus be reflected upon when considering any spatially-anchored development mechanism.

According to Varro and Lagendijk (2013), space is a social construct, constituted through social relations and material social practices, and can be conceptualised in three different ways: absolute, relative and relational. According to Hubbard, Kitchin and Valentine (2008), absolute space is space as an entity in and of itself. Absolute space is fixed and it is within its fixed frame that everything is recorded or planned. Furthermore, absolute space is usually represented as pre-existing and standardised. It is space which is unaffected by what happens to it and it may contain nothing (Lefebvre, 1991). Relative space is to be understood as a relationship between objects which exists only because objects exist and relate to each other (Harvey, 2004). The relational view of space asserts that space in itself is a construction of the processes that define it, meaning that space is fundamentally open (Hubbard et al., 2008). Harvey (2004) further defines relational space as being contained in objects in the sense that an object can be said to exist only insofar as it contains and represents within itself relationships to other objects. Relational space is that which enables what Massey calls a 'throwntogetherness'. This refers to the way in which diverse elements that cross categories such as the natural and social come together to foster a 'here and now' (Hubbard et al., 2008).

According to Hubbard et al. (2008), there are four ways of conceptualising relational spaces. The first is 'empirical construction of space' which is merely about everything that we see around us, from motor cars, to road signs and global positioning systems. Within these constructions, geographers speak of space of measurement and the idea that the way in which space is measured was an imposition from imperial conquests. The second is 'unblocking space' which is seen as a series of connections through which the world interacts. It is about the flow of people, goods, money and information. These flows are what knit the world together within the concept of globalisation. The third is 'image space' which consists of pictures and images ranging from paintings to photographs. Here, television emerges as one of the very popular promoters of imagery content. The fourth relational space is 'place'. According to Hubbard et al. (2008), the concept of place, in essence, is anything but fully understood, although they argue that it is more real and defined than is space (Hubbard et al., 2008).

In this study, the principal focus needs to be on relational space, more especially 'unblocking space', and on place, because these are the constructions of space in which there is no such

thing as space outside of the processes that define it (Harvey, 2004). Furthermore, because processes occur in space and define their own spatial frame (Harvey, 2004), and because the aerotropolis is a project with processes in a particular 'space', it is these processes that define its spatial frame. On this basis it will be more possible to understand the region in the context of the aerotropolis and to qualify the spatial frame of its resultant economic development. The study aims therefore to engage with the dynamics of how an RED project such as an aerotropolis produces a relational space that is considered to be a region.

Harvey (2004) also argues that it is impossible disentangle space from time and that the focus must therefore be on the relationality of space-time rather than of space in isolation. Furthermore, according to Harvey, the relational notion of space-time implies that there are external influences that get internalised in specific processes or things through time:

> An event or a thing at a point in space cannot be understood by appeal to what exists only at that point. It depends upon everything else going on around it (although in practice usually within only a certain range of influence). A wide variety of disparate influences swirling over space in the past, present and future concentrate and congeal at a certain point to define the nature of that point. (Harvey, 2004:4)

The implication for this study is that the aerotropolis as a whole cannot be fully understood as an RED project if it is taken at face value and no consideration is given to what coalesces to make it what it is and what it represents. Further, because there are influences that affect it in space and over time, it becomes crucial that we take account of these influences through interaction with stakeholders of the project.

Having looked at the relationality of space and time, further consideration needs to be given, in the context of this study, to 'space of flows' – defined by Castells (2000: 412) as 'the material organisation of time-sharing practices that work through flows'. The space of flows is a spatial structure of the information age which allows for simultaneity of social practices without territorial contingence (Castells, 1999).

3.2.1 The space of flows

There has been a transformation of location patterns of core economic activities under the new technological system, both for advanced services and for manufacturing (Castells: 2000). The spatial logic which Castells refers to as the space of flows (Castells, 1999) electronically

connects separate locations through an interactive network that links activities and people in distinct geographical contexts (Graham, 2004). The space of flows has become the dominant spatial manifestation of power and function in our societies.

The thinking behind the space of flows emerges from the age of the information society which has necessitated a new theory of spatial forms and processes to fit the social, technological and spatial context we live in (Graham 2004). According to Castells (2000:409), "the informational, global economy is organised around command and control centres able to coordinate, innovate, and manage the intertwined activities of networks of firms". Advanced services of finance, real estate, marketing, public relations, or research and development can be found at the core of all economic processes of any service sector. Castells further argues that they can all be reduced to knowledge generation and information flows: thus, advanced telecommunications makes possible the scattered nature of the entire value chain. While that dispersion has been noted, there has concurrently been a concentration of advanced services as would be the case with the special economic zones or designated industrial areas within the aerotropolis. Neither the dispersion nor the concentration are important in their individual capacity, however, because both processes are taking place at the same time (Castells, 2000).

An element in this thinking is the notion of the global city, which Castells (2000) describes as a process that connects advanced services, producer centres and markets in a global network. This network, he further explains, reproduces itself in regional and local centres, so that the whole system becomes interconnected at the global level. The global city is not a place, but a process by which centres of production and advanced services and their ancillary local societies are connected in the global network (Castells, 2000). On a more critical variance, he states that the territories surrounding these nodes of intensive connections play an increasingly subordinate function, with some potentially becoming irrelevant while others become dysfunctional (Castells, 2000).

The new society is based upon knowledge, is organised around networks, and is partly made up of flows (Castells, 2000). The informational city/society is made up of processes: processes characterised by the structural domination of the space of flows. The space of flows is the material support form of dominant processes and functions in the informational society (Castells, 2000). In simple terms, without the space of flows, the processes of the information age would face challenges in the sense that without advancements in telecommunications businesses would not be as effective and efficient as they are in the dispersion (Castells, 2000).

Castells explores three layers of material support that together constitute the space of flows. The first layer is constituted by a circuit of electronic exchanges. Here interactions in society are made possible by information technology; within this network no place exist *per se* but the technological infrastructure that builds up networks defines a new space in a similar way that railways or highways once defined 'economic regions' (Castells, 2000). The second layer is constituted by its nodes and hubs. These hubs play a crucial role in coordinating smooth interaction of all the elements integrated into the network, while the nodes are representative of other places within the network which perform important functions that "build a series of locality-based activities and organisations around a key function in the network" (Castells, 2000:443). Lastly, the third layer refers to the spatial organisation of the dominant, managerial elites. This is the space of power; within it is carried the organisational capacity of the dominant elite that is capable of disorganising groups in society whose interests are only partially represented even though they constitute a numerical majority (Castells, 2000).

The fourth kind of relational space noted by Hubbard et al. (2008) is place. Of the four, it is second of interest in this study. The next section explores the concept of place and what Manuel Castells refers to as the 'space of places'. This review is necessary because cities nowadays are simultaneously structured and destructured by the competing logics of the space of flows and the space of place (Graham, 2004).

3.2.2 The concept of place (the space of places)

The traditional spatial organisation of our common experiences is referred to as the 'space of places'. The space of places organises experience and activity in relation to the confines of locality (Castells, 2000). Places are conceived of as contexts that facilitate physical, social or economic processes, and they are also a distinctive coming together of natural and cultural dynamics in space (Agnew & Livingstone, 2011). This coming together can also be seen as a coexistence of these dynamics over time (Massey, 2004). Castells (2000: 453) defines a place as, "a locale whose form, function, and meaning are self-contained within the boundaries of physical contiguity". Furthermore, he argues that places are not necessarily communities, although they may contribute to community building.

Massey (2005: 140) defines place as a "throwntogetherness … a negotiating of here and now which must take place within and between both human and nonhuman". The elements of place can be altered or change at different times and speeds and are dispersed, but, she explains, in

their temporary being, we must make something of them. The "throwntogetherness" is a coming together of and constellation of processes. According to Low and Bornnett (2000:58, as cited in Massey, 2005), places are conceived of as "sites where a host of different social processes are gathered up into an intelligible whole". Massey (2005) cautions, however, that an assumption should not be made about there being coherence and coordination in the processes that make up place, and this is why the term conjuncture is used instead to refer to a coexistence of things in space.

Other theorists define place as a location, and they see a place usually being representative of the 'local' while space represents the 'global' (Jessop, Brenner & Jones, 2008). According to Massey (2005), place is space to which meaning has been ascribed. Furthermore, she sees places as not just points and areas on maps but also as integrations of space and time in the breath of spatio-temporal events. In spatio-temporal terms, places are seen as open, as they account for different stories over time. Places are highly complex and cannot simply be understood as spatial entities within a closed hierarchical, territorial-administrative system. Places only exist when they have an audience, and the resulting spatial identities often overlap, contradict or complement each other across existing territorial-administrative levels (Boisen, Terlouw & van Gorp, 2011).

As examples of existing spaces in current society, Massey (2005) cites places of knowledge production, such as science parks and areas of industrial concentration which are seen as icons of the knowledge economy intended to attract 'high technology'. These are constructed places which are carefully chosen and designed as sites of the production of an electronically connected world. "Entangled and enfolded within them is a multiplicity of trajectories each of which has its own spatiality and temporality; each of which has been, and still is, contested; each of which might have turned out quite differently (yet here the intersection of these histories has often served to reinforce the existing lines of dominance)" (Massey, 2005:143).

This discussion has provided conceptualisations of the concepts of 'space' and 'places', including spaces of flows and spaces of places, to add to the understanding of spatial theory needed to understand RED.

3.3 Conceptualising 'region'

Following on from the review of space and space, this section unpacks the concept of the *region*, which is itself a spatially contingent concept connected with the dynamics of space and place. Because place is relational, it is in its relationality that it is distinct from other places (Jessop et al., 2008). No place exists except in relation to other places (Jessop et al., 2008). From this thinking comes the idea that the relational character of space leads us to conceptualising of the *region* in specific ways which are to be explored below. Furthermore, the region is thus seen as a set of localities that are in some way already related to each other forming a 'place' on a broad scale. According to Malpas (2014; para. 12), these "relations are spatial, and space carries a basic relationality with it (even though it cannot be reduced to relationality), but the relationality of space is itself to be understood only on the basis of the regionality of relations". This means that a region is to be understood on the basis of how the places within it relate to each other.

The region becomes a significant spatiality to examine in seeking to understand RED. Furthermore, because the region is in its essence a spatial concept, understanding it can be viewed as spatial meaning making, hence the need for the discussion above reviewing the concepts of 'space' and 'place' (Paasi, 2011).

This research addresses the conceptualisation and enactment of RED and is grounded in the acknowledgement that the region is a problematic and complex concept in theory. Van Langenhove (2013) contests this assertion by arguing that the intricate nature of the region has hardly been problematized in theory and that not much attention has been paid to the development of a theoretical framework for the study of regions. However, he does acknowledge that the concept of the region is polysemous, meaning that there is uncertainty in its meaning in the sense that it is understood from different perspectives and disciplines across the board.

According to Agnew (1999), controversies have flared up episodically among geographers and theorists in other disciplines about the meaning invested in regions and the various schemes of global division they represent. Van Langenhove (2013) and Paasi (2011) both allude to the problematic nature of the region as a concept. This is because regions can be theorised from a number of disciplines as they are seen as a multidisciplinary endeavour (Schmitt-Egner, 2002). A lot of work has however been done, more especially by geographers, political economy

researchers, international relations studies and economists, to build on the knowledge and understanding of the concept of the region.

Given the debates and controversies mentioned above, a legitimate assumption is that regions are spatially contingent and that theoretical and empirical understanding of what regions are must be based on contextuality (Paasi, 2011). The next section considers the geographical debate about 'region'.

3.3.1 Geographical debate on 'region'

According to Van Langenhove (2013), the connotation of region was originally linked to governance and not necessarily to demarcating space by borders. But because the concept has become so ambiguous and polysemous, it can refer to a geographical space, an economic interaction, an institutional or governmental jurisdiction, or social and cultural characteristics. Given the multiplicity of possible definitions of region, the definitions themselves tend to differ and even contradict each other, and De Lombaerde, Soderbaum, Van Langenhove, and Baert (2010) conclude that there is as yet no unified academic perspective on regions.

Van Langenhove (2013) argues that allusions to regions tend always to refer either to a territorial space or to a certain characteristic of that territory. In this view, regions can then be seen as part of a single state or as a composition of different states. The problem is that these regions can be small or huge: "well defined with sharp boundaries or … fuzzy" (Van Langenhove, 2013:476). While every geographical surface can be called a region, there still remains a difficulty in labelling the state as a region, from which it becomes clear that people can see the same geographical spot as being part of different regions at the same time. As an example, 'region of Flanders' could refer to a clearly defined geographical area while 'region of Belgium' does not refer to territory inside Belgian borders. Van Langenhove (2013) characterises this way of thinking as first-order uses of the concept of region, contending that regions are much more than just geographical realities and that they should not be defined only by their surface or boundaries since they are "institutional facts". By this he meant that regions should be those geographical surfaces that are only 'facts' by human agreement because they are geographical areas whose existence is impossible without people.

This argument stems from a social constructionist point of view which states that regions start to exist because they are being talked about and because of the way they are talked about. This

then tells us that a region is constructed through discourse. This discourse could be related to governance, politics, culture and economics (Paasi, 2011) but equally it could be related to the several conceptualisations of space (whether relational, relative or absolute). This is a foundational contention in the present study in terms of the need to probe how the aerotropolis-linked region is conceptualised by stakeholders and practitioners within the economic development space.

Since a region is a socially constructed concept, Van Langenhove (2013) notes that consensus seems to have been reached with regard to differences in the conceptualisation of the region from the various disciplines and schools of thought. For geographers, regions are territorial and their problem is inability to grasp the extra-geographical element that is captured in the works of people in other disciplines (Van Langenhove, 2013). Political scientists focus on regions as entities of governance (Keating, 1998; Hooghe & Marks, 2009). The field of international relations looks at supra-national regions and processes of regional integration (Farrell, Hettne & Van Langenhove 2005). Economists look at the same divides as international relations practitioners but also focus on regional trade arrangements (Mattli, 1999). According to Acharya and Johnston (2007:629), from these varying understandings of the concept of region has emerged the insight that 'regions are central to our understanding of world politics', which is also the case for understanding forms of economic development intervention.

According to Suorsa (2014), in the traditional view of regions there are three classifications: administrative regions, functional regions and formal regions. Administrative regions are classified by governance and political territories, functional regions by labour market areas and formal regions by their human and physical features (Claval, 1998; Paasi, 2009). This traditional classification is reflective of a realistic view of regions as it regards them as concrete and existing entities or actual 'things' that are 'out there' rather than 'things' as dependent on observers (Suorsa, 2014).

One other group studying regions puts their focus on the territorial view of these entities and sees them as being constructed as spaces of governance which are territorially bounded (Goodwin, 2013). Paasi (1986) stipulated that the territoriality of a region can only be achieved once the region establishes its boundaries and becomes identified as a distinct unit in the spatial structure of society. Furthermore, the territoriality of regions is in the form of processes in which societal power relations manifesting themselves in political, administrative, bureaucratic or economic institutions play a crucial role (Paasi, 1986). Those studying regions through the

territorial lens emphasise that regions are discrete spaces and defined territories that are controlled by local actors and can be managed as both social and political spaces (Amin, 2004; Thomas, Harvey & Hawkins, 2013). Territoriality of regions qualifies itself as a powerful political construction, and it is political institutions which lend themselves to the language of territory, fixity, boundaries and boundedness (Allen & Cochrane, 2007; Hudson, 2006; Macleod & Jones, 2004; Paasi, 2002, 2004).

Challenging the territorial understanding of regions is the relational view which shifts the focus from thinking of regions as bounded territories to seeing them as 'products' of complex sets of social relationships whose density and variety changes in time and space (Suorsa, 2014). From this perspective, regions cease to be whole, bounded and closed entities and instead seen as dynamic and proactive; more like "networks of concentrations of people and places than simply uniform and bounded geographical units" (Suorsa, 2014: 208).

In considering the relational view of space, especially the relation of space and place, it is important to note that the relational perspective of the region is widely accepted in geographic scholarship (Varro & Lagendijk, 2013) and a number of geography researchers have advocated for the radically relational approach (see Allen and Cochrane, 2007; Amin, Massey & Thrift, 2003; Amin, 2004).

Interestingly, cities and regions are seen as "sites within networks of varying geographical composition as well as spaces of movement and circulation of goods, technologies, knowledge, people, finance, and information" (Amin et al., 2003: 25). Further into this argument we find that emerging spatial configurations are no longer interpreted as territorial and bounded (Macleod & Jones, 2007) because they are made up of a web of networks and relational "connections", which are neither fixed nor located in place but are constituted through various "circulating entities" (Latour, 1999), and which subsequently, "bring about relationality both within and between societies at multiple and varied distances" (Urry, 2007: 28).

The relational view on region is clearly the product of an increasingly mobile and interconnected world. The contending arguments on the 'relational turn' ask, on the one hand, whether regions should be conceptualised relationally, and on the other, whether territories should be conceptualised as spatial realities (Varro & Lagendijk, 2013).

Put simply, this is the 'relational versus territorial debate' (Varro & Lagendijk, 2013). There are two camps, with those who understand regions in relational terms labelled as 'radicals', and those adopting a territorial perspective referred to as 'moderates' because they propose

moderate relationalism (Varro & Lagendijk, 2013). The relational point of view disavows the territorial view of regions and proposes instead that an adequate understanding of the region can only come about from a conception of places as "open, discontinuous, relational and internally diverse" (Allen, Massey & Cochrane, 1998, 143).

In addition to those adopting the territorial perspective, seeing the region as territorially bounded, and those who make sense of it from the relational perspective, there is another a group which sees a region as an assemblage – as "the product of the networks, interactions, juxtapositions and articulations of the myriad of connections through which all social phenomena are lived out" (Allen et al., 1998: 50). This view is also put forward by Gregory (2000), who states that regional formations are more or less temporary concentrations of institutions, objects, people, and practices that are involved in the operation and outcome of local, trans-local and trans-regional processes. This relational view of the region captures what Massey refers to as a 'throwntogetherness' which Hubbard et al. (2008) refer to as a coming together of diverse elements that cross categories such as natural and social.

According to Godwin (2013), this assemblage could also be of overlapping institutional forms such as regional offices, agencies, boards and assemblies, along with related strategies. These institutional forms are territorial entities that attempt to be the foundation that "holds down the fluid elements of global life in the interest of their regions" (Allen & Cochrane, 2007), to "generate fixity through processes of government and governance" (Allen & Cochrane, 2007; Goodwin, Jones & Jones, 2005: 423). In this perspective, the assemblages that make up a region can apparently be derived from both aspects of the relational and territorial debates. The coming together of the various networks and interactions may be happening both in spaces of flows and in spaces of places.

Allen and Cochrane (2007) go on to say that these 'regional' spatial assemblages are not exclusively regional, but bring together elements of central, regional and local institutions. This view calls into question the usefulness of continuing to represent regions politically as either territorially fixed or relational in any essential sense (Allen & Cochrane, 2007).

One other problematic issue with defining and engaging with regions is their variation in spatial scale. There are economic macro-regions and regionalisms such as the European Union, the North American Free Trade Agreement, Europe, the Middle East, Africa and the African Union, just to name a few. There are also global city regions as well as polycentric urban regions (Paasi, 2011). According to Langenhove (2013), in considering scale, the distinction

between regions can be at three levels: sub-national level (within a nation as a whole), supra-national level (an integration of countries), and cross-border level (across national boundaries or across political jurisdictions). This is not to say that a region cannot be any scale bigger or smaller than the aforementioned.

To summarise, whereas the literature reveals opposing views on relational and territorial conceptions of region, there is also a camp that sees regions as assemblages in which multiple institutional forms are brought together to provide a foundation to hold together the fluid dynamics of the global world. The multiplicity of the views on what regions are has prompted a review of the 'politics of scale' to highlight how agencies and institutions mobilise to construct these regions (Allen & Cochrane, 2007).

3.4 A detour into the politics of scale

According to McCann (2003), the evolution of urban governance over the years has seen a reshuffling of the seat of power among the various institutions and increased importance of the urban policy-making process. The norm has been that capital holds direct control and carries weight in the formulation of urban policy through public–private partnerships. Affecting changes in urban policy making are 'politics of scale' (McCann, 2003). The changes in question make it clear that scale is not a neutral background but rather a discursive frame that contemporary actors or interests use to define or redefine the seat of power (political or otherwise) and the territorial extent of specific policies and regulations (McCann, 2003).

What compels attention to the politics of scale is the assertion by Marston (2000) that the production of scale is implicated in the production of space. Discourses in urban politics frequently employ geographical scale as a framework for creating a particular vision of the future of a place; hence the need to establish what the 'region' is in the context of the aerotropolis in order to determine the reach of development afforded by the project from the perspective of the various stakeholders. According to Marston (2000:220), scale, like environment, space or place, is one of the elements from which geographical totalities are built. Furthermore, scale needs to be understood

> not as size (census tract, province, (and) continent) and level (local, regional, national) but as a relational element in a complex mix that also includes space, place and environment – all of which interactively make the geographies we live in and study.

The problematic, polysemous and subjective nature of the concepts of space, place and the region all attest to the social construction of spatial scale.

Scale is ‘‘the focal setting at which spatial boundaries are defined for a specific social claim, activity, or behaviour’’ (Agnew, 1997:100). And while scale is a way of framing reality and setting boundaries for action through discursive means, the social production of scale is not merely rhetorical. Rather, it is fundamental to the historical, geographical, and material constitution of society and everyday life. Framings of scale are often contradictory and never permanent. As such, they are frequently contested and struggled over: as Agnew puts it, scale construction is a political process endemic to capitalism, the outcome of which is always potentially open to further transformation.

A major question in urban politics is how each coalition of political actors constructs a relatively consistent discourse, or discursive frame, on the future of the city that resonates with their own political ideology and is persuasive to a wider constituency (McCann, 2003). ‘Discursive frame’ signifies the process through which interest groups or various actors involved in urban politics (or politics of development) seek to entrench their own ideologies in relation to how things are, how they should be, and the policies that will make things better in the future (McCann, 2003). This political persuasion works through frames and these frames are identities and meanings that have been attached to certain actions, experiences and events for purposes of influencing politics and policy. Scale is thus contingent on the tensions between structural forces and the practices of human agents (Marston, 2000).

These discourses strategically and instrumentally highlight certain aspects of each place and its political, economic, and social context. Scale is a powerful discursive frame, whether it be in terms of space, place or region, as is the case with the questions raised in this study. Discursive framing generally, and in the context of scale, “draws on certain aspects of materiality and experience of everyday life to focus the attention of a wide range of people on a common concern so as to achieve a particular political purpose” (McCann, 2003:160). The politics emerge through various actors’ attempts to frame reality in different ways that promote their interests and enable them to implement policy and mobilise politically. According to McCann (2003), the way contemporary local policy is formulated affects the character of local political economies and built environments. This is believed to be as a result of the way government has been replaced by governance in industrialised cities that shifts the control of

policy making towards private business and civil society, with government agents performing a facilitative function (McCann, 2003).

Having examined the concepts of space, place and the region and the politics of making spatial boundaries in terms of scale, what follows is a discussion of developments that are linked to these concepts; in seeking to understand any development in and of itself, its key area of occurrence always needs to be fully unpacked. From space emerge issues of spatial development, place, place-based development and the region, regional development and other related concepts of new regionalism, leading on to RED. The next section considers what these entail and the kinds of initiatives that result from them.

3.5 Development linked to ideas of space, place & region

Thus far, this chapter has identified theoretical and foundational work on space, place and the region. From this, it has emerged that the concepts under discussion are complex but nonetheless important for understanding RED and the processes that unfold in urban development. The more particular concern in this study is spatialized economic development. The following sections accordingly discuss the relationship between space and development. Important points of focus are strategic spatial planning for spatial development, place-based development and regional development, taking into account the understanding already considered of space, place and region.

3.5.1 Strategic spatial planning for spatial development

The review of spatial concepts presented above has indicated the complexities of socio-spatial relations between physical spaces, places of meaning and the spatial patterning that result from dynamic social and economic networks (Healey, 2007). This is highlighted in the work of Castells (1999; 2000) who speaks of the tension between place and flows, and the different understandings of regions which see them as either territorial or relational entities. Given these contesting views and schools of thought, the language of ‘networks’ seeks to give conceptual meaning to the coexistence of these ideas and realities. These networks are superimposed on one another and reach out to others elsewhere either in space or in time (Healey, 2007). In the mid-20th century the amalgamation of these networks was called a ‘city’, but today there is an understanding that our social worlds and simple things such as daily interaction stretch well

beyond the area of any particular city (Healey, 2007). As a result, the place of cities and urban areas cannot therefore be understood as "integrated unities with a singular driving dynamic, contained within clearly defined boundaries" (Healey, 2007: 22)

The key argument here is that there are complex constructions created by interaction between actors in multiple networks who invest in material projects and give meaning to qualities of places. These webs and networks of relations escape analytical attempts to 'bind' them (Healey, 2007). Because of these intricacies, strategic spatial planning therefore emerges in an endeavour to make sense of the complexity of urban life. This planning exercise, together with an understanding of the socio-spatial dynamics, becomes a governance project focused on managing dilemmas of "coexistence in shared spaces" (Healey, 1997; 2007).

Strategic spatial planning is also referred to as town/city planning, urban and regional planning, spatial planning, territorial development, and territorial management (Healey, 2007). For spatial development to occur, spatial plans need to be put in place which offer indicative guidance for spatial development (Todes, 2012). Oranje and Merrifield (2010:1) refer to spatial development planning as

> a process whereby a national/central government seeks to consciously plan for the spatial development of the territory of a country by using the location, timing, nature and scale of infrastructure investment and development spending to stimulate, support, strengthen and encourage growth and development in specific spaces/places.

Spatial plans are "strategic frameworks and visions for territorial development, with an emphasis on place qualities and the spatial impacts and integration of investments, complement and provide a context for specific development projects" (Albrechts, Healey & Kunzmann 2003: 113). In strategic spatial planning, the 'strategic' deals with the pursuit of a long-range vision of a desirable and feasible idea of a potential future (Healey, 2004).

Strategic spatial planning is practised to "support a shared understanding, joint visioning, coordinated prioritisation, resource allocation and implementation" (Pretorius, 2012: 6). Healey (2007) claims that it is concerned with the interrelation between fixity and mobility, meaning that it involves making decisions relating to the allocation and distribution of land-use activities as well as infrastructure channels (Healey, 2007; Pretorius, 2012).

Strategic spatial planning aims to intervene in shaping development outcomes that affect urban regions or neighbourhoods (Pretorius, 2012). Urban regions are also 'city regions' or 'metropolitan regions' (Salet, Thornely & Kreukels, 2003). Other authors (Bafarasat, 2015;

Balducci, Fedeli, & Pasqui 2011; Oosterlynck, Van den Broeck, Albrechts, Moulaert & Verhetsel, 2011) confirm that the city-region and regional levels are seen as the core of strategy-making activities. Strategic spatial planning treats urban territories as "complex mixture of nodes and networks, places and flows, in which multiple relations, activities and values co-exist, interact, combine, conflict, oppress and generate creative synergy" (Healey, 2007: iii). Because urban regions are too dynamic, complex and mazy, their development cannot be planned by government action in a linear sequence of plan-action-outcome (Healey, 2007). The physical fabric and make-up of urban regions makes it difficult to imagine the development interventions and projects, let alone predict them. This is why strategic spatial planning is utilised to influence urban development and regional economic development trajectories (Healey, 2007).

According to Bafarasat (2015), the normal approach to strategic spatial planning often highlights community deliberations and the actual outcomes of spatial development. The focus is also on ensuring that those entrusted with making these plans promote inclusive spatial change. There is contention, however, around the nature and scale of strategic spatial planning. According to Bafasarat (2015), disagreement is primarily related to the merger of the 'strategic' and the 'spatial'. This has led to what Campbell (1996) refers to as contradictions of sustainable development – as, for example, when stakeholder involvement as a tenet of strategic spatial planning gives rise to debate around 'inclusivity' versus 'efficiency' (Gallent, Hamiduddin & Madeddu, 2013). Policy integration faces the dilemma of whether to be 'broad-ranging' or 'selective' (Oosterlynck et al., 2011), and issues of implementation centre on 'plans' or 'projects' (Banai, 2013).

From strategic spatial planning come strategic spatial projects, defined by Oosterlynck et al. (2011) as catalytic projects for change. These are spatial projects coordinated by public actors in close cooperation with private sector and other stakeholders (Albrechts, 2006a) and have the capacity to tie together multiple actions and actors (Oosterlynck et al., 2011). The projects are strategic in their quest to achieve visions, policy objectives and various other goals embedded in strategic planning processes at different policy levels and integrated with ambitions of the private sector (Albrechts, 2006b). However, strategic spatial projects have been criticised for undermining the universalistic agenda of spatial development by redirecting public investment away from social goals and concentrating development resources and policy attention instead on areas of privilege (Oosterlynck et al., 2011).

Having considered how spatial planning and development gives character to spaces, the next section, on place-based development, looks at the way places get developed using resources that they already possess.

3.5.2 Place-based development

The concept of 'place-based' development was introduced in 1966 by Louis Winnick to distinguish between policies for places and policies aimed at helping people (Seravelli, 2015). According to Markey (2010), place-based development seeks to reveal, use, and enhance the unique natural, physical and human capacity endowments present within a particular location for the development of the community. Approaches to place-based development are usually contextually specific and require that the specificity, complexity and interconnectedness of place be taken into account (Pugalis & Bentley, 2014).

Furthermore, design of place-based development strategies is 'case specific' and intended to deal with uneven patterns of spatial development. In relation to the present study it raises the question of whether project aerotropolis is designed to suit Durban, to suit eThekwini Municipality or to suit KZN province. Is the focus on a place, a political jurisdiction or a province? Or further beyond? The call for a broader understanding of how a project physically situated in one area impacts on economic development of the region stems from the fact that there are different scales at which the aerotropolis impact could be of reach.

According to Pugalis and Bentley (2014), in place-based approaches to development and their implementation policy makers and researchers fail to take account of the complexity of the environment because the approach lacks conceptual clarity and operational precision. Pugalis and Bentley argue that a narrowly crafted place-based socio-economic development strategy impedes sustainable and inclusive notions of development and growth. This happens because although these strategies are in some ways aimed at helping people they tend to be one-sided about development and overlook the social aspect of development.

The role of place becomes a crucial and important dimension of policy debate when issues of local and regional development come into play (Pugalis & Bentley, 2014). Celata and Coletti (2014) describe place-based approaches as a blend of territorial and relational imaginaries. The relational aspect is often made to appear less important in the actualisation of place-based policies as they tend to emphasise the importance of local and supralocal relations.

In a relational perspective, place-based approaches see relational geographies as platforms for cooperative policy development and governance (Pugalis & Bentley, 2014), and discourse centres on functional regions and functional economic geographies (Barca, 2009). In relation to socio-economic practices, the focus is on the transcendent characteristics of boundaries. Examples are given of interventions such as special economic zones and of simple daily commuting patterns of labour from one locality to another (Barca, 2009; Pugalis & Bentley, 2014). These examples show that place-based approaches are about the economic development of a particular place with a specific locality in mind.

Place-based development brings together a range of place-based economic strategies that are connected by various common attributes that could potentially form one ideal place-based policy model. The argument, however, is that each approach to place-based development is likely to be contextually distinct (Pugalis & Bentley, 2014). This is not a one-size-fits-all approach as it considers the specificity, complexity and interconnectedness of a place. There are globally framed currents that appear to be influencing places around the world but place-based approaches focus on the unique translation of these in particular contexts (Borggren & Strom, 2014).

Place-based approaches to development emerge from place-based policies. Tackling uneven development is not easy, and competing approaches to reducing spatial inequalities have been spurred by the emergence of new theories of economic growth that emphasise endogenous processes, agglomeration economies, and institutions (Todes & Turok, 2015). According to Koster, Cheng, Gerritse and Van Oort (2016), through place-based policies, governments put effort into stimulating employment growth, fighting unemployment and spurring productivity. The investments made in this regard are often not space-neutral although they may differ between regions and cities. The rationalisation for place-based policies is to improve the prospects and livelihoods of the poor and disadvantaged household (Koster et al., 2016). Place-based initiatives and investments may be more effective in reaching households than economy-wide investments (Koster et al., 2016).

Flaws that have been identified in place-based policies are chiefly related to targeting and coverage. Place-based policies explicitly target enhanced growth in particular locations and seek to ensure that localities utilise the resources they have at their disposal and exploit their strengths (Wijerathma, Smith, Naranpanawa & Bandara, 2015). According to Seravelli (2015:11), there is

> a trade-off … between static and dynamic efficiency. Adopting a redistribution policy in favour of people makes it possible to help many (coverage) who really need it (targeting). However, it does not usually make them self-reliant. A place-based policy runs the risk, in the short term, of favouring those who do not strictly need it, but, over time, it can allow the whole area- as well as its inhabitants to improve their lot. In essence, place-based policies should be implemented in such a way that really teaches people to fish rather than give them a fish. Of course there must be fish in the river.

One argument against place-based policies is that governments should not single out particular localities for special support because market forces alone should determine which places can prosper (Todes & Turok, 2015). In terms of this argument, as these places prosper, economic integration through trade and migration will inevitably spread resources and narrow the gap between leading and lagging regions.

Another criticism of place-based policies comes from Seravelli (2015), who sees them as potentially having perverse effects where local authorities are tempted to adopt a direct exchange between votes and favours. To counter this possibility Seravelli calls for decentralisation to promote efficiency of resource allocation. Place-based policies are complex in their designed and this hinders their efficiency (Seravelli, 2015). In particular, they combine top-down and bottom-up approaches to development which have both given poor results. Intervention from above fails to grasp the real potential of places, while bottom-up interventions have proved ineffective because locals are incapable, unwilling and inefficient (Seravelli, 2015). The most successful are those which integrate resources and knowledge from above.

Place-based policies that target deprived areas bring economic activity to the least productive places, thus potentially lowering overall productivity (Koster et al., 2016). Productivity also falls if poor regional performance can be traced back to negative spillovers from local people or firms. The distributional effects of place-based policies are also unclear. For example, beneficiaries of the aid may be the richer people in the impacted area, thereby increasing inequalities within the region.

According to Neumark and Simpson (2014), place-based policies often target underperforming areas such as deteriorating downtown business districts and disadvantaged regions. The policies represent government efforts to enhance economic performance of an area within its jurisdiction. Ladd (as cited by Neumark & Simpson, 2004) distinguishes place-based people

strategies from place-based policies that are less concerned about whether or not disadvantaged people live in an area. Focus on people can be direct or indirect. Direct forms of place-based policies seek to increase economic activity and strengthen labour markets where disadvantaged people currently live, while indirect policies may instead seek to increase access of those people to locations where labour markets are stronger (Neumark & Simpson, 2014).

The place-based policies that have attracted the most attention are enterprise zones (Neumark & Simpson, 2014). Signatories to the BRICS agreement are examples of countries that extensively apply place-based policies and special economic zones to promote development (Koster et al., 2016). In China's Shenzhen, for example, economic place-based policies have been carried out primarily to promote foreign direct investment, technology transfer, and exports (Koster et al., 2016). Science parks are also popular ventures in this regard, with included firms located in close proximity to each other to stimulate cooperation and interaction. In essence, place-based investments in science parks foster agglomeration economies and innovation (Koster et al., 2016).

The preceding discussion has explored place-based development and its efforts to bring about betterment of places through utilising their already available resources and strengths. The next section looks at regional development.

3.5.3 Regional development

According to Nelson (as cited in Bingham & Mier, 1993:27), regional development refers to "change in regional productivity as measured by population, employment, and income and manufacture value added. It also means social development such as quality of public health and welfare, environmental quality and creativity." Regional development is about improving the conditions of chronically underdeveloped regions or regions undergoing cyclical change. It consequently calls for regional policy, which is how national government assigns various economic interventions among its different regions (Adams & Harris, 2005). Essentially, it is about distributing economic activity to regions facing economic decline and restructuring. Before regional policy can be developed, there ought to have been a regional planning exercise. Adams and Harris (2005) define regional planning as decision making at the regional level; focus will be on a range of issues in a single region. The mechanisms for regional planning include preparation and implementation of a regional development strategy, and the plans may be carried out by decentralised administrative bodies.

There is a view that regional development/planning and spatial planning (discussed in section 3.5.1 of this chapter) may be perceived as similar or very closely linked (Adams & Harris, 2005). According to Adams, Alden and Harris (2006), spatial planning has generated considerable interest in the field of spatial planning. Correctly executed, both spatial planning and regional development have the potential to raise both national and regional levels of prosperity and reduce prosperity gaps between localities in regions. Regional development and spatial planning are said to be closely linked to regional planning theory, which seeks to explain the causes and consequences of regional economic disparities and regional competitiveness. In this regard, regional development thus addresses the question as to why regional disparities occur and why they persist (Adams et al., 2006).

Adams and Harris (2005) reject the view that regional development and spatial planning are related, arguing that regional development strategies focus primarily on economic activities and therefore lack the wider scope of a spatial strategy. This argument is supported by Adams et al. (2006), who state that regional development theory has to do solely with economic performance of regions. Similarly, Balisacan, Hill and Piza (2006) emphasise that regional development considers the fusion of trade and geography. The reason for the focus on the distribution of economic activity is because regional development examines the extent of economic and social disparities and requires them to be addressed (Adams et al., 2006). Regional economic performance is thus crucial for reduction of regional disparities.

Although these seem to be competing points of view, the shared concern for both is regional competitiveness and addressing of regional disparities.

According to Adams et al. (2006), there are various paradigms in regional development. For those who view it as focusing on economic performance of regions, issues of innovation, knowledge creation and labour flexibility tend to be a priority. Here knowledge is essential and implies an emergence of ‘learning regions’, ‘knowledge economies’ and ‘intelligent cities’. In this paradigm, innovation, location and competiveness are central themes in the inter-linkage between knowledge, space and economic development (Adams et al., 2006).

De Groot, Poot and Smit (2007) identify innovation and technological change as crucial aspects in the quest for regional development. According to Gordon and McCann (2000), the focus in the relationship between innovation and regional development tends to be on the role played by agglomeration economies in fostering localised learning processes within the economy. This relationship is also seen in the performance of industrial clusters which happen to have a high

degree of industrial innovation. Keune (2001) identifies important areas in promoting regional development: technology transfer, innovation and information, training, retraining and employment creation, supporting enterprises, promoting inter-firm cooperation and promoting inward investment. Some of these will be further discussed in the chapter on regional economic development.

In the classical regional development paradigm, nations and regions contain hierarchies of places and spaces (Adams et al., 2006) involving binaries of core/periphery, growth centre/hinterland and leading or lagging regions (Bingham & Mier, 1993). Deriving from this paradigm, Bingham and Mier (1993) identified two schools of thought on regional development: the 'development-from-above' school and the 'development-from-below' school. The former views development as emanating from the core or growth centres and trickling down to the periphery and hinterlands while the latter, although not necessarily disputing the notion of 'development-from-above', argues for regions (whether core or periphery) to take control of their own institutions to create economic competitiveness for that specific region.

Regional development is more about spatial dynamics of the regions as places to live, work and invest. This means that the focus of this development is as much on people as its driver as on industries, development agencies and firms (McCall, 2010), and people's knowledge, and where and how it is used, is a key focus for research in regional development. Also related to this are regional development theories which focus on human and social capital, innovation, and spatial dynamics.

3.6 Conclusion

A common thread in the discussions and debates concerning modern approaches to development, as outlined in this chapter, is a strong awareness of the key role of geography in policies targeting aggregate economic growth.

Although space is a complex concept it is important to reflect on its nature in seeking to understand urban processes. Because space is a social construct, it can be viewed in three different ways; applicable to this study, in particular, is the relational view of space, which asserts that space in itself derives from the processes that define it, meaning that it is fundamentally open. In studying relational space, place emerges as important in that it is a

context that facilitates relations and connections in the dynamics of physical, social and economic processes. Furthermore, the relationality of place implies that no place exists except in relation to other places because places within spaces are the places that they are through their location within the space and so in relation to others.

To summarise, the chapter has highlighted four kinds of relational spaces: empirically constructed space, image space, 'unblocking' space, and place. Unblocking space and place emerge as relational spaces applicable to the questions that are posed in this study as they imply that there is no such thing as space outside of the processes that define it. They are also about the series of connections through which the world interacts. The relationality of space also highlights the impossibility of disentangling space from time as urban processes unfold. This, in turn, puts focus on the 'space of flows', which is an interactive network that connects activities and people in distinct geographical contexts. Discussion of the fourth kind of relational space, place, centres on the literature dealing with the 'space of places' as proposed by Manuel Castells.

Because the region is spatially contingent, the nature of its making is also problematic and complex, given that its definitions vary and contradict each other. The contradiction is as a result of the multidisciplinarity of the concept, meaning that it is studied from within various fields. Some have argued that regions exist because they are spoken about and this stems from the social constructionist view which thus sees them as institutional facts. There are numerous views of regions: traditional (which classifies them into administrative, functional and formal), territorial, and relational. The territorial view sees them as bounded spaces of governance, and in the relational view they are perceived as unbounded webs of networks and relational connections. In addition there is the perspective of regions as spatial assemblages which seemingly incorporates aspects of both territorial and relational views of regions.

The need to engage with the politics of scale came about because of the understanding that the way scale is produced is implicated in the production of space, and since all the concepts being studied are spatially contingent, an exploration of the politics of scale was justified. Much of what is covered in this chapter puts emphasis on the difficulty of fully understanding specific concepts in the construction of discourse. Considering the politics of scale puts a spotlight on the way interest groups and actors involved in urban politics seek to entrench their own ideologies in relation to how things are, how they should be, and the policies that will make things better in the future. Scale thus becomes a contingent outcome of the tensions that exist

between structural forces and the practices of human agents. And particularly relevant for this study, scale – whether in space, place or regional terms – is a powerful discursive frame.

