

Reflecting on the formation of metropolitan regions in South Africa

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ABSTRACT

During apartheid, the spatial structures of South Africa's administration were based on racial profiles, both at the macroscale and the microscale. The rise of democracy brought with it one of its primary aims, which was to create a new sense of nationhood. One way in which this aim has been sought was by reshaping the country's administrative structure from the former racially segregated structure to a wall-to-wall structure to symbolise a de-racialised nation that is built on democracy and equality. In 1996 the final Constitution (South Africa, 1996) made provision for three categories of administrative entity in the country: category A (metropolitan municipalities), category B (local municipalities), and category C (district municipalities). However, criteria on how the various municipalities should be categorised and demarcated was only communicated in 1998 with the passing of Sections 2 and 3 and Sections 83 to 89 of the Municipal Structures Act (117 of 1998 as amended in 2000) and Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) (Todes *et al.*, 2010b; South Africa, 2014; Fuzile, 2015; National Treasury, 2013; Nene, 2015). Before the 2000 local government elections, the Municipal Demarcation Board (MDB) demarcated and categorised six municipalities as category A metropolitan municipalities against the criteria set out by the various acts. In 2011 the MDB included Buffalo City and Mangaung as metropolitans in addition to the six metropolitan municipalities. However, these eight metropolitan municipal entities varied in structure and composition, which led a 2012 report by the South African Cities Network (SACN) to comment that it had found the criteria that defined a metropolitan municipality in South Africa to be unclear. This study sought to reflect on the processes that the MDB followed in interpreting and implementing the Section 2 criteria of the Municipal Structures Act (117 of 1998) (henceforth the Section 2 criteria) between 1999 and 2011 by conducting a comprehensive analysis across the current eight metropolitan municipalities to compare and contrast their adherence to the said criteria during that period. This study found the interpretation and application of the Section 2 criteria to have been inconsistent and calls for more objective implementation criteria by the MDB to ensure consistency in the categorisation of category A metropolitan municipalities in future. This study contributes to the academic discourse on urban hierarchy and administrative restructuring of South Africa, and provides planning recommendations to guide municipal categorisation in South Africa going forward.

Key words: Categorisation, demarcation, democracy, metropolitan, Municipal Structures Act, rural, urban, urban hierarchy.

OPSOMMING

Tydens die apartheids-era is Suid-Afrika se administrasie op beide die mikro- en makrovlakke volgens rasseprofiel gestruktureer. Daarna sou die totstandkoming van demokrasie een van sy primêre doelwitte die lig laat sien, naamlik nasiebou. Een van die wyses waarop hierdie doelwit nagestreef is, is met die hervorming van die land se administratiewe strukture vanaf die voorheen rasgebaseerde verdelingstruktuur na 'n inklusiewe, omvattende en nie-rasspesifieke struktuur wat gebou is op demokrasie en gelykheid. In 1996 het die Grondwet (Suid-Afrika, 1996) voorsiening gemaak vir drie kategorieë administratiewe entiteite in die land, naamlik: kategorie A (metropolitaanse munisipaliteite), kategorie B (plaaslike munisipaliteite), en kategorie C (distrikmunisipaliteite).

Ten spyte daarvan is die kriteria vir die kategorisering en afbakening van die verskeie munisipaliteite eers in 1998 met die verordening van Artikels 2, 3, 83 en 89 van die Wet op Munisipale Strukture (117 van 1998 soos gewysig in 2000), en Artikels 24 en 25 van die Wet op Munisipale Afbakening (27 van 1998), deurgegee (Todes *et al.*, 2010b; Suid-Afrika, 2014; Fuzile, 2015; Nasionale Tesourie, 2013; Nene, 2015). Voor die plaaslike verkiesings van 2000, het die Munisipale Afbakeningsraad (MAR) munisipaliteite geklassifiseer as kategorie A metropolitaanse munisipaliteite teen die kriteria wat deur die verskeie wette voorgeskryf is. In 2011 is Buffalo City en Mangaung deur die MAR as metropolis by die ses ander metropolitaanse munisipaliteite ingesluit. Hierdie agt metropolitaanse munisipale entiteite het egter van mekaar verskil in struktuur en samestelling. Dit het tot gevolg gehad dat die Suid-Afrikaanse Stede Netwerk (SASN) in 2012 'n verslag uitreik waarin die kriteria vir die definisie van 'n metropolitaanse munisipaliteit as vaag en onvoldoende beskryf is.

Hierdie studie het gepoog om die proses te verken wat tussen 1999 en 2011 deur die MAR gevolg is in terme van die interpretering en toepassing van Artikel 2 se kriteria van die Wet op Munisipale Strukture (117 van 1998) (voortaan Afdeling 2-kriteria) deur 'n omvattende analise van die agt metropolitaanse munisipaliteite uit te voer, om sodoende dié munisipaliteite se nakoming aan die kriteria tydens hierdie tydperk te vergelyk en in kontras te stel.

Hierdie studie het bevind dat die interpretering en toepassing van hierdie kriteria nie deurlopend konsekwent toegepas was nie en stel voor dat die MAR die kriteria meer objektief toepas om sodoende die konsekwente kategorisering van kategorie A metropolitaanse munisipaliteite te verseker. Die studie dra by tot die akademiese debat oor stedelike hiërargieë en reflekteer op

die administratiewe herstruktureringpraktike in Suid-Afrika ten einde beplanningsaanbevelings daar te stel vir munisipale kategoriseringspraktike in die Suid-Afrikaanse konteks.

Sleuteltermes: Afbakening, demokrasie, kategorisering, metropolitaanse, landelike, verstedelike, stedelike hiërargie, Wet op Munisipale Strukture.

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LIST OF ABBREVIATIONS

AsgiSA: Accelerated and Shared Growth Initiative for South Africa

AC: Average Cost

AR: Average Revenue

Category A: Metropolitan Municipality

Category B: Local Municipality

Category C: District Municipality

CAPEX: Capital expenditure

CBD: Central Business District

CCS: Compare and Contrast strategy

CoGTA: Department of Cooperative Governance and Traditional Affairs

CSIR: Centre of Science and Industrial Research

CPI: City Prosperity Initiative

EPWP: Expanded Public Works Programme

EU: European Union

FUR: Functional Urban Region

GDP: Gross Domestic Product

GEAR: Growth Employment and Redistribution

GVA: Gross Value Added

HDI: Human Development Index

HSRC: Human Science Research Council

IDP: Integrated Development Planning

ISRDP: Integrated Sustainable Rural Development Programme

IUDF: Integrated Urban Development Framework

iREC: internal Research Ethics Committee

KEQ: Key Evaluation Question

MC: Marginal Cost

MDB: Municipal Demarcation Board

MEC: Member of the Executive Council

MIIF: Municipal Infrastructure Investment Framework

MR: Marginal Revenue

NDP: National Development Plan

NGP: New Growth Plan

NUDF: National Urban Development Framework

NSDP: National Spatial Development Plan

OECD: Organization for Economic Co-operation and Development

OPEX: Operational expenditure

PUR: Polycentric Urban Region

RDP: Reconstruction and Development Programme

REC: Research Ethics Committee

RIDS: Regional Industrial Development Strategy

SACN: South African Cities Network

SDF: Spatial Development Framework

SOP: Standard Operating Procedure

SPLUMA: Spatial Planning and Land Use Management Act

TLA: Transitional Local Authorities

UDF: Urban Development Framework

UN: United Nations

UNICEF: United Nations International Children's Emergency Fund

WHO: World Health Organization

Definitions

Balanced development: A development approach whereby various hubs, settlements or economic sectors are developed simultaneously in the hope that they would develop and grow in coherence.

Category A: A conurbation defined in section 2 of the municipal structures Act (117 Of 1998), which is under the power of a unitary local government.

Category B: Is a local municipality.

Category C: Is a district municipality which acts as an umbrella body over a category B municipality.

Fragmentation: A scenario where by the settlement or administrative areas does not appear to be integrated spatially.

Hub: Centre of socio-economic activity.

Integration: A scenario whereby with various parts or aspects of a human settlement or administrative entity are linked or coordinated.

Municipality: An administrative region of South Africa.

Open spaces: Land that is undeveloped within the municipality.

Unbalanced Development: A development approach in which resources are concentrated in one sector, hub, or settlement.

Urban areas: Comprises of formal cities or towns that could include high and low-income, medium or high-density settlements with high levels of economic activity and land values.

Rural areas: Low-density, planned or unplanned (homelands or townships) settlements with populations of over 5 000 people situated either close to other urban areas or located in the countryside, with small economic bases

CHAPTER 1: INTRODUCTION

1.1 Contextualisation of research

The intention of administrative restructuring practices globally has been to make settlements more efficient, cost-effective, and spatially integrated to promote positive social, economic, and national development (Sutcliffe & Bannister, 2014). This notion is aligned with the intentions of the democratic government of South Africa in its spatial restructuring endeavours. Despite this, not only did the democratic government inherit a racially fragmented administrative structure but also a country that had little knowledge of the nature of its own settlements (South Africa, 1998; Laldaparsad, 2007), which made the expectation to restructure the administrative spatial landscape over a brief period of seven years (1993–2000) a rather ambitious task (Sutcliffe, 1999; Cameron, 1999; Cameron, 2005).