In discussing the developments linked to ideas of space, place and the region the purpose has been to highlight the specific characteristics of each but also to identify the overlaps between them, given that they are all spatially contingent. Set against the complexities of interrelation between physical spaces, places of meaning and spatial patterning, strategic spatial planning emerges as providing indicative guidance for spatial development. This planning is intended to simplify the complexity of urban life and urban processes and to manage the dilemmas of coexistence in shared spaces. Unlike spatial development and its related planning, place-based development is aimed at helping individuals and utilising resources within a particular locality. This development is context-specific and seeks to address uneven patterns of spatial development of localities. Finally, considering regional development, which is about redistribution of economic activity, aids understanding of causes and consequences of regional economic disparities and regional competitiveness.

The discussion in this chapter has a direct bearing on conceptualisation of the region inherent in RED through the Durban Aerotropolis and the exploration of these issues of space, place, region and scale will inform our ultimate understanding of this conceptualisation.

Chapter 4
Regional economic development

4.1 Introduction

This chapter reviews literature on regional economic development (RED). It begins with a discussion of the definition of RED, complexities in the conceptualisation RED, and the basic tenets of RED. The chapter introduces the various enactment focus points of this research by unpacking the science and economics of agglomeration and clustering of businesses as a key element of RED, exploring the externalities of this agglomeration and clustering of economic activity. These include knowledge diffusion, innovation and entrepreneurship, and value chains brought about by competitive pressures within clusters of firms that force organisations to do more with less and to leverage all they know to succeed. The chapter then goes on to discuss governance for RED, outlining components, principles, dimensions and indicators that are crucial for the success of regional projects. Also included is a discussion of regional marketing strategy as an approach to RED, considering various aspects of marketing that attract investors, such as business climate, image and identity, infrastructure, incentives, capacity building and skills development.

4.2 Conceptualisation of regional economic development

This section considers the multiple ways in which RED is understood and conceptualised. It will provide the various definitions of RED.

4.2.1 What is regional economic development?

Changes in the economic landscape brought about globalisation over the past three decades include an increase in international trade and increased capital mobility across countries. There have also been changes in "regulating, orienting and/or restricting [capital] flows" (Ascani, Crescenzi & Iammarino, 2012: 3) by nation states, and economic institutions at the nation level are slowly becoming obsolete. At the same time, this process of globalisation has played a crucial role in reorganising mass production by fostering flexible and successful production systems in response to increasing competitive pressure in international markets. This has

promoted the rise of multinational enterprises (MNE) and contributed to the further weakening of national boundaries and 'flattening' of the world. Through the MNE model, firms are adapting their industrial governance and competitiveness to the new economic environment.

Set against the trajectory of globalisation, literature on the 'regional world' increasingly stresses the importance of regional processes and the role of local actors in shaping development trajectories. Local specificities are being reaffirmed rather than marginalised in a context of increasing globalisation, embracing the reality of development processes that unfold at the local level, with recognition that globalisation can in fact reinforce such a pattern. To unravel the complex ironies of this situation it is necessary to understand the "'regional world'… [as] essentially underpinned by the spatially-bounded localised forces that trigger economic development and push welfare to agglomerate in specific locations within countries" (Ascani et al., 2012: 4). What agglomerates could be both institutions and MNEs that have been enabled to function in whatever space they deem suited for their business.

Within this frame of thinking about development, national economic growth tends to be seen as an attribute of performance. A number of local economies within nation countries strive to perform at their peak, and it is urban areas that are the likely settings for concentration of economic growth. This is because "most industrial production, skilled labour and higher wages tend to agglomerate in cities where geographical proximity between economic agents facilitates communication and creates an environment which favours frequent interactions and flows of ideas" (Ascani et al., 2012: 5).

The context outlined above indicates the basis upon which the concept of RED is founded.

Before considering definitions or theoretical implications of RED, it is important to note the link between land economics and RED. Partridge and Rickman (2014) argue that it is important to include land in RED analysis, and that RED is about land because it is activity in a place or a specific land area. Land use and economic development are inherently linked through zoning, transportation, infrastructure, sprawl and environmental attributes that jointly affect firm productivity and household utility. Furthermore, land studies and economics need to focus on joint firm location decisions and RED on land, as land defines the space within which the economic activity occurs. In addition, Partridge and Rickman argue that

> models and empirical approaches are needed that recognise regions as complex systems, fully understanding and modelling the interplay between land use and economic development, including the linkages

> between the inter-regional distribution of economic activity and regional economic performance. (2014: 24)

Because of lagging economic performance, cities, regions and states strategically plan endeavours to improve their economies (McGahey, 2008). Regional economic development is therefore regional efforts in economic development. According to Wood and Valler (2009), delineating the field of regional economic development is problematic as it is very difficult to define any obvious boundaries around the related literature. Discussion and study of this field across and within disciplines such as politics, geography, sociology, economics and urban studies is said to be selective and impressionistic, but this is deemed inevitable given the diversity and potential scale of the field (Wood & Valler, 2009). Wood and Valler note in addition that in trying to understand such economic development processes; the problem is not the lack of theory but the multiplicity of theoretical understandings. These will be discussed below.

RED has been defined as the outcome of generative economic activity through collaborative multi-stakeholder relationships, productive networks and mutually reinforcing relationships drawing on key economic assets and infrastructure that contributes to an increase in the general prosperity of a region. Bodhanya (2015) defines RED as sustained and concerted actions of policy makers, businesses and communities that promote the economic health of a specific geographic region generally below the level of the nation state.

According to Karlsson and Rouchy (2015:2), "RED encompasses the economics and other resources that a region can mobilize for its own sustainable development and competitiveness". This mobilisation can only be facilitated by the "self-organised steering of multiple agencies, institutions and systems which are operationally autonomous from one another yet structurally coupled due to their mutual interdependence" (Chapple & Montero, 2016: 144). Chapple and Montero (2016) note four factors that strengthen the effectiveness of governance in RED:

- Simplifying governance models and practices.
- Developing capacity for interactive learning.
- Establishing a common worldview (vision).
- Developing a system of metagovernance to coordinate actions across space, time and domains.

In this kind of governance, social capital is crucial. Social capital is based on networks of trust and collaboration that can create synergy between public and private sector actors (Chapple &

Montero, 2016). According to Karlson and Rouchy (2015), intangible factors such as trust, networks and institutions become significant if economic and local governance actors are to successfully work together; collective action and coordination among local actors provides the appropriate environment to spur regional economic development.

In RED, one of the goals of local administrators or governments is to spur economic growth by creating a conducive environment to attract outside business activity (Yunus, Bustaman & Rashdi, 2014). The strategies used by local governments to influence companies' location behaviour need to combine instruments that will meet the objectives of that local economy. Kero (2002) identifies two broad development strategies in this regard: exogenous strategies and endogenous strategies. The exogenous determinants rely on economic impulses from outside the region and prioritise mobility of capital and labour. In the exogenous strategies, incentives and infrastructure development are paramount in increasing business activity. The endogenous strategies concentrate on the local capacity and competitiveness and they assess local resources and the efficiency of their allocation.

Given all the above viewpoints on RED, an overall theorisation of RED is provided by Fisher (2007) and McGahey (2008) who explain that RED comprises various programs that focus on specific industries (e.g. high technology or manufacturing), specific locations (economically distressed regions, 'urban blight' areas, rural communities), differing uses of funds (for infrastructure, for research and development, for plant and equipment, for training), in-state vs out-of-state firms (retention vs attraction of these firms), different sections of the tax code (property, payroll, corporate income), and different public agencies (special purpose tax districts, public development corporations).

Furthermore, RED is merely about finding ways to encourage business, companies or firms to relocate to specific places. This can be done through a provision of finance to set up facilities for companies to move or relocate to. The practice of attracting firms through the use of financial inducements is called "smokestack chasing". Fisher (2007) and McGahey (2008) identify three broad classes of incentives: discretionary, entitlement and tax cuts. Incentives have been criticised on the basis that public good (in this case, public finances) should not be spent to compete for individual business because what should happen is that governments should compete for business on the basis of their general economic and policy climate, such as overall tax rates, regulation, and education quality.

Because incentives are seen as a wasteful expenditure, there have been suggestions of a cost-reduction approach which emphasises investment in infrastructure, education and training, attention to the needs of business, and support of new business formation and innovation in the region through access to capital, improved technology transfer and education and training programmes for entrepreneurs and small business owners (McGahey, 2008).

Another approach which is also critical of cost-driven strategies is that of Michael Porter's 'clusters' of economic activity. These are region-specific concentrations of firms, industries, workforce skills and potential growth opportunities. Clusters untangle the paradox of location and offer insights into how companies create competitive advantage (Porter, 1998). Porter argues that for economic success, different groups of firms should raise their productivity levels as this will have a positive impact on citizens' standard of living (McGahey, 2008).

One criticism of Porter's clusters approach has been that the focus is on nations and not on the regions within them. It has also been questioned whether these clusters benefit low-income people and communities. Regional application of Porter's framework has nonetheless been adopted and there are basic economic arguments in favour of the regional focus. The first is that regions essentially have specific concentrations of industries, occupations/jobs, workers, and businesses that do not necessarily respond uniformly in the same way to overall national economic conditions and labour markets for many non-professional and low wage workers (McGahey, 2008). The second is that regions can gain economic advantage from spillovers of technology, industry concentration and labour force development.

One last very pertinent point made by McGahey (2008:9) is that "approaches to regional economic development, and cluster approaches in particular, concentrate on economic growth, [with] little attention to inclusive growth or social equity in a region as part of economic development". McGahey indicates also that clusters are demand driven, with companies acting in their own best interests. However, cluster approaches hold promise for increasing economic opportunity and could lead to higher incomes and stronger economies. Scott and Stoper (2007) note that the "role of cities and regions (also referred to as city-regions) as drivers of economic growth and prosperity – in both developed and developing countries – has been increasingly emphasised within the economic development literature (2007: 191)". Similarly, Stimson, Stough and Salazar (2005: 23) define RED as a "process that ensures a competitive and entrepreneurial city or region and one that achieves sustainable development".

To summarise: RED theory is complex; RED involves a coming together of stakeholders through collaborative multi-stakeholder relationships; RED is about creating an enabling environment to attract and encourage business activity for economic growth within regions and is in itself responsible for creating regions whose sole priority is to build on the competitiveness of businesses. Furthermore, agglomeration or clustering of this economic activity signals that RED is about economic growth. The next section further unpacks the concept of agglomeration as a core feature of RED.

4.3 The enactment of regional economic development

4.3.1 Agglomeration and clustering of firms

According to Bosma and Van Oort (2012), the tendency of firms and workers to agglomerate their activities in space has evidently been consistent throughout history. Glaeser (2010:1) sees agglomeration economies as "the benefits that come when firms and people locate near one another in cities and industrial clusters". Simply defined, agglomeration is the spatial or geographic concentration of economic activity (Baldwin & Martin, 2004). Economic agglomeration is a universal phenomenon that has been studied for decades by geographers, economists and other social scientists. They were intrigued by the way production and commercial activities tended to concentrate in certain points of national territories over time and how the similar business firms were consistently collocated with one another (Palacios, 2005; Wang, Madhok & Xiao Li, 2014).

In the past decade, if not for longer, a number of mainstream economists have directed their attention to the geographic dimension of economic activity or processes, seeking to understand the where and why of these processes, and specifically the concentration of businesses and industrial plants in given regions and locales (Palacios, 2005). It was only in the 1990s that the concept or term 'industry cluster' was coined to refer to places where firms and related institutions in an industry were concentrated; Michael Porter was the first from the business fraternity to produce a theory that has since become conventional wisdom in the study of industrial clustering.

Going beyond 'firm-' related definitions of clusters is a broader view which sees them as

> geographic concentrations of interconnected companies, specialised suppliers and service providers, firms in related industries, and

> associated institutions (e.g. universities, standard agencies, and trade associations) in particular fields that compete but also cooperate. Such clusters are a striking feature of virtually every economy, especially those of more economically advanced areas. (Porter 2000: 253)

Initially, the economies of agglomeration were mainly driven by sharing and matching mechanisms that enable firms to reduce production costs (Cainelli, Iacobucci & Morganti, 2006). In addition, agglomerative advantages, or externalities associated with clustering of firms, are said to include better access to information, workers, suppliers and specialised resources, complementarities among firms, ability to generate knowledge, access to specialised local institutions and public goods, and collective efficiency due to competition and pressure to outperform (Cainelli et al., 2006). This, according to Wang et al. (2014) enables better performance among clustered firms and has an impact on their longevity.

Furthermore, geographic concentration and frequent interaction of firms enables them to develop relational government structures that can help with problem solving (Wang, 2014). Breschi and Malerba (2001) identified a need for building of trust and encouraging informal relations among actors by maintaining social links and lines of communication.

Breschi and Malerba (2001) further argue that the firms located in clusters are more innovative than isolated firms and that this causes an uneven spatial distribution of technological capabilities. Learning through interacting and networking is said to be the crucial force pulling firms into clusters. From these processes of learning, there is an embracing of user-producer relationships, formal and informal collaboration, inter-firm movement of skilled labour and the spin-off of new firms from existing firms. Cainelli et al. (2006) note that the one competitive advantage of firms within clusters is their subsequent rate of growth as compared to firms operating from outside. The consequence is prevalence of learning mechanisms which foster both higher productivity in existing technology and innovation, upgrading and product differentiation.

According to Cainelli et al. (2006), the cluster trend is not confined to large firms only, but is widespread even among small and medium-sized firms as it is seen as another way in which small firms can grow. They comment that with any business cluster or any form of agglomeration of business, there must be an identifiable evolutionary pattern. Their argument is that in the initial stages, the system is dominant and serves the purpose of dictating homogeneity of businesses. In later stages however; the advantages of spatial agglomeration

should allow some of the firms to develop and grow, which subsequently leads to their predominance in and influence over the evolution of the system.

Clustering and agglomeration provides a way to describe the systemic nature of an economy, presenting a physical manifestation of the way various types of industrial activity are related (Malmberg & Power, 2005). Figure 4-1 is a cluster chart which shows the firms industry where we find the main producers of the primary goods of the cluster the chart proposes a way to analyse how these firms and industries are connected to supplier firms and industries providing various types of specialised input, technology and machinery and associated services, as well as to customer industries and more indirectly related (Malmberg & Power, 2005). It indicates how firms agglomerated within a cluster are interconnected.

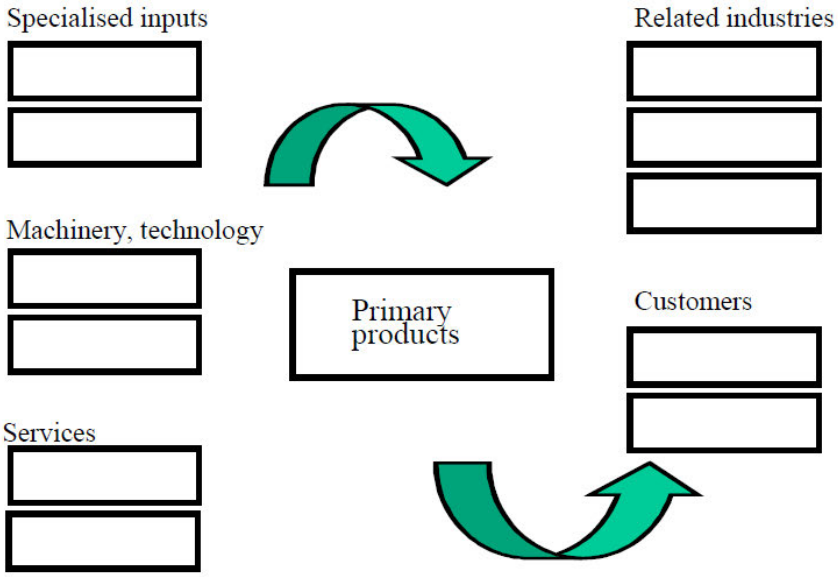

Figure 4-1 Cluster chart: actors in an industrial cluster (Malmberg & Power, 2005)

According to Johansson and Quigley (2004), the kinds of economic relationships in urban space, such as clusters, emphasise the importance of agglomeration. They note that a relationship exists between network developments and agglomeration in which agglomeration is a 'point' while the networks consist of 'nodes' and 'links' connecting these nodes to facilitate transactions among agents. Their argument is that these connections may lead to the same external benefits or externalities that arise from agglomeration: "networks among economic actors dispersed over space may act as a substitute for agglomerations of actors at a single point, providing some or all of the utility gains and productivity increases derived from agglomeration" (Johansson & Quigley, 2004). In a spatial context, these networks play a role in facilitating exchange both within and between regional agglomerations.

Bosker (2007) argues that a relationship exists between agglomeration and clustering of economic activity in a region and economic growth of the region. Agglomeration, he further explains; comes about as a result of the new economic geography. According to Fujita and Krugman (2004), the focal point of the new economic geography is the formation of a large variety of economic agglomerations in geographical space (Fujita & Krugman, 2004; Bosker, 2007). This agglomeration occurs at many geographical levels. An example is given of shops and restaurants clustering, industrial districts, or formation of cities. Furthermore, "it is important to notice that all these different types of agglomeration at different levels are embedded in a larger economy, altogether forming a complex system" (Fujita & Krugman, 2004: 140).

To summarise: agglomeration and clustering of economic activity entails unfold or take place in space, indirectly highlighting the importance of 'proximity', which can be understood as nearness in space and time or as a relationship characterised by 'nearness' and 'concentration' (Baldwin & Martin, 2004). According to Johansson and Quigley (2004), the economic advantages of proximity are quite explicit in clusters, and proximity matters if the external benefits of agglomeration are to manifest themselves. These external benefits are what is known as externalities and what Johansson and Quigley (2004) refer to as 'proximity advantages'. These are discussed in the next section.

4.3.1.1 Externalities associated with agglomeration and clustering of firms

The following subsections explore the externalities associated with agglomeration and clustering of firms. Other terms also used for externalities are spill-over effects, external benefits and proximity advantages. The discussion outlines the way in which spatial concentration of economic activity facilitates knowledge diffusion between firms and encourages innovation and entrepreneurship and describes the development of value chains. Considering these externalities sheds light on the external benefits that arise from agglomeration or clustering of business activity both in space and in networks, as per Johansson and Quigley (2004).

Knowledge diffusion

> Innovation, knowledge creation and learning are all best understood if seen as the result of interactive processes where actors possessing different types of knowledge and competencies come together and exchange information with the aim to solve some – technical, organisational, commercial or intellectual – problems. (Bathelt, Malmberg & Maskell, 2004:3)

According to Alden (2006), knowledge has become the most essential resource for urban and regional competitiveness. Spatial clustering of economic activity and its relation to the spatiality of knowledge creation is important in this study as it highlights various kinds of interactive learning processes not only between firms but also between actors (Bathelt et al., 2004: 1). Firms within agglomerations are said to create or generate knowledge, and since knowledge is the basis of competitiveness, clustered firms and industries will use it to outperform each other (Malmberg & Power, 2005). Knowledge diffusion, or 'knowledge spillover', is a key explanatory factor for clustering of firms, on the assumption that transmission of knowledge tends to occur more efficiently among actors who are in close proximity (Breschi & Malerba, 2001).

The importance of these actors being proximate has to do with the complexity and the tacit nature of the knowledge that usually needs to be transmitted. Nonaka and Takeuchi (1995: vii) define tacit knowledge as "personal knowledge embedded in individual experience [which] involves intangible factors such as personal belief, perspective and value system". Its complexity is in its being knowledge which has not yet been articulated and also knowledge which arguably cannot ever be articulated (Hedesstrom & Whitle, 2000). Because of this, the effectiveness of the transmission is through interpersonal contact and inter-firm mobility of workers. Over time, this knowledge spills over locally, and takes longer to diffuse across geographic distance (Breschie & Malerba, 2001). According to Malmberg and Power (2003), the spatial proximity of firms in clusters enables intensified, face-to-face interaction, use of common language, trustful relations between various actors, and opportunities for easy observation and immediate comparison. In essence, spatial proximity enhances processes of interactive learning through sharing of knowledge.

Bathelt et al. (2004) suggest that most people assume that spatial proximity of firms for knowledge diffusion is only significant in relation to tacit knowledge, since being in the same local environment and meeting repeatedly is how more subtle forms of information can be exchanged. However, they question the assumption that 'tacit = local' and 'codified = global'

and suggest conditions under which both types may and can be exchanged locally and globally. With the relaxation of trade regimes brought about by globalisation, there are emerging markets for intellectual property rights and improvements in information and communication technologies. And with the reduction in the friction of space, knowledge, once codified, is almost instantly available to all firms at zero cost, regardless of their location (Fujita, Krugman & Venables 1999).

The hypothesis about clustering or agglomeration creating an enabling environment for knowledge diffusion is backed up by three hypothetical arguments put forward by Malmberg and Power (2003). The first is that knowledge in clusters is created through various forms of local inter-organisational collaborative interaction; the firms create links or partnerships with universities, research and development institutes and higher education institutions (Audretsch & Feldman, 1996; Malmberg & Power, 2005). The second argument asserts that knowledge is created through increased competition and increased rivalry. While cooperation is important and signals altruistic behaviour among firms within a cluster, rivalry drives competitiveness and competitiveness is sought with more creative and advanced inventions. The third argument is that knowledge in clusters is created through spillovers triggered and perpetuated by local mobility and sociability of individuals; knowledge exchanges happen during informal interactions and the transfer of labour between firms and organisations boosts knowledge creation.

According to Bretschger (1999), the economic prosperity of regions is largely dependent on the accumulation and diffusion of knowledge. Knowledge, as mentioned above, is an important factor for regional development and an increase in knowledge thus leads to a rise in the productivity of regional inputs such as labour, physical capital and human capital, and to higher per-capita incomes. In economic theory, it is argued that knowledge is not restricted to the technical aspects of know-how but includes components like institutional and organisational know-how (1999). Furthermore, to analyse the development of regions, one has to distinguish between intraregional knowledge diffusion and inter-regional knowledge diffusion (1999). Intraregional knowledge diffusion is the flow of information and ideas between firms in a region, while inter-regional knowledge diffusion is knowledge sharing between two or more different regions.

According to Capello and Varga (2013), a complex relationship exists between knowledge creation, knowledge diffusion, regional innovation, and local economic performance. This is

because knowledge spillovers are a key mechanism that underlies new venture formation (Agarwal, Audretsch & Sarkar, 2007). The next section therefore looks at entrepreneurship and innovation. According to Zhou (2010), entrepreneurship is more likely to influence the process that leads knowledge to be converted into innovative products as opposed to imitative products (Zhou, 2010).

Entrepreneurship and innovation

Conventional wisdom in economies pursuing employment growth is to attract large firms to relocate within them. This has seen governments bidding against each other to provide the best possible incentives to these large companies to lure them into making location choices in their favour. However, the emergence of clusters and agglomeration of economic activity has challenged this and has played a crucial role in efforts to seed local entrepreneurship. These clusters are referred to by Chatterji, Glaeser and Kerr (2013) as 'entrepreneurial clusters'. Quite a number of entrepreneurial clusters have been launched around the world in various industries such as biotechnology, nanotechnology and advanced manufacturing, indicating a possible correlation between small establishment business size and economic development. According to Van Oort and Stam (2006) and Acs and Varga (2005), entrepreneurship plays an important role in economic growth and the extent to which a country is entrepreneurial and its economic system agglomerated could be a factor that explains technological change.

Bosma and Van Oort (2012) point to a link between agglomeration and regional performance and suggest that it results from innovation-based knowledge spillovers and entrepreneurship. Furthermore, entrepreneurship is always expected to go hand in hand with innovation although the two are not entirely the same. Entrepreneurship is achieved via the commercialisation of new combinations of resources, while innovation takes place through a process of creative destruction which brings about competition and selection among new and incumbent firms. Entrepreneurship usually leads to more entrepreneurial opportunities through innovation. There is an argument that knowledge spillovers emerging from entrepreneurship and innovation contribute to the competitiveness not only of firms but also of regions (Bosma & Van Oort, 2012). This we observe through concepts like innovative milieux, technological districts, regional innovation systems, and learning regions, which have been introduced to highlight the region as key drivers of innovation (Camagni 1991; Storper 1992; Asheim 1996; Cooke 2001).

Innovation is central to cluster development (Bodhanya, 2015). Innovation is important in determining the long-term ability of firms to prosper. For this innovation to happen, there has to be interaction between various actors, except, of course, in instances of grander ideas where innovation stems from the inventiveness of a single individual genius (Malmberg & Power, 2005). Innovation as a key process behind sustained industrial competitiveness has brought some of these core considerations of economic geography onto the research agenda in a wider community of economic scholars (Malmberg & Power, 2005). Most innovations are based on some form of problem solving. Someone perceives a problem and turns to someone else for help and advice. In an industrial context, these interactions often follow the value chain (Malmberg & Power, 2005).

According to Huggins and Thompson (2015), entrepreneurship is an important driver of regional innovation and growth. The relationship between entrepreneurship, innovation and regional growth is governed by a series of network dynamics. The endogenous growth theory and the knowledge spillover theory of entrepreneurship both propose that the nature of networks that are formed by entrepreneurial firms is a key determinant of regional growth differentials (Huggins & Thompson, 2015). Furthermore, Huggins and Thompson (2015) argue that what is important is the network capital in the form of investments in strategic relations to gain access to knowledge, which can also be useful in mediating the relationship between entrepreneurship and innovation-based regional growth.

According to Pietrobelli and Rabellotti (2010), "in developing countries, knowledge and innovation exchange, and collaboration are crucial, with integration in [global] value chains playing a growing and very important role in accessing knowledge and enhancing learning and innovation". Two important externalities of agglomeration and clustering, as already outlined, are knowledge diffusion, and entrepreneurship and innovation; attention now need to be given (in the next section) to value chains.

Value Chains

International trade has changed dramatically since the 1980s. There has been a worldwide liberalisation of trade in goods and enormous reduction in transportation and communication costs; this has resulted in production being fragmented and value chains going global (Draper, Freytag & Fricke, 2014). According to the Organisation for Economic Co-operation and Development (OECD) (2013), "a global value chain [GVC] involves all the activities that firms

engage in, at home or abroad, to bring a product to the market, from conception to final use". These activities range from design, production, marketing, logistics and distribution to support to the final customer (OECD, 2013). The value chain may consist and may have involvement of the same firm or may be shared among several firms. An important part of global trade is conducted within multinational enterprises or through systems of governance that link firms together in a variety of sourcing and contracting arrangements (Gereffi, Humphrey, Kaplinsky & Sturgeon, 2001).

According to the OECD (2013), GVCs mirror the following basic characteristics of the current global economy in their form and make;

- They have characteristics of growing interconnectedness, where one finds GVCs economic activities being fragmented and dispersed across countries.
- Various firms and countries specialise in different tasks and business functions, which is why most goods and a growing share of services are said to be "made in the world".
- The GVCs comprise networks of global buyers and suppliers; firms control and coordinate activities in these networks while multinational enterprises (MNEs) play a central role.
- They are also drivers of economic performance as they play a key role in increasing productivity and competitiveness and also affect the labour market by affecting demand for different skills groups.

It has become a norm for enterprises to outsource a number of activities that have previously been handled in-house and to keep only those in which they have core competencies. According to Pietrobelli and Rabellotti (2010), different parts of production processes are becoming increasingly dispersed across various developed and developing countries. Lead firms, often from developing countries, coordinate the activities of their business partners upstream and downstream. According to Pietrobelli and Rabellotti (2010), the literature of GVCs puts emphasis on the role played by the leaders in the chain in terms of transferring knowledge to their suppliers: "For small firms, participation in value chains is a crucial means of obtaining information about the type and quality of products and technologies required by global markets and of gaining access to those markets" (2010:4). However, the information spoken of here needs to be combined with local technological capabilities, which require substantial technological and learning effort (Morrison, Pietrobelli and Rabellotti, 2008).

Consideration of agglomeration and clustering and related externalities makes it clear that proximity matters to firms. However, for this proximity to be achieved, these firms, businesses,

corporations or organisations need to make decisions about where to locate or relocate and according to Kero (2002), these decisions have implications for cities and regions as they are continuously required to position themselves in ever-changing and competitive environment.

It is thus the responsibility of cities and regions to find "strategic development approaches that stimulate the business community on the one hand and serve the needs of the residents on another" (Kero, 2002). One such approach is working on coordinated investments for regional marketing. Before a place can be promoted as an investment site, there must be investment, or effort, in making the brand of the place or region to be what it is sold as. Such investments, or efforts, are what is widely referred to as determinants of FDI location (Toner, 2004). Examples include investments in infrastructure, skills development and investment, incentives, a stable political climate, proximity to raw materials and taxation rates. For purposes of this study, three of these have been selected and will be further discussed under regional marketing.

4.4 Regional governance

Generally, governance is about making and carrying out decisions. Others simply say it refers to management practices of governments (Charron, Lapuente & Dijkstra, 2012). Although the government is the most recognised form of governance, it is not the sole actor in governance issues. This is because effective governance incorporates a variety of decision-making and implementation practices by a wide range of people, organisations and institutions beyond government (Barnes & Foster, 2012).

Today's regions are a complex system of overlapping, interrelated jurisdictions – much like a network (Kacowicz, 1998). Collaborative governance therefore requires coordination of resources and sharing of information, ideas and power. The extent to which leaders partner and think regionally crucially affects ability to understand knowledge-based development tools and, more importantly, to forge a development strategy for the region as a whole. Regional governance is defined as "a partnership of public, private and non-profit leaders who come together to forge and implement a regional development strategy" (Center for Regional Development, 2009:123). The OECD considers regional governance as a linkage of two separate concepts. *Regional* refers to the functional economic geography that shares a common economic future, while *governance* refers to the way public, private and non-profit leaders come together and organise the region's competitiveness strategy and implement it.

Barnes and Foster (2012) define regional governance as deliberate efforts by multiple actors to achieve goals in multi-jurisdiction environments. In this definition, they imply that regional governance

- Crosses borders, by definition jurisdictional, and also usually sectoral (public, private, non-profit, civic) and/or functional (environmental, economic, social, etc.);
- Encompasses, but goes beyond, the institutions, tools, or structures that may establish and implement decision-making and action;
- Involves purposes and goals – solving a regional problem or seizing a regional opportunity – as the object of a regional governance effort;
- Is a kind of politics and does not assume consensus or cooperation as a dominant mode, but does assume the attempt to exercise power on behalf of interests, ideas, and values; and
- It is not the end in itself; it is the means by which a goal is sought.

The Center for Regional Development (2009) notes that many models of regional governance are emerging around the world. This varied and vibrant spectrum of experience is framed by two extremes. At one end of the spectrum, the driving force for the region-wide partnership comes from the public sector: public officials organise consultations of local private associations and companies; in most cases, the consultation is largely advisory, with the information flow influencing and benefitting government decision-making processes. At the other end, regional dialogue and strategy is driven mainly by private sector leaders; this may reflect a lack of strong public sector leadership or it may reflect the influence of the private sector in local government.

Table 4-1 sets out three general components and eight principles for effective regional governance. The components are collaboration, sustained citizen engagement and leveraging of regional resources. In collaboration we see crossing of the public, private and non-profit sectors. There is also crossing of political boundaries. In sustained citizen engagement, under-represented groups are encouraged to speak out on development issues and how these affect them, in this way helping them to envision a different and better future for themselves. Leveraging regional resources requires analysis of the region's competitive advantage, strengthening of competencies, engaging key intermediaries and investing local capital (Barnes & Foster, 2012).

Table 4-1 Components and principles for effective governance of regions

Three general components	Eight principles
Collaboration	-Crossing sectors (public, private, non-profit) -Crossing political boundaries, recognising regions
Sustained Citizen Engagement	-Welcoming new voices (especially under-represented individuals and youth) -Visioning a different future (bottom-up process)
Leveraging Regional Resources	-Analysing region's competitive advantages (focus on strengths, identify clusters) -Strengthening competencies of local elected officials -Engaging key intermediaries -Investing local capital

Adapted from Barnes and Foster (2012)

Barnes and Foster (2012) reframe regional governance with less focus on structure and more on capacity and purpose. Capacity, in their formulation, is the set of attributes of regional governance that reflect how actors make decisions to organise, determine means of action, accumulate appropriate resources, and act on a specific regional problem or issue. Purpose becomes the goal regarding the problem or issue. They conceive of regional governance as a complex, multi-faceted politics, part of historical processes of adaptation in the political economy to changing environments and vicissitudes. This evolution, they say, manifests in various decision-making structures, modes of governing, attitudes, and outcomes across topic, space and time. They identify five dimensions and fifteen underlying indicators (or contributing factors) to describe and measure regional governance for a particular place, time, and goal, as shown in Table 4-2.

Table 4-2 Dimensions and indicators/factors of regional governance

Agenda: the purpose and goals of the effort

1. Agenda framing: clarifying vision, goals, and priorities
2. Agenda assessment: weighing support for and opposition to the agenda
3. Comprehension of the agenda: assessing how much people know about the goals and issues

Actor group: individuals and organisations that will work together on the agenda

4. Actor group composition: deciding who will be at the table
5. Leadership roles: identifying who does what ... and when
6. Actor group commitment: assessing people's passion and sense of purpose

Internal capacity: the ability to secure in-region resources

7. Money and related resources: developing a budget of financial, in-kind needs
8. Information and expertise: gaining the knowledge needed to succeed
9. Authority and legitimacy: assessing the actor group's standing in the region

External capacity: the ability to secure resources from outside the region

10. Connectedness inside the region: assessing the group's regional links
11. Connectedness outside the region: assessing the group's external links
12. State-level influence: securing help from state government
13. Federal-level influence: securing help from the federal government

Implementation experience: experience and legacy of operating at the regional level

14. Overall region-scale activity: weighing the history of collaborative problem solving in the area
15. Region-scale activity on goal: learning from similar previous efforts

Adapted from Barnes and Foster (2012:3)

The dimensions and indicators in the figure above indicate that before a regional project can begin there needs to be an agenda which sets out the purpose and goals of the concerted efforts. The vision, goals and priorities need to be clarified so that ultimately even those who oppose it get to understand it. The actor groups, made up of individuals and organisations that will work together, need to be clearly defined and known so that their composition is evident and

the various roles of leadership are understood. It is also important to map out both internal and external capacity.

Internally, there should be ability to secure in-region resources like money, other related sources such as information and expertise, and also authority and legitimacy. Externally, links are assessed and the extent to which the actors may be able to secure help from national government. Lastly, the implementation experience requires that previously implemented regional projects be revisited for benchmarking purposes.

To summarise: the discussion has outlined what regional governance is and how it entails a partnership between public, private and non-profit leaders. These actors share a common economic vision and work together collaboratively while they maintain a citizen engagement and leverage regional resources. Also noted is the importance of the agenda setting out the goals and purpose of the effort. The actor groups to be involved need to be clearly established, and the group should have the ability to secure resources from inside and outside of the region.

4.5 Regional marketing

In the globalised world of competition, cities and regions can be seen as consisting of competitive advantage (Burger, van der Knaap & Wall, 2012). Some of these competitive advantages can be made to fit and are adapted to market situation by the local governments spearheading development. Places, cities or regions thus need to apply marketing principles in seeking to develop sustainable competitive advantage that will help them compete more effectively. Marketing of places, cities and regions has received academic attention in the disciplines of geography, political theory, sociology and the wider field of economic development, where there has been consensus that marketing principles are indeed applicable (Kero, 2002).

Regional marketing is useful for places that are either already in crisis or are guarding against an outbreak of a crisis in regard to development (Kero, 2002). In this study, regional marketing is looked at as a strategy for shaping efforts to attract investment in the Durban Aerotropolis. It is also important to note that places, cities and regions alike tend to be subjected to both internal and external forces. The internal forces stem from the natural business cycle, while the external forces deal with rapid technological change, global competition and shifts of political power, Regions are consequently expected to respond effectively to all these forces and their

occurrence must be anticipated. In this regard, regional marketing plays a role in strengthening the region's capacity to react and respond to these forces.

Regional marketing demands a market-oriented view of leadership, with local administrators needing to act more like entrepreneurs selling their region (Kero, 2002). It asks what the regional competitive advantages are. It goes further than selling the region to investors; it is also about efficiently creating and fostering long-term relationships. The general goal of local governments is to spur economic growth by attracting and retaining investment. What remains paramount, however, is knowledge of what strategies local governments can use to influence companies' location behaviour. Government needs to understand the requirements of FDI firms and target policies to satisfy them, with investment incentives and motives being core policies in place marketing (Metaxas, 2010).

According to Toner (2004), government policies have an important role in mediating the benefits nations receive from foreign direct investment. Equally, government policies have an important influence in attracting foreign direct investment or affecting investment-location decisions of multinational corporations. Governments directly or indirectly influence most of the key factors identified earlier as important in attracting foreign investment (Toner, 2004).

There are two types of strategy for regional marketing: exogenous and endogenous. Exogenous strategies are strongly reliant on external regional impulses and foreground the flow and mobility of capital and labour (Kero, 2002). Both economic development incentives and infrastructure development are seen as measures to heighten business activity. Endogenous strategies, on the other hand, centre around local capacity and competitiveness. These are strategies that focus more on available resources and efficiency in their allocation. Efficient regional marketing harnesses and integrates both strategies. Location factors are seen as essentially bundles of products and services that create value for investors. In this way, places and regions become more market-oriented and efficient in economic planning.

Table 4-3 sets out some of the determinants of FDI location, such as quality of infrastructure, quantity and quality of skilled labour, quality of the training system, quality of life, proximity to raw materials, government incentives, wage cost, taxation rates as well as political stability (Toner, 2004).

Table 4-3 Determinants of FDI Location

Proximity to markets/customers	Proximity to suppliers
Quality of infrastructure (utilities, telecommunications, transport)	Legal framework (industrial relations, company and intellectual property laws)
Quantity and quality of skilled labour	Proximity to raw materials
Quality of training system	Proximity to raw materials
Quality of life (expatriate managers and staff)	Wage costs
Establishment costs (land, construction costs)	Taxation rates
Counterattack against competitors	Political stability

Adapted from Toner, 2004

As mentioned in the discussion above, because of global competition, cities and regions are seen as 'complex products' that consist of bundled together competitive advantages. These competitive advantages include FDI location determinants, or what is referred to in this study as coordinated investments in regional marketing. These include business climate, image and identity, infrastructure, incentives, capacity building and skills development.

4.5.1 Business climate

Regional marketing has to do with showing investors that the business environment is favourable and enabling for them to set up shop (Kero, 2002). The concept of business environment or climate refers to all the factors external to businesses that either inhibit or favour their development (Hindson & Mayer-Stamer, 2007). The pressures of global competitiveness have seen increasing effort to improve business environments in developing and transitioning countries, with the focus mainly on reducing red tape and improving the regulatory environment.

Improvement of the business environment in a country is seen as a means of promoting enterprise development that ultimately grows economies, increases employment, improves citizens' welfare and reduces poverty. Efforts to improve the business environment are a response to disappointing experiences with direct support to firms, burdensome regulations, poor service delivery, corruption, and weak entrepreneurial culture. Initially, the focus of these efforts tended to be on the national level – more specifically on national policies, laws and regulations. However, the focus has subsequently scaled down to locality level since it became apparent that undertaking national reforms does not always translate to business environment improvement at the local level.

There is a distinction to be made between tangible and intangible locational factors.

> The tangible factors include geographical location, availability and cost of real estate, availability and efficiency of transport and communication infrastructure, availability and cost of skilled workers, cost of energy and environmental compliance, and taxes, levies and subsidies. Intangibles from a business perspective include the efficiency of government, the business climate, the availability of related industries and supportive institutions. (Hindson & Meyer-Stamer, 2007:5)

The various sets of business environment factors are set out in Figure 4-2.

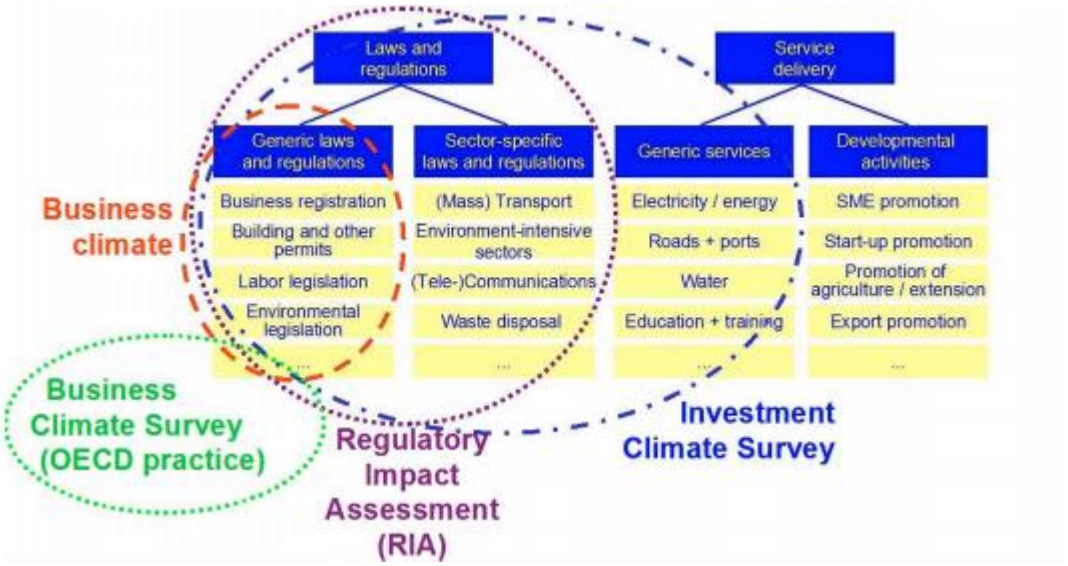

Figure 4-2 Factors to consider in a business environment (Hindson & Meyer-Stamer, 2007)

Hindson and Meyer-Stamer (2007) highlight an overlap between the business environment and locational quality. This is significant in view of the regional marketing context within which this discussion is taking place. The factors to consider in the business environment are to some extent the same as those needing to be considered in locational quality. For good locational quality, there has to be a good image and identity that has been created for the region in question. This is discussed in the next subsection.