Close to 18 years after the first official restructuring exercise (2000), it has become a common reality that many of the newly created municipal administrations are experiencing challenges in the form of poor service delivery or being investigated for misappropriation of funds (Cameron, 2010; John, 2012; SACN, 2014; Omarjee, 2018). An urban and regional planner reflecting on these issues might instinctively be led to ask questions about whether the structure and composition of these municipalities may be contributing to these problems.

This thesis will reflect on the categorisation practices of South African municipalities. Initial investigation has revealed that legislation only provides criteria on how category A metropolitan municipalities should be categorised. While it does go on to prescribe that all other forms of municipality that do not adhere to these criteria should be categorised as either category B (local municipalities) or category C municipalities (district municipalities), it provides no criteria on how to categorise them as it has category A municipalities. Having considered this shortcoming, this thesis will reflect on the legislative criteria to which a municipality should adhere for it to be categorised as a category A metropolitan municipality in South Africa. This is done to make appropriate planning recommendations that could assist in streamlining future categorisation of administrative entities in South Africa.

This chapter will contextualise the research and substantiate the chosen methodological approach.

1.2 Problem statement and substantiation

Human settlements have always been hubs of economic activity, constantly evolving and varying in size, structure, and function (Hall, 1966). Governments often use these 'hubs' as tools

to attain their socio-economic and political objectives (UN, 2008). Currently there exist two main schools of thought on how to develop a national economy (Todaro & Smith, 2011). On the one hand are economists such as Nurkse (1953) and Rosenstein-Rodan (1957), who promote a more integrative approach in which the various hubs, settlements or economic sectors are developed simultaneously in the hope that they would develop and grow in coherence. On the other hand are Hirschman (1958) and Singer (1958), who believe that a more fragmented approach in which resources are concentrated in one sector, hub, or settlement would enable quicker development, and the positive spill-over would in turn develop the rest of the economy. Regardless of the stance taken, the primary objective of all government policies related to human settlements is to stimulate economic growth and development within the country in the most efficient and sustainable manner possible.

A global human settlement policy trend since the 1970s has been to restructure administrative entities in order to make their governance more cost-efficient and effective (Barlow, 2004; Wright, 2007). This trend is a response to the challenges that many governments have faced and still face concerning citizens' needs, financial constraints due to economic recession, or changes in political power (Peters, 2002). Accordingly, many governments globally have restructured their administrative entities in one of two ways, of which the first is a balanced economic growth approach. This approach involves the enlargement of administrative areas by amalgamating smaller, less economically efficient settlements with larger settlements to create more efficient, effective, and sustainable spatial entities (UN, 2008). The second approach is an unbalanced economic growth approach, and it involves increasing the density in already existing areas by growing upwards to take advantage of economies of scale and agglomeration benefits (UN-Habitat, 2013, 2014; Turok, 2013). Over the past 25 years (1993–2018) the South African approach to structural-spatial administrative reform has adopted the former approach, namely a balanced economic growth approach (John & Mahlangu, 2011; South Africa, 1998, Municipal Demarcation Act (27 of 1998); Sutercliff, 1999; Cameron, 2010).

With the rise of democracy in South Africa, the Local Government Transition Act (209 of 1993) together with the Interim Constitution (South Africa, 1993) called for the restructuring of the country's administrative landscape by creating a wall-to-wall administration system, which restructured the 1 283 racially divided municipalities of the former apartheid regime. The new system suggested that the municipalities be racially merged and re-categorised as either metropolitan, urban, or rural municipalities (South Africa, 1993; Cameron, 2005).

However, no set legislation other than the Local Government Transition Act (209 of 1993) was put in place on how restructuring and municipal categorisation were to take place in 1994. Nevertheless, the National Government employed nine local government demarcation boards

(one for each province) as advisories to the Minister of Provincial Councils and Local Government on how boundaries should be demarcated within their provinces. As a result of this demarcation process, in 1995 the 1 283 administrative structures of the apartheid government were reduced to form 843 racially integrated municipalities. Five of these 843 municipalities were identified by Minister Sydney Mufamadi as metropolitan areas: Johannesburg, Greater Pretoria, Khayalami, Greater Durban, and Greater Cape Town (Sutcliffe, 1999; Cameron, 1999). However, on account of there being nine different advisory local government demarcation boards, the resulting processes and practices of demarcating boundaries around these municipalities during this period were found to be inconsistent, and a shared understanding of what defined and constituted rural and urban areas was lacking (Cameron, 1999).

Consequently, with the acceptance of the final Constitution in 1996, the South African Government adopted a more extensive development structure which combined rural settlements with functionally linked urban areas to create three categories of municipal administrative entities: category A (metropolitan municipalities), category B (local municipalities), and category C (district municipalities) (South Africa, 1996; South Africa, 1998; Woolridge, 2002; Rogerson, 2006; Angel *et al.*, 2012; De Visser & Poswa, 2017; South Africa, 2015). These administrative entities were intended to represent a more inclusive, equitable, and integrated society (South Africa, 1998; Atkinson, 2014). In view of this, the Constitution (South Africa, 1996) also called for the election of a single, independent municipal demarcation board that would be responsible for the demarcation and categorisation of these municipalities across the country (South Africa, 1996).

In addition to the constitutional requirements were also various legislations that were passed by the National Government to guide the administrative restructuring process, of which the most important for the purposes of this thesis are the White Paper on Local Government (South Africa, 1998), which is also known as the mini-constitution of local governments; the Municipal Demarcation Act (27 of 1998), which set out the guidelines for demarcating administrative boundaries; the Municipal Structures Act (117 of 1998), which laid out the criteria by which these municipalities should be categorised; and the Municipal Systems Act (32 of 2000), which guided the operational aspects of these entities. These measures were put in place to ensure that administrative entities were demarcated and categorised consistently (MDB, 2016; Thupana, 2017; Cameron, 1999).

In 1999 the South African National Government elected a municipal demarcation board (MDB). During the first municipal demarcation exercise in 1999, the MDB evaluated the 1996 South African census statistics and household surveys data for various municipalities against the criteria set out in Section 2 of the Municipal Structures Act (117 of 1998) (Cameron, 2005; MDB,

1999). The MDB amalgamated the 843 municipalities (metropolitan, urban, and rural municipalities) into 278 integrated municipalities (category A metropolitan municipalities, category B local municipalities, and category C district municipalities). According to the MDB, only four of the previously demarcated five metropolitan municipalities were category A municipalities, namely the City of Johannesburg, Tshwane, the City of Cape Town, and eThekweni. However, between 1994 and 2000 their boundaries were adjusted in adherence to the criteria of Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998). In addition to these four metropolitans the MDB demarcated and categorised the East Rand Municipality (Ekurhuleni) as a metropolitan municipality. Though this municipality did not have a main economic centre as such, this categorisation was motivated by the functional and economic interdependence between the settlements, the population density, and socio-economic activities which were comparable with the four already demarcated metropolitan municipalities (Cameron, 2005; MDB, 1999). In 1999, the MDB also identified the Port Elizabeth-Uitenhage-Despatch industrial complex (Nelson Mandela Bay) in the Eastern Cape as a category A metropolitan municipality. This decision was supported by the region's significant socio-economic and functional linkages, which qualified it as a category A metropolitan status (Cameron, 2005). This resulted in the MDB categorising and demarcating six municipalities (eThekweni, Ekurhuleni, the City of Cape Town, the City of Johannesburg, Tshwane, and Nelson Mandela Bay) as category A metropolitan municipalities before the first democratic local government elections of 2000 took place (Cameron, 2001).

During this categorisation process the MDB determined that Lekoa-Vaal (Vanderbijlpark and Vereeniging), Bloemfontein (Mangaung), East London (Buffalo City), Pietermaritzburg (Msunduzi), Kyalami, and Richards Bay did not satisfy the Section 2 criteria and were hence not granted category A metropolitan status in 2000 (MDB, 1999). Reasons, provided by the MDB for this decision included that the Lekoa-Vaal region was too small and its economy had not yet been well developed (MDB, 1999; MDB, 2003); the Bloemfontein-Botshabelo (Mangaung) and Buffalo City did not have diverse or complex economies, lacked extensive development, did not have a high enough population density, and their economic compositions were too small (MDB, 1999; MDB, 2003). However, in 2011 both Buffalo City and Mangaung municipalities were granted category A status on the basis of the boundaries that had been demarcated in 2000 (Naidoo, 2009; MDB, 2008; Atkinson, 2014, Turok & Borrel-Saldin, 2013). However, in 2012 the South African Cities Network (SACN) report titled *Towards Understanding Intermediate Cities in South Africa* found that the development trajectories of the newly demarcated metropolitans (i.e. Buffalo City and Mangaung municipalities) did not support their becoming metropolitan municipalities but, in fact, suggested the contrary (John, 2012).