4.5.2 Image and identity

The marketing and branding of cities, regions and countries is positioned firmly on contemporary policy agendas (Boisen, Terlouw & van Gorp, 2011). Because the world has

become one huge market, every place, country, city or region finds itself needing to be highly competitive (Anholt, 2007). In modern day settings, people find themselves navigating through the complexity of the modern world with armed clichés that form the basis of their opinions about specific places (Anholt, 2007). For instance, Iraq is about war, Paris about fashion, Switzerland about the best chocolate and most African countries are about poverty, famine and disease. As a result, places have to persuade people in other parts of the world to go beyond the simple clichés and stereotypes and to start understanding the rich complexity that lies behind them (Anholt, 2007).

According to Boisen et al. (2011), the discourse of economic globalisation has resulted in a perceived state of international, inter-regional and inter-urban competition, as these processes have boosted the focus on competitiveness of places. Because of this, an interest has been fuelled in marketing-driven spatial strategies which strengthen the competitiveness of places. Consequently, every place needs to strive to create a competitive identity for itself. This is a synthesis of brand management with public diplomacy, trade and investment, export promotion and tourism (Anholt, 2007). This is a responsibility of government as the onus is on government to discover what the world's perception is of its country and to then develop a strategy for managing it. A great image and positive reputation has an advantage for a player on the international stage.

Anholt (2007) says that the reputation of places, countries, cities or regions is like brand images of companies and products; however, he argues that over the years he has spent studying 'nation branding', the phrase has become distorted because it seems countries are judged by what they do and not so much according to what they say. This, he says, is not a possibility he has ever seen evidence for. According to Boisen et al. (2011), various scholars have disputed that places are actually competing against each other, with some pointing out that urban competition is hardly global but mostly just limited to nearby cities.

According to Anholt (2007), places embarking on image and brand building should strive for consistency by ensuring that all branding agencies speak in one voice when they carry out their transactions. Government officials, policymakers and commercial and non-commercial stakeholders will then have confidence that a coherent, strong and attractive place brand will help promote the economic development of their city, region and/or country (Boisen et al., 2011).

Places need to take a more entrepreneurial stance in relation to branding in order to remain at the top of a region and enhance their attractiveness to the footloose capital, residents and visitors. According to Hall (1999, cited in Metaxas 2010), the concept of branding includes;

- a clear and distinct image of the place, which truly differentiates it from other competitors
- associations with quality and with a specific way of retailing to the final consumer
- ability to deliver long-term competitive advantage and
- overall, something greater than a simple set of nature attributes

Branding helps a great deal with the 'invest ability' of a place. The emphasis in 'invest ability' is on how a locality can be made attractive to investors, and on identifying and dealing with those features of the local business environment that most detract from its appeal (Metaxas, 2010). However, the focus should not just be on the attempt to attract FDI, but also on being able to formulate the proper business environment, in the frame of which the businesses will be able to operate effectively.

A place may have a great image and identity, but ultimately, it will need infrastructure for businesses to set up shop. This is discussed in the next section.

4.5.3 Infrastructure

According to Bakar, Mat and Harun (2012), the impact of FDI and its contribution to the economic growth of any country is quite substantial because FDI increases the domestic capital formation and it also facilitates the transfer of new technology. However, to attract FDI, infrastructure stands out as one of the most important determinants in luring foreign investment, because "investors search for markets where they can maximise the benefits and lower the cost of production and this can be achieved if the infrastructure are in good conditions and supportive to investors" (Bakar et al., 2012).

It is said that in general, it is countries with good physical infrastructure such as communications, bridges, highways and ports that are likely to attract FDI. Even more important is the range of transportation infrastructure required for the mobility of goods (Bakar et al., 2012). Concurring, Shah (2014) stresses the importance of abundant availability of quality infrastructure for the smooth functioning of multinational companies' affiliate

production and trade activities. This is because good quality infrastructure can significantly reduce overhead costs and positively affect investor location decisions.

Infrastructure comprises metalled roads, rail networks, uninterrupted power and water supply, number of sea ports and airports, and telecommunication density approximated with number of fixed line telephones and mobile phone subscribers or internet access possibilities (Shah, 2014). According to Portugal-Perez and Wilson (2012), there is hard and soft infrastructure. Hard infrastructure includes physical infrastructure which looks at level of development and quality of ports, airports, roads and rail infrastructure. Also in this category is information and communications technology (ICT) which is interpreted as the extent to which a specific economy uses ICT to improve efficiency and productivity and reduce transaction costs. What is important here is availability, use, absorption and prioritisation of ICT by government (Portugal-Perez, 2012). Soft infrastructure looks at the level of efficiency of the customs, business and regulatory environment which assesses the level of development of regulations and transparency. This includes efforts by government to curb corruption in institutions. According to Rehman, Ilyas and Akram (2010), soft infrastructure is far more important for FDI than hard infrastructure because it provides twice the returns and brings with it economic reforms; the friendlier the soft infrastructure, the higher the inward FDI in emerging economies.

Rehman et al. (2010), in a study on the role infrastructure in the attraction and retaining of FDI in Pakistan, found that infrastructure essentially reduces operational costs. If foreign investors are not provided with infrastructure, their enterprises operate with less efficiency as they have to build and develop their own infrastructure, which then results in duplication and wastage of resources. Poor infrastructure causes an increase in transaction costs and limits access to both local and global markets, which ultimately discourages FDI in developing countries. Rehman et al suggest therefore that greater efficiency can be achieved if infrastructure facilities are extended by considering a provision for infrastructure facilities in contracts and lease frames such as build-to-operate-transfer, builddown-operate and full privatisation. But they also note that good quality infrastructure has impact on FDI as it facilitates export performance, which constitutes a motivational factor for FDI for a country as well as for trading blocks. Infrastructure also has greater impact on emerging economies as it not only promotes FDI but also ensures a greater return on investment to business owners (Rehman et al., 2010).

4.5.4 Incentives

Because of competition, local governments set goals to display their competitive advantages and regional marketing fosters this competition. Competition has also seen local governments make provisions for economic development or business incentives. For some, economic development incentives are good but others see them as a bargaining chip with many limitations and failures. According to Kero (2002), incentive competition ends in a zero-sum game and although there is a positive economic relationship between incentives and local economic growth, it is at the least on a short-term perspective. Kero (2002) appeals for economic development incentives to be properly planned and administered because failure to do this may result in lowered government revenue base.

According to Cheshire and Gordon (1998), there are three types of competitive or incentive policies. The first are a pure waste by virtue of having no discernible impact on diverting activity to the region, although they cost resources. The second are one-sided, in that whatever impact they may have on the economic welfare of the region, they are a zero-sum game from a wider perspective because the investment moves as soon as another place offers better incentives. The third are those whose economic efficiency sees them producing welfare from both the local and the wider perspective.

Peters and Fisher (2004) distinguish between two types of incentive: tax related and non-tax-related. Tax-related incentives include property tax abatements, tax increment financing, sales tax exemptions and credits, corporate income tax exemption and credit for investment on jobs. Non-tax-related incentives are business grants, loans and loan guarantees. These incentives are systematic changes done explicitly for economic development purposes and their justification is that they lead to business investment and thus new jobs, growth in demand for goods and services and further rounds of economic growth. Furthermore, incentives increase public revenues which enable improved public services or a decline in tax rates.

According to Morgan (2009), each local government decides on the incentives it puts forward on offer. For example, in North Carolina in the United States, the local government offered zoning and permit assistance, infrastructure improvements, cash-grant incentives, one-stop permitting, state development zone, land or building acquisition, site preparation, subsidized land or buildings, subsidized worker training, low-interest loans, relocation assistance, employee screening, regulatory flexibility and incentives for retail projects.

Generally, and from an economic point of view, incentives have long been a mainstay of economic development policy but are at the same time a very controversial subject which has been the target of intense criticism (Kero, 2002; Peters & Fisher, 2004). According to Peters and Fisher (2004), the controversy centres on whether economic development incentives are a cost-effective strategy for achieving economic growth. The cost effectiveness is measured through growth of the locality and this growth should be targeted to provide net gains to poorer communities and poor people, because otherwise it is a zero-sum game. A further measure is cost to government of providing these incentives. The controversy also centres around a belief that public officials often fail to assess adequately the net return on the public investment in incentive deals (Morgan, 2009). Other issues are whether or not they actually work and in what the rationale is for using them.

According to Morgan (2009), debate about the extent to which economic development incentives work is also concerned with their legality, fairness, efficiency and effectiveness and with the accountability both in the process of awarding incentives and of their recipients. For the incentives to fuel growth and prosperity, state and local government officials need to understand them in terms of the highlighted five issues. The legalities of incentives require that they serve a public purpose and therefore do not violate the state constitution. Their public purpose is to help create jobs and expand the tax base through which citizens gain increased economic opportunity and better public service. The issue of fairness has to do with who reaps the benefits and who bears the cost of economic development policies – whether it is fair that taxpayers in one jurisdiction subsidize businesses to create jobs that go to the residents of other jurisdictions. Efficiency, speaks to whether incentives are an efficient way of allocating public resources, while effectiveness can be measured according to how they were initially expected to work and what they then realistically achieved. Lastly, accountability asks that incentives be awarded or provided to recipients who will be sufficiently accountable to taxpayers and the broader public interest. Another accountability concern is about how open, publicised and transparent the early incentive negotiations are.

One other important competitive advantage is the availability of a labour force with the right skills for the firms and industries in a region. These are discussed below.

4.5.5 Capacity building and skills

One of the best policy practices for attracting and benefitting from FDI is through capacity building and skills development. According to the United Nations (2011), improvement of national skills sets is by far one of the most important policy objectives for both developed and developing countries. In decision to locate the investment in Australia, according to Toner (2004), the quality of the vocational education and training skilled workforce is ranked equal third in importance out of fifteen factors. A nation's human capital or rather, the level of skills in the local population, is a key determinant of economic development and growth. Because of globalisation, there is a need for workers and businesses to be competitive on a global scale and as a result an enhanced skills base leads to a more attractive investment climate for FDI (United Nations, 2011).

Generally, attracting FDI simply requires the host region to have a relatively open framework for foreign investment and an attractive business climate. However, a host of other factors are considered, such as more targeted policies that provide sufficient access to skilled labour. These include domestic education, training policies and migration policies which enable augmentation of the region's skills base (United Nations, 2011). Additionally, dissemination policies such as incentives, as discussed above, are considered to partially compensate foreign investors. There is also a regional innovation system that may need to encourage cooperation between local research institutions, foreign investors and local firms to raise the level of skills spillovers.

According to the United Nations (2011), there are complementarities between FDI and human capital. While a strong skills base tends to attract FDI inflows, both transnational and multinational corporations can also contribute to the local skills base through spillovers. These could be spillovers to employees, to local firms, and participation in local education and training institutions. The argument here is that virtuous cycle exists in which the human capital level of the host area, country or region determines how much and what type of FDI can be attracted but also the extent to which the local economy can absorb potential skills transfer (United Nations, 2011) (see Figure 4-3). This is also attested to by Toner (2004) whose argument centres around correlation between existing stock of education and skills in the country and preparedness of foreign investors to invest in further skills upgrade.

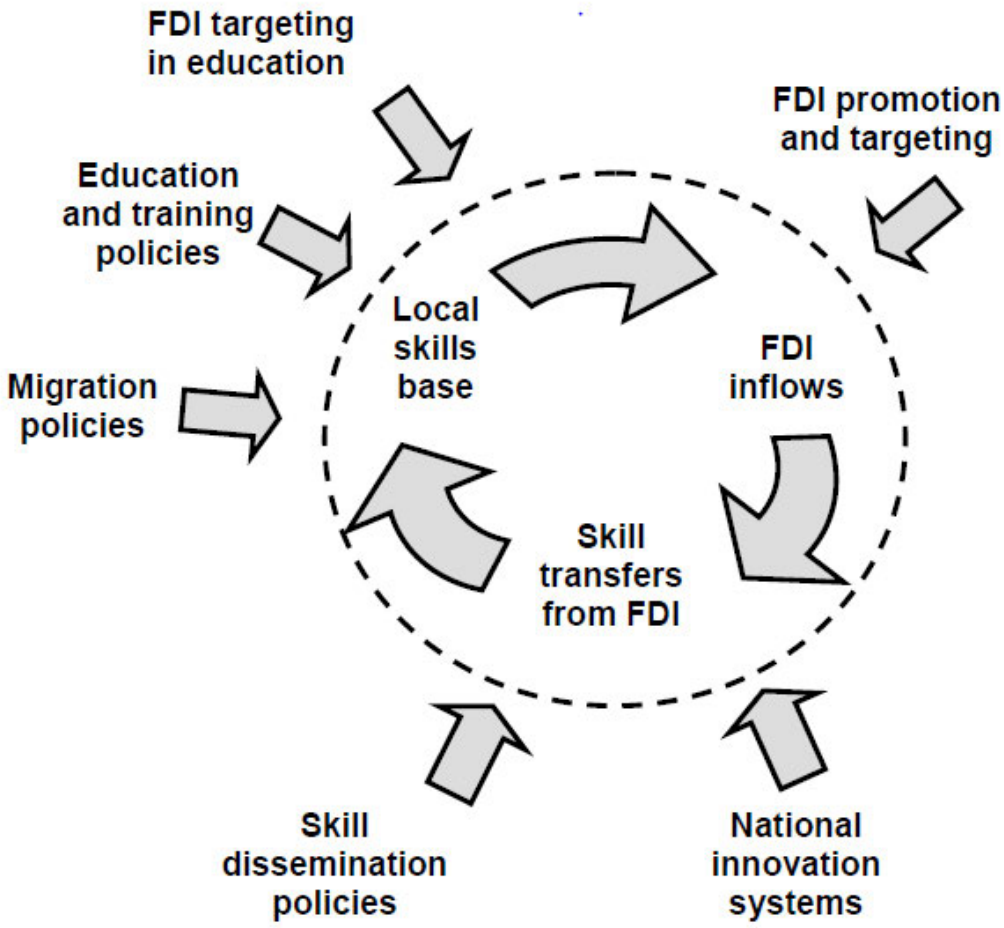

Figure 4-3 FDI and skills: the virtuous cycle

The primary responsibility for skills development in a country rests fully with the national education system. “An effective national education system seeks to develop universal elementary, secondary, tertiary and vocational education, and to ensure that curricula and research infrastructure keep up with the requirements of a country's economic structure” (United Nations, 2011: 4). According to Toner (2004), in most cases government action does indeed influence the absorptive capacity of a national economy to attract and retain FDI, but more crucial in this absorptive capacity is the skills levels of the workforce and the associated educational and scientific infrastructure.

Amoroso, Dosso and Moncada-Paterno-Castello (2015) argue that foreign investors tend to locate their research and development activities where skilled labour force is cheaper and more abundant because knowledge intensity can be geographically separated from production: in essence, high-level human capital is a key determinant of innovation-related foreign

investment. Furthermore, they highlight the differences between manufacturing FDI and knowledge-intensive FDI. The former is seen as more 'resource seeking' where enterprises invest abroad to acquire particular and specific resources or unskilled labour whereas the latter is considered as 'efficiency-seeking' or 'strategic asset-seeking' and therefore requires highly skilled labour (Amaroso et al., 2015).

A shortage of skilled workers in an economy adversely affects firm performance as leads to cost increases, restricted output and delay in the introduction of new products (Toner, 2014). This is why investors endeavour to complement host country efforts and make positive contributions to national education systems (United Nations, 2011). This is done through attracting FDI in higher education and vocational training. Government can also work with foreign investors in other sectors to participate in management and funding of specialised programmes: industry-specific knowledge and expertise can be used to improve curricular and research infrastructure which stands to benefit the locality as well as the foreign investor.

This chapter has reviewed LED, RED, agglomeration, clusters and their related externalities, and regional marketing and its various competitive advantages. To conclude, some of the most important points on governance of the region that affect RED are summarised in the next section.

4.6 Conclusion

Given the problematic nature of RED and its diversity and potential scale, the account in this chapter has inevitably been selective and impressionistic, and the definitions that have been provided reflect the range of possible conceptualisations of RED. While for some the central issues are effective and collaborative multi-stakeholder relationships, stimulation of business activity and full utilisation of resources; for others RED is about agglomeration of economic development and welfare, and targeting and prioritisation of investment. The common factor is RED being about creating an enabling environment to attract and encourage business activity for economic growth within regions.

In regard to agglomeration and clustering of firms the externalities associated with such economic activity include knowledge diffusion, entrepreneurship and innovation, and value chains. Spatial clustering of economic activity is related to spatiality of knowledge creation, as firms within and agglomerations create and generate knowledge that is the basis of their

competitiveness. Agglomeration also plays a crucial role in seeding local innovation, entrepreneurship and the development of value chains.

Regional marketing, which assists places, cities and regions to develop sustainable competitive advantage that helps them compete more effectively, requires a market-oriented leadership with local administrators acting more like entrepreneurs in selling their regions to attract investment. Coordinated investments in regional marketing relevant for this study include competitive advantages such as business climate, image and identity, infrastructure, capacity building and skills development and incentives. Business climate involves assessment of factors external to businesses that either inhibit or favour their development. The image and identity of regions is important in a world that requires high competitiveness and thus pushes governments to discover what the world's perception is of their regions to develop strategies for managing how they are perceived. Infrastructure stands out as one of the most important determinants for attracting foreign investment and regions with good physical infrastructure are those most likely to attract FDI. Although incentives make regions appealing to investors, they are criticised as not cost-effective for achieving economic growth. Also important is capacity building and skills development in which targeted policies for education and training provide sufficient access to skilled labour and augment the region's skills base.

Lastly, governance of regions for RED entails various decision-making and implementation practices that bring together a wide range of people, organisations and institutions beyond government. Because regions are complex, overlapping and interrelated systems and jurisdictions, collaboration, sustained citizen engagement and leveraging of regional resources are all crucial for effective governance. Five dimensions and fifteen indicators have been proposed to describe and measure regional governance for a particular place, time and goal.

What has not been explored is how LED projects differ from RED projects. Also still to be examined is how all the basic tenets of RED discussed above are enacted through the aerotropolis, which is the economic development mechanism analysed in this study. One issue is that RED requires concerted efforts of various stakeholders but there is no unpacking of the way these stakeholders work together as discussed in the governance section. Furthermore, a gap also exists regarding the role coordinated investments and efforts in regional marketing play in RED.

Chapter 5
Research methodology

5.1 Introduction

According to Blanche, Durrheim and Painter (2006), researchers define the nature of their research along three dimensions: ontology, epistemology and methodology. According to Vanderstope and Johnston (2009), there are two worldviews on research: reality and knowledge. Ontology frames the nature of reality and that which can be known about it, and epistemology is concerned with the nature of the relationship between the researcher and what can be known (Blanche et al., 2006; Denzin & Lincoln, 2005). The methodology asks how we know the world or gain knowledge of it (Denzin & Lincoln, 2005) but also provides specifications about how researchers can embark on studying what they believe can be known (Blanche et al., 2006).

This chapter outlines the way of thinking about and studying social phenomenon and the methodology employed in this study. According to Kallet (2004), the methodology chapter a describes the rationale for the application of specific procedures and techniques used to identify, select, and analyse information applied to understanding the research problem, enabling critical evaluation of the study's overall credibility. The two basic questions addressed here are how the data was collected or generated and how it was analysed. These are important methodological questions because an unreliable method produces unreliable results and, as a consequence, undermines the value of the interpretations of the findings (Lunenburg & Irby, 2008). The method must therefore be appropriate to fulfilling the overall aims of the study to answer the main question of the research.

This chapter therefore provides the location of the research, unpacks the research design and discusses the research approach and the paradigm within which the inquiry unfolded. This is followed by a description of sources for both primary and secondary data. The chapter continues with an exploration of the techniques employed in the collection of data, indicating the population and sample of the study, the sampling approach and method, and the data collection tool. The data analysis process is discussed, followed by a consideration of knowledge trustworthiness and credibility and ethical issues.

5.2 Research location

The study was centred around the Durban Aerotropolis, which comprises Dube TradePort and King Shaka International Airport. This project is situated in La Mercy, an area just outside of the city of Durban in KwaZulu-Natal province, South Africa.

5.3 Research design

This study employed an exploratory research design. This is the kind of research design for research projects that serve to address a subject in which there are high levels of uncertainty and ignorance, and when the problem is not very well understood (van Wyk, 2012; Thomas & Hodges, 2012). According to Lynn University (2015), an exploratory design is conducted about a research problem when there are few or no earlier studies to refer to. This is particularly fitting in this particular study given that it has highlighted a problem that is context-specific and has as a result not been studied extensively. This is the problem of the vagueness and ambiguity of the discourse utilised in policy documents and government strategies and its implications for policy implementation – the other problem being the shift in nomenclature from LED to incorporation of the regional aspect which has been problematic for practitioners who are responsible for implementing RLED or RED projects in South Africa. This latter being a problem that is currently emerging, thus affording little history of practice in South Africa that could have been researched.

According to Reiter (2013:1), to legitimise and provide a solid epistemological ground for exploratory research in the social sciences, the research;

- needs to be grounded in a philosophy of science;
- has to be articulated within an epistemological framework;
- and has to formulate a comprehensive methodological framework that justifies its methods.

In utilising Reiter (2013)'s work, an argument is made that we can spend hours debating what any concept is theoretically (the 'region' for example). But this discussion is beside the point because it is not linked to an exploration of 'reality'. What exploratory research focuses on is to understand what reality a word like *region* refers to. What is the actual conceptualisation of the *region* inherent in the Durban Aerotropolis? What are the RED governance mechanisms found in the Aerotropolis *region's* stakeholder relations and partnerships? How does this

Aerotropolis *region* facilitate clustering and agglomeration of businesses as a feature of RED? How does this Aerotropolis facilitate coordinated investments in *regional* marketing? Reiter further argues that "we need to dissect, to analyse by pulling apart, words from the reality they refer to and, as exploratory social scientists, we should focus on the reality, not the words. This means, in most cases, that we need to look for indicators that tell us something about the reality represented by a word" (2013: 6).

However, Reiter (2013) also cautions researchers against the concretising of ideas as definite and exclusive. He advises that

> when doing exploratory research, we need to remain alert to the pitfalls of reification and avoid any tendencies to essentialise words and categories. Instead of looking for the essence behind a word or concept, we need to explore what aspect of reality this word opens up for us and what a specific word allows us to see, or what aspect of reality it refers to. (Reiter, 2013: 7)

In this research, although the exploratory research design offers (among other things) a way to shed light on what economic development projects are likely to be implemented under the 'regional' banner and what the inherent governance dynamics are, it must be recognised that the kind of knowledge it can achieve is tentative and dynamic (Reiter, 2013). Admitting to the tentativeness therefore plays a crucial role in ensuring that the complexities and dynamism of reality are not misconstrued through case-specificity.

5.4 Research approach

The study adopted a qualitative approach in the techniques and procedures for gathering and interpreting data. According to Corbin and Strauss (2008), qualitative research opens up an avenue through which researchers can understand the inner experience of participants to determine meaning making through and in culture and to discover variables, as opposed to testing them. Furthermore, qualitative research engages with words and identifies order out of seeming disorder (Corbin & Strauss, 2008).

What is defined above speaks directly to the present field of economic development in South Africa in which there is currently a shift in nomenclature, incorporating the regional aspect in what previously would simply have been referred to as local economic development (LED), or just a total shift in mind-set to the broader regional economic development (RED). This creates

chaotic uncertainty and nebulousness for practitioners, necessitating investigation and exploration of how this RED is consequently conceptualised (forming an idea and making sense of) and enacted (being implemented) through the aerotropolis project in Durban, KwaZulu-Natal. RED is an emerging concept and, with its associated practice, necessitated a methodological approach to explore its social construction and implications. Thus, it became evident that this could be done best by adhering to qualitative research methods which make the assumption that knowledge about the subject of enquiry is constructed through communication and interaction (Vanderstoep & Johnston, 2009).

According to Henning, van Rensburg and Smit (2004), qualitative research is about the quest for understanding and for in-depth inquiry. As described by Denzin and Lincoln,

> it consists of a set of interpretive, material practices that make the world visible… (these material practices) turn the world into a series of representations- including field notes, interviews, recordings… at this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of meanings people bring to them. (2005: 3)

It is important to note that qualitative research can take either an interpretive or a social constructivist turn in its undertaking. These two paradigms share what Schwandt (1994: 221) refers to as "an abiding concern for the life world, for the emic view, for understanding meaning, for grasping the actor's definition of situation, for *verhesten".* However, the differences come in the recognition of peoples' thoughts as products of systems of meaning that exist at a social (social constructivist) level rather than an individual (interpretive) level (Chell, 2000). Blanche, Durrheim and Painter (2006) describe the constructivist paradigm as socially constructed reality while the interpretive paradigm has more to do with internal reality of subjective experience.

The discussion below expands on what qualitative research following the social constructivist paradigm entails and why it is suited for this study.

5.5 Research paradigm

According to Patton (2002), a research paradigm is a worldview. Schwandt (1994) elaborates on this by explaining that a paradigm suggests direction along which to look rather than a

description of what to see. It is further asserted that a paradigm is the lens through which the complexity of lived experience is understood, mainly from the point of view of those who live it (Patton, 2002; Schwandt, 1994). Given the definitions provided above, this study has adopted a social constructivist paradigm. This particular worldview maintains that what is understood as objective knowledge and truth is the result of perspective and this is because knowledge and truth are created, not discovered by the mind (Schwandt, 1994).

Because qualitative research within social constructivist bounds has been undertaken in this study, discourse has been utilised as a structural device to format and direct meaning. The social constructivist paradigm is an epistemological position which explores how the socially produced ideas and objects that populate the world are created (Henning et al., 2004). Furthermore, it is within this paradigm that understandings and experiences are derived and also feed into larger discourses (Chell, 2000; Blanche et al., 2006).

There is also a recognition of peoples' thoughts as products of systems of meaning that exist at a social rather than individual level (as is the case with the interpretivist paradigm) (Chell, 2000). The social constructivist paradigm argues for a pluralistic (Patton, 2002) and plastic character of reality (Schwandt, 1994): "pluralistic in the sense that reality is expressible in a variety of symbol and language systems; plastic in the sense that reality is stretched and shaped to fit purposeful acts of intentional human agents" (Schwandt, 1994: 236). This is consistent with the argument cited in section 5.3 above, in which Reiter cautions against reification and essentialising in the exploratory research design. Given the nature of the research purpose and foci within a social constructivist approach, this was deemed the best methodological framework for the study. Qualitative work undertaken through a social constructivist paradigm is malleable and open to negation as new knowledge is accrued (Corbin & Strauss, 2008) and it is the belief of the researcher that such flexible, inductive research work on RED is needed, especially in a period when a shift in nomenclature is presently taking place.

5.6 Data sources

The discussion below of the sources of primary and secondary data indicates where the data originated from that justified the need for the study (secondary) and that provided first-hand evidence and account of the studied phenomenon (primary).

5.6.1 Secondary data

The study made use of secondary data from journal articles, books, government policies and other related documentation, newspaper articles and theses or dissertations. This data established the theoretical framework for the entire study, played a crucial role in enabling engagement with the concepts of space, place and region, RED, agglomeration, clustering, and regional marketing, and helped in generating an understanding of the various developments that are linked to the aforementioned concepts. Furthermore, secondary data provided a platform from which governance and the coordination of investments in regional marketing could be perceived in the context of this study.

Secondary data also assisted the researcher in deciding that the Durban Aerotropolis would serve as a good case of reference to be utilised in further understanding RED and provided an overall perspective of the aerotropolis project.

5.6.2 Primary data

Due to the qualitative nature of the study design, primary data consisted of in-depth, face-to-face interviews that were conducted with key informants. Other primary data sources were documentary evidence from within these organisations, such as annual reports, strategy documents and factsheets. The organisations from which primary data was sourced included the public and private sector stakeholders of the Durban Aerotropolis. These organisations are further detailed in the next section.

5.7 Population and sample

It is important to discuss the population in the study, stating its size, if it can be determined, and the means of identifying individuals in the population (Creswell, 2014). Issues of access may arise here, and the sampling design for the said population may have to be either single-stage or multistage (Creswell, 2014).

With this in mind, the sample for this research was selected from the population of government departments, government-funded institutions or state-owned entities, and private sector companies that were involved in the Durban Aerotropolis. There was no exact number to serve

as a determining factor of size of population given that these are big organisations and vary according to sectors and in relation to project engagements.

Within each of these organisations were individuals and, at times, teams that dealt directly with the various aspects of the Durban Aerotropolis. The sample therefore included first and foremost the project Aerotropolis partners, namely the Department of Economic Development, Tourism and Environmental Affairs, Dube TradePort, Airports Company South Africa (ACSA), eThekwini Municipality, Tongaat Hulett Property Developers (THPD), Tourism KwaZulu-Natal, and Trade and Investment KwaZulu-Natal. Also included were members of the Economic and Strategic Infrastructure Development Cluster: iLembe Municipality, iLembe Chamber of Commerce, Department of Corporative Governance and Traditional Affairs, Department of Transport, and Small Business Growth Enterprise. In addition, three private sector companies working within the Dube TradePort were selected. In total, the estimated sample size was 23 respondents from all the above organisations.

5.7.1 Sampling method and approach

A non-probability sampling method was utilised. This sampling method is used where the intention to select certain respondents is deliberate to reflect particular characteristics of the population used as a basis of selection (Ritchie & Lewis, 2012). More specifically, the sampling approach is purposive in nature. According to Henning et al. (2013), purposive sampling has elements of theoretical sampling in the sense that it looks for people who can help to build a certain theory further.

The sample chosen for this study was in line with objectives proposed and it was envisaged that it would suffice in answering all the key questions intended to aid in the conceptualisation and enactment of RED through the analysis of the Durban Aerotropolis, consequently filling the identified gaps and building on the literature on RED. The sample comprised people involved in Durban Aerotropolis project from the various organisation or stakeholder groups who had the necessary expertise and individuals who qualified to speak on issues pertaining the project.

Although the main sampling approach was purposive, the study also made use of snowball sampling whereby those already identified indicated which other respondents were useful for the study (Henning et al., 2013). The use of snowballing technique was also instrumental in

assisting with issues of access, because some of the respondents were more open to engaging and being part of the study after they found out who had referred me to them. It can thus be argued that multistage sampling was employed, because the researcher first identified the organisations and stakeholder groups of the projects and was only then able to obtain names of individuals. This kind of sampling is defined by Creswell (2014) as a sampling procedure where the researcher first identifies clusters of either groups or organisations and then obtains names of individual respondents within those clusters and samples within them.

Because of issues with access, as highlighted by Creswell (2014), efforts to secure respondent meetings with a number of the stakeholders were unsuccessful. These included the Durban Chamber of Commerce and Industry, the Premier's Office in KZN, iLembe District, and one private sector company, Rholig-Grindrod.

5.8 Data collection tool

The study utilised in-depth, face-to-face interviews. Because a sizeable aspect of the study's objectives was to examine, question, understand and make sense of the various issues raised in the study, interviews emerged as the most appropriate data collection tool. Interviews enable an understanding of the respondents' view and interpretation of the world in relation to their own beliefs, history and context (Wengraf, 2001).

Although there were other data collection instruments that could have been used, the nature of the study in itself required a data collection tool that would allow and make provisions to collect and rigorously examine narrative accounts of social worlds (Silverman, 2011). This was needed because the research was essentially exploratory in relation to the concept and implementation of RED. It would, however, be impossible to arrive at this understanding if we do not acknowledge that individual's perspectives are an important part of the fabric and make-up of society and that our joint knowledge of social processes can emerge as a result of the interrogation and questioning that interviews enable (Henning, Rensburg & Smit; 2013).

The interview schedule which was developed took cognisance of the main aim of the study as well as the subsequent objectives that the study intended to meet. The researcher designed interview schedules for the various organisations so that all the relevant questions were answered in the best way possible. There were variations in the schedules because some questions were only relevant to particular organisations and not others (see Appendix A). These

interviews were conducted wherever the respondents felt comfortable, whether it was their workplace, any chosen location or the researcher's place of work.

5.9 Data analysis

In this study, it is important to note that perspectives and plans emerge from the interplay between a socially constructed self and a socially constructed environment and that the self and the specific setting are lent an additional structure by their location and time (Babbie & Mouton, 2009). It is at this juncture (time of shift) that an account is given in this study of what economic development (setting) practitioners and policy makers (selves) involved in the Durban Aerotropolis project understood as the region and as RED within eThekwini, KZN and the wider South Africa (location) that will hopefully craft or pave a way forward within the ever evolving field of development.

Given the above-mentioned factors, the Miles and Huberman thematic analysis approach (1994) was used in data analysis. A transcription of interviews and field notes was produced to enable the data reduction process. The transcriptions were then coded to establish general descriptive codes for topics raised in the data (Miles & Huberman, 1994). Following this was level two coding which involves identifying clusters and hierarchies of information to identify patterns and relationships in first-level codes (de Wet & Erasmus, 2005). At this point, the process of memoing begins, which entails recording of ideas about codes as they strike the researcher (de Wet & Erasmus, 2005). When the researcher has related the codes and drawn conclusions from the memos, the stage of data displaying is reached because it is from here that conclusions can be drawn and verified (Miles & Huberman, 1994). Lastly, pattern codes emerge and this process enables the interpretation of findings.

The knowledge produced from the findings of the study needs to be validated, and this process is discussed in the next section.

5.10 Knowledge trustworthiness and credibility

This section addresses a crucial aspect of qualitative research which is validation of the research and the knowledge it produces. According to Creswell (2014), the terms that commonly used in addressing validity in qualitative literature are 'trustworthiness',

‘authenticity’ and ‘credibility’. The researcher has accordingly referred to aspects of validation as knowledge trustworthiness and credibility.

The trustworthiness and credibility of the findings and conclusions drawn from the proposed research have been ensured by the inclusion of multiple sources of data. This process is called data triangulation as it involves a use of varied data sources in a single study (Blanche et al, 2006). Data triangulation includes a cross-verification of data from two or more sources. Furthermore, triangulation checks the integrity of, or extends, inferences drawn (Ritchie & Lewis, 2012). The researcher firstly sourced the data from various respondents who were all involved in this project and were thus qualified to speak about it and to address issues of governance, clustering and agglomeration, and regional marketing of the Durban Aerotropolis and what that means for regional economic development in this country. In addition, other strategies and other sources of primary data were utilised. These included, for example, documents such as the Dube TradePort SEZ Factsheet, the Durban KZN Integrated Aerotropolis Strategy and the DTI’s SEZ Tax Incentive Guide. This exercise served the purpose of converging several sources of data so that the opinions and perspectives of the respondents was triangulated with what was contained in the documents to build a coherent justification for the trustworthiness and credibility of this study.

With all that has been discussed above, Blanche et al. (2006) state that in evaluating credibility of the research, one has nonetheless to think about the anticipated findings and conclusions and ask how they could be wrong. An issue they raise is that researchers who have employed a social constructivist paradigm tend to reject the accuracy of findings in reflecting reality. This is because these kinds of researchers, and the specific paradigm, understand factors that would be perceived as challenging conclusions, as merely events to be understood, and not variables needing to be explained. This argument underscores the basic tenet of exploratory qualitative research undertaken within social constructivist bounds, namely belief in the existence of multiple realities. Whittemore, Chase and Mandle (2001:525) support this by claiming that a reach of consensus has emerged “regarding a pluralistic approach to knowledge development in that the utilisation of a particular method should not be seen as an absolute ontological commitment”.

5.11 Ethics

Upholding ethical conventions is crucial in research, given that it is the duty of the researcher to ensure that the respondents are protected, and that some level of respect is developed with them; integrity of the research also needs to be strongly promoted and researchers also ought to guard against any misconduct and impropriety (Israel & Hay, 2006).

The study has adhered to the ethics policy of the University of KwaZulu-Natal. The researcher ensured that ethical conventions were not contravened in conducting the proposed study. Gatekeepers' letters granting access to the various organisations were initially given to the researcher allowing access to the organisations. Consent for their participation was obtained from respondents before the interviews. This was done through a consent letter (see Appendix B) that had to be signed by each individual respondent who was willing to do so. Furthermore, conducting this study caused no harm to the respondents and those wishing to remain anonymous or have their confidentiality to protect were granted their wishes. Data collection did not proceed until ethical clearance was granted by the University (see Appendix C). The ethics committee of the university granted the researcher clearance as a way to approve undertaking of this study.

5.12 Conclusion

This chapter has indicated ways of thinking about and studying social phenomena and the methodology utilised for this study, to explain why the methods used were considered appropriate for the study. An exploratory research design was selected for the qualitative study undertaken within a social constructivist paradigm. A social constructivist paradigm was adhered to because of the nature of the problem in this research and the number of respondents and data sources for primary data. A purposive sampling approach with non-probability sampling was used to derive a sample from which primary data was sourced to address the objectives and the problem to be investigated. The data was collected through in-depth, face-to-face interviews and analysed using a thematic approach. The analysis subsequently led to the interpretation of the findings of the study, which are presented in the chapters that follow.

Chapter 6
Conceptualisation of the 'region' inherent in RED as exemplified in the Durban Aerotropolis

6.1 Introduction

Because of the complexity of the conceptualisation of the region as evident in the Durban Aerotropolis, this chapter has been divided into two parts. The first takes us through the conceptual process of the construction of *region*, aforementioned, by unpacking notions of its form, function and scale. This is highlighted through notions of region associated with the Durban Aerotropolis. In addition there are also further concepts that go beyond form, function and scale; these have to do with how stakeholders perceived the Durban Aerotropolis as a project with influence, impact and reach going beyond and above what Kasarda refers to as spatial reach, and which the stakeholders see as constituting a region. The second part of the chapter discusses the purpose, form, function, scale and beyond played in the construction of the Durban Aerotropolis region to simplify the process and better understand it. The chapter ends with a chapter summary.

6.2 Notions of 'region' associated with the Durban Aerotropolis

To examine the conceptualisation of the region inherent in the Durban Aerotropolis, questions related to the geography of the aerotropolis were put to the respondents. Through this exercise it became apparent that the way in which stakeholders of the Durban Aerotropolis spoke of the geography of the project reflected the form, function and scale of the region. Notions of the form, function and scale of the region were cited by the Durban Aerotropolis stakeholders as being related to the following issues:

1. The purpose that the Durban Aerotropolis seeks to serve and the requirement needed to fulfil that purpose (function)
2. The consequent thoughts that went into decisions about what kind of economic development mechanism or strategy could fulfil the identified purpose (form)
3. The extent, reach and magnitude of the project that needed to be considered (scale)

In the light of these stakeholders' concerns, and since form always follows function (Kasarda & Apold, 2014), presentation of the findings in this chapter firstly captures the functions of the Durban Aerotropolis, followed by issues of form and scale associated with the project. This then leads to an analysis of the notion of 'region' as it pertains to RED (see section 6.3.).

6.2.1 Conceptualisations of the function of the Durban Aerotropolis

The conceptualisations of the function of the Durban Aerotropolis reveal the purpose of the project as constructed by respondents and in related strategic documents. This section therefore portrays the many ways in which the project is constructed as an integrated environment with a mixed-use function. These functions include the project being perceived as a space to live work and play, a space for innovation, a space for basic services, a space for industry, a space for world-class logistics and a space for food production. The presentation of the Durban Aerotropolis in this way corresponds with Kasarda's (2006) explanation that airports have become complex multi-functional enterprises that serve both aeronautical and commercial development.

According to the Chief Executive Officer (CEO) of the Dube TradePort (12/05/2016), the Durban Aerotropolis is an integrated environment and a mixed-use space. He has aspirations for the project which he expressed as follows:[1]

> *Let's make it a fully integrated environment. I think with aerotropolis [it is an] integrated environment where you can actually have production as an industrial, you can have commercial office, retail, you can have educational, which is super important, and training.*

This understanding is in line with, Hanly's (2015:1) reference to an aerotropolis as a "sub-regional economy where the airport city is the anchoring economic hub associated with a concentrically expanding mic of clustered uses".

Furthermore, when asked what spaces the aerotropolis encompasses, the CEO of Dube TradePort (12/05/2016) said,

> *Right across the board, so commercial and business, industrial, residential, associated with that is your retail and leisure and then specialist things like special economic zones because the whole aerotropolis won't be a special economic zone. So special economic zones, certain shared infrastructure, so let's say rail, road,*

[1] Text set in italics indicates data collected from participating study informants (e.g. interview responses).

bulk infrastructure. Then other specialist zones would be like aviation linked stuff, like we've got over here.

When asked what spaces the aerotropolis encompasses, the Director for Research and Development at EDTEA (01/07/2016) said; "*it should encompass the spaces of work, the spaces of living and the spaces of recreation*".