These observations inform the core focus of this thesis, namely to reflect on the interpretation and implementation processes of the Section 2 criteria that were used to categorise category A metropolitan regions in South Africa over the period of 1999 to 2011. The empirical study ends at 2011 since this was the year in which the last two metropolitan municipalities were categorised. However, the literature study extends beyond 2011 to capture the current reality of spatial administrative planning in South Africa. By reflecting on the manner in which administrative regions are categorised in South Africa, this study will contribute to the academic discourse on urban hierarchy in South Africa and offer insight into the administrative restructuring process in post-apartheid South Africa, thereby guiding future urban planning and municipal categorisation in the South African context.

1.3 Research statement

This thesis will reflect on the criteria set out in Section 2 of the Municipal Structures Act (117 of 1998) and its requirements for the categorisation of category A metropolitan municipalities in South Africa by investigating the interpretation and the implementation of the Section 2 criteria. In this regard, the study will triangulate the interpretation of the criteria from a theoretical, professional, and MDB perspective. Furthermore, this thesis will present a comparative analysis of the eight metropolitan municipalities within South Africa over an 11-year timeframe (1999–2011) to reflect on the MDB's implementation of the criteria. The criteria for categorisation have remained the same since 1998 and are employed as such in this study.

1.4 Research aim, objectives and research questions

1.4.1 Primary research aim

This thesis will offer a critical reflection on the interpretation and implementation of the Section 2 criteria by the MDB in categorising the eight category A metropolitan municipalities in South Africa between 1999 and 2011 (time of demarcation employed by government) to conclude on the consistency of application and make planning recommendations to guide municipal categorisation going forward.

1.4.2 Objectives

Based on the research aim, the objectives of this study include:

- (1) To reflect on the administrative restructuring process in South Africa with the purpose of contributing to the academic discourse on urban hierarchy in South Africa.

- (2) To unpack how the various municipalities are demarcated and categorised in South Africa with the purpose of contributing to the body of knowledge on the demarcation of administrative structures.
- (3) To reflect on the formation of metropolitan regions in South Africa against the Section 2 criteria of the Municipal Structures Act (117 of 1998)
- (4) To make planning recommendations, based on the literature review and empirical investigation pertaining to this study, to guide future administrative categorisation processes in South Africa.

1.4.3 Research questions

- (1) What is a metropolitan city and how does it differ from a metropolitan administrative entity?
- (2) How are administrative areas delineated theoretically?
- (3) How are human settlements categorised in South Africa?
- (4) How has the administrative structure been restructured in South Africa post-1994 and how were the various administrations entities delimited and categorised?
- (5) How has the prescribed criteria in Section 2 of the Municipal Structures Act (117 of 1998) been interpreted and implemented in categorising category A metropolitan municipalities in South Africa between 2000–2011?
- (6) How should future administrative categorisation processes be approached in South Africa?

1.5 Contribution to new knowledge generation

New regionalist theories offer no descriptions for delimiting or categorising metropolitan areas (Savitch & Vogel, 1996; Hamilton, 2002; Porter, 2003; McLeod, 2001). South Africa is one of the few countries in the world with defined criteria for what metropolitan municipalities should comprise of to be categorised as such (Cameron & Meligrana, 2010). Although available literature exists on the demarcation and governance of municipalities (Pillay, 1999; Mabin, 1997; Watson, 2002; Mabin, 2006; Harrison & Gotz, 2014; Harrison & Bobbins, 2014; Harrison & Todes, 2016; Todes *et al.*, 2010a; Nxumalo, 2013), research on the categorisation of municipalities in South Africa is limited, with the only published work available being from a

political-administrative perspective by Cameron (1999; 1996; 2005; 2008), Cameron and Game (2005), and Cameron and Meligrana (2010), and from a reporting perspective by Sutcliffe (1996; 1999).

Hence, this thesis can be considered a pathfinder in that no similar study has been undertaken to date to reflect on the categorisation of metropolitan municipalities from an urban planning perspective in South Africa between 1999 and 2011. In this light, this thesis will:

- (1) contribute to academic discourse on the urban hierarchy, especially pertaining to South Africa;
- (2) contribute to the evidence base on how administrative structures are delimited in South Africa;
- (3) contribute to informing the parliamentary debates regarding the categorisation of metropolitan regions in the country; and
- (4) guide future urban planning as well as municipal categorisation and demarcation in the South African context.

1.6 Research design

The research design describes the method used for this study to ensure that the data collected would enable it to generate answers and address its objectives. In this regard, this thesis will seek to reflect on the manner in which Section 2 of the Municipal Structures Act (117 of 1998) has been interpreted and implemented between 2000 and 2011, to categorise the current eight categories A municipalities.

This study employed a process evaluation research design, which has been used extensively in social, education, medical, statistical, and political sciences (Coyle, 1991). Process evaluation is a systematic process of investigating a programme through scientific analysis to answer questions such as *what was done* (descriptive research), *why it was done* (descriptive and explanatory research), *how*, and *by whom* (explanatory research). Both descriptive and explanatory research approaches show a correlation between what was done (X) and how it affected the outcome (Y).

In the context of this study it would seek to test the consistency in the interpretation of the Section 2 criteria and the consistency by which it was implemented by the MDB between 2000 and 2011.

1.7 Methodology

A comprehensive methodological approach is captured in Chapter 7; the section below is just an overview.

To conduct a process evaluation on the Section 2 criteria of the Municipal Structures Act (117 of 1998) for the current eight metropolitan municipality's case studies this study required the cooperation of purposefully selected individuals who implemented the respective programmes, given that there was limited information regarding its implementation.

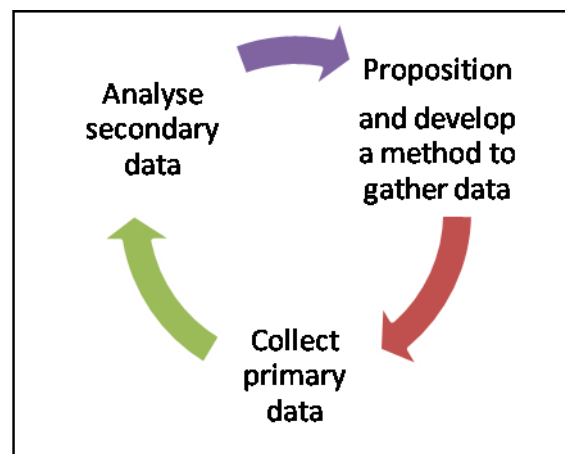


Figure 1-1: Data collection method

Source: Own construction (2018)

Thus, the researcher started by analysing secondary data (MDB reports) that was available before interviewing the MDB personnel to build a proposition. This ensured that the understanding of the document was correct. Once this was established, qualitative primary data was collected in the form of a structured questionnaire to test the interpretation of the criteria, from an urban planning perspective. Subsequently, secondary data was then collected to provide a quantitative element to the section 2 criteria. Lastly, there were a few criteria which could not be measured quantitatively, so the researcher conducted semi-structured interviews with MDB personnel and municipal employees to gain the relevant insight into its implementation and then built a supplementary proposition on its interpretation (see Figure 1-1)..

Each of these steps is discussed in detail in chapter 7 of this study.

1.8 Data collection

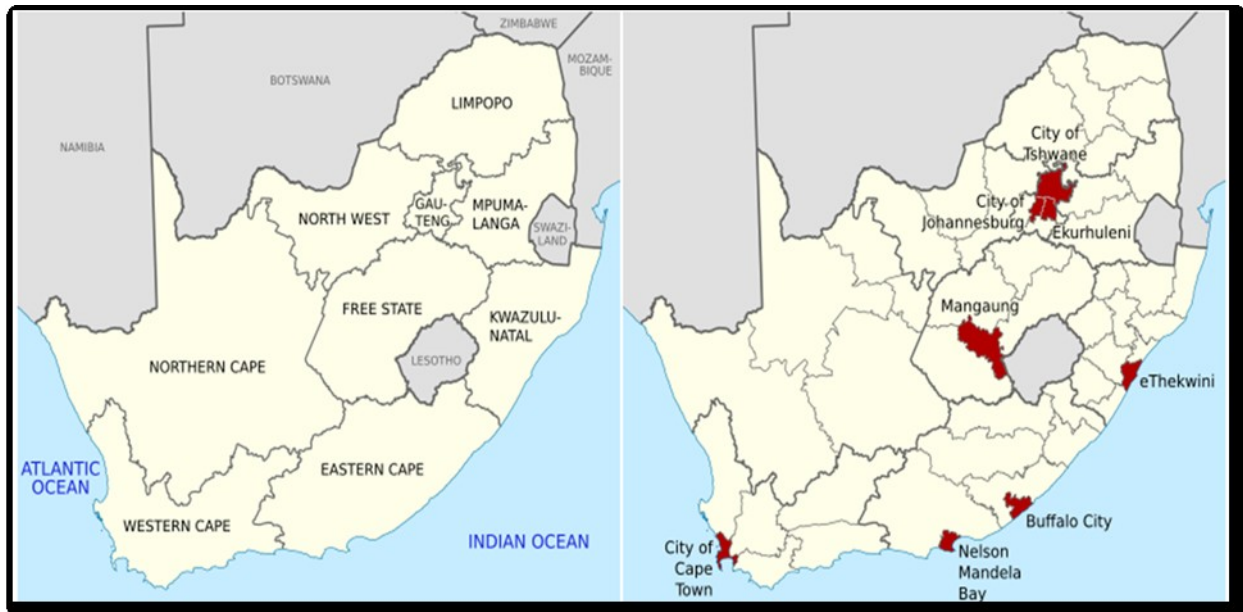
According to Maxwell (2013), a successful research design consists of collecting various methodological components with a mutual goal in mind. Therefore, a mixed methods approach has been deemed suitable for reflection and obtaining a holistic understanding of how the Section 2 criteria was interpreted and implemented between 1999 and 2011.