The Durban Aerotropolis seeks to become a region within which "people will enjoy a holistic quality of life… where people can be able to enjoy a convenient and healthy live, work and play lifestyle" (EDTEA, 2016). Proposals have been made for a number of housing developments, many of which have a holistic and sustainable work-live-play basis to them. One example is Cornubia (EDTEA, 2016). It is proposed that it will be both dense and liveable and serves as an example of housing models that are to be adopted moving forward. Inevitably, as the aerotropolis region grows and expands, the need for new housing will arise (Director for Research & Development at EDTEA, 01/07/2016). As a result, the masterplan has identified that there are real opportunities to ensure "better located, better planned housing in the region". This is needed to undo the legacy of racial segregation that is still evident in the northern region.

The 'live, work and play' narrative, which encompasses mixed-use function and a good quality lifestyle, is evident in Kasarda's (2001b) argument that the corporate headquarters, regional offices and various professional organisations that gather around the airport, require their staff and people in their employ to undertake considerable long-distance travel, which can be eliminated if the airport city becomes a space to live, work and play.

Further to the project being seen as a space to live, play and work, there are stakeholders that conceive of it as a space for basic services. According to the Deputy Director of Policy and Planning at EDTEA (20/05/2016), the Durban Aerotropolis should not just be "*limited to manufacturing, manufacturing, manufacturing*". What he was advocating for is a space where the people who work and live in the Durban Aerotropolis are able to access the basic services that they require. This includes but is not limited to schools, hospitals, police stations, fire station and many other services that are required for great living.

where is the nearest police station to King Shaka, I don't know it is probably quite a while, so those kind of services would probably have to come through or the nearest school or the nearest fire station or nearest hospital. There is all those spaces not just you know manufacturing, manufacturing, manufacturing, otherwise you're going to become too big and then there is a crime and the nearest police

station might be Tongaat or somewhere, it might take them a while to get there. (Deputy Director of Policy and Planning at EDTEA, 20/05/2016).

The Durban Aerotropolis is also functionally conceptualised as a space of innovation in response to global change. The Masterplan of the Durban Aerotropolis speaks of "megatrends, disruption and a changing world" (EDTEA, 2016). This, in essence, highlights how the world is changing and how the rate of this change is ever-increasing and unpredictable. Here, innovation is seen as a force that has motivated the master planning team to adapt and be flexible in planning for a sustainable future through a competitive aerotropolis in Durban. The masterplan identifies the following megatrends, "urbanisation, a rising, more empowered middle class, constrained, finite resources, hyper connectivity, the exponential growth of technology and innovation and the renaissance of design and innovation" (EDTEA, 2016).

According to the Director of Research and Development at EDTEA (01/07/2016), the aerotropolis provides spaces of innovation where people can do things in ways that have never been done before. He further believes that within this space of innovation people should compete and set up their business ventures to avoid relying on the government to provide them with opportunities of employment. He stated,

The aerotropolis provides the spaces of innovation where people can do things differently, do things better, compete and set up their entities without having to rely on somebody providing them with jobs, so it affords them the smart way of life. You know you don't have to live a 100 years to catch up with the developed world.

This innovation is also as a result of companies working together (or coming together in space) to foster a cluster environment, which is further discussed in Chapter 8.

According to the Durban Aerotropolis Masterplan, the project offers prime land for industrial activity within a reasonable distance to King Shaka International Airport (EDTEA, 2016). This further highlights the Durban Aerotropolis as a space for industry or industrial activity. According to the masterplan;

These areas will need to be flexible to cater for yet undetermined future production/activities that will take place within them. (EDTEA, 2016).

The space for industrial activity has been designated as the Special Economic Zone, a project managed by the Dube TradePort Corporation. Like some of the world's best aerotropoli, for example, IATN in Brazil and ZAEZ in China, decisions were taken to attract industry, foster business development and create jobs by setting up and establishing SEZs within the

aerotropolis (Kasarda, 2013). In this regard, stakeholders speak of the purpose of the Durban Aerotropolis being a space for industry activity.

In relation to integration and innovation, stakeholders also speak of the Durban Aerotropolis as a space for world-class logistics. According to the Durban Aerotropolis Masterplan,

> *the establishment of a logistics gateway will require an integrated multimodal logistics platform, facilitated movement and processing of goods (secure and bonded), inland transportation networks, high-value agricultural production, creating an enabling environment for new enterprises and attracting private sector participation and investment for specific opportunities.* (EDTEA, 2016).

Because the aerotropolis needs to meet the crucial demand for speed, agility and reliability in fulfilment of orders, infrastructure of this kind needs to be set up around airports (Kasarda, 2001a). According to Arend, Bruns and McCurry (2004), airports are economic development engines as they are one of the central factors in businesses' ability to compete, given the intensified role of logistics and distribution in meeting customer and shareholder demands. In the same way that the Memphis Aerotropolis redefined global logistics (Cox, 2009), the Durban Aerotropolis seeks to provide a space for world-class logistics.

Because South Africa is a food-insecure country, the master planning team identified a need for capitalising on rich agricultural potential. The Durban Aerotropolis is uniquely positioned to take advantage of the rich soils and excellent climate that defines it, according to the Durban Aerotropolis Masterplan (EDTEA, 2016). Within the project, there is Dube AgriZone which is an agricultural production zone for local and export markets. According to the Dube TradePort (2013), the AgriZone is said to be Africa's first integrated perishables supply chain and is home to the continent's largest climate-controlled growing area under glass. In this regard, the Durban Aerotropolis is thus perceived as a space for food production.

The foregoing discussion highlights the functions of the Durban Aerotropolis as shared by the stakeholders and as highlighted in the Durban Aerotropolis Masterplan and related documents from the Dube TradePort. In analysing the function of the Durban Aerotropolis, the findings show that integration and innovation are primary and key in its conceptualisation. Integration includes spaces of living, working and playing as well as presence of basic services. Essentially, this integration can be understood as facilitating connection and assembling of the various functions to co-exist in space. Innovation, on the other hand, is evident in the presence of a world-class logistics platform, a sophisticated industrial area designated as an SEZ, and a food and agricultural complex. This innovation highlights processes of the Durban

Aerotropolis through which ‘dispersed parts’ can be connected through logistics. These ‘dispersed parts’ could be individuals, companies or countries. Essentially, the innovation facilitates a connection beyond geographical space and boundary.

Before the form of the project could be decided upon, the function had to be unpacked in detail from the respondents and documents. What follows is a discussion on the form of the Durban Aerotropolis.

6.2.2 Conceptualisations of the form of the Durban Aerotropolis

Respondents shared their understanding of what kind of economic development mechanism or strategy the Durban Aerotropolis is as a project. Their thinking can be seen as the form to be taken by the Durban Aerotropolis. This was also reflective of the thought process on how the purpose and functionality, discussed above, can and should be fulfilled on the ground. The key themes discussed here include perception of the Durban Aerotropolis form as a greenfield, a quality urban space, and a corridor of economic development.

As a point of departure, the stakeholders saw the aerotropolis as a greenfield space (CEO of the Dube TradePort, 30/06/2016; Deputy Director of Policy & Planning, 20/05/2016). This means that they saw it as a project whose form had been established on a commercial development site that was previously unused and had thus required rezoning. In this thinking the Durban Aerotropolis appears as one of the few aerotropoli around the world using a “greenfield site” which is purposely tailor-made as a platform to support air logistics and associated developments in an airport city.

Being a greenfield site creates the opportunity to put in place a comprehensive plan that responds to and capitalises on the location of the airport on the edge of the eThekwini Municipality. EDTEA and its stakeholders and partners are thus able to manoeuvre and implement plans without any of the obstructions created by pre-existing built-up areas, as experienced in other airports in the country and beyond. However, being a greenfield site requires cognisance of the considerable time and money needed in the long-term for the aerotropolis to be fully developed. In addition, the greenfield nature of the aerotropolis also means that it was not formerly a commercial development site and is thus a space which has a multitude of natural habitats embedded within it. According to the Durban Aerotropolis Masterplan,

> *The future airport city and its surroundings aims to be truly respectful of these systems as they are an asset to citizens and tourists alike. These natural systems include coastal forest, grassland, wetlands, estuaries, rivers and coastline. Together, they form a critical structuring element to future regional planning. (EDTEA, 2016)*

The Durban Aerotropolis Master Plan alludes to the form of the Durban Aerotropolis as reflective of a '*quality urban space'* (EDTEA, 2016). This is defined by complete streets that equally serve the pedestrian and the car, that have a mix of uses in a compact, walkable area, and that have a memorable aesthetic or 'magnetism'. An urban space is highly attractive to people. Notably, Kennedy et al. (2014) explain that the aerotropolis is thus essentially an airport-driven urban feature. As an urban development form, the Durban Aerotropolis should serve the purpose and function of being a space for people to 'live, work, play'. The CEO of TKZN (12/05/2016) argued that for the Durban Aerotropolis to become one of the best in the country and in the world, it has to be a sophisticated urban space that offers world-class service.

By virtue of its form as a quality urban space, other respondents argued that the Durban Aerotropolis form therefore reflects an "airport city" or a city built around an airport. The "airport city" is characterised by commercial functions locating on and immediately around major airport sites (EDTEA, 2015). The airport city is therefore what can be referred to as the nucleus or epicentre of an Aerotropolis. This is characterised by a multiplicity of activities where the city grows outward to various nodes and corridors.

Further to the thinking that the Durban Aerotropolis takes the form of an urban development feature and an airport city is the claim that the development of the aerotropolis facilitates the emergence of corridors, clusters and spines of airport-related businesses that create new urban forms close to major airports (Arends et al., 2004; Kasarda, 2000). The KZN Provincial Spatial Development Strategy (PSEDS) accordingly highlights development of nodes and corridors in the province (KZN Planning Commission, 2011). One such node and corridor of development, according to interview respondents, is the Durban Aerotropolis. The KZN Integrated Aerotropolis Strategy speaks of these nodes as "*places such as Howick, Pietermaritzburg, Kranskop, Eshowe, and Mandini and to some extent Port Shepstone*" to which economic activity from the core of the project will ripple through, and which together with the Durban Aerotropolis will form a corridor of development (EDTEA, 2015).

The corridor referred to here, according to the KZN Integrated Aerotropolis Strategy, includes the N2 corridor northwards to Richards Bay and southwards to the Port Shepstone area. The

Durban Aerotropolis Masterplan alludes to the 'north corridor' which is made up of travel routes such as the R102, the M4 and the N2 (EDTEA, 2016). Within this corridor of the Dube TradePort and King Shaka International Airport are places such as Umhlanga Rocks, Phoenix, Tongaat, Ballito and La Mercy.

The priority plans for movement and transportation within the project are centred around the northern corridor. The Master Plan also reveals that "*there are currently proposed plans for upgrades to roads and rail and options for new road and rail alignments*" along that corridor. According to the Senior Planner of Tongaat Hulett Property Developers (25/05/2016) who also shares the view of an aerotropolis moving along the north corridor,

> *If you look at the growth trajectory for the city it is very much towards the north and has been for many years and it is certainly topographically the best area for providing housing etcetera so it is the logical expansion of the city. I think even without the airport we would still be growing in this direction, [but] obviously the airport adds a new sort of catalyst to development within the area.*

The findings given above indicate that the form of the Durban Aerotropolis reflects a greenfield urban development project which is an airport city with nodes and corridors of economic activity. Essentially, the form reveals the character of the Durban Aerotropolis project.

6.2.3 Conceptualisations of scale of the Durban Aerotropolis

In addition to function and form of the Durban Aerotropolis in the stakeholders' conceptualisations, thought had to go into the extent, reach and magnitude of the project. This section highlights two different kinds of conceptualisation of the scale of the Durban Aerotropolis that predominated: (i) fixed and bounded in space with defined size and a boundary, and (ii) defined by connection, loose, and thus flexible as a notion of scale. Size-defined, fixed and bounded conceptualisations are evident in Integrated Aerotropolis Strategy references to a footprint that requires differentiation between the airport city (the study area for the strategy itself) and the aerotropolis more broadly (the catchment area) (EDTEA, 2015).

As explained in the previous section on the form of the Durban Aerotropolis the airport city is characterised by commercial functions located on and immediately around the King Shaka International Airport (KSIA) site. The airside activity includes **s**hopping mall concepts merged into passenger terminals, retail (including streetscapes and upscale boutiques), restaurants

(increasingly higher-end and themed), leisure (spas, fitness, recreation, cinemas and more) and culture (museums, regional art, musicians, chapels). On the landside are hotels and entertainment, office and retail complexes, convention and exhibition centres, time-sensitive goods processing, free trade zones and what is called Dube TradePort (DTP), which is the airport city's designated area for industrial development, widely recognised as a special economic zone. These airside and landside activities are what is referred to as the inside-the-fence activities of the Aerotropolis (see Figure 6-1).

Figure 6-1 Durban airport city and the areas constituting "inside-the-fence" (Author's own)

In the KZN Integrated Aerotropolis Strategy (EDTEA, 2015) the Aerotropolis area is referred to as the catchment area. It covers almost all of the eThekwini Municipality and some parts of iLembe and uMgungundlovu municipalities. It stretches up to the Richards Bay area in northern KwaZulu-Natal. The defining criterion for the catchment area is the concept of the one-hour travel distance from King Shaka International Airport.

The footprint depicted below in Figure 6-2 shows that the catchment area cuts across a number of municipal boundaries. The aim is to ensure that people can travel with ease between the airport and various destinations (nodes) and reduce the travel time also between the airport and

these various areas (EDTEA, 2015). These nodes could be places such as Howick, Pietermaritzburg, Kranskop, Eshowe, and Mandini and to some extent Port Shepstone. For this to be achieved there has to be efficient, speedy and agile ground connectivity. Government is therefore being encouraged to invest substantially in road and rail infrastructure to achieve ground connectivity and widen the KSIA catchment area. The Aerotropolis shown in Figure 6-2 is based on the concept of a one-hour travel radius.

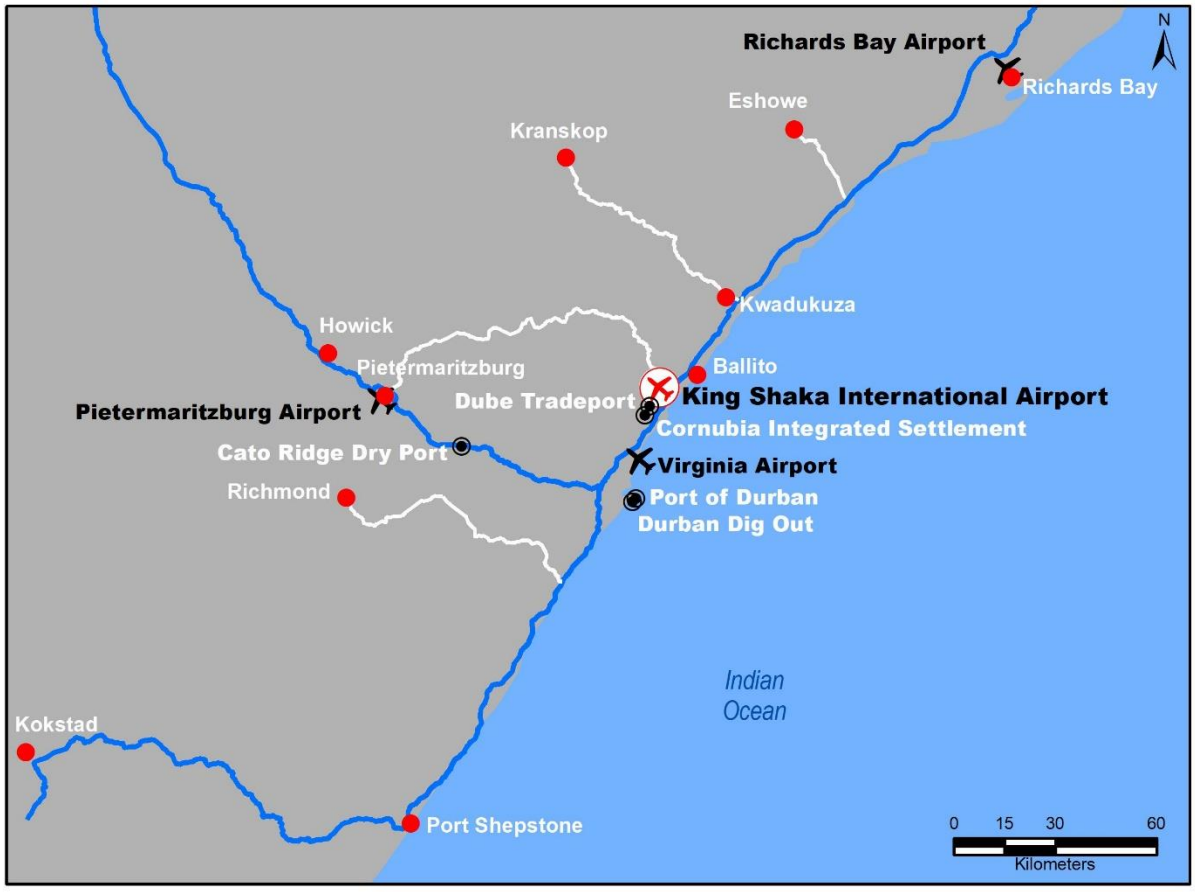

Figure 6-2 Durban Aerotropolis and the areas within the one-hour radius (Author's own)

In addition to the airport city study area and the aerotropolis catchment area, the Durban Aerotropolis Masterplan speaks of the 'core study area' which is said to begin from the M41 adjacent to the Phoenix Township in the south and spans through to Compensation in the north in proximity to Ballito (EDTEA, 2016). The eastern boundary is the coastline, while the western boundary is defined by the P521 and P715, which includes a small but crucial portion of the Ndwedwe region. It is however stressed in the Durban Aerotropolis Masterplan that the boundaries of their identified core study area are artificial and that "broader connections to the

western hinterland areas are considered significant in the development of an inclusive Aerotropolis Master Plan" (EDTEA, 2016).

Many of the stakeholders shared the view that the Durban Aerotropolis will surpass its physical boundaries as per its location through functional flows that will cross the administrative borders of Durban, eThekwini and possibly KZN province. The inclusion and exclusion of these flows has significant bearing on the institutional forms of governance of the Durban Aerotropolis. If included and considered they introduce a dynamic of challenges in the coordination of the project. If however they are excluded, possibilities of a complex regional governance structure are simplified. One stakeholder who captured the essence of this was the Programme Manager for Human Settlements (24/05/2016) who said;

> *It is my view, I want it to be a project for space that is defined, yes, beyond that can only be the impact of it and also some interdependent. I am saying we will have an aerotropolis so that you are able to move goods in and out of KwaZulu-Natal, but I am saying that does not make everything that is touched by that to be part of an aerotropolis. I would want it to be defined and also doing it that way it makes our focus to be easier, you know exactly what you are dealing with. Yes, as I am saying I am not excluding that there will be impact worldwide but it does not mean the whole world then becomes aerotropolis, you still confine it to a defined area. I will want it to be a physically defined area, yes with influences and impact beyond its boundaries but it must be a physically defined area.*

The Deputy Director of Policy and Planning at EDTEA (20/05/2016) acknowledged that the Durban Aerotropolis projects sits within a physical space but he felt that it had a reach that went beyond that. Here is what he had to say:

> *It has to be obviously first by physical attributes it has to sit at a space. I think by virtue of the aerotropolis, it is a project that actually becomes global in its reach. The footprint might just be KZN it might just be iLembe, eThekwini and the others to a certain extent, but as we are starting to see some of the projects coming up with the global reach that the institute is exactly the example of that because that becomes an opportunity for the whole of Africa. While you might have a headquarter or a building in here but it has its reach to others it is influenced throughout Africa and I think that's the whole idea and that's why even the branding we are starting to look beyond just if you don't call it Durban there will be problems because we have to link it to the destination or known destination. You call that institute Africa because you want to associate it with that market, but the influences are coming from elsewhere, it is a global project it just happened to be at a local space.*

The Director of Policy and Planning at EDTEA (20/05/2016) and the Programme Manager for Human Settlements (24/05/2016) also spoke of the Durban Aerotropolis having influence in most parts of Southern Africa and across the globe. This is what they said respectively;

> *Well it will go beyond that, I mean it is just like Durban influenced it is the spoon that feeds Gauteng, so you know eThekwini's boundary is more than just influencing KZN it is sort of influences Gauteng and Gauteng influences most of Southern Africa. Yes, look the one hour drive you know is you know, the nice thing about it is it is not a fence. It is not like okay these people are in and those people are out, there is no like physical boundary keeping people out and certain people in. The one-hour drive allows it to have a bigger influence but it can also be a lot bigger influence because you're looking at airport that has connectivity and cargo you know flying to international destinations it's influence is beyond that you know if we're looking at it in an international context, yes, so yes.*
>
> *Then you are saying the aerotropolis is not going to be unique it is still going to maintain that influence, I am talking about the link between it and KwaZulu-Natal specifically. Globally it is just going to be the global influences depending on what you sell and what you buy, yes basically those two go together very well.*

The Programme Manager of the AMU (18/05/2016) alluded to spillovers that will come from the Durban Aerotropolis project being present in more than one municipal jurisdiction.

> *Well you will find that there are spillovers, for instance there could be spillovers to places like Richards Bay because of the economic integration, there are similarities between for instance the two ports so you will find that there are businesses that will locate within the airport city because they want to be just in between these two ports so yes, there are synergies.*
>
> *Look within the aerotropolis study area you've got 80 percent of the province's economy. KZN is a city region as opposed to being a province, it is a city region because if you take Durban and Richards Bay you've got 95 percent of the economy of this province, so you're looking at we're sitting at an area where the bulk of the economy and it is growing is located so that's why we are calling it Durban. Besides aerotropolis' globally they spill over, there is no one aerotropolis that sits within a municipal boundary. Memphis Aerotropolis is sitting in three countries, Kuala Lumpur Aerotropolis even the airport is not even in Kuala Lumpur.*

In relation to bounded or unbounded scale, there are specific places that are encompassed by the Durban Aerotropolis. The stakeholders speak of these places in different ways. The section below groups some of these places in categories to make better sense of them. While some speak of compass points, others speak of their physical nature, as they are known, and they are also spoken of in terms of their political jurisdictions.

Places encompassed by the Durban AerotropolisThis section looks at the places that are encompassed by the Durban Aerotropolis. These differ along the continuum of 'fixed-defined' and 'loose-flexible'. These are places that are believed by the stakeholders to be within the confines of what they call the Durban Aerotropolis. According to Castells (2000:453), a place is "a locale whose form, function, and meaning are self-contained within the boundaries of physical contiguity".

In compass points

Some of the stakeholders refer to places within the Durban Aerotropolis as stretching to cover the "*north, south and west of the airport*" (Deputy Director of Research & Development). This is a vague indication of the places within the area spoken of as the aerotropolis. The north of the airport stretches from La Mercy up to Ballito, Mandeni and Richards Bay. The south of the airport stretches to the South Coast down as far as Port Shepstone. The west of the airport stretches from Durban past Pietermaritzburg. Scale in these terms can be defined as loose and flexible.

In their physical nature

All of the stakeholders said that the following areas were within the Durban Aerotropolis boundary: Durban, Ballito, Ndwedwe, Tinley Manor, Stanger, Mandeni, Pietermaritzburg, Port Shepstone and Richards Bay. The Programme Manager of the AMU however, also said that it might just incorporate other areas such as Eshowe, also in the north of KZN.

A number of respondents spoke of the impact of the Durban Aerotropolis going beyond the La Mercy area and Durban itself. They believed that the project will have an impact that reaches as far as Richards Bay, Pietermaritzburg and Port Shepstone on the South Coast. Others saw the impact stretching beyond of the borders of the country into Zimbabwe or Nigeria through trade:

> *As a Gateway function for trade for example it actually impacts on the whole of selling. Companies as far afield Richards Bay, Pietermaritzburg, right down the South Coast, everybody in KZN should be able to benefit from the aerotropolis. (CEO of the Dube TradePort, 30/06/2016)*
>
> *Obviously if we speak of the reach of impact of the project then obviously it can stretch to as far as yes Richard's Bay or to Zimbabwe or Nigeria or what not, so I*

think maybe the variation is project reach yes can go way beyond. (CEO of the Dube TradePort, 30/06/2016)

In this perspective, although a physical place reflects a more fixed scale, there are aspects of it that are loose and flexible, more especially where stakeholders refer to impact stretching to outside the borders of South Africa to countries such as Zimbabwe and Nigeria.

In their political jurisdictions

In terms of political jurisdiction, the following municipalities were cited: eThekwini Municipality, iLembe District Municipality, Kwadukuza Municipality, Umsunduzi Municipality. Although many respondents referred to the south in compass point terms and to Port Shepstone in relation to physical places; no mention was made of Ugu District at any point in time. Scale, in political jurisdiction terms, is fixed and bounded.

The findings presented above reveal that the scale of the Durban Aerotropolis is conceptualised as both fixed and bounded and as loose and flexible. It thus can be understood across a continuum from totally fixed to totally flexible. The fixed and bounded is reflective of absolute spaces.

6.3 Purpose of function-form-scale in construction of the 'region' in RED

From the findings we deduce that the region inherent in the Durban Aerotropolis has a clear form and function but is made up of a somewhat complex scale which ranges between totally loose and totally fixed boundaries. This is understandable however, given the problematic and complex nature of the region as a concept. Although we understand regions as spatially contingent, Paasi (2011) states that the theoretical and empirical understandings of what regions are must be based on contextuality, given the multiplicity of definitions of the concept. In this regard the study indicates that in this particular context, the region inherent in the Durban Aerotropolis should thus be seen as what Van Langenhove (2013) refers to as an 'institutional fact'. By this is meant that the Durban Aerotropolis should not be defined only by its surface and boundaries but also by human agreement (which in this case is agreement of the stakeholders) since it is a relational geographical area whose existence is impossible without

people. It is therefore correct to conceive of this region as a geographical space consisting largely of economic interaction and incorporating an institutional jurisdiction.

This region is a geographical area because its form is principally reflective of an urban space, or what Kennedy et al. (2014) refer to as an airport-driven urban feature. This region can be viewed as an economic interaction when we consider its role in the clustering and agglomeration of business activity, in relation to which it can be referred to as a node or corridor of economic development. It is an institutional jurisdiction when we take cognisance of how it has become territory over which multiple stakeholders and actors of government have practical 'planning authority' at this juncture.

The form, function and scale of the Durban Aerotropolis region speaks to different kinds of 'spaces'. Without acknowledging these spaces it is impossible to conceptualise this region. These spaces are, however, social constructs constituted through social relations and interactions in their own right (Varro & Lagendijk, 2013). It may be problematic to simplify a complex concept in this way but doing so speaks to the importance of considering space first when dealing with regions.

The scale of the Durban Aerotropolis is supposedly absolute when perceived in relation to its fixed and bounded nature as the study area and the catchment area that the stakeholders have referred to. It is thus a study area that consists of an airport city ultimately made up by what is referred to as 'inside-the-fence activities' of the aerotropolis. These are all landside and airside activities. The catchment area is inclusive of the study area and the areas within the one-hour radius – the one-hour radius being a standardised measure established by Professor John Kasarda who developed the aerotropolis concept.

Airport city functions, or what is referred to as the function of the Durban Aerotropolis, depict relative spaces. These are the different components which make the Durban Aerotropolis region an integrated environment with a mixed-use function. The presence of spaces where people can live, work and play attest to there being residential spaces (to live), industrial spaces (to work) and entertainment spaces (to play). These spaces are relative because they present a relationship between objects and things that exists only because these things exist and inevitably relate to each other. This means that the existence of such spaces was brought about by the coming together of economic development in space, which then saw things working in particular way in relation to each other and thus created a need for such spaces to exist.

The form of the Durban Aerotropolis, however, assumes a relational form of space. Relational space is space which allows for what is called a 'thrownto getherness'. According to Hubbard (2008), 'thrownto getherness' refers to the way in which diverse elements that cross categories such as the natural and social come together to foster a 'here' and 'now'. The elements of the scale and function come together in a space where they can have a relationship with each other. The relationship emerges from what was previously a greenfield site which took form of a quality urban space in which there are is a manifestation of a node and corridor of development which we ultimately refer to as the Durban Aerotropolis region.

This 'thrownto getherness' further assembles or brings together spaces of flows and spaces of places (Castells, 2000). The intention of the Durban Aerotropolis stakeholders to attract MNEs and other investors to their vicinity may potentially require interactions such as those that are facilitated through the spaces of flows. In this regard, the Durban Aerotropolis becomes a driver of air commerce and e-commerce and ensures that it meets the crucial demands for speed, agility and reliability in order fulfilment (Kasarda, 2001a). The space of flows virtually connects separate locations, and the stakeholders articulate this complex process in layman terms, highlighted in the scale section, in which they make reference to spillovers, influence, impact and reach.

With regard to the space of places, the Durban Aerotropolis region as a whole can be perceived, according to Castells' definition (2000:453), as a "locale whose form, function and meaning are self-contained within the boundaries of physical contiguity". This essentially means that it is inherently characterised as a space of place. Within it, however, exist other spaces of places which stakeholders have referred to in terms of compass points, in terms of their physical nature and in terms of their political jurisdictions, as previously discussed (6.2.3.3).

The Durban Aerotropolis is also socially constructed through guidance from the standardised scale provided by Kasarda, as discussed in chapter 2. It has been constructed through discourse sourced from the stakeholders and from strategy documents of the Durban Aerotropolis project. According to Soursa's (2014) classification of regions as either administrative, functional or formal, the Durban Aerotropolis assumes a functional region because Soursa (2014) defines this particular region as a labour-market area. The Durban Aerotropolis is indeed such a space. It is an economically integrated spatial unit in which residents can find jobs as alluded to by stakeholders referring to it as a place where people can 'live, work and play'.

In relation to the boundedness or unboundedness of the Durban Aerotropolis, the concepts of territoriality and relationality become important. The territorial view of region speaks to its boundedness in space. In the case of the Durban Aerotropolis, the airport city study area and the catchment area are the two components of the region that can be spoken of as bounded. This is because these are the two absolute spaces of the Durban Aerotropolis, as highlighted above. What is beyond these absolute spaces requires that we conceive of the Durban Aerotropolis region as relational in that it is a complex network of concentrations of people and places (Soursa, 2014). Furthermore, perceiving the Durban Aerotropolis region as relational means that it can be understood as an assemblage, which Allen et al. (1998:50) define as a "product of the networks, interactions, juxtapositions and articulations of the myriad of connections through which all social phenomena are lived out". While Godwin (2013) sees assemblages as overlapping institutional forms such as regional offices, agencies, boards and so on, Allen and Cochrane (2007) point out that these institutional forms are the foundation that holds down the fluid elements of global life in the interest of their region. This is true for the Durban Aerotropolis region as well, as it is a mixed-use space with a host of functions that ultimately serve the purpose of assisting KZN province to keep up with economic development, global business and investment trends.

6.4 Findings Summary

The conceptualisation of the region inherent in the Durban Aerotropolis in relation to RED shows a process of delineation which is reflective of project scoping. In this regard, the region is treated as an endeavour whose form, function and scale are socially produced. Before planning of economic development for this region could be embarked on, it needed to be clearly defined; this definition could only be made by the stakeholders of the Durban Aerotropolis, who also played a role in pronouncing the vision of the project. Also instrumental in guiding the process of defining and delineating was the contribution made by Prof. John Kasarda, a pioneer of the aerotropolis concept.

Because form follows function, as alluded to by Kasarda and Apold (2014), the stakeholders of the Durban Aerotropolis had to deliberate on the purpose the project ought to serve. The findings reveal that the stakeholders intended the project to be an integrated environment with a mixed-use function. Generally speaking, an aerotropolis is a city around an airport, however its specific function can only be defined by the stakeholders entrusted with the project. Thus,

with the King Shaka International Airport performing its aeronautical function, the Durban Aerotropolis is expected and intended to be a space where people can 'live, work and play': a space of innovation, of basic services, of industry, of world-class logistics and a space for food production through the Dube AgriZone. This is closely aligned with Kasarda's view of airports as economic development engines and key nodes of global production (2001b). In this regard, the Durban Aerotropolis is thus perceived as a multifunctional enterprise fulfilling both aeronautical and commercial development functions.

Taking the above-mentioned factors into account, the kind of economic development mechanism or strategy that could assist in fulfilling the purpose of an integrated and mixed-use environment was identified as a quality urban space, or what is referred to as an airport-driven 'urban development' feature. In this context, the Durban Aerotropolis is thus an urban development feature, or a quality urban space, whose development facilitates the emergence of corridors, clusters and spines of airport-related businesses that create new urban forms close to major airports. These are the forms that the region incorporates. This node or corridor of development will stretch to areas such as Howick, Pietermaritzburg, Kranskop, Eshowe, Mandeni and Port Shepstone, in which it will facilitate emergence of airport-related businesses. Its starting point is the La Mercy, Umhlanga, Tongaat and Ballito areas. Lastly, the Durban Aerotropolis also takes form of an 'airport city' or a city built around an airport because of all its commercial functions located on and immediately around King Shaka International Airport and the Dube TradePort.

The scale of this multi-functional urban development feature, was defined both in 'fixed and bounded' terms and, by virtue of its connections, as loose and flexible. What stakeholders identified as fixed and bounded is the airport city (also referred to as the catchment area). The study area consists of all 'inside-the-fence' economic activity, and the catchment area is defined by the inclusion of areas within the one-hour radius from the airport. For planning purposes, the Durban Aerotropolis Masterplan speaks of a 'core study area' from the M41 in Phoenix to Compensation in Ballito. The scale is also defined by the connections which are said to be loose and flexible. Here stakeholders speak of reach that may be global. Others refer to influence that the Durban Aerotropolis may have provincially, in parts of Southern Africa and globally (EDTEA, 2016). They also make reference to spillovers in the sense that economic activity may well reach other municipal jurisdictions. In addition, places encompassed by the Durban Aerotropolis are categorised according to compass point, physical nature and political jurisdiction.

It was from the conceptual journey of defining the Durban Aerotropolis and its activities that the 'region' was constructed. This is a region understood as an institutional fact (Van Langenhove, 2013). This means that it is to be defined both by its surface and boundaries and also by human agreement (in particular, by stakeholders of the project) because it is a geographical area whose existence is impossible without people. Because it is a social construct, it can be perceived as incorporating a geographical area, an economic interaction and an institutional jurisdiction as its key characteristics.

The concept of region inherent in RED in the instance of the Durban Aerotropolis consists of different spaces (as discussed in section 6.2.1.), the aerotropolis being an institutional jurisdiction that is socially constructed through social relations and interactions. This highlights and further underscores how crucial the concept of space is when dealing with regions. These spaces all come together, or coalesce, in a 'throwntogetherness' of scale and function, coming together in a form within and through which they can have a relationship with each other. The 'throwntogetherness' also assembles spaces of flows and spaces of places. This is why the region in this instance can be understood as an assemblage to depict a presence of overlapping institutional forms and juxtaposition of connections.

6.5 Conclusion

The findings presented in this chapter show that in the conceptualisation of the region inherent in RED in the instance of the Durban Aerotropolis definition of function, form and scale becomes pertinent. Function is the purpose of an RED project, form refers to the kind of economic development mechanism or strategy which could assist in fulfilling that purpose and scale speaks to the extent, reach and magnitude of the project, without which the implications are challenging practical enactment or implementation of RED projects. Form, function and scale are all socially produced and were instrumental in developing the vision of the Durban Aerotropolis, which is discussed further in the next chapter, and they all combine to depict a presence of overlapping institutional forms and juxtapositions of connections. This chapter has traced the conceptual journey of the region and will further assist in the conceptualisation of RED.

Chapter 7
Collaborative and cooperative governance mechanisms in Durban Aerotropolis stakeholder relations and partnerships

7.1 Introduction

This chapter presents the collaborative and cooperative governance mechanisms and dynamics of the Durban Aerotropolis project. It highlights the importance of collaborative multi-stakeholder relations, productive networks and mutually reinforcing relationships that are crucial in resource mobilisation for a successful RED (Bodhanya, 2015). It explores the concerted efforts and actions of policy makers, businesses and communities in driving the Durban Aerotropolis project. As highlighted by Ascani et al. (2012), RED processes facilitate communication and create an environment which favours frequent interactions and flows of ideas, as reflected in the governance dynamics of this project. The discussion therefore begins with the roles and responsibilities of the various stakeholders of the Durban Aerotropolis from public, private and state-owned agency groups. It is followed by an exploration of the mechanisms and forms of stakeholder engagement in which the importance of stakeholder engagement is broken down, the strategic thinking behind the vision of the Durban Aerotropolis is considered, the vision shared, and the formal structures of engagement unpacked. The chapter advances with a look at the management of the Durban Aerotropolis and a consideration of intergovernmental collaboration.

7.2 Stakeholders and partners of the Durban Aerotropolis

As highlighted in Chapter 4, governance entails making and carrying out decisions. Charron, et al. (2012) further refer to governance as management practices of governments. While government is the most recognised form of governance for the Durban Aerotropolis project, it is not the sole actor in its governance issues, given that there are other actors from different stakeholder groups. This is because governance in its essence incorporates a variety of decision-making and implementation practices by a wide range of people, organisations and institutions beyond government (Barnes & Foster, 2012). Governance of the Durban

Aerotropolis is made up of public sector stakeholders, private sector stakeholders and state-owned agencies, or what is also referred to as implementing arms of government.

The Durban Aerotropolis region thus reflects an amalgamation of networks and flows confirming that it is neither a single unity with a singular driving dynamic nor is it contained within clearly defined boundaries. These complexities are further created and entrenched by the interaction of actors from the multiple networks whose role and responsibilities in the Durban Aerotropolis is discussed below.

Furthermore, this collaborative action from the various stakeholders is indicative of strategic spatial planning, defined by Healey (2007) as efforts towards making sense of urban life. This planning exercise, together with the socio-spatial dynamics that have been discussed in relation to conceptualisations of the Durban Aerotropolis region, are what Healey (1997; 2007) refers to as a governance project focused on managing the dilemmas of 'co-existence in shared spaces'.

Three stakeholder groups that emerged, public sector, private sector and state-owned, are further discussed below.

7.2.1 Public sector stakeholders

The public sector stakeholders are government departments or municipalities from all three tiers of government and include EDTEA, eThekwini Municipality, KZN Department of Transport, KZN Department of Human Settlements Housing Development Agency.

7.2.1.1 Department of Economic Development, Tourism and Environmental Affairs

The role of the Department of Economic Development, Tourism and Environmental Affairs is to champion and spearhead the Durban Aerotropolis project. This project is an outcome of catalytic projects that were identified by KZN provincial government through its Provincial Growth and Development Strategy (PGDS). It was identified as one of four critical programmatic hub interventions of the department and the province (Aerotropolis, Maritime, Tourism and Industrial Economic) (EDTEA, 2015).

7.2.1.2 eThekwini Municipality

According to the Head of Economic Development Programmes in the eThekwini Municipality (02/06/2016), the city of Durban sees itself as a strategic partner in the Durban Aerotropolis project. In being part of the steering committee of the project its role, first and foremost, is to advance the economic development of the province. The Head of Economic Development Programmes further stated that he "*did not think that the concept of the aerotropolis would have been explored had it not been for the presence of an economic development unit in the city*".

Asked to expand on the role of the municipality, he further indicated that, "*what the city does, is to provide the bulk infrastructure around the aerotropolis and Dube TradePort precinct*". He also commented that

> *Because the development of the city is going north, it has been critical that the city prepares itself for that change and development so as to ensure that all the right infrastructure has been put in place for the necessary projects to be set up. If the city does not make such provisions, there would not be any development happening in the northern part of the city.*

Because the municipality wants to see an area within its jurisdiction grow and develop economically, it has also focused its efforts on investment promotion to help establish industries and firms in the Durban Aerotropolis that will that will create employment opportunities for residents and citizens in the wider province of KZN. Like ACSA, the municipality is also aware that EDTEA is at the forefront of the Durban Aerotropolis project and that its role is to provide a support to the project.

7.2.1.3 KZN Department of Transport

According the respondent responsible for Strategic Policy and Planning at the KZN Department of Transport (01/06/2016), the department was key in looking at various case studies from around the world to see what kind of transport infrastructure is required for setting up an aerotropolis:

A lot of the transport requirements also pointed out a need for extensive spatial planning. The spatial plans were used to ascertain what transportation needs would arise around the aerotropolis as well as around the city and the province. It was understood that a good public transport system is key and that there is a need for integration of all modes of transport in the

Durban Aerotropolis project. Prior to exploration of the aerotropolis concept the Department of Transport had commissioned a Northern Urban Development Corridor Study to identify what transport corridors were needed. It looked at spatial alignment in terms of the kinds of investments the project would require to make sure that the right transport modes were in place. Following that study, an industrial development zone in the form of Dube TradePort materialised and the airport came, which then later brought about the development of the aerotropolis. The role and responsibility of the Department therefore centres around transport infrastructure developments that will be beneficial for the operation of the entire Durban Aerotropolis.

7.2.1.4 KZN Department of Human Settlements' Housing Development Agency

According to the Programme Manager of the KZN Department of Human Settlements' Housing Development Agency (HDA) (24/05/2016), the HDA was brought onto the project

> *for the mere fact of understanding that there cannot be planning for economic development or for any kind of development without thought into the socially inclined questions that centre around where people are going to reside and where they are going to be coming from, if they are working in a particular development. There has to be an understanding of the movement patterns.*

He also alluded to dysfunctionality that arises in urban form when other important factors, mainly around people and where they reside, are neglected. or when environmental issues are not attended to:

> *Now if you want to say we are talking economic development you just say well how do we improve the GDP of the area and so on but not consider movement patterns, not consider even the outlook of the area after the intervention.*

The representative from the HDA further explained that their role focuses more on social wellbeing. Because they deal with issues of spatial equity, their concerns centre around the use of space and land and the efficiency in promoting inclusive economic development. He said, by way of example, that it was important where the people who work at the Dube TradePort come from, how much time they spend on the road, and how much impact that has on their productivity levels at work, commenting further that

> *the moment you speak about space you are then going to speak about land uses, what do people use land for, they use it for production of food, for movement, to live on it, to pray and play and so. All those elements must be covered so then the*

issue of human settlements came as an extension on a broader definition of a spatial equity agenda, it was not purely like a clear human settlement agenda it was like spatial equity.