The quantitative data, which is numerically and statistically based, was collected from databases of Quantec, Global Insight, and Statistics South Africa and analysed by means of a compare and contrast strategy (CCS). With this data the research design aims to develop an understanding of the quantitative criteria that a municipality should adhere to for it to be categorised as a metropolitan municipality.

More subjective qualitative data was collected to gain an understanding of how human settlements are formed, developed, delimited and categorised from an administrative perspective. This data was collected through structured online questionnaires, semi-structured interviews, primary observations, literature reviews of books, journal articles, conference proceedings, legislative documents, MDB reports and records, newspaper articles, and radio interviews. This data provided insight into how the criteria was interpreted.

Next, the qualitative and quantitative findings from the eight metropolitan municipalities were compared, contrasted, coded and triangulated according to the themes identified from the Section 2 criteria (see Map 1-1 below). These comparative findings were used to generate an understanding of the interpretation and the implementation of the Section 2 criteria, which were reflected on and used to make inferences about the categorisation practices of the eight metropolitan regions in South Africa.

1.8.1 Location of metropolitan municipalities



Map 1-1: Location of metropolitan municipalities in South Africa

Source: Htonl, (2016)

South Africa has eight category A metropolitan municipalities. This study would analyse their adherence to the section 2 criteria. Three of the eight category A metropolitan municipalities are based in Gauteng (City of Johannesburg, Tshwane, and Ekurhuleni) at the heart of the country while four of the metropolitan municipalities are situated along the country's coastline, with City of Cape Town located in the Western Cape, Nelson Mandela Bay and Buffalo City situated in the Eastern Cape, and eThekweni in the East Coast in the province of KwaZulu-Natal. Mangaung municipality is the only metropolitan located in the Free State province. Six of these municipalities were categorised as metropolitan municipalities in 2000, while the two remaining municipalities, Mangaung and Buffalo City, were categorised in 2011.

1.9 Ethical considerations

The research proposal and questionnaire were first submitted to the internal Research Ethics Committee (iREC) in August 2016 at the Faculty of Natural Sciences of the North-West University (Potchefstroom campus). Upon approval of the research proposal and questionnaire in October 2016, they were forwarded to the relevant faculty Research Ethics Committee (REC). Only once this approval was gained on the grounds of scientific merit, minimal conflict of interest, and ethical acceptability, was ethical clearance granted by Sub-programme 7 and the Urban and Regional Planning Research Unit at the North-West University.

Subsequently, the research was conducted in accordance with the prescriptions of the urban and regional ethical guidelines, which included among other things that the research would ensure honesty in all aspects of reporting. Furthermore, when distributing the questionnaire in August 2017, professional courtesy was illustrated in explaining the purpose of the research to the respondents and seeking permission to forward them the questionnaire (NWU, 2016). The e-mail that was issued explained the purpose of the questionnaire and reiterated that participation and the extent of participation were voluntary and anonymous. The questionnaire was completed on Google Forms to ensure privacy and anonymity. Furthermore, where pictures had to be taken of persons, permission was requested (Reason & Bradbury, 2008; NWU, 2016).

Trustworthiness and reliability of data will be discussed further in Chapter 7 of this study.

1.10 Limitations of the study

Settlements are not classified uniformly globally since the categorisation and delimitation of settlements is largely influenced by culture, history, political and geography, making a cross comparison of metropolitan municipalities across countries difficult. For this reason, this thesis will only seek to determine the consistency of application for metropolitan entities in South Africa. The categorisation of settlements is expected to be comparable in the same country at the very least.

The subjective nature of the Section 2 criteria resulted in the measurement criteria being defined through a selection of measures prescribed by the Determination and Delimitation Department at the MDB. Once the questionnaire for data collection had been drafted, it was sent to the Determination and Delimitation Department of the MDB for approval. Upon its approval, the questionnaire was sent to three purposefully selected respondents to conduct a pilot study. Once it had been established that the questionnaire was surveying what it had been intended to, it was circulated to the other selected interviewees.