7.2.1.5 iLembe Chamber of Commerce

According to the CEO of the iLembe Chamber of Commerce (26/05/2016), on a much broader scale, his organisation lobbies and advocates on the implementation of government policy to ensure that iLembe District in KZN remains a business- and investor-friendly environment. In addition, the iLembe Chamber of Commerce serves as a resource for local businesses by helping to create linkages and connections for their stakeholders. What the organisation wants to see happen in this project is for the stakeholders of the Dube Aerotropolis to recognise that their duty is to represent the business community. So at the top of their agenda is ensuring that the project continues to consider the interests of business and works for business, "*so you know we are representatives of business in the district*" (CEO of iLembe Chamber of Commerce, 26/05/2016).

The Chamber also plays a role in facilitating infrastructure provision for businesses. Although, they do not provide infrastructure themselves, initiative is taken to ensure that government develops and provides the necessary infrastructure. Lobbying for infrastructure is important, given that the chamber is also a crucial party in investment promotion within the district.

7.2.2 Private sector stakeholders

Private sector stakeholders are companies not directly controlled by the government. The one such company involved in this study was Tongaat Hulett Property Developers (THPD).

7.2.2.1 Tongaat Hulett Property Developers

According to the Senior Planner of Tongaat Hulett Property Developers (25/05/2016), the Dube TradePort and THPD have had a good working relationship and have consequently worked and are still working on a number of joint planning initiatives. THPD owns a lot of land around the airport; the estimation was that around 80% of the land within the 7,5 km radius is under ownership of THPD. This is what the Senior Planner said;

> *when it comes to Dube we've obviously had a long association over many years, we have a number of joint planning initiative together. We own a portion of land north of the airport called Eshekela Highway Development and they own half and we own half. We are doing all the planning together so we have an agreement in place for that.*

Furthermore, THPD has been exploring the concept of developing all the land that was available north of Durban (Senior Planner of THPD, 25/05/2016). In 2007, together with the Dube TradePort, THPD put together a broader plan for the development of the area and efforts to do international benchmarking were effected. At this stage, THPD would be a key partner in the process of setting up the Durban Aerotropolis because of the land and so it would be involved in aerotropolis tours with the EDTEA and other stakeholders. THPD is also part of the steering committee where a lot of plans are crafted regarding the aerotropolis project. She noted further that

> *Then with DTP we've had like an ongoing aerotropolis joint initiative partnership in the past. We're still doing some work in that area, although province is really now taking the lead in terms of driving the whole aerotropolis as opposed to DTP. So we still do joint planning exercises and another one we're looking at sort of traffic modelling in the broader area another important factor, so a lot of planning initiatives but a lot more focused than say the aerotropolis.*

THPD, she said, did not feel like they had the upper hand because they own the land. What the Senior Planner had witnessed over the years was that because they are a private sector company, they were treated equally with government departments in the sense that before decisions are made, they were brought on board to share their views and ideas and they were also given documents to make sure their comments and their comments were taken into account. In meetings, their input, she said, was fairly welcome (Senior Planner of THPD, 25/05/2016).

7.2.3 State-owned agencies

State-owned agencies are entities fully or partially owned by government and include Dube TradePort, Tourism KZN, ACSA and Trade and Investment KZN.

7.2.3.1 Dube TradePort

Dube TradePort is a corporation responsible for operation of the Dube TradePort Special Economic Zone. It was created to encourage increased levels of local investment and FDI in KwaZulu-Natal and the wider South Africa. Dube TradePort has also been charged with the responsibility of developing the province's biggest infrastructure project, the Durban Aerotropolis.

7.2.3.2 Tourism KZN

According to the CEO of Tourism KZN (TKZN) (12/05/2016), "an airport is an airport because the planes are taking off and landing, if no plane lands and no plane takes off, it is not an airport- it is a building". His statement came after he was asked what the role of TKZN is in strategic planning and implementation in the Durban Aerotropolis, to which the response was "tourism, tourism, tourism". He further commented that when airlines want to express interest in a specific destination or a route to a specific destination, the first people they ask to speak to are the tourism authorities. He said it does not matter which country they may be in talks with because "the first person that airline wants to meet is the tourism authority because they see tourism as the greatest [opportunity]".

The involvement of TKZN was therefore crucial, whether or not they may have wanted to be part of the project because the first point of communication of airlines was their office. Furthermore, he stressed that although many people think that the airlines speak to the airport first, the reality is that airlines meet with the tourism authority, "*even before they want to see the airport*". Their duty was merely to instil a sense of confidence to the airlines. This, they did by building a strong case of demand for the airline. This is what the CEO of TKZN (12/05/2016) said:

> *So we were very critical in the sense that to give confidence to the airlines it was important that we be seen to be part of the project to be supporting it because at the end of the day the airline will not fly just for the sake of flying it must make business sense. There must be a demand, there must be either an existing demand in that the people are moving between that place and another place albeit indirectly or so,*

TKZN plays a role in stimulating demand for more routes and airlines by advertising and marketing the city as a great tourism destination and engaging a number of different players

and stakeholder in the tourism value chain. The entity is also responsible, as the tourism authority, for ensuring that hotel infrastructure, compelling attractions, and great experiences are on offer that can be put together and presented as a package for attracting tourists to the city of Durban and the province of KwaZulu-Natal. The CEO of TKZN (12/05/2016) also made it a point to assert that what they do is only one part of the demand stimulation because, obviously, there are other elements of business that need to be taken into consideration such as ensuring that the economy is able to generate air cargo demand or business travel demand.

7.2.3.3 Airports Company South Africa

Airports Company South Africa (ACSA) runs King Shaka International Airport in Durban. According to ACSA's Manager for Communications and Branding (04/08/2016), ACSA initially had the title deed for the land on which the Durban Aerotropolis is built but this changed in 2006 when they signed a corporation agreement with the Dube TradePort Company in which it was decided that they would own a certain portion of the land and ACSA would own a certain percentage of the land. A decision was then made to work together to create a joint venture between ACSA and Dube TradePort where both organisations play a role in developing pockets of land in the precinct, the TradeZone, the airport and ultimately the aerotropolis.

The Manager for Communications and Branding (04/08/2016) further said that in looking at the aerotropolis concept, one needed to understand that the airport is the centre of business. So essentially, they are key and strategic partners in the sense that the backbone of this entire Dube Aerotropolis relies and depends on the existence of an airport which is an establishment under ACSA's ownership.

ACSA is a strategic partner in the airport development process and future upgrades of the airport, in line with what Dube TradePort wants to do regarding the future of the airport. Dube TradePort has an understanding of the aspirations of and plans of ACSA for the airport, given that ACSA has its own separate masterplan for the airport. Their duty has also been to establish alignment between their land and the wider plans of the Durban Aerotropolis.

Although ACSA is a strategic partner on the Durban Aerotropolis project, "*we are very much aware of the fact that decisions have to be made collaboratively*" (Manager for Communications and Branding, 04/08/2016). This means that, as ACSA, they are not at liberty

to singlehandedly make decisions that will affect the project. The Manager for Communications and Branding also noted that they consult with other key stakeholders (such as Durban City EDTEA and Dube TradePort) regarding anything that impacts on the development of the Durban Aerotropolis to make sure that everyone is on board and that ACSA is not just making decisions alone in terms of development and addressing challenges. Their hope is that they can run parallel with the project, in terms of their developments and their goals to support the province.

7.2.3.4 Trade and investment KZN

According to the Destination Marketing Manager of TIKZN (04/08/2016), the agency is the primary driver of foreign investment in KwaZulu-Natal and also the key facilitator in working with local businesses to get them export-ready and then assisting them in finding international markets for export. As such, in the development of any commercial international strategy, TIKZN becomes a key role player among the various drivers of economic development in the province.

The section above has highlighted the stakeholders from the various sectors that are working together in the Durban Aerotropolis.

7.3 The strategic thinking behind the vision of the Durban Aerotropolis

This discussion is important as it shows that the vision was a process that involved various government actors rather than just the work of an individual or a single entity. Because strategic thinking about the vision was done, many of the stakeholders had shared in the vision and were aware of what role they should play.

According to the CEO of TKZN (12/05/2016), realising that the airport in the south of Durban was experiencing a lot of shortcomings and limitations, a decision was made to move the facility to La Mercy in the north of the city. He further explained that

> *The idea to move the airport to this part of Durban had come about around the 1970s, work progressed up until it was abandoned in 1975s. The issues at the old airport included lack of land and space for expansion and the airport could no longer compete effectively given that a longer runway could not be built. What led to this problem was the fact that there were already things built around the airport*

> *and the freeway had also been erected in the midst of all that. When the old airport in the south could not expand and accommodate bigger aircraft, it became clear that the government had to make a decision to relocate so as to accommodate the evolution of aviation in the province.*

After 1994, the KZN government looked further into the move and a decision was finally made to start developing the area in La Mercy, setting up an industrial development zone which would later be known as the Dube TradePort Corporation. The decision to then kick start the project of the relocation of the airport was affected in 2006 so that the province and the city could be ready for the 2010 World Cup.

According to the Programme Manager of the Aerotropolis Management Unit (18/05/2016), the decision to move the airport to La Mercy was inspired by the fact that the economy of KZN and of Durban was moving towards the north. He expanded on this, saying that

> *The significance of the north if you look at this whole N2 corridor attached to Richards Bay Provincial Government has got two major assets which is these two ports, Richards Bay being the busiest bulk port in Africa and they have got the biggest port terminal. This side where you have got the second busiest container terminal which is this one here in Durban and the fact that the development of businesses and the location of the whole commerce and light industries is moving towards Durban North, so it became necessary to relocate the relocation of the airport which was not something new it's something that was muted by the apartheid government long time ago but it was never enacted.*

The move to the north was apparently also inspired by the bigger and greater vision that the government foresaw given the amount of land that was available in the La Mercy area. According to the CEO of TKZN (12/05/2016),

> *when the airport moved north the idea wasn't just to move the airport, it was to develop also the land around the airport so that it becomes a new economic driver for the province and also enhances our position as the logistics capital of the country.*

Following this grand realisation, ACSA and Dube TradePort put together a masterplan setting out what they were going to use the land surrounding the airport for on a very much smaller scale (Strategic Policy & Planning for the KZN Department of Transport, 01/06/2016). The government then took it upon itself to ask what could be further done, and that is how the proposal for development of an airport city came about:

> *Then as government we then said what else can we do now and that's when as part of a team a few of us went overseas and visited a whole lot of case studies. We went*

> *to something like 12 cities, six countries in a four week space and basically then consensus conceptualised the idea of what is an aerotropolis and that's what then initiated the process in terms of saying this is what we want to do in that area so that's basically what the basis of it was.*

The vision of the Durban AerotropolisRegarding the vision of the Durban Aerotropolis, it was clear that the stakeholders were aiming at building a brand new city centred around an airport. According to the Deputy Director of Policy and Planning at EDTEA (20/05/2016),

> *Basically, to build a brand new city centred around the airport and build a city that can leverage off the airport just like as Durban was basically built around the seaport. If you think of Durban connecting regions, you know Durban has an international port it feeds the consumption of and the drive of Johannesburg and the Gauteng area, so you kind of thing to yourself well if Gauteng wasn't around would Durban have grown as big as it did, you know there is a two way relationship between Gauteng and Durban. Now we really just looking at you know at connecting the airport, the same as Ekurhuleni well the municipality in Jo'burg. Ekurhuleni is centred around O R Tambo which feeds a whole of areas, Pretoria, Germiston, Benoni, Springs, the whole area, yes.*

For others, although the vision was clear about building a city around an airport, there was a shared sentiment that the Durban Aerotropolis should become a mechanism through which the country can craft a new trajectory of economic development. The Director of Research and Development at EDTEA (01/07/2016) underscored this argument by explaining that

> *we have to make sure that this project is one of the country's big projects, you know the big catalytic projects, presidential projects it had to fit into that category.*

He commented further that

> *There is that sense of understanding that we have an opportunity to develop a city around the airport. I think everybody understands that we have an opportunity to also model what the future development of the country, the province first and then the country.*

The CEO of Dube TradePort (30/06/2016) noted that although there might be differences in views about the main vision of the project, for him personally, and Dube TradePort specifically, the vision was to develop a project that will be key in driving the next generation of economic development and infrastructure development in "*the central core of the airport*" as he put it:

> *So let's say we take the first 10km radius, a lot of that will be Dube Trade Port stuff and our new land and the stuff that we are doing, well let's say 5km radius. Then 10km you start needing to put in bulk infrastructure from the city, big sewage works, roads, rail, then you go to 20 and suddenly you're touching Umhlanga,*

> *Ballito, Ndwedwe, so it is almost to say we've got a Greenfield opportunity here. Government owns a large portion of the land here, let's coordinate our efforts and let's accelerate good sustainable economic development in this area for good jobs*.

While the CEO of Dube TradePort (30/06/2016) had a clear vision for the Durban Aerotropolis and shared this with the various other stakeholders in the project, he expressed his concern about how he, unlike everyone else, had to think more practically about these grand ideas, as he works in the TradePort. In essence, what he was saying was that he had to work on the project on a day-to-day basis, which in a way forces him to adopt a 'taking it one step at a time' mentality rather than thinking about the bigger picture of the 60-year masterplan of the Durban Aerotropolis. He explained,

> *Yes, sure it's great that everyone's got big vision but I come from a more practical school where I've got to run a company that's got to deliver on the ground year by year. So I don't buy into the broader vision but I can see that that's going to come year 2025, 2030 rather than being now.*

A representative responsible for Strategic Policy and Planning at the KZN Department of Transport (01/06/2016), said that the collective vision for the Durban Aerotropolis (from the perspective of the transport sector) is to ensure that a new city is built. This is the kind of city in which people can "live, work and play". One of the challenges they had identified in the transport department is that there are people who are forced to commute from one end of the city to the other for work every day, which creates unnecessary traffic. What they were therefore trying to do in the aerotropolis concept, was to create an environment which will enable a reduction in commuting so that the N2 and N3 are not clogged with commuter traffic.

The discussion above has highlighted the strategic thinking behind the vision and the vision itself. The stakeholders spoke in in unison about wanting an airport city. Although there were variations in views here and there, overall, the stakeholders were of the same mind. The next section explores stakeholder engagements beyond their shared vision.

7.4 Beyond the vision: Stakeholder engagement in the Durban Aerotropolis

There is a system of processes, platforms and avenues through which all the parties involved in the project are brought together to discuss further plans concerning the Durban Aerotropolis. These will be unpacked in this section. Included is the importance of stakeholder engagements.

This is followed by a discussion of the formal structures through which stakeholders engage and an exploration of the leadership and management of the project.

7.4.1 The importance of stakeholder engagement

> *Let us once again, demonstrate the spirit of working together and put the main objective of building the-economy of the province at the forefront of our collective engagements. (Former MEC for Economic Development Mike Mabuyakhulu-EDTEA, 2015)*

Asked how critical the engagement had been in setting up the Durban Aerotropolis, the Programme Manager of the AMU (18/05/2016) said

> *Very critical because you must understand that they are competing we are dealing with competing interests, not only competing interests but conflicting interests and we also deal with cross border issues whereby there could be a project that is just at the border of Kwadukuza and eThekwini.*

For the Deputy Director of Policy and Planning at EDTEA (20/05/2016), engagement has been crucial for quicker implementation. In his view, it was very important to have plans for a specific project. More important, after all plans have been made, was that they are implemented. His point was that platforms for engagement enable stakeholders to hold each other accountable and say "given what we had agreed upon with regards to the planning, how much of that have you delivered on and how long do you need to get to the conclusion?"

For others (Programme Manager of the AMU, Director of Research and Development at EDTEA and Senior Manager of Policy and Planning), engagement had been instrumental both in soliciting buy-in and in mobilising resources from the different organs of state. Because the Durban Aerotropolis is a strategic pillar of the KZN economy, it requires concerted effort in pooling resources necessary for the growth and development of the project. The opportunity to source assistance of any form is created through the engagement platforms or through whatever other process of engagement that takes place between stakeholders of the project.

Furthermore, the engagements had been aggressive and quite focused in the sense that they had encouraged stakeholders to not lose momentum. The Director of Research and Development at EDTEA (20/05/2016) commented that "*Because the ball has already rolled, it should continue that way until the 60 year vision is realised*". He further explained that

> *If the momentum within the engagement forum is kept steady, the same culture he believes will also filter down to the organisations that have come together to work on the Durban Aerotropolis project. The essence of his argument is that if the people who represent the various organisations in the engagement forums are consistently urged to meet in the platform which encourages their buy-in and reminds them of the vision of the project, it will be easier to get the Durban Aerotropolis into their plans and finances will be easily set aside for it.*

A representative responsible for strategic policy and planning in the KZN Department of Transport (01/06/2016) expressed similar sentiments, commenting that

> *Well obviously, it is trying to making sure that as government and all the separate entities we all working towards the same goal, so we get a cohesive plan that everyone supports so that is really what we are trying to make sure happens.*

Although the processes of engagement had been smooth, challenges had arisen in the deliberative processes leading up to decision about what to call the Durban Aerotropolis project. Because the project was located within the bounds of the eThekwini Municipality and iLembe Municipality, various names were proposed for the project. Durban was eventually selected as a suitable name because it was perceived as a brand that had more visibility internationally. The decision is reflective of what McCann (2003) calls "politics of scale", where actors and interests either define or redefine the seat of power, whether political or otherwise.

This section has indicated that engagement was instrumental in fast-tracking the implementation process. Discussed below are the specific forums for engagement, which included the executive committee, a steering committee, a management unit and the various working groups.

7.4.2. Formal structures of stakeholder engagement

Once the vision of the project had been developed from its conceptualisations (as indicated in Chapter 6), formal structures had to be set up to enable stakeholders to work together in a well-coordinated manner. The role of each of the organisations was integrally linked to the development of the Durban Aerotropolis, giving the KZN Integrated Aerotropolis Strategy a group of work streams in which each organisation was a role player (Destination Marketing Manager of TIKZN, 04/08/2016). Figure 7.1 indicates the structure of the engagements.

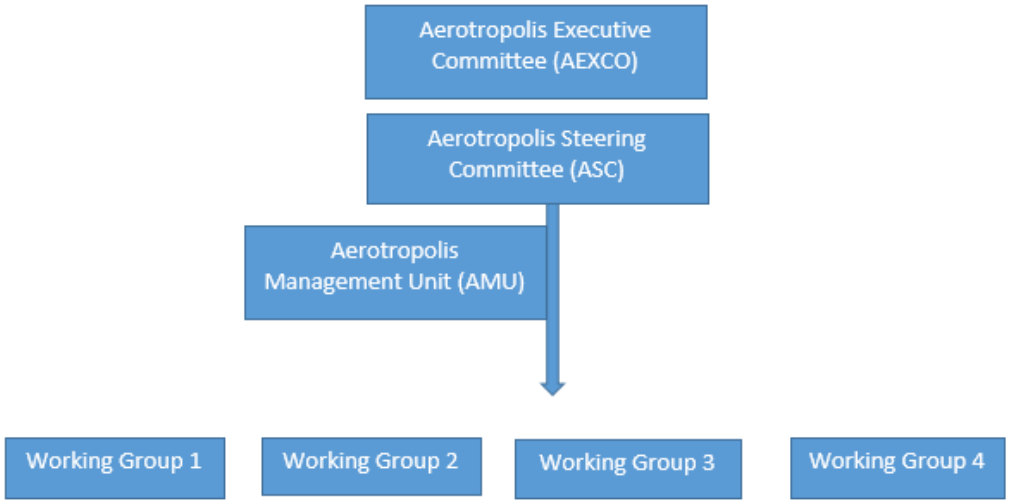

Figure 7-1 Structure of stakeholder engagement platforms of the Durban Aerotropolis

Aerotropolis Executive Committee (AEXCO)

The primary purpose of the AEXCO is to provide strategic support and direction in the development of the Aerotropolis. While the Committee will have no decision-making powers, the individual representatives will be able to take decisions that can be condoned by their respective entities. All unresolved project issues that require decisions of key partner entities will be referred to this executive committee for final resolution.

Steering Committee

The governance structure for the implementation of the IAS necessitated the formation of the Aerotropolis Steering Committee (ASC) and four working groups (AMU, ASC, TORs).

The stakeholders discussed in section 7-2 form part of the Durban Aerotropolis Steering Committee, convened by the KZN EDTEA. The Department also provides a secretariat for this committee. The stakeholders that are part of the steering committee are signatories in the memorandum of understanding (MoU) that commits each of them to the development of the aerotropolis. The Durban Aerotropolis Steering Committee oversees and supports the aerotropolis development role of the Dube TradePort Corporation. The steering committee work is also supported by four working groups that were created in accordance with the 10 strategic levers of the KZN Integrated Aerotropolis Strategy (EDTEA, 2015).

The Durban Aerotropolis Steering Committee and its subsequent working groups are structured as depicted in Figure 7-1. Their roles and responsibilities are discussed in the next section.

Working Groups

The Durban Aerotropolis has four working groups, each focusing on the different aspects of the project. These are discussed here.

Working Group 1 also referred to as the "Route Development and Air Services Committee" comprising ACSA, the Department of Economic Development, Tourism and Environmental Affairs, Dube TradePort Corporation, Tourism KwaZulu-Natal, Trade and Investment KwaZulu-Natal, KwaZulu-Natal Department of Transport and the eThekwini Municipality, has been established to coordinate and promote international air services to King Shaka International Airport (AMU, 2016).

Working Group 2 supports strategic levers two, four and ten of the KZN Integrated Aerotropolis Strategy. Strategic lever 2 envisions integrated and coordinated spatial planning by all KZN governmental stakeholders at local, district and provincial levels. Strategic lever 4 is about full commercial development and occupation of all available land in the Aerotropolis Core Area (Dube TradePort/King Shaka International Airport) and its immediate surroundings. Strategic lever 10 centres on a sustainable Durban Aerotropolis that embodies economic viability, environmental integrity, social inclusion and strong leadership.

Given the above, the establishment of Working Group 2 therefore broadly seeks to coordinate spatial planning, investment promotion, commercial development and sustainability of the Durban Aerotropolis. This meets the requirements outlined in the IAS as per the strategic goals.

Working Group 3 is anchored on strategic levers six and nine, which are about efficient, integrated multimodal transport networks that meet the international standards of first and last mile of air travel, and about creating solid municipal infrastructure and engineering services that support a continuous supply of services like electricity, water, sanitation, roads, and other infrastructure crucial for the Durban Aerotropolis. Given the above strategic levers, Working Group 3 therefore coordinates multimodal transport and infrastructure for the Durban Aerotropolis and fulfils the requirements set out in the IAS as per the two strategic goals. Working Group 4 addresses strategic levers three and five. Strategic lever three seeks to achieve equitable and inclusive growth that addresses the triple challenges of inequality,

unemployment and poverty, as identified in the National Development Plan policy. Strategic lever five is about facilitating optimum knowledge support, thought leadership and human capital that meet the industrial and commercial needs of the growing Durban Aerotropolis with potential to export such skills and knowledge. Working Group 4 broadly coordinates knowledge support, equitable and inclusive growth, ICT and Smarty City for the Durban Aerotropolis and fulfils the requirements set out in the KZN Integrated Aerotropolis Strategy as per the two strategic goals.

Management of the Durban Aerotropolis

The project management unit, known as the Aerotropolis Management Unit (AMU) is a resource available to coordinate all stakeholder engagements and ensure that the partnerships created are sufficiently fruitful to see the end of project implementation. There have been conflicting views however, with other respondents raising issues about why an AMU unit was set up when there is Dube TradePort Corporation (Director of Research and Development at EDTEA; Deputy Director of Policy and Planning at EDTEA).

The KZN Integrated Aerotropolis Strategy states that "the establishment of an Aerotropolis Development Corporation (ADC) is one imperative that is too important to ignore" (EDTEA, 2015). "The Durban Aerotropolis cannot be developed through committees with implementation left to individual stakeholder entities. The feasibility of establishing this ADC will have to be tested as a matter of urgency". It turns out that many of the stakeholders already assumed that the so-called ADC would become the Dube TradePort and not necessarily a new support structure called the AMU. Because of this, there is "*uncertainty in who will run the aerotropolis project moving forward whether it's the DTP, AMU, EDTEA*" (Director of Research and Development at EDTEA, 01/07/2016).

In addition to coordination of stakeholder engagements, the AMU is responsible for project monitoring and evaluation. The monitoring and evaluation framework provides a mechanism to monitor implementation progress and evaluate the impact of specific interventions (EDTEA, 2015). In order to ensure optimum utilisation, the monitoring and evaluation must incorporate the review of effectiveness and efficiency of the deployment of these resources (EDTEA, 2015)

The discussion above has provided the engagement structure of the Durban Aerotropolis and explored the roles and responsibilities of each of the groups involved. Below is a section on intergovernmental collaboration.

7.4.3. Intergovernmental collaboration

Intergovernmental collaboration in this study refers to additional government departments from which support has been sought and received at national level, including other state-owned entities that were not necessarily discussed in section 7.2. It also has to do with reflection of the Durban Aerotropolis project on policies of the three tiers of government.

Emphasising that the Durban Aerotropolis is a project that requires an array of stakeholders and resources for its success, various policies at all tiers of government reflect this support and buy-in as a way of encouraging intergovernmental collaboration.

At national level, the Durban Aerotropolis Steering Committee has sought support from various national government departments, which include the National Department of Transport, the Department of Public Enterprise, the Department of Trade and Industry, the Department of Economic Development, National Treasury and all state-owned enterprises reporting to these departments (EDTEA, 2015). One other forum that they were planning on becoming a part of is the SIP 2 Forum that includes the competing aerotropolis of Ekurhuleni. This was to dispel the notion that there can only be one aerotropolis in a country (EDTEA, 2015). In addition,

> *Although the National Development Plan does not mention the Aerotropolis concept per se, it strongly brings out and prioritises the Strategic Infrastructure Projects (SIPs). It makes a number of references to the Durban-Free State-Gauteng logistics and industrial corridor (namely SIP2), which is envisaged to play a catalytic role in job creation. The Durban Aerotropolis falls directly under the SIP2's list of priority projects. In addition, the NDP makes reference to a number of transport strategic interventions to increase capacity and logistical bottlenecks to improve the flow of goods and services as well as growing the tourism industry.* (EDTEA, 2015).

Provincially, section 6.7 provides greater detail on the roles and responsibilities of each of the stakeholders. While the AMU has been set up as a special purpose vehicle to drive the Durban Aerotropolis, it does not absolve the KZN government of its responsibility to jointly develop the Aerotropolis. In fact, the AMU carries out tasks that include the establishment of the Durban Aerotropolis Corporation (which could possibly be Dube TradePort), monitoring and evaluation, and impact studies. This AMU is supported by HoD of EDTEA with the corresponding MEC being the political champion. From a provincial policy perspective,

> *The guiding principles of the…KZN Integrated Aerotropolis Strategy are contained in two strategic documents that have been published by the KZN government. The primary one is the Provincial Growth and Development Plan (PGPD), which has*

been aligned to the National Development Plan (NDP). The second document is the KZN Department of Economic Development and Tourism's 2014 – 2019 Strategic Plan. It is well worth relooking at the strategic goals of these two documents to the extent that they could be impacted by or can influence the Durban KZN Integrated Aerotropolis Strategy. (KZN Integrated Aerotropolis Strategy, 2015).

The discussion above has provided a picture of a collaborative and cooperative government relating to the Durban Aerotropolis. This is to argue that RED can be viewed as economic development that enforces cooperative governance.

7.5 Findings summary

The findings presented in this chapter have shown that the Durban Aerotropolis consists of stakeholders and partners emerging from the public and private sectors as well as state-owned agency groups. The roles and responsibilities of the stakeholders differ but all participants work together for the success of the project. EDTEA is the government department responsible for championing the development of the Durban Aerotropolis. Its role is to ensure that the project is set up and implemented for the fulfilment of the PGDS. The eThekwini Municipality sees itself as a strategic partner. It provides bulk infrastructure around the Durban Aerotropolis and Dube TradePort precinct.

The KZN Department of Transport commissions studies for corridor developments, takes care of required transport infrastructure and seeks to align spatial plans with transport plans. The Housing Agency of the Department of Settlements focuses on social wellbeing in dealing with issues of spatial equity and promoting inclusive economic development. Tongaat Hulett Property Developers is the owner of the land and plays a role in developing the land. Dube TradePort Corporation is a land owner together with ACSA and is responsible for operation of the Dube TradePort Special Economic Zone and for setting up of the entire Durban Aerotropolis project. TKZN plays a role in creating demand for travel, thereby instilling a sense of confidence for airlines. It is responsible for tourism development, which ultimately has an impact on the development of routes. ACSA is a landowner together with Dube TradePort. The two are in a joint venture in which they develop pockets of land in the Durban Aerotropolis precinct. TIKZN is the primary driver of local and foreign investment in the province. It is responsible for investment promotion in which the Durban Aerotropolis is also promoted as a site of investment. iLembe Chamber of Commerce lobbies and advocates on the

implementation of government policy to ensure that iLembe District in KZN (one of the two districts within which the Durban Aerotropolis is situated) remains a business- and investor-friendly environment.

The Durban Aerotropolis also has mechanisms, platforms and avenues through which all stakeholders involved in the project are brought together. These platforms take the form of strategy sessions that led to the vision of the project and deliberations on the vision of the Durban Aerotropolis. There are also formal structures for governance and stakeholder engagement which include the Aerotropolis Executive Committee, the steering committee and the various working groups.

The Aerotropolis Executive Committee provides strategic support and direction in the development of the Durban Aerotropolis. This committee has no decision-making power. The steering committee is made up of members of the working groups. Working Group 1 is responsible for route development and all air related services. Working Group 2 deals with integrated and coordinated spatial planning. Working Group 3 deals with all issues around infrastructure development and provision. Working Group 4 coordinates knowledge support, equitable growth, ICT and smart city development.

The overarching structure for all these governance and stakeholder engagement platforms is the Durban Aerotropolis Management Unit. It oversees and coordinates all stakeholder engagements and ensures that all the working partnerships are sufficiently fruitful for project implementation. The findings also revealed evidence of intergovernmental collaboration as underpinned by and reflected in the set of policies from the different tiers of government, including national and provincial levels of collaboration.

From the discussion above, the collaborative and cooperative governance dynamics are evident simply in the sheer volume of the actors involved. The Durban Aerotropolis is a project championed by the EDTEA, is run by Dube TradePort and is located close to ACSA or King Shaka International Airport but requires the many other actors from the various stakeholder groups to be a success. This is because a project such as the Durban Aerotropolis is reflective of a region with a complex system of overlapping, interrelated jurisdictions – much like a network (Kacowicz 1998). This type of region therefore requires collaborative governance which entails coordination of resources and sharing of information, ideas and power. The extent to which these actors partner and work in collaboration played a crucial role in consolidating the KZN Integrated Aerotropolis Strategy. This strategy is essentially what can be thought of

as a development strategy for the region. The efforts of actors collaborating in the Durban Aerotropolis project have been deliberate and have mirrored what Barnes and Foster (2012) define as regional governance. They have done this through agenda framing in which they clarified the vision, goals and priorities of the Durban Aerotropolis that have manifested themselves in this study as what we call form, function and scale. They have weighed support for the agenda put forward, hence their collaboration through the various roles and responsibilities they carry out. Although there may still be inconsistencies or conflicting views in the comprehension of the agenda, the stakeholders know and understand the core vision of the project and what is required of them.

Furthermore, another way in which this deliberate effort for collaboration is evident is in the stakeholders' ability to decide on the 'actor groups' or stakeholder groups that would be suited for the project (Barnes & Foster 2012). They deliberated on stakeholder group composition, leadership and management roles through which they appointed a management structure in the form of the AMU to ensure stakeholder group commitment. The stakeholders worked collaboratively to strategically craft the vision of the project. This is because regional governance involves cooperative development of purposes and goals to be better able to solve a regional problem or seize an opportunity (Barnes & Foster, 2012).

It is also important to note that governance of the Durban Aerotropolis has gone cross-border in the sense of rejecting jurisdictional, sectoral and functional boundaries. To establish and implement decision-making and action it has also encompassed many other institutions or structures and can go still further beyond to involve more that may be suited. Essentially, the presence of actors from multi-stakeholder group highlights collaboration and cooperative governance as a mechanism of RED. As defined Bodhanya (2015), RED is the outcome of generative economic activity through collaborative multi-stakeholder relationships, productive networks and mutually reinforcing relationships drawing on key economic assets and infrastructure that contributes to an increase in the general prosperity of a region.

The collaboration and partnership evident in the Durban Aerotropolis has thus become a sustained and concerted action of policy makers, business and communities to promote the economic health of a specific region. Karlsson and Rouchy (2015:2) recognise that RED requires a region to mobilise its economy and resources to facilitate sustainable development and competitiveness. However, for mobilisation of resources to happen there must be a self-organised steering of multiple agencies, institutions and systems which are operationally

autonomous from one another yet structurally coupled due to their mutual interdependence, and this has been the case in regard to the governance dynamics of the Durban Aerotropolis project. There is also a metagovernance agent in the form of the Aerotropolis Management Unit which has assumed the role of coordinating the various actions of the working groups across space, time and domains (Chapple & Montero, 2016).

The governance dynamics evident in the Durban Aerotropolis project attest to presence of social capital that is crucial in complex projects such as this. Chapple and Montero (2016) note that social capital is based on networks of trust and collaboration that can create synergy between public and private sector actors.

7.6 Conclusion

This chapter has presented the enactment of RED by unpacking the governance mechanisms of the Durban Aerotropolis project. This means that for successful implementation or enactment of an RED project such as the aerotropolis, concerted efforts from various stakeholders are a primary requirement. Collaborative effort and cooperative governance is important for RED as it enables and facilitates coordination of resources and sharing of information, ideas and power. These are needed to facilitate sustainable development and competitiveness. Without collaboration and cooperative governance, RED projects cannot succeed and would be mere economic development interventions within localities. This collaboration and partnership should be evident from when the vision of the project is strategically decided on. This is when the form, function and scale is delineated to highlight the purpose of the project, what kind economic development mechanism is suited to fulfil it, and the reach of its impact. The governance mechanisms discussed in this chapter also illustrate cross-border relations between stakeholders which have rejected jurisdictional, sectoral and functional boundaries to bring together people and organisation with a shared vision for economic development despite challenges.

Chapter 8
Agglomeration and clustering in the Durban Aerotropolis as enactment of Regional Economic Development

8.1. Introduction

This chapter explores clustering and agglomeration of businesses in the Durban Aerotropolis. This is crucial for the enactment of RED because it fosters concentration of economic activity (firms, industries and the workforce) in a region. Because the Durban Aerotropolis project is currently at planning phase, the chapter begins with a discussion of the kinds of industries that are already in the aerotropolis and the importance of their diversity. This is followed by plans for the way evolution and growth of the Durban Aerotropolis will be managed and what the stakeholders foresee as impacting on the longevity of the project as a cluster of business activity. The discussion goes on to indicate the externalities associated with clustering and agglomeration and their prevalence in the Durban Aerotropolis project. The first is knowledge diffusion, which includes business linkages and partnerships with universities, research and development institutes, and other institutions of learning. The second is value chains and the third is entrepreneurship and innovation. Interviews were also conducted with some of the companies in the Dube Cargo Terminal at the Durban Aerotropolis and their experiences contribute further detail on how being within a cluster and being in close proximity to other similar businesses has impacted on knowledge diffusion, value chains, and entrepreneurship and innovation.

8.2. Industries located in the Durban Aerotropolis

In the conceptualisation of the function of the Durban Aerotropolis in Chapter 6, we find that the project is an integrated environment with a mixed-use function. This means that among other functions, the Durban Aerotropolis serves as a space for industrial activity. In this section we explore what kinds of industries the stakeholders are intending to bringing into the Durban Aerotropolis.

According to the CEO of Dube TradePort (30/06/2016), the industries and types of companies that are to be found in the Durban Aerotropolis as it develops are those that tend to utilise air

transportation or air freight logistics. These are companies or industries that, according to the Director of Research and Development at EDTEA (01/07/2016), "*have a core competency which is prone to require aviation related services*". Furthermore, these are industries "*that look for just-in-time services, that look to get to different destinations very quickly*". Also in agreement with this view is the Deputy Director of Policy and Planning at EDTEA (20/05/2016) who believes that, "*well you know with any airport you're looking at time-sensitive high valued goods so I would say that there is a host*". Another point he made with regards to these industries is that they obviously need to be in line with the comparative advantage of the province of KZN. This attests to Arend et al. (2004) who views airports as development engines as they have become the central factors to businesses' ability to compete given the intensified role of logistics and distribution in meeting customer and shareholder expectation. The stakeholders of the Durban Aerotropolis are also aiming for logistics and distribution companies to take advantage of such opportunities.

The CEO of Dube TradePort (30/06/2016) gave examples of the kinds of industries referred to above:

> *Now at the top of the list in all of those are your logistic companies, your freight forwarders, your warehousing, clearing agents, so your big logistic companies, like we've got DB Schenker, Rohlig-Grindrod, so the first guys you always try and get are the big logistics companies, you know BT Logistics and others but that is not a sector per se.*

Also,

> *When it comes to the sectors what we find then number one, electronics, we have got Samsung, we've got a few more coming through so that's probably our joint number one. Our second joint number one is pharmaceuticals and associated healthcare products that is really becoming a big one for us. Pharmaceuticals can be the pure production of treatments of medicines per se and we've got one really interesting project that we're doing for international investors, then it is also your secondary stuff. We've got condom manufacturers, all the other healthcare associated stuff so pharmaceuticals healthcare big sector. Then we have specialist metal manufacturing, it is quite strange so they are components, bearings, laser cutting, all of those are really big. Then your third would be – so those are the two main clusters and that's where we are expecting to experience our highest growth. Then we've got a lot of small and little industries that have come in, cold storage, certain consumer products or fast moving consumer products but we very much are looking for high-value low rates type products. You will find that in an aerotropolis your sectors will be those kind of sectors, it can also be high-value clothing and textiles as well. So there will be pharmaceuticals, your electronics,*

> *your clothing and textiles your logistics, those are your big key ones and then your fresh produce as well, that's a very big one but then lots of things get flown on aeroplanes so you've got a whole lot of secondary smaller sectors.*

The Director of Research and Development (01/07/2016) at EDTEA mentioned also that there would be a need for support services to locate within the Durban Aerotropolis, commenting that

> *of course, you would start to see support services you would start to see the hotels, different firms you know legal firms, all the support organisations or institution to the core but I foresee the aviation being opportunistic".*

This is supported by Freestone (2009) who notes that it is not only time-sensitive goods processing and distribution facilities that are being drawn to gateway airports. The aerotropolis model also attracts corporate headquarters, regional offices and various professional organisations that require their staff or people in their employ to undertake considerable long distance travel (Kasarda, 20001b).

The Programme Manager of the AMU (18/05/2016) commented as follows:

> *Well it's light manufacturing what we term as advance manufacturing. You would find the commercial development where you find Class A and Class B commercial space which is where offices just like in this area of Umhlanga Ridge. You would find aircraft repairs happening within this area of the aerotropolis, they will happen at the core of the aerotropolis which is like at Dube Trade Port. You would find retail, eCommerce where people move products through particularly the light goods, the light and high-value goods which are time sensitive your perishables would move within the airport.*

According to the Senior Planner of Tongaat Hulett (25/05/2016),

> *ultimately, like from our perspective we want to capture investments, so ideally you want it to be investment that will take advantage of the airport but I don't think necessarily we will turn investment away just because it is not related to the airport.*

This is one view that differed. For her, obsessing over the kinds of industries was not feasible given that she saw an urgent need for investment, no matter what kind it may be.

Palacios (2005) and Wang et al. (2014) define economic agglomeration and clustering as the concentration of commercial activities in certain points of national territories over time and similar business firms persistently collocating with one another. It was interesting to find out from the stakeholders of the Durban Aerotropolis that they planned to deviate from the norm of clusters with similar businesses by encouraging diversity in their investors. This is because

the Durban Aerotropolis is, broadly, an agglomeration economy within which is a cluster of industrial activity in an SEZ: in effect the Dube TradePort. In other words, the aerotropolis is what was referred to in Chapter 6 as an assemblage of economic activity in its various forms. Within this assemblage is an industrial cluster from which the study could assess the dynamics of the externalities associated with agglomeration and clustering of firms. Essentially, agglomeration speaks to conception of the Durban Aerotropolis region as an assemblage, while clustering of firms speaks to the SEZ and the firms that are part of the industrial activity in this particular study. According to Malmberg and Power (2005), clustering and agglomeration provides a way to describe the systematic nature of an economy and physically manifests how various types of industrial activity are related. As explained above, the goal is primarily to attract industries that require air services (e.g. for time-sensitive goods); others will be support industries like hotels, legal firms and so on. The relation here is simply visible.

The next section discusses the importance of diversity in the kinds of industries they are hoping to attract or already have in their premises.

8.3. The importance of diversity among companies in the Durban Aerotropolis

According to the stakeholders of the Durban Aerotropolis, diversity in these companies is required to prevent cluster failure in times of economic downturn. The CEO of Dube TradePort (30/06/2016) indicated that relying on a single sector, or companies in the same sector, will be unsustainable and prone to failure in times of economic weakness. He commented as follows when asked about why diversity in industry is needed:

> *Interviewer: Then obviously you need diversity in these companies but for what reason couldn't we have just kept the aerotropolis as a one sector specific project?*
>
> *Interviewee: Yes, but then you don't become recession proof, sustainability.*
>
> *Interviewer: Yes, yes,*
>
> *Interviewee: You don't want to be reliant on one sector. You want to go with those sectors that are growing where there is a lot of investor interest but you don't want to be only one sector because then you can collapse.*

This what the Deputy Director of Policy and Planning at EDTEA (20/05/2016) referred to as '*diversity for resilience'*. He believed that diversity was required in the Durban Aerotropolis to

add resilience when facing changes in the economic environment, suggesting as an example "*during the global financial crisis you will find that certain countries suffered a lot more and those that suffered the most were really not very well diversified in their economy*". This was also supported by the Head of Economic Development Programmes in the eThekwini Municipality (02/06/2016) who argued against reliance on one industry because it was not economically sound, since,

> *if there are any shocks in the system you are done, you are so vulnerable, so it's important that you diversify your investment even the industries and firms you know you shouldn't only be attracting big firms in those kinds of areas, no.*

According to the Deputy Director for Policy and Planning at EDTEA (20/05/2016), the Durban Aerotropolis requires diversity in the kinds of industries it accommodates because these industries need support since no firm can operate without assistance from others; each firm is dependent on another in one way or the other:

> *We have to have that mix because the others need support. Some industries exist because of others. So those relationships, synthetic relationships need be maintained in any development.*

A similar view was expressed by the Programme Manager of the AMU (18/05/2016):

> *No, of course we need diversity because these businesses need to complement one another. If say for instance you've got a retail hub that deals with electronic goods you need an industry that also deals with repairs so that if they were to ship these goods to the region if these goods have to be returned they need to be returned through the same channels and they have to be fixed. Some of the goods that come through big ships like in big containers get stuffed, repackaged that they can move in the same way so that should happen within the aerotropolis.*

The diversity required to sustain the existence of the Durban Aerotropolis project, in the view of stakeholders, manifests itself in the presence of an airport, logistic and freight-forwarding companies around it, light manufacturing industries, pharmaceuticals, agribusiness zones, hotels and conferencing facilities, retail shops, legal firms and other organisations.

The Durban Aerotropolis deviates slightly from traditional clusters in which similar business firms collocate with each other, and with interconnected companies, specialised suppliers and services providers (Porter, 2000; Wang et al., 2014). This is because, as mentioned above, clustering in this project can be seen from two different angles. The second is a potential cluster of companies that are found in the specific zones such as the Dube TradeZone which currently

houses logistics and freight-forwarding companies. The second is one through which the argument for diversity is developed.

The Durban Aerotropolis being an assemblage of economic activity within which we also find a cluster of industrial activity, the stakeholders also indicated how they plan on managing its growth and evolution.

8.4. Managing the evolution of the Durban Aerotropolis as an assemblage of economic activity

According to the Programme Manager of the AMU (18/05/2016), optimal management of the evolution and growth of the Durban Aerotropolis requires that investment or economic activity that is not in line with the aerotropolis or the broader aviation industry needs to be excluded from the airport city space.

> *Well first and foremost you've got to try as much as possible to push back whatever industries or economic activity that is not in line with aerotropolis. Like for instance you wouldn't have heavy metal industries to come within the aerotropolis, number one. You wouldn't want high polluting industries to come within the aerotropolis because it does not become liveable because you want people to live and work within the same area as you have got here in Umhlanga Ridge. So you want to push back all those secondary industries but only retain the high-value advance manufacturing like jewellery which is where they deal with high-value goods but which are light enough to go into an aircraft.*

A differing view was expressed by the Senior Planner of Tongaat Hulett Property Developers (25/05/2016) who believed that no investment should be ever be turned away if the Durban Aerotropolis is expected to succeed. Her argument is that space around the airport and the Dube TradePort should be given to investors that will rely on the airport and that the rest of the available land can be given to anyone who is interested in setting up shop within the Durban Aerotropolis space. Although issues of investment are not her forte, her personal view was as follows:

> *I think it is very dangerous when government starts, and this is a personal view, when government starts dictating where private sector investment can go as opposed to letting the market respond. Obviously, we have to look to try to create the type of investment we're looking for, but again if something's going to come in and create X amounts of jobs it is in accordance with your broader zoning for the*

area. I mean why would you want it to turn that away and where else are you going to put it that's another question.

The Director of Research and Development at EDTEA (01/07/2016) believed that what is needed is a good management structure to ensure that the growth of the Durban Aerotropolis is best managed since there are already areas in existence around this project. The growth of the airport city therefore needs to be carefully handled and that particular management structure will need to ensure that they manoeuvre this accordingly so that the project does not end up being an inconvenience. He said that "*the whole project needs to be coordinated from the onset and managed through and through*". For him, whether the Durban Aerotropolis manages to or fails to attract investment to its full capacity, it would still require a strong foundation of management.

Similar sentiments were expressed by the CEO of Dube TradePort (30/06/2016), whose argument centred around the fact that with every zone that is being developed, there needs to be a team specifically focused on looking after the wellbeing of the zone to maintain the operational quality and standard that Dube TradePort promises its investors. In this way they make sure that investors do not have reasons to leave, since they will be well taken care of. This team would know whether or not the zone has reached its capacity in terms of investment; if not, the team would be able to set up a drive to bring in investment. This, for the respondent, was what would also reinforce the sustainability of the Durban Aerotropolis because it would guarantee investor loyalty.

The views of the stakeholders differed in this regard, with some saying that the growth and evolution of the Durban Aerotropolis required them to be selective with the kinds of investment they attract and others cautioning against being too selective, since either could be disadvantageous. Another stakeholder spoke about how good management structure is crucial. These are some of the ways in which the growth of the Durban Aerotropolis can be achieved. The next section discusses how its growth can subsequently be sustained to reinforce the longevity of Durban Aerotropolis.

8.5. What will affect the longevity of the Durban Aerotropolis as an agglomeration economy?

The Programme Manager of the AMU (18/05/2016) explained that the sustainability and longevity of the Durban Aerotropolis is dependent on whether or not aviation does well, as he

sees it as the heartbeat of the project. According to him, aviation related activity is the anchor of the cluster and will determine whether or not the project succeeds. He insisted that the infrastructure being put in place was not indicative of anything because what mattered was that passenger numbers and the volume of air cargo were increasing. His argument was as follows:

> *At the core of the aerotropolis is the aviation business. The measure of whether the aerotropolis is growing it will not be just because of bricks and mortar building that you see but it will be categorised by growing passenger numbers and air cargo, so if that is growing that's the part that will categorised the development of the aerotropolis.*

The CEO of Dube TradePort (30/06/2016) also said that the air connectivity that is more important:

> *If you lose your air connectivity you've reduced the value significantly, so for us air connectivity, maintain the air connectivity is number one priority.*

Most stakeholders felt that once the aviation activity gained momentum in air passenger numbers, volume of cargo and number of routes, the investment would then follow.

> *Well the investments will follow the growth of this airport because if this airport grows it will require more investments, particularly if it grows in terms of cargo and passengers it will need more investments.* (Programme Manager of the AMU, 18/05/2016).
>
> *I think it is all about connectivity. You know if we've got no connectivity I don't think then you can't essentially leverage or use the comparative advantage of leveraging off the airport. I think the basics is to get route development and connectivity because that will drive passengers and cargo and that will attract investment into the region because you know if they have certain markets that they want to target but there is no route to get your goods there is no point in moving there, so I would say that is probably the biggest keys is the connectivity*. (Deputy Director of Policy and Planning, 20/05/2016*).*
>
> *I would say the one is entirely dependent on the other if you're looking at specifically the aerotropolis, so ultimately you need land use to drive connectivity and you need connectivity to drive land use so you can't divorce the two from each other*. (Senior Planner of Tongaat Hulett Property Developers, 25/05/2016).

A slightly different point of view was expressed by the Senior Planner of Tongaat Hulett Property Developers (25/05/2016) who believed that the longevity and sustainability of the Durban Aerotropolis will depend on consistent political support of the project. She raised the concern that with every change in the term of office, development plans change and good

projects end up being unsuccessful because the people in power at the time do not share the same vision as the previous leadership. She commented as follows:

> *I think political championship is definitely important. Government, one of the XXX and this is you know partly from my observations in DTP and you know just general experience like government is a five year focus because that's the political term, so it is often difficult to create the continuity that you need from a long-term perspective especially when it comes to big strategic infrastructure projects because of that five year time frame. I would say you need dedicated capacity, dedicated officials who take a long-term view and then political championship and a view that even if there are changes in the political space that this project will still get prioritised.*

The views expressed here by the stakeholders of the Durban Aerotropolis speak to a number of important things that are crucial for the longevity of the project. The first is a thriving aviation business: air connectivity that would then catalyse demand for air transportation and drive up passenger numbers and volume of air cargo. This is consistent with Knippenberg's (2010) assertion that air connection and volume of air traffic are the important factors in enabling an airport to develop as an airport city. The stakeholders also said that investors were therefore very likely to consider locating in close proximity to an airport or within an airport city that is doing well. One last point had to do with consistent political backing where government office bearers ensure proper handovers at the end of their term of office so that there can be continuity in the implementation of the necessary plans for the success of the project. This is important because, according to Wang et al. (2013), government policy planning is necessary because the governance of an aerotropolis needs to be able to integrate airport planning, urban planning and business site planning.

8.6. Externalities associated with clustering of businesses in the Durban Aerotropolis

Because the Durban Aerotropolis reflects an agglomeration economy in which the environment is a cluster of industrial activity in the form of an SEZ called the Dube TradePort, the externalities discussed here are specifically associated with the firms in the Dube TradeZone which is part of this SEZ. The externalities considered in this section therefore include knowledge diffusion, value chains, entrepreneurship and innovation. Externalities are benefits of firms being close proximity to one another.

8.6.1. Knowledge diffusion

This section discusses knowledge sharing between firms in the Durban Aerotropolis and their linkages with institutions of higher learning.

Knowledge sharing between firms or businesses found within the Durban Aerotropolis

Because the project is still in its infancy, the CEO of Dube TradePort (30/06/2016) suggested that it may be too early to ascertain whether or not knowledge sharing is happening between companies in the Durban Aerotropolis. This was important to investigate because according to Kasarda (2001a) modern businesses are increasingly emphasising intra- and inter-firm networking. The CEO of Dube TradePort (30/06/2016) believed that once more companies locate in the space they will then start talking to each other. The positive aspect of what he communicated was his confirmation that knowledge sharing would be something the TradePort will encourage.

Asked about how knowledge is happening in the context of the Durban Aerotropolis he suggested that companies would only share knowledge with each other to the extent that they were not competing with each other. This means that companies and firms will shield their important information that makes them competitive, setting them apart from other companies and putting them ahead of the pack.

> *It depends. Obviously, companies will share knowledge to the extent that they are not competing against each other. If they complement each other obviously there will be a lot of knowledge sharing, particularly if you look at logistics companies and freight forwards and the manufacturers and wholesalers they will share information because they feed off each other they need each other, but not so much with companies that compete with each other. (Programme Manager of the AMU, 18/05/2016).*

The Deputy Director of Policy and Planning at EDTEA (20/05/2016) said that the onus is on the DTP to facilitate knowledge sharing between the companies and firms in the Durban Aerotropolis, argument being that the implementing arm of government should convince companies about the importance of sharing knowledge, and more especially if they are in similar or complimentary sectors. Furthermore, he felt that Dube TradePort should contractually bind companies to forge such relationships.

He also argued that if companies in the Durban Aerotropolis were all made to join a chamber of business, they might perhaps feel more comfortable talking to each other and sharing ideas along the way. In the absence of such a structure to guide and facilitate the process, there is little hope that it might happen, given what the Programme Manager of the AMU (18/05/2016) said about companies only sharing information insofar as they are not competing:

> *I think if you, you know whether it is on iLembe, Enterprise iLembe Business Chamber or in Durban Business Chamber, or actually nothing prevents them from being members of both since the influence is greater boundaries. Yes, I think if they sign up for that then they have already got that connectivity with other companies or other members and you know the chambers often host these sorts of presentations of what's going on so I think that will be quite a good idea, yes.*

The Director of Research and Development at EDTEA (01/07/2016) said that the department should take the lead in encouraging companies to share information on the grounds that they may potentially make new discoveries if they work together rather than operating in silos. What he had seen in most instances was that companies fear that by collaborating and partnering with others they will not get ahead. This he rejected, since he felt confident that if there is a collective working spirit there are great ideas that can be shared in terms of improved access markets and improved product offerings. He also suggested that if companies communicated more they would also be able to share issues that they faced in the aerotropolis establishment and in so doing could advocate for things jointly to ensure that they are heard and problems are solved. This is also supported by Bathelt et al. (2004) who maintain that

> innovation, knowledge creation and learning are all best understood if seen as the result of interactive processes where actors possessing different types of knowledge and competencies come together and exchange information with the aim to solve some technical, organisational, and commercial or intellectual problems.

The question of knowledge sharing between foreign investors and local firms is an important one but the responses received here were not substantive. To address this question, once again, the Deputy Director for Policy and Planning at EDTEA (20/05/2016) suggested that it may also be helpful to get the foreign investors to also join a business chamber – either one set up by Dube TradePort or one already in existence in Durban or the iLembe District Municipality.

Durban Aerotropolis firm linkages and partnerships with universities, research and development institutes and other institutes of learning

The CEO of Dube TradePort (30/06/2016) said that his thinking centred around the big question about why Silicon Valley works. In his view, it is because it has a strong research and development base, being in close proximity to Stanford University. Much like this example, Dube TradePort has in the smaller scheme of things started to ensure that it creates and develops more linkages and partnerships with educational institutions such as the University of KwaZulu-Natal and the Durban University of Technology. Such relationships between Dube TradePort and the institutions of learning should encourage individual firms in the Dube TradeZone and other parts of the Durban Aerotropolis to pursue similar partnerships. This is particularly important because knowledge in clusters is also created through various forms of local inter-organisational collaborative interaction by the firms themselves creating links and partnerships with universities, research and development institutes and other higher education institutions (Audretsch & Feldman, 1996; Malmberg & Power, 2005).

The CEO of Dube TradePort (30/06/2016) also suggested that it could be beneficial to build satellite campuses of some of the higher education institutions, either local or international, as long as they focus on areas that have to do with airport city development or aviation. This is because he believes that the people doing research in these fields need to be located in the aerotropolis so that they can live and breathe what they do instead of being given research on something that is so far from them and they have to imagine what is really going on. Being based around the aerotropolis will give people an opportunity to walk around and experience first-hand the growth and development of the project. This is what he had to say:

> *Well one of our objectives is in this zone here to actually have a new building which we've got permission from the board to build, which will actually start to house on our site satellite research departments, maybe satellites for things like the USB.*
>
> *This is a good place to have the knowledge sector, so being practical development orientated people, we would say let's say let's build facilities that can start housing so that you have to live and breathe this aerotropolis it is hard to do it from Howard College you know. You have got to be here and understanding what is going on.*

The Director of Research and Development at EDTEA (01/07/2016), who is also in favour of the idea of satellite campuses, said that building these institutions in the Durban Aerotropolis will inculcate a culture of knowledge production and sharing. It is in these spaces of thought leadership that people will be able to debate key issues around the project to learn what works best and what can push the success of this project to another level. Here is his argument:

> *I think by also putting the knowledge institutions you are inculcating that culture. We are hoping that that would be the centre where everybody consults and from there that centre then shares back with information. People like you (academics and researchers) would be debating these issues and people would need to learn from them.*

One of the respondents who was not in support of putting satellite universities in the Durban Aerotropolis was the head of strategic policy and planning for the KZN Department of Transport (01/06/2016). His argument was that it is unnecessary to build satellite universities in the aerotropolis because the province has many higher education institutions and the majority of those institutions are already in Durban. His comment was,

> *I do not agree with the idea of satellite campuses because I can see they are already thinking we are going to put a university but I am saying why, we've got universities here, here I don't need another one.*

8.6.2. Value chains of the Durban Aerotropolis

According to the Strategic Policy and Planning representative of the KZN Department of Transport (01/06/2016),

> *We can't rush to understand the value chains when we don't know what industries we are going to attract.*

This response gave the impression that stakeholders have not yet put thought into the value chains they want to attract or are planning to develop through the Durban Aerotropolis, and as expected, the responses varied. In as much as they are quite clear about the kinds and types of industries that will be found in the Durban Aerotropolis – for example the CEO of Dube TradePort (30/06/2016) speaks of value chains in logistics and pharmaceuticals, which are just industry sectors and not necessarily value chains tracing the various steps of production – the planning towards a development of specific value chains is not something the stakeholders have deliberated on. Some understand the value chains that will emerge, such as the synergy between the port and the airport, the relationship between the industrial economic hubs of the province and the SEZ at the Dube TradePort, the tourism value chain, pharmaceuticals and technology value chains. The respondents did not speak in one voice and this raises a concern about what discussions had taken place if the individual respondents were each raising different views.

For the Programme Manager of the AMU (18/05/2016), the value chains that should be anticipated would be partly external to the Durban Aerotropolis. They would come about as a result of beneficiation of imports coming into the province either through the ports or by road or air and then made into complete products ready for export. He further noted that the initial target for beneficiation was 25% of imports. Responses from other respondents suggested that they did not quite understand the concept of value chains in its entirety. It was possibly being thought of more in terms of 'global value chains' rather than just value chains. Since different parts of production processes are increasingly being dispersed across various developed and developing countries (Pietrobelli & Rabellotti, 2010), the process of beneficiating products imported into the province through air or the port would be the first step in developing 'global value chains'.

As noted above, the Deputy Director of Policy and Planning at EDTEA (20/05/2016) thought that a local value chain would be created by the linkages between the industrial economic hubs and the Durban Aerotropolis project. Here his understanding was that any produce from activity of the industrial hubs would be transported via air to various destinations. Although this is an important point to raise, it still does not trace specific development of a value chain in the Durban Aerotropolis itself. Because the value chain entails the processes from sourcing of raw materials, then value add to the materials, through to creation of a complete and finished product (Pietrobelli & Rabellotti, 2010), it could be argued that no such processes were yet in place and that plans for these were not clearly communicated; hence the assumption that further deliberations are needed so that plans to develop value chains (either solely within the airport city or others from such linkages) may be effected.

Another important point relates to the Durban Aerotropolis (20/05/2016) as a catalyst in the creation and development of value chains that are not product based. An example was given by the Deputy Director of Policy and Planning and the CEO of TKZN who both commented that they foresaw a successful tourism value chain in which passengers flying into the province via the King Shaka International Airport (which is part of the Durban Aerotropolis) need lodging facilities in the form of hotels and bed and breakfast establishments, will want to see heritage sites given the province's rich culture, and will perhaps, some of them, make use of the cruise ship to explore the Indian Ocean via the MSC. Although this value chain would not be entirely within the Durban Aerotropolis, the key contributor to its creation would be the airport and it would therefore add value to the economy of the entire province.

Given what the stakeholders said with regards to value chains, it was clear that not a lot of thought had gone into the importance of integrating small local companies in global value chains. This would have great impact not only for the Durban Aerotropolis but also for the economic growth of the region. This means that the government needs to rethink its role in the development of value chains

The next section discusses entrepreneurship and innovation in the Durban Aerotropolis.

8.6.3. Entrepreneurship and Innovation in companies in the Durban Aerotropolis

The literature talks about how the emergence of clusters and agglomeration of economic activity has played a role in efforts to seed local entrepreneurship. This has led to development of entrepreneurial clusters where small and emerging businesses find themselves in environment of cluster economies that enable them to benefit from knowledge sharing and learn from well-established businesses. They also prefer this environment because it enables entrepreneurs to work together on new innovations that make their businesses more competitive (Bosma & Oort, 2012).

Entrepreneurship

According to the Director for Research and Development at EDTEA (01/07/2016), the onus is on the government to ensure that they upskill and create and provide opportunities for local businesses, including SMMEs which should be small emerging businesses started by local entrepreneurs. The Durban Aerotropolis could be a perfect site for their location and development. The project could consider the route of developing an entrepreneurial cluster in the Durban Aerotropolis which could be a space where various industries such as biotechnology, nanotechnology and advanced manufacturing could be set up (Chatterji et al., 2013). He explained his ideas as follows:

> *Yes, I think the idea is obviously this must be only for local businesses we shouldn't be just looking at the foreign direct investment. We have a challenge to up skill and create opportunities for small businesses and there are many programmes to do that. I think the challenge is that you have people who have oversupply in one area and completely undersupply in others.*
>
> *So the solution to do that is to start building entrepreneurship in your programmes, throughout your schooling you are just taught to find opportunities or find*

solutions for problems and we are hoping to do that the using of your educational system, higher education system, lower level education system, your business, you know in that whole value chain of innovation that's where you need to start building competence. Because right now to say you're just going to give it because it is an SME if an SME is not competitive it is not price competitive or technically inclined you can't just do business for the sake of doing business.

According to the representative of the Small Business Growth Enterprise (05/07/2016), in terms of the national and provincial inclusivity agenda funding should be provided for upcoming small businesses, including provision specifically to encourage small local businesses to set up shop in the Durban Aerotropolis:

Like in inclusivity we are looking at a number of initiatives from the township economy to the transformation agenda in …[indistinct] How you raise or secure funding, you know also the other business support that you need because the problem is sometimes not that they …[indistinct] the opportunity it is what they do with the opportunity, so there are programmes.

The CEO of Dube TradePort (30/06/2016) said that the Dube TradePort will drive entrepreneurship in and through the Durban Aerotropolis. They are currently working on a BEE strategy which they are hopeful will significantly encourage and support entrepreneurship within the project. When asked if Dube TradePort supports entrepreneurship efforts this is what he said

Completely, as Dube Trade Port that is one of our key mandates so we're just finishing off our BEE strategy actually at the moment which has – as you know nowadays the BEE scorecard is 50 percent EB and CSD you know your supply and development, so if we get it right as we hope to it will have a major impact on

The Programme Manager of the AMU (18/05/2016) said that with the involvement of entities like TIKZN and other small enterprise development entities, the stakeholders of the Durban Aerotropolis were setting in motion a culture of supporting entrepreneurship to allow small and emerging businesses an opportunity to thrive within the project. He also mentioned that provincial government wants to get even some of the young people to be entrepreneurs because

they want to grow the number of entrepreneurs so that people don't just rely on just being employed but can also create their own employment…. There are various funding opportunities, one of them is the KZN has got the growth fund where they support some of the major projects, through Ithala Bank they have got some of the smaller projects that they can fund so it is a combination of both.

Technology and innovation

In the Durban Aerotropolis there is a zone of the Dube TradePort called Dube iConnect. Its role is to provide an information technology (IT) function whose primary responsibility is to serve the IT needs of Dube TradePort and the wider airport city project. What this means is that Dube iConnect provides the Dube TradePort and all its zones with all telecommunication services. A representative from Dube iConnect explained that IT for the Dube TradePort had to take into consideration a need for IT across the whole precinct:

> we are what's considered a master developer, the Dube TradePort Corporation. We are the master developer of the Dube TradePort. By being the master developer, we have also taken on the responsibility of providing IT services to all new buildings, new tenants, new customers that come into the TradePort itself. So now the IT function is now being split into two. One is to serve internal IT, which is a different function altogether which Dube iConnect is not responsible for. So Dube iConnect is responsible for the IT function in terms of providing services to all of the new buildings and their respective tenants. (20/08/2013, cited in Luthuli, 2013:60)

Dube iConnect offers voice and broadband, virtual computing platforms, secure viral storage, back-up and recovery, IT security, hosted call-centre services, media services and dark fibre (Dube TradePort, 2017). Dube iConnect's virtual computing is also called a cloud computing platform.

> *Representative: What we have also done with Dube iConnect is we have developed what's called a cloud platform. What a cloud platform is, it's a computing platform that sits on the internet which offers a whole range of cloud services. You are familiar with Google, you use Google email, you use Google search engine well that's a cloud service. So Dube TradePort itself has a cloud services that people in the local region can now use.*
>
> *Interviewer: The local region being people inside the precinct?*
>
> *Representative: Inside and outside. So if you're in Durban, you're in Newcastle, you're in Gauteng. But we focus on trying to serve the KZN market.*

Regarding entrepreneurship, technology and innovation in companies in the Dube TradePort, the findings reveal a deviation from the argument put forward in Chapter 4 that these three aspects come about as a result of ideas shared between firms. Because the firms are not quite sharing information in the Durban Aerotropolis, the innovation that is shared is an effort of Dube TradePort in its IT division, not innovation as a result of entrepreneurs of the small businesses coming together to develop great ideas to boost the competitiveness of their

companies. This highlights a gap and is an issue that EDTEA and Dube TradePort may need to address if full advantage is to be taken of opportunities that could potentially arise from the clustering and agglomerating of firms and business activity. Presence of Dube iConnect is not necessarily unimportant, but it is highly inadequate and does not speak to the innovation that results from a cluster environment.

8.6.4. Experiences of the businesses in the Durban Aerotropolis

Interviews were also conducted with three companies already located in the Durban Aerotropolis to obtain their perspective on clustering and agglomeration of businesses in the Durban Aerotropolis as a feature of RED.

Background on companies interviewed

Company A does airfreight clearing, forwarding, sea freight and warehousing. They were previously based in Umhlanga before moving to the airport. Company B, which is also a logistics company, is fairly small, as their office at the Dube TradeHouse has only six employees, although it does have a head office in the Durban city centre. It is part of a global PDP which has presence in a number of countries. Company C, according to its Managing Director, is "*in everything chasing JIT, so just-in-time*". It has two offices, one in the Dube TradeHouse and another in Johannesburg.

Motivation for proximity to the airportFor Company C (08/07/2016), the motivation for bringing the business to the airport was that the managing director wanted to do inter-trade. Being a small logistics company, their concern before moving to the TradeHouse was that they "*can't be seen in a crowd*". Thus coming into a space which already had companies such as Haspag, Rohlig-Grindrod and Kuehne-Nagel was an opportunity to be seen as a player in the competitive industry.

Company B (18/07/2016) relocated to the airport to reduce running costs. When they were still based in town there was frequent need to drive to the airport to handle urgent shipments. Being at the airport cuts down the travel and enables Company C (08/07/2016) to provide access to its clients. At the TradeHouse they have customs, port health and airlines, which is what they need. Being in close proximity, for them, has everything to do with time. Because people pay a lot for airfreight, they expect things to be done efficiently.

> *Being here does save a lot of time here we could say for instance if I was based in town and I only plan a delivery for tomorrow I can do it today so I reduce the delivery time and stuff like that.*

Company A (13/07/2016) moved to the airport for similar reasons, needing to be close to customs and airlines. They also felt that it would serve the company well to be closer to where the "*action is*", according to an employee of Company A. Being close to the airport was also meant to raise profile of the company by assuring clients that delivery of packages would be efficient. Although they had the idea that being close to the airport would help, the employee of the company commented that they had not seen much of the results. The only thing they had picked up on as a positive was reduction in time taken to send documents to customs.

Knowledge diffusion

According to the air freight manager from Company B (18/07/2016), they do have a relationship with other companies in the TradeHouse. What they do essentially is that they offer support to whomever whenever they can in regard to giving them work. He said,

> *Respondent: Look we do support where we can. There are airfreight consolidators in this business so you have got a company called AMI they are an airfreight consolidator. This is with regards to exports, so depending on well we've got Emirates and Qatar and Turkish Airlines and stuff but we have found them to be cheaper sometimes with rates.*
>
> *Researcher: AMI?*
>
> *Respondent: Yes, so we would support them. Then you've got another company called Haspag that specialises in dangerous goods packaging and we give them all our packaging so we do support people.*

These relationships are compounded by the fact that they are in close proximity with each other because, as explained by the air freight manager of Company B (18/07/2016), if they were not close to each other they would go and get services someplace else but because they are together they have no choice but to be of assistance to each other. An example he gave was that of a company called Haspag which handles dangerous goods. He explained that if they were not all together at the Dube TradeHouse they probably would not be in business, but because they are, they have no choice but to use each other. As he put it, "*I would rather give it to them than outsource to town or somewhere like that*".

A respondent from Company A (13/07/2016) told quite a different story. Asked if the company had any relations with other companies in the Dube TradeHouse or anywhere in the Dube TradePort or the broader aerotropolis project he said, "*It is (only) with the airlines because the other tenants are our oppositions*". He further said, "*we are in the same line of business*" and "*yes so we're stealing each other's clients so we don't have any relationship with them the other companies except for the airlines and the Dube TradePort (corporation)*". He explained that they had relationships with people who make their job "*doable*", namely the airlines, and TradePort is the landlord. Furthermore, he emphasised that there are no friends in business;

> *Respondent: Yes, but we do have friends you know in the oppositions.*
>
> *Respondent: Socially.*
>
> *Researcher: Social friends not business.*
>
> *Respondent: No, even with them we don't discuss work, even socialise we don't discuss.*

According to the air freight manager of Company B, companies do not share information. Although they work together and are in close proximity to each other, they still do not. He said,

> *You can't do that. That's the scary thing of being close by or next to each other because they are competitors, at the end of the day we're all fighting to get clients. My neighbour next door if I go down and look at his bakkie I can exactly see who he is bringing stuff in for and I can make a quick call so it is very cutthroat and if you see this particular client is regularly bringing in tons and tons of stuff you know.*

For the air freight manager of Company B (18/07/2016), it is not good to be in a cluster environment, especially when faced with the pressure of making sales. As he saw it, they all need to survive so each of them finds a way to do that and they cannot compromise on that. He always tells his employees that leads are important and they need to be followed up. So while the cluster may be good for bringing close other companies that can assist with the work, they create a lot of unnecessary competition. The only knowledge that Company B got from other companies had to do with training on dangerous goods, which was done by Haspag.

The respondent from Company A (13/07/2016) related a similar scenario:

> *Researcher: Okay, so in your knowledge do other companies maybe share information given that you guys are in close proximity, not now just yourselves other companies maybe?*
>
> *Respondent: Other companies share information with who with us?*

Researcher: No among each other.

Respondent: No, not within the same business definitely, no.

Researcher: It doesn't happen?

Respondent: No, Rohlig can't share information with UTI or with Bidvest or with us.

According to the managing director of Company C (08/07/2016), the Dube TradePort had created a platform for knowledge and information sharing; companies would choose one issue per meeting as subject of discussion.

for example they will call in SARS to answer questions and the airport ACSA people to answer questions so we kept a very close and had the SAA people there as well, so that was the one place and then also I believe to SAAFA the largest customs SAAFA.

So this happens in regard to mutual concerns or engagement with an external organisation that they all need to deal with.

Training and development

Training and development of staff for Company C (08/07/2016) and Company A (13/07/2016) is usually done internally, except for Company B asking Haspag to do their dangerous goods course. According to the air freight manager (18/07/2016), Company B also does learnership programmes. One staff member who now works for Company B got the job after having gone through their learnership programme. She did not have a diploma or a degree in any particular field and had only done a short course in secretary work. But except for this one case, none of the three companies had any relationship with education institutions although they support. Because they do internal staff training and development, none of the companies have a relationship with any of the higher education and training institutes in the province or country.

Value chains

Company C, Company A and Company B are part of the logistics value chain. They do airfreight, warehousing, sea freight, clearing and forwarding. The managing director of Company C (08/07/2016) explained that they

deliver cargo nationally and cross border as well, so we can do Lesotho, we do Botswana, we can do Mozambique, we can do Swaziland and now we've just been given on the lap we've been given trucks to go northbound to Zimbabwe.

At Company A (13/07/2016), their responsibility and role within the value chain is specifically "*airfreight, warehousing, sea freight, clearing and forwarding*". Company B does imports and forwarding.

A representative from Company A (13/07/2016) alluded to the fact that they are well integrated in global value chains as they do most of their work with international clients. He explained as follows:

Respondent: In fact all our work it is mainly it is either it is from the other part of the world or it is from here going abroad, so we do work with – yes.

Researcher: So what you focus mainly on is facilitating exports and imports?

Respondent: Yes.

Respondent: Imports and exports outbound.

Researcher: What kind of stuff do you get out and bring in.

Respondent: General cargo, mainly general cargo. Basically we move anything or bring in anything. But not perishable here in Durban, in Jo'burg we do perishables but here we don't because we don't have the facilities.

For Company B (18/07/2016), their access to foreign markets and thus integration in global value chains is as a result of their company being part of BDP:

a company based or the head office is in the States and they have offices throughout the world. If I need to pick up something from Cairo I would contact BDP in Cairo and yes, basically get them to contact the supplier pick the cargo, so BDP has got offices everywhere.

Company C (08/07/2016) do a lot of their work within the African continent. According to their managing director,

We deliver cargo nationally and cross border as well, so we can do Lesotho, we do Botswana, we can do Mozambique, we can do Swaziland and now we've just been given on the lap we've been given trucks to go northbound to Zimbabwe.

8.7. Findings summary

The findings here reveal that the stakeholders of the Durban Aerotropolis are looking to attract industries that will make use of air transportation or air freight logistics because they

understand the urgency required when dealing with time-sensitive high-value goods. Sectors of focus include logistics and distribution, electronics, pharmaceuticals, clothing and textile- which are regarded as the province's comparative advantage. Stakeholders also spoke of other support services such as hotels and legal firms. For the Durban Aerotropolis, the diversity in these industries reflects an attempt to avoid cluster and project failure during an economic downturn. Stakeholders see this as 'diversity for resilience'. For some, the diversity is required for support to other industries. Lastly and most important, the diversity is to ensure the resilience of the Durban Aerotropolis as a project.

Seeking to attract industries to the vicinity of the Durban Aerotropolis seems to indicate how RED is merely about finding ways to encourage business, companies or firms to locate to specific places (Fisher, 2008). For this to happen, the onus is on the relevant stakeholders of the Durban Aerotropolis to ensure that they create an enabling and conducive environment to attract outside business activity (Yunus et al., 2014). Chapter 9 discusses some of the efforts to create an enabling environment for investor attraction.

Because Durban Aerotropolis has a cluster within a cluster (being an agglomeration economy consisting of a cluster of firms), the question of how its growth and evolution will be managed became crucial in the interrogation and discussion of clustering and agglomeration. This is because, according to Glaeser (2010), agglomeration or clustering is a result of people and business activity coming together in space. As highlighted in Chapter 6, the Durban Aerotropolis is a space within which people can live, work and play, which tells us of the complexity of this particular cluster as it is not solely an 'industrial cluster' but also incorporates spaces for living. So in essence, what has agglomerated (or will agglomerate) in the Durban Aerotropolis is both people and business activity, which necessitates a plan to ensure that this complex process of clustering can be managed to be beneficial for both people and businesses. Here views differed, with one stakeholder arguing that investment which is not in line with the aerotropolis should be turned away, while another took the view that no investment should ever be declined or turned away. A further opinion was that management of growth and evolution of the project depends on having a good management structure, which in this particular case is the AMU.

Along with all this, the success of the Durban Aerotropolis and its longevity will also depend on air connectivity and development of more routes, increase in passenger numbers and consistent political support for the project.

Porter (2000) defines clusters as geographic concentrations of companies, specialised suppliers and service provider firms in related industries and associated institutions in particular fields that compete but also cooperate. This cooperation takes places in many ways, including knowledge sharing. In the Durban Aerotropolis however, the stakeholders felt that it was too early in the project to ascertain whether or not knowledge sharing is happening between firms and businesses in the Aerotropolis. However, they emphasised that the onus lies on Dube TradePort, the business chambers, and the EDTEA to encourage such interactions as this will yield many positive benefits. Breschi and Malerba (2001) highlight the need for building trust and encouraging informal relations among actors and businesses to enable interaction between the firms for knowledge sharing.

The crucial discussion on the development of either local or global value chains in the Durban Aerotropolis has not been fully thought through by stakeholders of the project. There are no value chains currently identifiable purely within the Durban Aerotropolis. However, the stakeholders spoke of global value chains that could potentially be developed as a result of beneficiation of imports. Other value chains will come about as a result of the linkages between industrial economic hubs and the aerotropolis. The stakeholders also foresaw development of non-product-based value chains that centre around tourism development in the province.

In regard to entrepreneurship being spurred as a result of the Durban Aerotropolis cluster, there is no substantive evidence of entrepreneurs that have emerged from innovation that may have taken place in the project. However, the stakeholders felt strongly that this was an important point that required government intervention. This is why Working Group 4 also addresses issues of inclusivity to advocate for development of small businesses and support for entrepreneurs through funding mechanisms. Dube TradePort is also working on a BEE strategy to encourage and support entrepreneurship within the Durban Aerotropolis. On the innovation front, one of the best technological inventions and innovations of the Durban Aerotropolis is Dube TradePort's Dube iConnect whose primary function is to serve the IT needs of the TradePort. iConnect also has a virtual computing platform. However, there has not necessarily been any invention or innovation as a result of businesses being in close proximity to each other or being within a cluster.

The accounts companies gave of their experience of being in a cluster environment revealed that the motivation for being in close proximity to the airport was to be players in the competitive logistics space. One company wanted to reduce running costs while another needed

to be close to customs and airlines. On the point of knowledge diffusion it emerged that although companies had established some sort of a relationship, they still did not share information with each other, in the belief that it would be a mistake to share information with companies in the same line of business as themselves. Although a knowledge sharing platform had been created by the Dube TradePort, the respondents were critical of the cluster environment as it heightened competition among them. Further, the companies identified themselves as part of the logistics value chain because of other involvement in airfreight, warehousing, sea freight, clearing and forwarding. They also made the distinction that they were integrated in global value chains because of their work with international clients. In regard to entrepreneurship and innovation, nothing was shared from the side of the businesses.

8.8. Conclusion

This chapter has examined the enactment of RED by presenting findings from the interrogation of agglomeration and clustering of business. It highlighted that the stakeholders of the Durban Aerotropolis see the project as a cluster of economic activity that contains a cluster of industries in which the stakeholders are planning to attract industries that will utilise air transportation or freight logistics. Because the Durban Aerotropolis is a multi-functional and integrated environment, what agglomerates there is business activity and people, since it a place to work, live and play. Because of the complexity of this cluster, a management plan needs to be put in place to ensure that the establishment is beneficial to both people and business and to ensure longevity of the project. The literature alludes to associated benefits from clustering of businesses such as knowledge diffusion, development of value chains and innovation and entrepreneurship. This chapter has revealed that the Durban Aerotropolis stakeholders have little or no knowledge of these benefits and have not focused their attention on them, although some claimed that they would start doing so. Understanding all dynamics of agglomeration and clustering is crucial for the overall conceptualisation and enactment of RED.

Chapter 9
Coordinated investment in Durban Aerotropolis for regional marketing as an element in RED

9.1. Introduction

Chapter 6 and Chapter 8 indicate that the Durban Aerotropolis aims to be an integrated environment with a mixed-use function. One of its many functions is to be a space of industry or industrial activity. Regional marketing is thus an approach for attracting business and industry. Because places, cities and regions are seen as consisting of bundled competitive advantages, these are adapted to market situations by government actors spearheading developments. In this context, these places, cities and regions are therefore required to apply marketing principles as they seek to further develop sustainable competitive advantage. Although there are many factors that may be considered in business location decisions beyond what government actors can influence, the study explores and assesses some of the coordinated investments in regional marketing which, if strategically developed and executed, can have a positive impact in attracting business and industry to the Durban Aerotropolis. Essentially, these coordinated investments are locational advantages possessed by the Durban Aerotropolis region.

This chapter accordingly explores the coordinated efforts involving both foreign direct investment and local investment in some regional determinants. These efforts emerge from the list of requirements and considerations of investors when they make location decisions (as outlined in chapter 4). This then gets packaged by regions into regional competitive advantages that help them compete more effectively (Kero, 2002). Similarly, in the Durban Aerotropolis, although coordination of these efforts is still nascent it shows signs of future potential. The following discussion therefore considers the need for alignment of national, provincial and city marketing strategies for the benefit of the Durban Aerotropolis and also highlights absence of a coordinated regional marketing team for the Durban Aerotropolis, lack of which threatens the Aerotropolis' ability to attract substantial investment in its region and thus jeopardises the success of RED. This is followed by consideration of individual stakeholder roles in regional marketing, an outline of the competitive advantage of the Durban Aerotropolis, and a breakdown of the efforts and investments in infrastructure, skills and incentives. The chapter concludes with an account of businesses' experiences of the general business climate of the

Durban Aerotropolis, giving their thoughts about its image and identity, access to basic services and infrastructure, and availability of skilled labour and incentives.

9.2. Barriers to effective regional marketing of the Durban Aerotropolis

This section discusses some of the problems raised by stakeholders concerning effective regional marketing.

Need for alignment in national, provincial and city marketing strategies for the benefit of the Durban Aerotropolis. In projects of the magnitude of the Durban Aerotropolis, there needs to be alignment in marketing strategies of the country, province and the city where the actual project is located. The country and what it can offer needs to be well marketed before we get to the province and the city within the province. According to the destination marketing manager at TIKZN (04/08/2016), the reason why FDI is more likely to invest in South Africa than in other countries in the continent is because

> *We are the most diversified economy on the continent… if you look at South Africa there is nowhere else in Africa where you see such a diversification in terms of manufacturing resources and services.*

In regard to the province, he sees the Durban Aerotropolis being best positioned for investment because

> *[there is] nowhere else on the continent that you will see this confluence of logistics like you see it in this province so that confluence of two ocean ports with first class road infrastructure together with an ailing but very strong rail infrastructure and a good air logistics platform and that's what gives us this advantage of saying an aerotropolis is an undoubted future driver of this economy.* (Destination Marketing Manager of TIKZN, 04/08/2016).

Furthermore, his feeling was that when the country sells its provinces to investors, the province of KZN should be remembered clearly to encourage selection of the Durban Aerotropolis as a location for these companies. The Durban Aerotropolis needs to build a compelling case as to why investors should choose it compared to the Ekurhuleni Aerotropolis. This is the argument he made:

> *They must remember KwaZulu-Natal they must say I want to invest in KwaZulu-Natal. Why do I want to invest in KwaZulu-Natal, because it is the easiest way for my goods to get on to the African continent and then when people say why, because it's got the two ports it's got the road network, it's got the aerotropolis that has all*

of the support services we require within five minutes' drive of where we are. (Destination Marketing Manager of TIKZN, 04/08/2016)

According to his argument, places, cities and regions need to apply marketing principles as they seek to develop sustainable competitive advantage that will help them compete more effectively (Burger et al., 2012). In this study, this is referred to as regional marketing, a strategy that is to be utilised to outline efforts to attract investors to the Durban Aerotropolis. If a country markets itself well, investors choose it over others. When already in South Africa, investors watch out for a province which has the best competitive advantage, hence the need for the province to do well in that regard. Lastly, when the province has been chosen, the Durban Aerotropolis also needs to be the ultimate site for any investor, hence the need to sell what it can best offer investors. According to Kero (2002), regional marketing demands a market-oriented view of leadership in which local administrators and actors need to be more entrepreneurially minded as though they are selling their region.

In attempting to do exactly this, the respondents highlighted lack of a coordinated regional marketing team positioned to work on strategies to influence companies' location behaviour. Such a team could work with the multiple stakeholders highlighted in chapter 6 to understand FDI requirements and be able to target policies to satisfy them (Metaxas, 2010).

9.2.1. Lack of a coordinated regional marketing team for the Durban Aerotropolis

The Durban Aerotropolis project currently does not have a team coordinating all regional marketing activities that pertain to it. Many of the respondents commented that although a working group had been assigned to do marketing (among other things), a need still existed for a team specifically focused on marketing and investment promotion of the Durban Aerotropolis (Destination Manager TIKZN, 04/08/2016; Senior Manager: Property Sales and Product Development, 18/05/2017). The Senior Manager: Property Sales and Product Development (18/05/2017), commented as follows:

On the marketing side, I know that they are trying to create that marketing group, exactly what Victor said but it hasn't been done at the moment. What you finding at the moment is individual marketing and promotion of your different areas. But strictly speaking in the immediate aerotropolis (which for him stretches between Umhlanga and Ballito), is that there is only two people. So what you are finding is a little bit in a vacuum you having Dube TradePort focused on Dube TradePort. You have Tongaat Hulett focused on themselves and then you having TIK, TIKZN

> *focusing on KZN as a whole but in particular using the aerotropolis, but the SEZ more than the aerotropolis to bring investment in here but also to market Richard's bay which is also an SEZ.*

He further commented that

> *what you are finding at the moment is individual marketing and promotion of your different areas.*

According to the Senior Manager: Property Sales and Product Development (18/05/2016), there is a lack of coordination in marketing for the aerotropolis, in particular, lack of a coordinated infrastructure approach to serve the growth and development of the entire aerotropolis project.

> *Respondent: the reason I say that is because if you look at our land holdings. We have this land, large land holdings and for us to release that land, we need certain infrastructure. Okay let me explain. Without having the roads, the sewer and the water etcetera, we can't release the land and neither can Cornubia release their land.*
>
> *Researcher: Until it is serviced?*
>
> *Respondent: Yes, well no. Servicing is easy and doing the actual work of servicing is easy. The issue is that for instance the Department of Transport won't allow any future developments in this area without a new road and that road is supposed to connect from Dube TradePort all the way through basically Cornubia but it even goes through Moreland etcetera all the way to almost the, you know the Umdloti turn off? If you go along Umdloti towards Verulam? There's a road that goes there you will see it and it connects to that road all the way to Cornubia.*

The stakeholders' criticism of lack of a coordinated and coordinating team is serious; the team is needed because function it would fulfil is crucial for the broader success of the Duran Aerotropolis project, working with the project's multiple stakeholders to sell the Durban Aerotropolis more effectively to airlines and tourists but also to investors, whether local or foreign. The work needing to be done by such a team is crucial for the project's sustainability. Marketing efforts would then no longer be confined to on bringing in investment into the industrial area of the Dube TradePort and would become an exercise to attract airlines and drive tourism development, which are all fundamentally important aspects of the entire project.

Although regional marketing has come to be something that happens in silos within a structure or organisation, it serves a specific purpose in coordinating efforts and investments that enable regional marketing to happen successfully. Considered next are specific roles played by stakeholders in the bigger regional marketing exercise. These relate to three important three

issues: airline attraction (understood as route development), tourism development through increase of tourism demand in the city and province, and marketing to attract investment.

9.3. Stakeholders' role in regional marketing of the Durban Aerotropolis

This section discusses the various stakeholders involved in regional marketing of the Durban Aerotropolis project.

9.3.1. Working Group 1

Member organisations in Working Group 1, also referred to as the Route Development and Air Services Committee are established to coordinate and promote international air services to King Shaka International Airport (AMU, 2016). They include the Airports Company South Africa, the Department of Economic Development, Tourism and Environmental Affairs, Dube TradePort Corporation, Tourism KwaZulu-Natal, Trade and Investment KwaZulu-Natal, KwaZulu-Natal Department of Transport and eThekwini Municipality. Essentially, these are the various entities and stakeholder groups and organisations that play a role in marketing of the Durban Aerotropolis. The responsibilities of this working group and committee are as follows:

- The committee coordinates and promotes air services to King Shaka International Airport.
- The committee evaluates all proposals prepared by Dube TradePort and provides recommendations for incentives to
    - The Dube TradePort board in the case of the aeronautical incentives
    - The other partner entities shall prepare and implement marketing support
- The committee is responsible for the development and implementation of the marketing support agreement for new air services.
- The committee is responsible for Working Group 1 of the Durban Aerotropolis project
    - To develop and market the Durban Aerotropolis brand.
    - For alignment of tourism development and marketing programs with air services and route development plans.

Explaining the importance and role of this working group, the Destination Marketing Manager of TIKZN (12/08/2016) made the following observations:

> *Air connectivity has a direct relationship to the increase of both trade, regional and international trade and it also a direct correlation to the attraction of foreign direct investment. Looking at the aerotropolis as part of an overall system to which we attract direct flights but also in terms of attracting foreign investors and foreign participants in trade and all other aspects of business, to set up industries within the environment of the airport that are both future looking in terms of services and the development of services, but also looking at industries that are focussed or associated with air logistics.*

For successful route development by the province, route marketing and communications needs to have happened. Within route development, TKZN and other stakeholders of Working Group 1

> *go out and negotiate with airlines to get them to come and land in KwaZulu-Natal, to ensure that they are successful, to market the destination as an investment destination, to market the destination as a tourism destination, to develop local businesses to get their products to relevant markets to find those relevant markets, that is all part of a work stream.* (Destination Marketing Manager TIKZN, 04/08/2016).

9.3.2. TKZN

According to the CEO of TKZN (12/05/2016), the role of their organisation in the Durban Aerotropolis and more specifically in regional marketing and related coordinated investments is to stimulate demand for travel. For them, what is more important is making sure that the aircraft are full either coming in or going out of KwaZulu-Natal and in this case King Shaka International Airport. He further explained that they are responsible for inbound aircraft but also that over the year he has worked for TKZN the assumption has been that if people come to the province or to Durban by air they are likely to leave that way as well.

In more complex terms, TKZN stimulates demand in the following way, as he explained.

> *Well the demand is stimulated in a couple of ways but the main thing is basically our normal destination marketing. You market the destination as a tourism destination where you talk to different players in the tourism value chain. Firstly, obviously there has to be hotel infrastructure, there must be attractions, there must be experiences which you put together and obviously talk to the tour operators and on the other side people must want to come to see you and obviously people must come. But given that, it is also important that the structure then of your economy support aviation because in as much as one would talk of tourism but there are other elements of business that are actually very critical, particularly around you*

know does your economy generate air cargo demand. Does your economy generate interest or demand for business travel, you know people that go in and out of your place. So that is quite critical and that is why you find that there is a relationship between the structure of the economy that you see in the country around the special economic development and success of aviation within the country. You know that the most sustainable aviation activity is between the three main economic centres of the country, the rest of the other places still don't have even though they are in the tourism space but because of the structure of the economy that hasn't been diversified they still can't sustain aviation so the face of aviation in those regions still remain largely the same because they have not been able to attract investments that have also supported the stimulation of further demand for air travel.

Because TKZN cannot stimulate demand for travel without marketing the province and the city, what they have done is set up a marketing committee which is co-chaired between Dube TradePort, TKZN, EDTEA and eThekwini Municipality. Stimulating demand for travel also requires the airport to develop more routes so that the passengers have options in destinations to travel to. He further commented that,

the marketing committee which basically then assist airlines to stimulate and sustain the route because once you have brought the airline here it is important that you also work with them in just making sure that the route becomes sustainable and profitable because while you are busy attracting routes you don't want to be losing routes because it is a reputation thing. When you start losing routes it sets you back about 10 years and there are some very risky airlines who carry a huge reputation of being very strong in building routes like your Emirates and Qatar and so forth. So if those airlines withdraw from your airport your reputation is seriously damaged and it sets you back about 10 to 20 years because no one looks at you for 10, 20 years because the point of reference that if Emirates couldn't make it work then no one can because they are known for starting routes where no one thought it could work and they have got double daily, triple daily kind of stuff and sometimes four times daily you know in some of those places.

In a nutshell, TKZN works with the airlines in marketing the destination and stimulating demand for travel.

9.3.3. TIKZN

Asked what TIKZN's role is in promoting the Durban Aerotropolis as a site for investment, the Destination Marketing Manager of TIKZN (04/08/2016) said;

I don't go out and market the aerotropolis I market the various value propositions of the province, the two ports, the aerotropolis the two IDZ's so it is part of a basket

of offerings that we present. Trade and investment does a regional road trail to other provinces, especially Johannesburg and Cape Town, Johannesburg being the number one in terms of GDP in our country, Cape Town number three after KZN, so obviously we need to be very much within the minds of businesses and the professional environment working in those areas in those provinces so that they become more integrated in terms of the opportunities here. From that perspective when our team goes out the aerotropolis will be part of the – what's the word I'm looking for it is the content is it the bag of offerings that we present.

In addition, in the bigger scheme of marketing the aerotropolis project, his role is to

engage with all stakeholders outside of the borders of South Africa. Essentially to develop strategic relationships that essentially impact on all that we've mentioned, so to form partnerships with investment and trade organisations in key strategic regions. We have a country targeting strategy that fits in with investment strategy that is identified where we are most likely to source foreign direct investment. It also identifies with the export strategy, it identifies which are the key markets that we are most likely to find provenance for local goods if we take local goods they are likely to sell in those markets. My role in terms of international marketing or international relations in marketing the destination is to make sure that those areas interface with us, are aware of us.

9.3.4. Dube TradePort

Because the Dube TradePort is a Special Economic Zone and a designated area for industrial development in the Durban Aerotropolis, it has a mandate to bring investment into the numerous zones that it has so far developed. Dube TradePort also plays a role in development of routes as it markets to airlines the potential for cargo transportation from King Shaka International Airport to various destinations.

In regard to the SEZ, the Senior Manager: Property Sales and Product Development (18/05/2016) commented that it has become the selling point for both Dube TradePort and the Durban Aerotropolis:

now with us, when we are doing our own promotion okay. At the moment what we are doing is we promoting number one, the special economic zone of Dube TradePort. Then number two and three, it comes into the aerotropolis and KZN as a whole ok. But, until the aerotropolis has gained traction, more traction, in a way KZN is second. Okay let me explain, KZN means the Durban Port, it's the infrastructure needed, the N2, the N3 etcetera. The aerotropolis as a sense. The benefit that we getting from now is on the coordinated infrastructure but the

marketing hasn't been set up. So I'm not finding any benefit from the marketing side as yet.

His job is to package development and to sell it. He meets with developers, looks at land for them, finds out who the tenants are and meets with the tenants. For example, before Samsung set up shop in the Dube TradePort, he first had to do groundwork meeting with the responsible developer to determine whether to lease or buy the space where the company has been built. However, he does more than sell the Dube TradePort SEZ or the Durban Aerotropolis as a whole; he also showcases KZN as a province and its advantages to investors.

9.3.5. ACSA

Together with Dube TradePort and other stakeholders, ACSA is working on developing even more routes for airlines. In doing this it supports growth of both air cargo and passenger traffic. ACSA currently has a business development function; it does market research and analysis, marketing, promotes traffic development and seeks opportunities to develop and manage airports. A particular focus in route development is what is known as the "southern corridor", which includes South-East Asia and South America. This function helps to maintain ACSA's status as the logistics and distribution hub for sub-equatorial Africa.

ACSA is also mandated by Working Group 1 to do the following in regard to marketing in the Durban Aerotropolis project:

- To provide marketing support in line with a marketing support agreement, to be developed and agreed
- To report on ACSA marketing contribution as per the marketing support agreement
- To manage and coordinate on airport marketing and launch event activities

The roles of each of the organisations discussed above are reflective of specialised functions that require them to be at the forefront of their coordination. For example, Working Group 1 drives route development and air services. TKZN plays an integral role in this as it stimulates demand for travel through tourism development in the province and the city. TIKZN promotes the province and the city together with the Durban Aerotropolis project as a site for investment. Dube TradePort drives attracting investment in its industrial area designated as an SEZ. It also plays a role in route development. ACSA is involved in development of routes to increase passenger and cargo traffic.

Above and beyond the efforts highlighted above, the Durban Aerotropolis also has a list of efforts that go into making it the investment region of choice. These include efforts and investments in infrastructure, skills development and capacity building, and incentives, as extracted from Toner's (2004) determinants of FDI location.

9.4. What gives the Durban Aerotropolis the competitive edge?

What chiefly gives the Durban Aerotropolis its competitive edge are the efforts to coordinate infrastructure provision, skills development for labour availability, and incentives. This is because when companies look for places in which to invest, they ask questions about these three important aspects among a host of other things.

The factsheet of the Dube TradePort SEZ indicates that the strengths of the SEZ and ultimately of the Durban Aerotropolis lie in the proximity of the SEZ to major complementary transport and freight links boasting world-class infrastructure (Dube TradePort 2017c). The factsheet also refers to secure and purpose planned infrastructure, and capacity to provide outstanding services to investors. What gives it the competitive edge is government backing, as the project is broadly in line with the National Infrastructure Plan and the National Development Plan, is funded by the KZN provincial government, and is designated as a key priority Infrastructural Development Project for the province.

Confirming these advantages, the Senior Manager of Policy and Planning at EDTEA (08/07/2016) and the Senior Manager of Property Sales and Product Development of the Dube TradePort (18/05/2017) listed stakeholder support and political will, proximity of two of the largest ports in Africa (Durban and Richards Bay), state-of-the-art road, rail, broadband infrastructure, location in a green field space, newly built and purpose-designed international airport with a 60-year plan.

What needs to be understood, however, is that background work goes on in the various efforts and investments relating to these crucial factors for attraction of investment in the Durban Aerotropolis, including investment in infrastructure, skills development and incentives as further discussed below.

9.4.1. Investments and initiatives in infrastructure development for the Durban Aerotropolis

According to Bakar et al. (2012), the impact and contribution of FDI on economic growth of any country is very substantial. However, to attract FDI, infrastructure stands out as one of the important determinants in attracting investment. In the Durban Aerotropolis project, issues, plans and investments relating to infrastructure are dealt with in Working Group 3. Working Group 3 is anchored on strategic levers six and nine. Respectively, they are about efficient, integrated multimodal transport networks that meet the international standards of first and last mile of air travel, and creating solid municipal infrastructure and engineering services that support a continuous supply of services such as electricity, water, sanitation, roads, and other infrastructure crucial for the Durban Aerotropolis.

Breakdown of the function, role and responsibilities of Working Group 3 that deal with infrastructure issues is as follows;

- Prioritise transport needs of various nodes.
- Develop a single Integrated/Multimodal Transport Plan for the Aerotropolis.
- Provide support and guidance to the Aerotropolis master planning project,
- Identify nodes and corridors of development linking the airport city.
- Undertake transport needs assessment of the airport city.
- Integrate and harmonise transport plans of partner entities.
- Ensure alignment of multimodal transport plans of partner entities: Transnet, PRASA, KZN Department of Transport, Sanral, municipalities, National Department of Transport, etc.
- Demand management for bulk services: water, electricity, roads, sanitation, etc.
- Explore bulk infrastructure project financing options with key funders like DBSA and other international sources.
- Prioritise rail linkages of Airport City with other key nodes in the study area.
- Formulate a public transport strategy for Airport City.
- Support Bus Rapid Transit plans of municipalities, ensuring linkages with Airport City.
- Decide on the monitoring and evaluation indicators and appoint a team that will be responsible for tracking progress.
- Explore intelligent transportation options to improve mobility in the Airport City (Smart City).

- Facilitate the implementation of the amendments to the Land Transports Act in relation to ride-hailing.
- Explore reduction of carbon footprint caused by ground transportation in the Airport City.
- Support road safety initiatives and campaigns in the larger Aerotropolis area.

In the list provided above, it is important to note that there is evidence of hard infrastructure which includes the development of quality ports, airport, roads, rail infrastructure, and information and communications technology (Wilson, 2012). According to the Senior Manager: Property Sales and Product Development (18/05/2017), the biggest task of Working Group 3 should be coordinating infrastructure working hand in hand with other government initiatives such as the ESID Cluster and other role players, because without the infrastructure and without it being serviced, the Dube TradePort itself cannot release its large land holding. "*Without having the roads, the lights, the sewer and the water etcetera, we can't release the land*".

The Senior Manager: Property Sales and Product Development (18/05/2017) also commented that the Department of Transport does not allow further developments of the land that they have until the department has built a road. Further growth and expansion of the Dube TradePort thus requires other stakeholders to provide some of the necessary hard infrastructure which may not have been part of their current plans. All the land they have is therefore nothing without all the necessary infrastructure requirements being met. The Senior Manager: Property Sales and Product Development (18/05/2017) further explained that "*the developments are really hampered by the infrastructure even before we even have to get to the marketing*" (18/05/2017); what then would they be selling to potential investors if there was nothing there to be sold in the form of serviced land with all the necessary infrastructure?

Infrastructure in the development of the Durban Aerotropolis and in attracting investment is this for growth of the project, as highlighted in Chapter 8. Rehman et al. (2010) underline the importance of infrastructure in reducing operational costs of investors and note that if investors are not provided with infrastructure, their enterprises operate with less efficiency. Poor infrastructure has consequences for developing countries in that it discourages investment.

The next section looks at the investment efforts of the Durban Aerotropolis stakeholders in skills development and capacity building.

9.4.2. Investment and efforts in skills development and capacity building for the Durban Aerotropolis

In response to the shortage of skills in aviation and related sectors, the KZN government appointed the University of KwaZulu-Natal to establish the Aerotropolis Institute Africa (AIA) with a view to bridging some of the gaps in scarce and crucial skills in the province and nationwide. This was done because effort to improve skills set is one of the most important policy objectives in both developed and developing counties (United Nations, 2011). Establishment of the AIA is also part of the implementation of the KZN Integrated Aerotropolis Strategy and in accordance with the university's policy of establishing similar institutes. The project is expected to be completed by the end of 2018.

The aim in establishing the AIA was

> [to] develop an enduring and financially sustainable knowledge centre to support primarily the development of the Durban Aerotropolis. To this end, the institute will seek to, inter alia, provide thought leadership, knowledge support and pertinent applied research in the following areas; planning and development of the aerotropolis, innovative cutting edge technological advancement, operational efficiencies, policy advocacy for aviation and airport development and the global competitiveness of the Durban Aerotropolis. (AIA, 2016)

The institute seeks assistance through partnerships from all the higher education institutions in the province, the country and the continent. Moreover, MoUs will be signed with aviation institutes from countries such as Dubai, the Netherlands and the United States, and potentially many others that are yet to be identified.

Further to the investment in establishing an aerotropolis institute are partnerships between Dube TradePort and the various higher education institutions such as the University of KwaZulu-Natal, the Durban University of Technology and Mangosuthu University of Technology. Within these institutions, Dube TradePort has partnered with departments in which they have identified skills that can be utilised in the planning and running of the broader aerotropolis project and skills appropriate for the various industry sectors. For example, the Senior Manager for Property Development at Dube TradePort said that once the pharmaceuticals company has set up shop in its SEZ, he will be in contact with the Health Sciences College of the University of KwaZulu-Natal to seek advice on which students would be suited to work in the employ of that specific company in pharmacy or pharmacology. He stressed the importance of these partnerships in finding appropriately skilled people for

investors so that they do not have to go back and look for people from elsewhere to do work that is supposed to be for the citizens of the province.

These efforts are commendable given that investors often require a well-capacitated labour pool from which they can draw their workers. According to the United Nations (2011), the process of globalisation has made it crucially important to ensure that workers and businesses are competitive on a global scale, and an enhanced skills base will consequently lead to a more attractive investment climate for investors. Additionally, it is argued that a region's human capital level determines how much and what kind of investment can be attracted, and also the extent to which the local economy can absorb potential skills transfer. This essentially means that in planning to attract certain kinds of investment the stakeholders need to be ready to provide the investors with the skills necessary for the sectors they are targeting.

In addition to investing in skills, what is also important are the efforts that have gone into various incentive offerings of the Durban Aerotropolis.

9.4.3. Investments in incentives for the Durban Aerotropolis

Incentives are offered by Dube TradePort in its SEZ, by the DTI in the SEZ programme since it is driven by the DTI, and by the municipality (Senior Manager of the SEZ Programme at the Dube TradePort, 19/05/2017). There are similarities in incentives offered by the DTI and by Dube TradePort.

The DTI offers tax incentives to qualifying companies that will be locating or are already located in approved SEZs such as the Dube TradePort in the Durban Aerotropolis. According to the SEZs Tax Incentive Guide, the tax incentives include, "VAT and customs relief, if located within a customs-controlled area; the employment tax incentive; building allowance; and reduced corporate income tax rate" (DTI, 2016). VAT and customs relief will be for companies located in the customs-controlled areas and these are areas which have import duty rebate and VAT exemption on imports of production related to raw materials, including machinery and assets for production. The employment tax incentive will apply to companies which employ low-salaried employees earning below R600 000 per annum. "This is an incentive aimed at encouraging employers to hire young and less experienced work seekers" (DTI, 2016). Building allowance will allow qualifying companies an accelerated depreciation allowance on capital structures such as buildings. Certain companies in the Durban

Aerotropolis will qualify for a reduced corporate income tax rate of 15% for the period 2014–2024.

The DTI also offers other benefits of investing in an SEZ; these include tax allowance incentives, a one-stop-shop facility and an SEZ Fund for SEZ infrastructure development. According to the SEZs Tax Incentive Guide, "the 12I tax incentive is designed to support greenfield investments such as the Durban Aerotropolis" (DTI, 2016). The one-stop shop facility is currently being rolled out at the Dube TradePort. The aim of the facility is to "facilitate access by investors to all required permits and licences and other informational requirements in a timely manner" and also to "eliminate steps in the approvals/administrative process and allow parallel rather than sequential approvals".

eThekwini Municipality has its own "Economic Development Incentive Policy" of 2016. Among the policy provisions that have been highlighted as potentially applicable for the Durban Aerotropolis are the "one-stop shop", investment fast-tracking service in SEZs, foreign direct investor assistance, and incentivising for investment in bulk infrastructure. The "one-stop shop", much like the one that will be run through the DTI programme, will provide investors with information about all available incentives and allow investors to apply. The investment tracking aspect of the incentive policy aims to provide the investor with assistance at no cost for low-risk development proposals in SEZs. The foreign direct investor assistance will ensure that an investor is assigned a single point of contact for all tax, employee and construction regulations as well as assistance with visas, housing and other administrative hurdles. Incentivising for investment in bulk infrastructure entails "incentivising private greenfield investors to provide bulk infrastructure which could be achieved through various such as Public–Private Partnerships or alternatively, negotiated arrangements" (eThekwini Municipality, 2016).

9.5. Voices of business in regard to coordinated investments for regional marketing

The discussion below gives an idea of the coordinated investments that have gone into infrastructure, skills and incentives to boost the overall business climate of the Durban Aerotropolis, drawn from interview responses given by some of the companies that are already located in the Cargo Terminal Zone of the Dube TradePort. Comments include their general thoughts about the business climate in the Durban Aerotropolis and their perceptions of the

image and identity of the Durban Aerotropolis, availability of basic services and infrastructure, availability of skilled labour and incentives.

9.5.1. Business climate

Because regional marketing is about portraying to investors that the business environment is favourable and enabling for them to set up shop (Kero, 2002), first-hand accounts of some of the businesses were necessary to get a complete picture of what transpires in the Durban Aerotropolis.

What emerged is that the companies already located in the Durban Aerotropolis were hoping that the stakeholders of the project would work hard to attract more and more investments so that the project could grow and so that the companies are exposed to more companies that perhaps do what they do. The managing director of Company C (08/07/2016) was very clear in saying that the project ought to grow so that they can start to see some integration happen between companies, which is something they know they are capable of:

> *I am saying that people have noticed that but more must come, more, we need more of that you know integration and we're capable of doing it.*

The reason why they are hoping for growth and location of more investors in the Durban Aerotropolis is that they do not want to end up moving someplace else where there is more business activity than what the project can offer:

> *Well if nothing happens then we are going to move to Pinetown because we have more customers at Pinetown but I still will have like a pilot office at Dube I don't think I want to let that away because it has other advantages.*

According to the Airfreight Manager of Company B (18/07/2016), his feel of the business climate is that it is only starting out, so perhaps the lack of business activity and vibrancy is due to a natural dip that is expected at the beginning of every business cycle:

> *at the moment it's very down but that's economics, you know it is up you've got to go down before you go up. Yes, I believe it will turn.*

From the views shared by the representatives of the companies, their perception of a thriving and enabling business climate includes more companies locating in the Durban Aerotropolis. This is likely to mean that their confidence in the Durban Aerotropolis will only be solidified once they see more investment coming into the SEZ and its various zones. It is also interesting

to see that the companies are encouraging more investment into the Durban Aerotropolis despite the issues that were raised in Chapter 8 which indicated that companies have no relationships at all because they are in competition with each other.

9.5.2. Image and identity

For some of the companies in the Cargo Terminal zone of the Durban Aerotropolis, the image and identity that the project purveys to them is of a place of opportunity for their businesses to grow and be in the presence of other great-minded people who can be help them grow their business by exposing them to opportunities. The managing director of Company C (08/07/2016) perceives the aerotropolis as "*opportunity, opportunity*". Here he was referring to opportunities for growth, for exposure and for more business. Being around an airport signalled great things for their company.

A representative of Company A (13/07/2016) saw the aerotropolis project as one that will boost the economy. For him, the Durban Aerotropolis goes beyond providing a conducive space to do business. In his understanding, what is done in the Cargo Terminal serves a bigger purpose of growing the economy for job creation, poverty alleviation and bridging the inequality gap in the city, the province and ultimately, the country. He also agreed with the proposition that aerotropolis concept amounts to building a city: "*basically a city on its own*".

In seeking to understand what may have attracted the companies to the Durban Aerotropolis it was important to find out what the project portrays and means to them. The views expressed were indeed similar and related in some ways because for one company it represented a place of opportunities while another saw it as a project which will bring about economic growth and economic development. Cumulatively, perceptions such as these become the reputation of the Durban Aerotropolis.

The next section considers whether the stakeholders' perceptions of the Durban Aerotropolis are in alignment on issues of investment in infrastructure, skills development and incentives.

9.5.3. Access to basic services and infrastructure

On arriving at the Dube Cargo Terminal, Company C (08/07/2016) was given a building for the company which they had to service and fix as they saw fit. Although the managing director

was not necessarily complaining, he suggested that Dube TradePort could have done better as the landlord. He felt that Dube TradePort was not well prepared for the kind of companies they brought into the Dube Cargo Terminal zone because, as logistics operators, the companies deal with a lot of cargo handling and the cargo comes in trucks needing space to manoeuvre. Because the space provided is too small it cannot adequately accommodate the big delivery rigs:

> *Makhosi, you go to the building now and you go and look at the big trucks, they had to take out all the parking bays because they never thought that big rigs, how do you turn a rig. When we used to load containers when we were doing this customer and we were loading containers for Australia and this guy used to bring us all this stuff, we used to check it, wrap it, fumigate it because you've got fumigate stuff when the stuff goes to these countries especially Australia. When the truck comes we block the whole driveway nobody can move and people come and shout and I say "excuse me".*
>
> *So definitely in the architecture and the providing they are again make vague boo-boo's absolutely. We don't know why they did it you know what was the reason but it is certain people that were not qualified who were doing the job.*

A representative of Company A (13/07/2016) told a slightly different story in that the company was provided with all that was needed, which was office space and the warehouse, and the warehouse (where all their cargo was stored) was directly opposite their offices. What he felt could have also been done though, was proper planning for the warehouse construction. The same issue was raised by the managing director of Company C (08/07/2016): when it was raining, they were unable to offload cargo either from or into the trucks because it would get wet. This had been raised with the landlord but it had yet to be attended to. The manager was under the impression that some plans were set in motion to sort out the problems and then later aborted. He explained further that this problem caused delays with further costs accruing for the company:

> *Yes, we will get more expenses to pay claims and all that stuff so that can cause a big problem and also delays because when it rains you have to stop and wait for it to clear up and then only then you can offload and only then they can load the cargo because there isn't shelter so that wasn't planned.*

9.5.4. Availability of skilled labour

Although Company C is a local company from Durban with another branch in Johannesburg, the managing director (08/07/2016) of the company indicated that he found it very difficult to

find skilled labour when he moved to the Dube TradePort and he saw a need for training people with the skills required for the logistics sector. In view of the problem, he felt that companies should be able to rely on Dube TradePort as the managing corporation of the SEZ for assistance in getting the right people for the job. Perhaps with the AIA and the various partnerships that Dube TradePort has forged with higher education institutions, it will be much easier to secure the appropriately skilled labour for the different sector industries.

9.5.5. Incentives

The managing director of Company C (08/07/2016) appreciated that being in the airport city precinct means that he can benefit (grow the company) from being surrounded by people and companies that do the same work that he does. However, he said that Dube TradePort is not offering any incentives for being there except for provided empty buildings for companies to set up shop.

> *Researcher: Then what incentives, if any, were you provided with?*
>
> *Respondent: Tell me another joke. We always ask that of Paula. I said you talk so much about SME what do you give us? You insist the rent must be paid on that time, yes we understand that and if we don't you want to take us to court it is like National Bargaining Council. You are treating us, there is no benefit in being here I could go across the street and build my own house. I have got land right across the airport that I have been offered I can build my own warehouse here but I don't want to do that because I am not yet that big and I want to stay within because that's what makes me grow, if I am with everybody else I can do that.*

9.6. Findings summary

According to McGahey (2008), cities, regions and states plan efforts to improve their economies. RED is essentially regional efforts in economic development; regions look at what resources they can mobilise for their own sustainable development and competitiveness (Karlsson & Rouchy, 2015). As mentioned in Chapter 7, this mobilisation is facilitated by a "self-organised steering of multiple agencies, institutions and systems which are operationally autonomous from one another yet structurally coupled due to their mutual interdependence" (Chapple & Montero, 2016:144). In this chapter, regional marketing was explored as a characteristic of RED enactment by assessing the coordinated investments of Durban Aerotropolis in infrastructure, skills and incentives. This speaks to how in RED, one of the

goals of the actors is creating a conducive environment for attracting business activity. To do this, the study explored what the Durban Aerotropolis has to offer to influence companies' location behaviour.

The findings indicate a need for alignment in country, provincial and city marketing strategies. The alignment will assist in the development of an integrated and sustainable competitive advantage. This is needed because investors are likely to choose the Durban Aerotropolis if it is well captured and visible in the city, provincial and country marketing strategies. They are also likely to choose it as a site of investment if the country, province and city it is based in all have compelling competitive advantages.

To develop a sustainable competitive advantage, the Durban Aerotropolis needs to apply marketing principles that will help to boost its image and make it more competitive in attracting investment (Burger et al., 2012). In this regard, the stakeholders argued that the Durban Aerotropolis lacks a coordinated and coordinating regional marketing team. This would be a team that can work with the stakeholders of the project to better market the Durban Aerotropolis to airlines and tourists and thus influence companies' location behaviour. The team should consist of people who have a market-oriented view of leadership in which they act more like entrepreneurs selling the Durban Aerotropolis region (Kero, 2002). Although such a group does not yet exist, there are various stakeholder groups involved in regional marketing for different purposes that are all beneficial for the success of the Durban Aerotropolis. These include Working Group 1, TKZN, TIKZN, Dube TradePort and ACSA.

- Working Group 1 is a stakeholder group which drives route development and promotes air services to King Shaka International Airport. It also seeks to develop and market the Durban Aerotropolis brand and align tourism development with air services and route development plans.
- TKZN focuses on stimulating demand for travel through tourism development in the province.
- TIKZN is responsible for investment promotion and investor attraction for the broader province as well as the Durban Aerotropolis.
- Dube TradePort plays a role in investor attraction and the development of routes for cargo transportation.
- ACSA is focused on route development to increase passenger and cargo traffic.

Above and beyond the specific roles and responsibilities of the various stakeholders in regional marketing, there is background work that unfolds in the form of plans and investments in that which makes for a sellable and marketable Durban Aerotropolis. These are coordinated investments for regional marketing that give the Durban Aerotropolis its competitive advantage. They include infrastructure, skills development and capacity building and incentives. This is part of what the Durban Aerotropolis is doing to influence companies' location behaviour.

For all infrastructure developments of the Durban Aerotropolis, Working Group 4 is entrusted with a number of responsibilities ranging from prioritising transport needs, managing demand for bulk services, exploring bulk infrastructure project financing, exploring intelligent transportation options and championing road safety initiatives. Key investment in skills development and capacity building to enhance availability of labour for the Durban Aerotropolis is reflected in the establishment of the Aerotropolis Institute Africa. The investment in incentives offered in the project come from the Department of Trade and Industry Dube TradePort and eThekwini Municipality. The DTI offers tax incentives, VAT and customs incentives, employment tax incentives and many others. The one-stop-shop roll out will assume a degree of collaborative effort between the DTI, the municipality and a variety of other stakeholders. The municipality also incentivises investment in bulk infrastructure.

With regard to the companies' feel of the environment, their suggestion was for stakeholders to put more effort into attracting more investors in the industrial zones of the Durban Aerotropolis. Their perception of the project's identity has to do with it being a space for opportunities and potential business growth. It is also a space to network with like-minded people. In sharing their experiences of access to basic services and infrastructure, the views varied; while some were given a building they had to fix up and service themselves, others were provided with everything they needed. One other issue raised in this regard had to do with a need for proper planning and construction of the terminal zone in the Dube TradePort. Other challenges centred on access to labour with skills in the logistics sector. Although this was a viewpoint of a single company, it confirmed the need for the Aerotropolis Institute Africa

9.7. Conclusion

This chapter explored a crucial tool in creating an enabling environment for the enactment of RED, namely regional marketing – which is essentially efforts that support investment attraction such as boosting the image of a city, region or state to drive its competitiveness. The chapter reveals that cities, regions and states as well as projects like the Durban Aerotropolis apply marketing principles that help boost their image and assist them to compete more effectively for investment. Various stakeholders are involved in regional marketing, each with different responsibilities. Because RED is about actors coming together to drive economic development, the same applies to the exercise of regional marketing. This therefore makes regional marketing an important mechanism for RED enactment in that it is useful for attracting investors and people to the Durban Aerotropolis establishment.

Chapter 10
Conclusion

The analysis of the Durban Aerotropolis presented in this study reflects how RED is conceptualised and enacted. As such, the thesis provides an account of how, in the context of the Durban Aerotropolis, the region is conceptualised as an inherent notion in the RED approach. Furthermore, the study explores the enactment of RED by examining the governance mechanisms of the aerotropolis project and interrogating the dynamics of agglomeration and clustering of businesses through the aerotropolis. Furthermore, regional marketing is examined as a component of the enactment of RED by uncovering the various investments that have been coordinated by stakeholders to ensure that the Durban Aerotropolis is better positioned to attract investment.

As evidenced in the data analysis chapters, the findings of the study show that RED involves a complex assemblage of economic activities in which the conceptualisation of the region comprises the form, function and scale of impacts associated with a project. These complexities indicate that concerted efforts are required from stakeholders to drive such projects. This in addition requires the coordination of investments from RED stakeholders to better position the region to attract the kinds and levels of investment necessary to sustain the longevity and success of an agglomeration economy in a region.

This chapter completes the study by providing an overall conclusion and recommendations related to the research. It begins with a discussion of how the research questions have been answered, and then goes on to explore what these findings indicate about the conceptualisation and enactment of RED. Finally, recommendations are made for future research.

10.1. The conceptualisation of the 'region' inherent in RED through the Durban Aerotropolis

Conceptualising the *region* inherent in RED by analysing the Durban Aerotropolis was effectively a process of delineation, with project scoping an inevitable corollary. Here, the region was treated as a space whose form, function and scale are socially constructed. The region's form, function and scale are used by stakeholders to pronounce and highlight the purpose of the project, what kind economic development mechanism is suited to fulfil it, and the reach of its impact.

The findings of this study reveal a conceptual journey of utilising the Durban Aerotropolis and its activities to construct a region for RED. This conceptual journey alludes to function as the purpose the project ought to serve. The stakeholders of the Durban Aerotropolis describe the function of the project as an integrated environment with a mixed-use function. In this regard, the Durban Aerotropolis is thus perceived as a multi-functional enterprise serving aeronautical and commercial development functions. The form of the region refers to the kind of economic development mechanism and environment required to fulfil the purpose of this integrated and mixed-use establishment. The form of the Durban Aerotropolis is illustrative of a quality urban space, incorporating a corridor of development and an airport city. Findings also showed that the scale of this urban development feature with a multi-functional purpose is socially constructed in fixed and bounded terms, and often through a combination of scalar features. The scale is also defined by connections of spaces, goods, economic circuits and movement which are perceived by respondents as being loose and flexible.

The discussion above speaks to a region which is understood as an institutional fact (Van Langenhove, 2013) which means that it cannot be defined only by its surface and boundaries but also requires human agreement among stakeholders because it is a geographical area whose existence is impossible without people and the socio-economic and political systems which they construct and in which they function. The social construction of this notion of region incorporates a geographical area, an economic interaction and an institutional jurisdiction. Further to these three characteristics, this region consists of different spaces (as presented earlier in section 6.2.1). The spaces described in this analysis come together, or coalesce, in a ‘thrown**together**ness’ through which the conceptualisation of the region in regional economic development emerges (Hubbard, 2008). This is a coalescing of scale and function coming together in a form in and through which they have a relationship with each other. The ‘thrown**together**ness’ also assembles spaces of flows and spaces of places (Castells, 2000). Thus, the notion of region emerging in this study is conceptualised overall as an assemblage, in which overlapping institutional forms and a juxtaposition of connections exists; with the flexibility of scale being possible (Godwin, 2013; Allen et al., 1998).

10.2. Understanding the governance mechanisms for RED through the Durban Aerotropolis' stakeholder relations and partnerships

Because the region inherent in the Durban Aerotropolis is reflective of an assemblage, 'thrownto getherness', and clustering of various elements, its governance mechanisms are complex and deliberative. These governance characteristics are evident in a number of characteristics of shared decision-making and monitoring processes and negotiated decision-making. For instance, although the KZN government is the most recognised entity having leadership of the Durban Aerotropolis, it is not the sole actor and decision-maker. Instead there is intensive and ongoing involvement of other stakeholder groups from the public and private sectors and from state-owned agencies. The public sector partners include EDTEA, eThekwini Municipality, KZN DOT and the DHA of the KZN Human Settlement Department. Private sector stakeholders are Tongaat Hulett Property Developers. The state-owned agencies are Dube TradePort, TKZN, ACSA, TKZN and ILembe Chamber of Commerce and Industry. Each of these stakeholders plays specific roles in the project and all are crucial for its success. They have initially worked together on strategically crafting a vision for the Durban Aerotropolis project and will be jointly involved in the long-term implementation process.

Governance mechanisms of the Durban Aerotropolis regularly require stakeholder engagements. These engagements are platforms for the actors and partners of the project to meet to deliberate on issues concerning the Durban Aerotropolis. They are also platforms for stakeholders to hold each other accountable, mobilise resources and keep focus on the 60-year vision for the Durban Aerotropolis as per the components and principles for effective governance in the regions provided by Barnes & Foster (2012). These engagements happen through three channels: the EXCO, the steering committee and the four working groups each responsible for the different aspects of the Durban Aerotropolis (route development, spatial planning, infrastructure and equitable growth, and knowledge support). This further reaffirms that RED requires communication between economic agents and actors and favours frequent interactions and flows of ideas (Ascani et al., 2012). Although the Durban Aerotropolis project is seen as a coming together of stakeholders from various stakeholder groups, it has a management structure or entity called the AMU. The AMU plays a role in coordinating all stakeholder engagements and ensures that the partnerships translate to a successful project implementation.

Findings also show that that intergovernmental collaboration is observed through the presence of the Durban Aerotropolis in policies of the three tiers of government. At national level, the

SIP2 sees the aerotropolis playing a catalytic role in job creation. Support has also been sought from various government departments. Provincially, there is involvement of a number of stakeholders and the Durban Aerotropolis is also represented in the KZN Provincial Growth and Development Strategy.

Findings in this study also reveal that although the stakeholders of the Durban Aerotropolis generally work well together, challenges have arisen at times in terms of decision-making. One important example is difficulties which arose as a result of the multiplicity of stakeholders and jurisdictions in suggestions for the name of the project. This challenge came about because the project falls between two political jurisdictions: ILembe District and eThekwini Municipality. Various names were proposed for the project and overall "Durban Aerotropolis" was deemed more suitable and appropriate. The reasons for this centred on Durban being an already existing brand, thus making it easier to use for marketing purposes. However, a conclusion from this research on the naming decision is that it is consistent with urban governance dynamics that emerge in regard to 'politics of scale'. This is a discursive frame through which actors define the seat of power, whether it be practical or otherwise (McCann, 2013). Since eThekwini Municipality is more politically and economically powerful than the neighbouring municipality, use of its name was therefore justified. This tells us that in RED projects, actors can define or redefine the seat of power in the region as a whole, whether it be political or otherwise. eThekwini Municipality is a metropolitan municipality and thus has higher ranking compared to iLembe Municipality, and this has been reaffirmed in the naming of the project, which in itself reflects a form of governance outcome.

In light of the discussion above, this study shows that enactment of the Durban Aerotropolis happens through an amalgamation of networks of actors and complex decision-making systems and flows that make its governance dynamics shared and therefore often deliberative (Healey, 2007). As such, this strategic spatial project is planned for using strategic spatial planning which treats urban territories as a "complex mixture of nodes and networks, places and flow in which multiple relations, activities and values co-exist, interact, combine and generate creative synergy" (Healey, 2007: iii). All in all, the Durban Aerotropolis' governance mechanisms indicate the presence of a collaborative and cooperative effort that is foundational for RED as it enables and facilitates the coordination of resources and sharing of information, ideas and power. The study therefore concludes that effective RED governance mechanisms require four significant characteristics: collaboration, a shared vision, a commitment to sharing resources and social capital through which stakeholders develop a level of trust necessary for achieving

the necessary synergy for successful project implementation across the complex spatialities and jurisdictions of the region as it is determined by the project intentions.

10.3. Agglomeration and clustering of businesses as a feature of RED seen in their enactment in the Durban Aerotropolis

RED involves encouraging businesses, companies or firms to relocate to specific places (Porter, 1998), while the Durban Aerotropolis is an integrated environment with a mixed-use functionality, including being a space for industrial activity. The findings reveal that the Durban Aerotropolis seeks to attract investment by companies that will utilise air transportation or air freight logistics, which be companies or industries that require just-in-time services or produce time-sensitive goods. The investment will thus likely be in sectors such as logistics, distribution, electronics and pharmaceuticals.

While the norm is that clusters have similar businesses collecting in one geographical point, the Durban Aerotropolis has encouraged diversity in its investors. This is because the Durban Aerotropolis exhibits characteristics broadly of being an agglomeration economy in which there is also a cluster of industrial activity in the form of an SEZ, in this case the Dube TradePort. As an agglomeration economy, the Durban Aerotropolis is essentially an assemblage of economic activity in its different or varying forms. But in this assemblage, there is also an industrial cluster which was used to assess the dynamics of the externalities associated with agglomeration and clustering of firms. In essence, the study reveals that agglomeration in this context refers to and involves perceiving the Durban Aerotropolis as an assemblage as per the work of Allen & Cochrane (2007), while the cluster of firms encompasses the SEZ/Dube TradePort and the firms that are part of the industrial activity in this study.

As an agglomeration economy, the growth and evolution of the Durban Aerotropolis needs to be well managed. One of the ways in which this could be done is to ensure that if prospective investment is not in line with the types of industries the stakeholders plan on attracting to the Durban Aerotropolis it should be declined. Other stakeholders suggest need for a good management structure to drive this kind of development, such as either the Dube TradePort or the Aerotropolis Management Unit. In regard to evolution and growth of the Durban Aerotropolis, longevity is also important, and stakeholders commented that aviation activity is essential and includes driving up connectivity by intensifying the routes network for cargo and

passengers. Another important factor in the longevity of the project is consistent political support which can ensure that the project is sustained over time.

The externalities associated with clustering in the Durban Aerotropolis reflect the views of both the public sector stakeholders and businesses in the industrial zone. In regard to knowledge sharing, the findings reveal that the stakeholders feel that because it is early on in the Durban Aerotropolis project, they cannot ascertain whether or not knowledge is being shared between the companies. They do however commend the partnerships between the Durban Aerotropolis and higher education institutions such as UKZN and DUT. The companies also do not share information because they see each other as competitors. This deviates from one of the basic tenets of RED which asserts that cluster environments foster knowledge sharing between firms.

The stakeholders have not deliberated on the value chains they would want to develop and be part of through the investment they attract into the Durban Aerotropolis. At this juncture no value chains are identifiable. However, stakeholders said that global value chains could emerge as a result of the beneficiation of imports. Other value chains are seen as likely to emerge as a result of the linkage between industrial economic hubs of KZN and the Durban Aerotropolis. There is also potential for the integration of non-manufacturing value chains into the region of the Durban Aerotropolis, such as those in the tourism sector.

The findings of the study also reveal that, currently, the Durban Aerotropolis does not show any evidence of entrepreneurs having emerged from the businesses co-locating around the airport property. Strong government intervention is required to support Working Group 4's efforts to address issues of inclusivity and advocate for the development of small businesses and funding support for entrepreneurs. The innovation, on the other hand, has been Dube TradePort's Dube iConnect whose primary function is to serve the IT needs of the TradePort.

The findings show RED enactment that remains incomplete and therefore flawed, in that the stakeholders of the Durban Aerotropolis were clear on the project agglomerating spaces of living, working and playing. They were able to share their plans for managing the evolution and growth of the project and ensuring its longevity as an agglomeration and cluster economy. They were also certain on the kinds of industries that will be encouraged in the Durban Aerotropolis. However, their knowledge of the externalities associated with such economies was questionable. It presents us with the challenge of an RED project with stakeholders who – although they work collaboratively, have a clear and shared vison, can commit to sharing resources and develop trust through social capital – still lack understanding of the beneficial

outcome for all those efforts which is to ensure that benefits of cluster economics can be taken advantage of as alluded to by Cainelli et al. (2006) and Johansson & Quigley (2004). This is because agglomeration and cluster economies also exist to facilitate knowledge diffusion between companies, to raise their productivity and competitiveness. Furthermore, benefits are to be drawn from the creation and development of value chains, an aspect which stakeholders appear not to have sufficiently explored. Lastly, these kinds of economies should drive innovation and entrepreneurship in a region and this has not yet happened. This essentially means that although the conceptualisation of RED may be clear and well defined, lack of understanding of the benefits and externalities of subsequent processes of RED such as agglomeration and clustering may lead to flaws, delays and challenges in its enactment.

10.4. Exploration of regional marketing as a characteristic of RED through the coordinated investments of Durban Aerotropolis

The study asserts that the coordination in investments and efforts for regional marketing is currently nascent but displaying signs for future potential. Collaborative efforts for regional marketing are therefore important in RED because they are instrumental in attracting businesses and industry into the regional economic system. Because places, cities and regions are seen as entities consisting of bundled competitive advantages, they are required to apply marketing principles as they seek to further develop sustainable competitive advantage (Burger at al., 2008).

For regional marketing to fulfil its purpose in the Durban Aerotropolis, stakeholders noted two challenges. The first centres on the need for alignment in national, provincial and city marketing strategies. The absence of this alignment has consequences for the Durban Aerotropolis' goal of attracting investment. What was being argued here is that it not enough for the city and the province to be marketing and promoting the Durban Aerotropolis; those responsible for promoting the country as an investment choice should also be involved. Additionally, the feeling of stakeholders is that if the country markets itself well, investors will choose it over others as a desirable location for industrial investment. Once investors have started scoping South Africa, the next question should be which province has the best competitive advantage in terms of what they want to do. Lastly, then comes the decision on where to invest in that province. Absence of this alignment has implications for effective RED facilitation.

The second challenge arises from the absence of a coordinated regional marketing team for the Durban Aerotropolis. What is currently happening is that there are individual groups that are responsible for marketing and promotion in their specific organisations but not necessarily fully responsible for marketing the Durban Aerotropolis. A team such as this is required because other organisations have their own mandates and jurisdictions and would not therefore prioritise the Durban Aerotropolis.

It became clear in the findings of the study that these regional marketing efforts are geared not only towards attracting investment in the industrial area of the Durban Aerotropolis but also towards attracting new airlines to Durban and driving tourism development, which are all fundamentally important aspects of the project. Working Group 1 is thus responsible for route development and air services. TKZN is involved in stimulating demand for travel through tourism development in the province; their responsibility in the project is to market the province as a worthy destination. TIKZN does marketing and investment promotion for the province by creating partnerships with investment and trade organisations in other regions. Dube TradePort has a property sales and product development function that deals with investments in the SEZ. ACSA also does marketing of the airport to generate more passengers and an extensive flight network.

The study also reveals that Durban Aerotropolis bases its competitive advantage on being located around an airport, close to major transport and freight links, being able to offer secure and purposeful infrastructure and offering outstanding services to investors. To be in a better position to attract investment in the Durban Aerotropolis, the stakeholders spoke of coordinated investments in infrastructure development, skills development and capacity building and incentives.

Investment and initiatives in infrastructure development are handled in Working Group 3 which also addresses issues in regard to transport, master planning and managing bulk services. The various stakeholders who make up the working group coordinate their efforts in this regard. One of the most important investments in skills development and capacity building is the Aerotropolis Institute Africa, which seeks to bridge the gap in scarce and crucial skills in the aviation and airport cities sector. The incentives are a coordinated effort between the municipality, the province, and DTI at the national level.

Stakeholders of the Durban Aerotropolis having given an account of their coordination of efforts and investments in regional marketing, it was only fair that the experiences of the

companies also be captured here. What are of significance to companies are the business climate and the image of the Durban Aerotropolis. Their views in this regard were that there is a need for more investors so that their location becomes a place with a vibrant economic activity. For these companies, being in the Durban Aerotropolis means exposure to more opportunities for growth. Their experience in regard to infrastructure, skilled labour and incentives, is indicative of a group the Durban Aerotropolis still needs to work on at great length.

Because RED is primarily theorised as fostering agglomeration and clustering of economic activity (Ascani et al., 2012; Basma & Van Oort, 2012; Glaeser, 2010; McGahey, 2008), enactment of RED needs to incorporate strategic ways to encourage businesses, companies, firms and people to relocate to, and invest in, specific places. These strategies include stakeholders using marketing principles as they develop the competitive advantage of their region (Kero, 2002). The stakeholders must also think entrepreneurially in selling the region to potential investors (Kero, 2012). In this regard, regional marketing can be considered as an RED facilitative mechanism which assists stakeholders in attracting investment for the cluster of economic activity (business and firms) but also for the broader agglomeration economy (presence of people to work in the firms and to live there). To attract investors, the business climate should be commendable (Hindson & Mayer-Stamer, 2007) and provide for investor requirements such as infrastructure, skilled workforce and attractive incentive packages. To attract people, the image and identity of the central location of investment and development should be reputable. Much like governance, regional marketing as a facilitating mechanism of RED requires collaboration from stakeholders but should also ensure that marketing goals of each stakeholder align with the bigger purpose of the region.

10.5. What do the findings tell us about the conceptualisation and enactment of RED?

Figure 0-1 below indicates how, as revealed in the study, conceptualisation of RED precedes enactment of RED. Conceptualisation of RED can be perceived as the stage where objectives of RED are defined through form, function and scale. Everything that comes to be implemented or enacted is as a result of the delineation of the form, function and scale of either a region or an RED project. However, for successful enactment of RED two facilitative mechanisms are required: collaborative and cooperative governance, and coordinated investments and

collaborative efforts in regional marketing. These facilitative mechanisms ensure that what is delineated in conceptualisation is implemented successfully to bring about the outcomes of RED. The next sections elaborate.

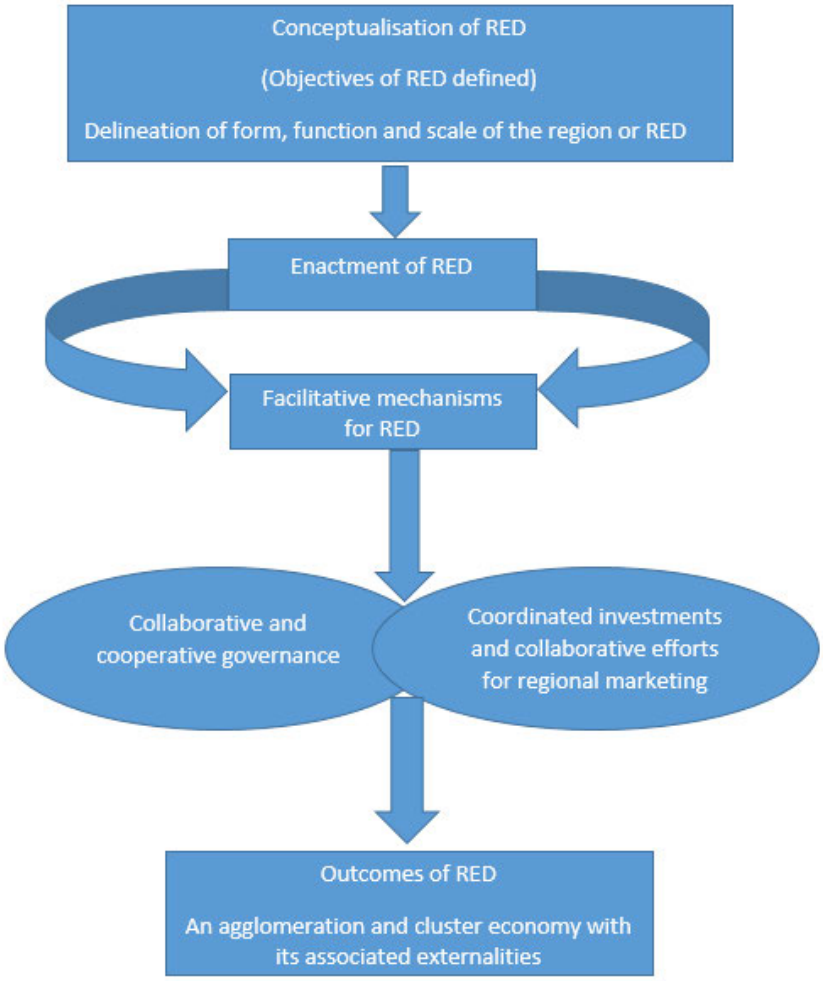

Figure 0-1 Conceptualisation and enactment of RED (Author's own)

10.5.1. Conceptualisation of RED

The findings confirm that in conceptualising RED, the region (which we could also think of as an RED project) should be clearly defined and delineated in its function, form and scale. The function is the purpose of the region. Form refers to the kind of economic development mechanism or strategy that could assist in fulfilling the purpose. Scale talks to the extent, reach and magnitude of the region.

In looking at the function of a region (RED project) it is necessary to critically think about the stakeholders entrusted with mandates that align with the defined purpose. This cannot be

achieved if there is vagueness in the definition and delineation. In dealing with the form of the region (RED project), it is crucial to consider also what resources need to be mobilised for the purpose to be fulfilled. The scale of the region highlights the physical boundaries of the region (RED project) but also clarifies its reach, which is ultimately determines which stakeholders to involve. Furthermore, it serves the purpose of defining regional (RED project) impact.

This means that different kinds of stakeholder groups might be found in a region (RED project) but who they are is contingent on how the form, function and scale of the project has been defined. It is also important because the individual actors selected for a particular region (RED project) need to be fully equipped to bring about the kind of development that is required or be able to work together for the bigger vision. The form, function and scale of the region (RED project) also inform the working dynamics of the stakeholders. This is because, collectively, they all represent and share a goal or vision – one that should ideally be held by all stakeholders involved in the strategic thinking processes of the region (RED project), although the findings in the study also draw attention to the challenges stakeholders face when working together, as in deciding what to call the project studied here. This further underlines the complexity of the governance dynamics of regions (RED projects) and how RED can only succeed if there are concerted, shared, mutually assisting efforts from various stakeholders. This requires good governance in the form of rich social capital in which the stakeholders can build a network of trust and collaboration that creates synergy between public and private sector actors.

The function of the region drives and, in a sense, delimits the purpose, but it also solidifies the stakeholders' vision of the parameters of the RED project. In so doing, the function of the region determines the planning necessary for the processes of clustering and agglomeration, in that it directs what assembles and in what way it gets assembled to fulfil the vision and purpose of the regional project. This requires and challenges stakeholders to think carefully and strategically about the types of industries that should be incorporated in an RED-focused project, their diversification, managing the assemblage, what impacts on the longevity and sustenance of the agglomeration of economic activity and the externalities associated with clustering of firms. The dynamics of this should be fully explored by the stakeholders so that the mandate of growing the regional economy through foreign and local investments results in the production and strengthening of regional economic development. This can work better if the private sector investors are also involved, so that they know their duty and responsibility in driving and facilitating RED. Otherwise, the stakeholders of an RED project are unlikely to see optimal benefit from the project.

10.5.2. Enactment of RED

What the study tells us about enactment of RED is that first and foremost it is preceded by a clear and solid conceptualisation which serves to define the RED objectives that manifest themselves in terms of form, function and scale. Secondly and of utmost importance is that it requires facilitative mechanisms: namely, collaborative and cooperative governance, coordinated investments and collaborative efforts for regional marketing.

RED governance reflects an amalgamation of networks of actors and decision-making systems. This RED mechanism requires collaborative and cooperative efforts of stakeholders that are foundational for RED as they enable coordination of resources and sharing of information and power. RED success is thus conditional on the success of collaboration, a shared vision (defined through the function or purpose in RED conceptualisation), a commitment to sharing resources, and social capital through which stakeholders develop trust.

The second RED facilitative mechanism is coordinated investments and collaborative efforts for regional marketing. The vision stakeholders have for this project is an airport city with a multi-functional purpose of agglomerating spaces to live, work and play together with clustering of industries and firms through the SEZ. The role of this facilitative mechanism for RED is to encourage businesses, firms and people to locate in the aerotropolis. In this way RED is enacted.

The purpose, goal or objective of the RED project analysed here is to be a multi-functional agglomeration economy with a cluster of industrial activity. The findings stress, however, that good RED enactment requires stakeholders who fully understand, and therefore take advantage of, the benefits of an agglomeration and cluster economy. This is because agglomeration and cluster economies do not exist without beneficial outcomes. This could be taken to mean that RED also does not exist without such beneficial outcomes; as is the case in this particular study, these benefits include knowledge diffusion and sharing between companies and firms to raise their levels of productivity and competitiveness. The benefits could also be as a result of the creation and development of value chains and new business formation through innovation and entrepreneurship.

10.6. Contribution of the study

This study makes a contribution to the theory of RED and practice of economic development. It fills the gap of what purpose conceptualising the region serves and how the concerted efforts of stakeholders ought to also consider the externalities brought about by agglomeration and clustering while prioritising efforts in regional marketing to attract investment into these very clusters. The discussion is elaborated on below with a focus on the theoretical contribution and the practical contribution of the research.

10.6.1. Theoretical contribution

The study highlights the importance of space and place in the conceptualisation of the region. In this perspective, RED can be understood as a nexus of concepts whose foundation is spatial theory. Without understanding space and place, the region could not have been understood in the complexity through which it has been formulated by RED practitioners and Durban Aerotropolis stakeholders. The region in RED is critical in that it serves a purpose of outlining the spatial form, function and scale of economic development. In so doing, the purpose of an RED project is thus outlined through function, its form defined and its extent, reach and magnitude are also considered. This definition and delineation plays a role in deciding which stakeholders to involve in the project, which share a mandate that aligns with the said project and where resources could be mobilised. This comes after the function has captured part of the vision that the strategic decision makers have made. The complexity of the region or of an RED project is simplified through examining its conceptualisation. However, its simplification is still characterised by nuances of complexity in that the region or project is defined through the lens of spatial theory as a 'throwntogetherness' or an assemblage of economic activity planned for through strategic spatial planning.

The contribution is also in how the study concludes on a presence of a region with a physical reality such as the aerotropolis. This region is territorially defined with a partial existence of administrative boundaries and a designated budget given that it seats at the provincial EDTEA. Notwithstanding its physical existence through an RED project, it can also be understood as a construct which has been subjectively conceptualised from the work of Prof. Kasarda and the multiple stakeholders. This construct has thus been utilised as an organising principle for the planning and development of an RED project. Although there are various interpretations of its

extent and reach, this is understood to be as a result of the overlapping institutional forms and juxtaposition of connections.

Further contributions come through edification of the theory on RED wherein the study asserts that regional marketing is an integral part of attracting investment for RED. Investment attraction is important given that agglomeration of economic activity and a cluster environment such as the aerotropolis requires investment both foreign and local from the sectors specified in chapter 2. The coordination of efforts for regional marketing are integral part of this process. It is thus the duty of the stakeholders to ensure that they are entrepreneurial in thinking about their region. Furthermore, it is the responsibility of stakeholders to ensure that there are efforts made towards infrastructure development, skills development and capacity building as well as incentives so as to ensure a favourable business climate for investors.

10.6.2. Practical contribution

This study has been instrumental in simplifying the nomenclature shift in that because municipal LED practitioners are used to traditional local economic initiatives, this study has provided evidence of actors and stakeholders working together. This is done first and foremost in the genesis stages of the project wherein they decide on the strategy of the project which then leads to a vision which ultimately delineates the form, function and scale of the project.

Within the space of LED projects, the primary focus is finding locally-centred ways of enhancing economic growth and reducing poverty. This is done by local stakeholders, utilising local resources of a specific territory. In RED projects however, the generative economic activity is achieved through collaborative multi-stakeholder relationships, productive networks and mutually reinforcing relationships drawing on key economic assets and infrastructure as said by Bodhanya (2015). This is because RED is sustained and concerted efforts of various stakeholder groups.

The study also clearly shows that in RED, economic development agglomerates in specific locations within the country. This is highlighted through how the aerotropolis is in itself an agglomeration economy which also consists of a cluster of industries that is known as an SEZ. Although there was lack of solid benefits of externalities of clustering in the analysis of the Durban Aerotropolis, LED practitioners in the country can now be better able to assess the

extent to which being in a cluster environment is beneficial for both the investor and local companies as well.

The study also contributes to practice in the sense that it encourages local government officials entrusted with the (R)LED mandate to apply marketing principles as they seek to develop sustainable competitive advantage. This essentially means that they need to think entrepreneurially by developing infrastructure, building capacity and skills and offering great incentives so that they can attract investment that will create opportunities for linkages with local businesses and well as create employment for citizens and thus lead to an outcome which is economic development.

10.7. Recommendations of the study

Because RED is gaining traction in the economic development space in South Africa, local municipalities will now be tasked with the responsibility of extending their economic development function beyond the locale as they embrace the complexities of thinking regionally. This will compel municipal economic development practitioners to work cooperatively with other actors from the three tiers of government and the private sector. In this regard, LED practitioners will thus be required to think entrepreneurially about their local spaces to drive investment attraction which will ultimately create jobs and lead to economic development of local municipalities.

This study has made a considerable effort to clarify the conceptualisation and enactment of RED. This should enable the practitioners entrusted with the economic development function to understand that successful RED implementation requires a clear conceptualisation of the region in its form, function and scale. Here, the practitioner should be able to state the locality's objectives for RED. In doing this, the practitioner guided in making decisions about which stakeholders to involve and what resources will be required. When conceptualisation has been done, the practitioner must decide on what RED facilitative mechanisms they should make use of to achieve outcomes that meet their original objectives.

10.7.1. Limitations and recommendations for future research

The study was solely focused on investigating the conceptualisation and enactment of RED through analysing a specific aerotropolis, which as explained in Chapter 1 and 6, is a greenfield project. Because of this, one of the study limitations is that these findings may not translate to the other aerotropolis in the country (for example, Ekurhuleni in Gauteng, which is a brownfields project) as well as aerotropoli in other parts of the world given that the contexts for these developments are different. The Durban Aerotropolis is at planning phase and this meant that some aspects of the research could not be fully explored and thus prevented a complete understanding of the enactment of RED from a longitudinal perspective.

As a result of the above limitations, there are opportunities for future research in a form of a follow-up enquiry on the agglomeration and cluster dynamics of the Durban Aerotropolis. It may be beneficial to explore agglomeration and clustering at a later stage to establish whether or not it went according to the said sectors, is being run and managed well and whether or not the stakeholders have come to an understanding of the externalities of economies of this nature. Furthermore, a study could also be done to explore the development of value chains in the Durban Aerotropolis. It would be worthwhile to assess their feasibility and what sector value chains would thrive in this particular agglomeration economy.

Having set out to explore the conceptualisation and enactment of RED through an analysis of the Durban Aerotropolis in KwaZulu-Natal, South Africa, the study concludes that conceptualisation and enactment of RED are intricately linked and influence each other. However, it remains to be seen how the complexity of these dynamics will continue to manifest themselves in the long run, since RED is a process whose agglomeration and cluster economy outcome will grow and evolve over time.

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Appendix A

Department of Economic Development, Tourism & Environmental Affairs

A. To examine the conceptualisation of the 'region' inherent in the KZN Aerotropolis' relation to Regional Economic Development.

1. What spaces and places does the Aerotropolis encompass or include?
2. Is it a project for the space and place within which it finds itself or does it go beyond that?
3. If so, how far beyond does it go?
4. On the documentation it officially says that the Aerotropolis is called the Durban Aerotropolis, do you think that this is correct and appropriate and why and why did you decide on that name?
5. Would you prefer to call it by a different name? If so, which one?
6. What implications does the project being named a Durban project have on how Durban relates to other places and how provincial government as the funder relates with other places?
7. What is the region in the context of the Aerotropolis project?
8. Will the region in the context of the Aerotropolis change over time?
9. What is the relationship between project Aerotropolis and neighbouring municipalities and regions outside of Durban but within the KZN province?

B. To understand governance mechanisms for Regional Economic Development through the Aerotropolis stakeholder relations and partnerships

10. What was the strategic thinking that led to the vision of the Aerotropolis project?
11. Which of the stakeholders were involved during the strategy formulation stages?
12. Why did the strategy formulation include these stakeholders specifically and not the others?
13. What in your view were their roles and responsibilities in the development and implementation of the strategy or creation of a vision for project Aerotropolis?
14. Is there a stakeholder relations strategy?
15. What is the collective vision for project Aerotropolis?
16. Do you have a board of directors?
    - If so, who makes up the board?
    - What are the skills that are needed for the board to effectively execute its responsibilities?
    - What processes are necessary for the board to both understand and properly oversee the activities of the organization?
    - Is the information you have relayed to the board adequate to support effective oversight and decision-making?
17. Who is currently responsible for annual operating plans and financial plans?

18. In business you would have a CEO and staff to take care of the clients? Who in project Aerotropolis plays a role of CEO or project management and what would/do support staff roles entails?
19. Who will oversees the talent programs of the Aerotropolis, particularly those related to executive leadership and potential successors to the CEO?
20. How critical has engagement been in the process of setting up project Aerotropolis?
21. What engagement channels do you have in place? (roundatables workshops)
22. What resources are available for stakeholder engagements? (consultants or facilitators)
23. Who are the stakeholders and partners during the implementation and operational phase of the Aerotropolis?
24. In the case of project Aerotropolis, who do you think your clients are? (who benefits directly from project Aerotropolis' activities?)
25. Who is responsible for the monitoring and evaluation of the Aerotropolis?

C. To interrogate clustering and agglomeration of businesses as a feature for Regional Economic Development, through their enactment in the Aerotropolis

- **<u>Agglomeration</u>**

26. What kinds of industries would be found within the Aerotropolis?
27. Do you need diversity in these companies? For what reason?
28. Overtime, the proposed cluster may need to evolve, given the growth and development of the various industries. Given that possibility, what measures will you have in place to ensure that the whole concept of the Aerotropolis remains manageable?
29. In your view, what will impact on the longevity of the proposed Aerotropolis?
30. Is it economic gains or attracting more investment that ensures the persistence of the geographic concentration within the Aerotropolis?

- **<u>Knowledge Diffusion</u>**

31. What is your knowledge of how knowledge sharing between firms will happen in the context of the Aerotropolis?
32. In the case of more advanced firms who do not feel comfortable sharing their expertise? How will you deal with the politics of them not wanting to share information?
33. Do you anticipate a problem of freeriding? Where some of the firms will consume more knowledge than the share of others?
34. How are each of the firms within the Aerotropolis located within the Aerotropolis to enable knowledge sharing?
35. What do you anticipate the firm linkages or partnerships with universities, research and development institutes and other higher education institutions entailing with regards to knowledge sharing in the context of the Aerotropolis?

36. How will you maintain knowledge sharing relations between foreign investors and local firms?

- **Global Value Chains**
    37. What is your understanding of how the value chains will work in relation to the aerotropolis?
    38. What value chain will you fully concentrate on?
    39. Is the Aerotropolis a project and strategic investment by the province to access GVCs? How will this happen?
    40. Is the Aerotropolis offering products or services? Please explain.
    41. How do you plan on using this technology to ensure that the Aerotropolis and firms there remain competitive?
    42. Will any of this technology be used during the production stages?
    43. What modes of transportation will the output from the Aerotropolis based firms require to facilitate the movement of goods?
    44. What plans do you have in place to ensure efficiency of Aerotropolis firms as global players?
    45. How does the Aerotropolis benefit from the liberalisation of trade and investment?
    46. What foreign markets does the Aerotropolis anticipate having access into?
    47. What business processes do companies within the Aerotropolis usually outsource?
    48. What opportunities will be created for local suppliers?
    49. What will be the overall outcome of the Aerotropolis being part of the GVCs? (economic or social upgrading)
    50. What is the level of development of value chains and their governance systems within the Aerotropolis?
    51. Will the Aerotropolis have knowledge systems developed to facilitate collaboration, knowledge capture, storage, transfer and flow; knowledge use; as well as to foster creativity and innovation?
- **Entrepreneurship & Innovation**
    52. Is the Aerotropolis concerned more about entrepreneurship or innovation? Is it more about businesses than it is about being a unique development of its kind in the region?
    53. Will the Aerotropolis support industry and entrepreneurship at the local level?
    54. Where will be the concentration of entrepreneurs developed by the Aerotropolis?
    55. Does the Aerotropolis intend on promoting entrepreneurship and innovation?
    56. Will it target already existing businesses or is its target upcoming businesses? Please motivate as to why?
    57. What plans will it have in place to develop entrepreneurs or support them?
    58. Is the intention of the Aerotropolis to be seen as another Silicon Valley or does it have a different vision in mind?

59. What exactly is the vision in terms of the kinds of businesses or investments the Aerotropolis is intending on attracting?

D. To explore regional marketing as a characteristic of Regional Economic Development through the Aerotropolis coordinated investments.

60. What role does regional marketing play in investor attraction and the overall Aerotropolis project?
61. What structures do you have in place to ensure a smooth process of setting up shop for both foreign and local investors?
62. What identity do you plan on giving the Aerotropolis, what do you want it to stand for and how do you want it to be perceived? How will this help you attract investment into the Aerotropolis?
63. What exclusive natural advantages does the Aerotropolis and the region have or offer potential investors? & how will these help you attract foreign investment? (The ability for an economic actor to produce a good or service because the resources to do so are physically available)
64. Does the Aerotropolis have adequate and appropriate infrastructure for project set-up and investor attraction?
65. What are the infrastructural requirements and how can they be funded?
66. How are skills and labour requirements of the Aerotropolis addressed at a regional level?
67. What are the incentive offerings and how do they help with attracting investment into the Aerotropolis?
68. How publicised are the incentive negotiations?

All other stakeholders

E. To examine the conceptualisation of the 'region' inherent in the KZN Aerotropolis' relation to Regional Economic Development.

1. What spaces and places does the Aerotropolis encompass or include?
2. Is it a project for the space and place within which it finds itself or does it go beyond that?
3. If so, how far beyond does it go?
4. On the documentation it officially says that the Aerotropolis is called the Durban Aerotropolis, do you think that this is correct and appropriate and why and why did you decide on that name?
5. Would you prefer to call it by a different name? If so, which one?
6. What implications does the project being named a Durban project have on how Durban relates to other places and how provincial government as the funder relates with other places?
7. How does the Aerotropolis being a Durban project affect the project financing model?
8. What is the region in the context of the Aerotropolis project?
9. Will the region in the context of the Aerotropolis change over time?

10. What is the relationship between project Aerotropolis and neighbouring municipalities and regions outside of Durban but within the KZN province?

F. To understand governance mechanisms for Regional Economic Development through the Aerotropolis stakeholder relations and partnerships

11. What was the strategic thinking that led to the vision of the Aerotropolis project?
12. What was the role of your organisation in that?
13. Where do you fit in on the organisational structure?
14. Are you in a formal and legal partnership with the main stakeholders?
15. How do you uniquely make a difference in this project?
16. What are your organisational goals in as far as project Aerotropolis is concerned?
17. What will be achieved through project Aerotropolis? (the projects end)
18. How will that be done? (project means to getting to the end)
19. How will you align your organizational resources and activities with the end that you have defined above?
20. What is your expectation from the success/risk of the project or its outcomes?
21. How would you rate your decision making power within the Aerotropolis project?
22. Are there any stakeholder engagements that you have been part of? Which ones are those?
23. In what way have these stakeholder engagements been fruitful?
24. What policies or strategies govern the setting up and operation of project Aerotropolis?
25. Who is responsible for monitoring and evaluation of the Aerotropolis project?

Trade & Investment KZN

G. To examine the conceptualisation of the 'region' inherent in the KZN Aerotropolis' relation to Regional Economic Development.

1. What is the region in the context of the Aerotropolis project?

H. To understand governance mechanisms for Regional Economic Development through the Aerotropolis stakeholder relations and partnerships

2. What was the strategic thinking that led to the vision of the Aerotropolis project?
3. What was the role of your organisation in that?
4. Where do you fit into the organisational structure?
5. Are you in a formal and legal partnership with the main stakeholders?
6. Are there any stakeholder engagements that you have been part of? Which ones are those?

7. In what way have these stakeholder engagements been fruitful?

I. To explore regional marketing as a characteristic of Regional Economic Development through the Aerotropolis coordinated investments.

8. Who is responsible for marketing of the region?
9. What is the general aim of regional marketing?
10. What has the general been like?
11. How does Aerotropolis marketing link to the way the regional marketing for KZN is done?

- **Business Climate**
  12. What is the general market access and the country's openness to FDI? (capital mobility)
  13. Do you think the country, province and Durban specifically have a relatively open framework for foreign investment and an attractive business climate?
  14. What impact would the volatility of our exchange rate have on attracting investors for the Aerotropolis?
  15. Is our market size complementary to the output from the Aerotropolis firms?
  16. Is the region's trade union influence favourable for investor attraction?
  17. Did the KZN business environment need to be reformed to accommodate the establishment of the Aerotropolis?
  18. What structures do you have in place to ensure a smooth process of setting up shop for both foreign and local investors?
- **Image & Identity**
  19. Do you have a regional strategy or a vision for regional marketing in as far as the Aerotropolis is concerned? What does it entail?
  20. Which stakeholders are involved in putting together the regional marketing strategy and plan in as far as project Aerotropolis is concerned?
  21. What identity do you plan on giving the Aerotropolis, what do you want it to stand for and how do you want it to be perceived?
  22. A place with many already existing firms is more attractive to entrepreneurs; given this, what is your initial plan of attracting firms into the Aerotropolis?
  23. How will you ensure the overall attractiveness of the Aerotropolis to investors?
  24. Why are you marketing the project as Durban Aerotropolis and not KZN Aerotropolis? Take us through your reasoning?
- **Attraction**
  25. What exclusive natural advantages does the Aerotropolis and the region have or offer potential investors? (The ability for an economic actor to

produce a good or service because the resources to do so are physically available)

- **Infrastructure**
  26. Does the Aerotropolis have adequate and appropriate infrastructure for project set-up and investor attraction?
  27. What are the infrastructural requirements and how can they be funded?
- **People**
  28. Do you have a sufficient skills base for the industries you intend on attracting into the Aerotropolis?
  29. What are some of the skills that will be required?
  30. What skills will you develop to ensure that locals can stand a good chance of getting employment within the Aerotropolis?
  31. Which institutions are you working with to ensure that you are provided with graduates to feed into those industries?
  32. Do we have a responsive higher education system? One willing to support the operations of the Aerotropolis?
  33. Generally, do you think the quality of our Higher Education Institutions in the region is good enough to convince investors into the Aerotropolis?
  34. Is there a formal partnership or memorandum of understanding that you have entered into with these institutions?
  35. What are the terms of the partnership?
  36. What role do South African migration policies play when it comes to making considerations about what to do in a case of skills shortages for the Aerotropolis?
  37. Did/do we have to recruit foreign labour?
- **Incentives**
  38. What incentives are available to companies setting up shop in the Aerotropolis?
  39. Who will deal with issues of incentivising companies?
  40. How will you deal with ensuring that the incentives provided lead more to economic growth more than they do to loss?
  41. What will be the social costs and benefits of the incentives in the Aerotropolis project?
  42. How publicised are the incentive negotiations?
  43. How do you hold recipients of incentives accountable?

Companies within the Dube TradePort Special Economic Zone

1. Can you please give me some background on your company, like who you are and what you do and specialise in?
2. Before your offices were close to the airport, where were you based?
3. How long have you been located here?
4. Which component of the Dube TradePort are you located in?
5. What motivated you to bring your business close to the airport?
6. How is your being in close proximity to the airport crucial for your business?

Knowledge Diffusion

7. Does your company have any relationships with other companies within the zones?
8. What is the nature of this relationship?
9. How is this relation beneficial to your business progression?
10. Does your company have any relationship with foreign investors?
11. Does your company have any relationship with institutions of learning locally or provincially?
12. In your knowledge, do companies share information given that they are in close proximities to each other?
13. Who do you use for your staff training and development?
14. What kind of training and development does your staff usually require?

Value Chains

15. What value chain does your company concentrate on?
16. How is your integration there?
17. What foreign markets does your company have access to? Please tell us about this in depth.

Entrepreneurship and Innovation

18. As entrepreneurs do you feel fully supported and favoured by the Aerotropolis project?

Regional Marketing

19. What do you think of the overall business climate around the airport and the new Aerotropolis project?
20. What do you perceive the Aerotropolis as? What image does it purvey to you?
21. When you first located into the Aerotropolis, how was the availability of labour?
22. Did you need to recruit labour from overseas?
23. Were you provided with all the infrastructure when you set up shop here? If not what happened? What could they have done better?
24. What incentives were you offered?
25. What better incentives could they provide?
26. In your view, is a one stop shop required?

Appendix B
Letter of consent

UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINES AND LEADERSHIP

Dear Respondent,

Researcher: Miss Nomkhosi Luthuli (0762617916/0312608887)
Supervisor: Dr Jennifer Houghton (0312607429)
Research Office: Premlall Mohun (0312607224)

I, **Nomkhosi Luthuli (207504959)** a Doctor of Philosophy student, at the **Graduate School of Business & Leadership**, of the University of Kwazulu-Natal invite you to participate in a research project entitled, 'A conceptualization and enactment of Regional Economic Development through the analysis of the Aerotropolis in KwaZulu-Natal'.

Through your participation I hope to address the following questions:

1. To examine the conceptualisation of the 'region' inherent in regional economic development through the Durban Aerotropolis.
2. To understand governance mechanisms for regional economic development in the case of the Durban Aerotropolis stakeholder relations and partnerships.
3. To interrogate agglomeration and clustering of businesses as a feature of regional economic development, in relation to their enactment in the Durban Aerotropolis.
4. To explore regional marketing as a characteristic of regional economic development through the coordinated investments in the Durban Aerotropolis.

The results of the study are intended to contribute to the literature on Regional Economic Development in the South African context.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business and leadership, UKZN.

If you have any questions or concerns about participating in this study, you may contact me or my supervisor at the numbers listed above.

The interview should take about **40 minutes** to complete.

Sincerely

Investigator's signature_____ Date_____

Consent Form

I…… (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I have also given the researcher consent to record the interview ☐

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Signature of Participant…..…… Date……..

Appendix C
Ethical clearance letter

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

22 January 2018

Ms Nomkhosi Hlengiwe Luthuli (207504959)
Graduate School of Business & Leadership
Westville Campus

Dear Ms Luthuli,

Protocol reference number: HSS/0505/016D
New Project title: An exploration of the conceptualisation and enactment of Regional Economic Development through an analysis of the Durban Aerotropolis in KwaZulu-Natal, South Africa

Approval notification – Amendment Application

This letter serves to notify you that your application for an amendment dated 18 January 2018 has now been granted **Full Approval** as follows:

- **Change in Title**

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully

[redacted]

Professor Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

cc Supervisor: Dr Jennifer Houghton
cc Academic Leader Research: Dr Muhammad Hoque
cc School Administrator: Ms Zarina Bullyraj

Appendix D
Turn-it-In report

turnitin

Digital Receipt

This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

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portfolio for Nomkhosi Luthuli

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