Upon requesting documentation and reports from the MDB that motivated reasons for Buffalo City and Mangaung being declared as category A metropolitans, the researcher was provided with an investigative report; however, it did not include any final motivations for the decision for this categorisation. Interviews with MDB employees revealed that those who were directly involved in the process are no longer at the MDB and that no one was aware of such a document (the final report). Consequently, identifying individuals who were directly involved in the implementation of the Section 2 criteria was challenging and complicated the interview process, making the researcher rely on snowballing which in many cases led to a dead end.

The interview response rate was poor, since many individuals who were supposed to have been well-acquainted with the categorisation of metropolitans in the private, public and academic sectors could not, or were not willing to, define the terms and left some of the questions with fewer responses than others.

A time lapse in comparison activities can impair the reliability of responses. The case in this thesis is an 11-year time lag between the categorisation of the six metropolitan municipalities in 1999 and the remaining two municipalities in 2011, which made comparisons between cases problematic because of likely influences of historical, social and/or other programmatic factors (Goodrick, 2014). Despite these circumstances, the legislation and criteria used to categorise the municipalities remained the same (namely the Municipal Structures Act 117 of 1998). Accordingly, this study only analysed indicators from Section 2 of the Municipal Structures Act (117 of 1998) to determine how the municipalities adhered to them. Moreover, the municipal boundaries of the six metropolitans have been slightly adjusted over the 11 years to correct for technicalities. For the sake of reliability and consistency, the data that was collected was based on the boundaries established as at 2011 for all eight metropolitans, which would be used for comparison and analysis purposes.

Lastly, since there is no shared understanding of what a small town or a large town is or is not. It is uncertain as to what a municipality with both these settlements would be referred to.

1.11 Chapter division

Following this chapter, Chapter 2 will provide a brief background on how human settlements have developed and how they are classified theoretically. Chapter 3 will offer a theoretical explanation on how these cities have been administratively delimited and explore the levels of success of four international administrative restructuring techniques. Chapter 4 will explore the administrative restructuring outcome in South Africa from apartheid to 2016. Chapter 5 will investigate the classification of settlements and migration patterns in South Africa from apartheid to post-2011, and Chapter 6 will discuss the legislation that guides the categorisation and demarcation practices of municipalities in South Africa. Chapter 7 will present the methodology that was used to collect data for this study. Chapter 8 will present the findings from the empirical study concerning the interpretation and implementation of the Section 2 criteria. Chapter 9 will provide a reflective conclusion on the formation of metropolitan regions in South Africa, and Chapter 10 will offer recommendations for further studies. Lastly, Chapter 11 will provide an overview of the study's contributions (see Table 1-1).

The chapters in this thesis are themed in Table 1-1 below.

Table 1-1: Chapter division of this thesis

Chapter	Content	Purpose of Chapter
Chapter 1 Contextualise the research	This chapter provided an introduction and background to the study to motivate its relevance. It discussed the rationale, the research aim, and the objectives that guided the research. It then discussed the location of the chosen case studies and explained the research methodology. Lastly, it provided a roadmap of the remaining chapters in the study.	The main purpose of Chapter 1 was to orientate the reader within the scope of the metropolitan municipality categorisation debate in South Africa. The chapter further provided an overview of the research methodology and provided a summary on this study's structure.
Chapter 2 Theoretical undertones of urban settlements	This chapter firstly explained the difference between the classification of rural and urban areas globally. Next, it explored the categorisation of human settlements from a demographic and administrative perspective, followed by theories explained the structures of settlements. Lastly, this chapter discussed regional urban development with a particular focus on the functional development of human settlements.	The literature provided a theoretical understanding on how urban areas are formed, structured and function, thus contributing to the first objective of the study by providing insight into the urban hierarchy debate, with a focus on metropolitan regions, as well as the third objective by exploring the structure of metropolitan regions from a theoretical perspective.
Chapter 3 Structural reform of administrative entities	This chapter provided a theoretical background on how administrative boundaries are drawn. It started with providing a brief background on the development of local governments. Once this had been established, the various theories and thought processes that influence boundary delineation were investigated. Lastly, this chapter explored the practical application of structural reform in four countries around the world and the success of the respective approaches.	This chapter contributed to the second objective by proving a theoretical background of how administrative boundaries are delimited academically and in reality.
Chapter 4 Administrative restructuring in South Africa	This chapter first provided a brief overview of the historical events that impacted administrative development in the country. Next, it explored the administrative restructuring process in South Africa by discussing the occurrences in three distinct phases: the pre-interim (pre-1996), interim (1996–2000) and post-interim (post–	This chapter generated an understanding of how, why, and where category A metropolitan municipalities were created in South Africa from 2000 to 2011 and offered insight into the administrative restructuring outcome in South Africa

Chapter	Content	Purpose of Chapter
Chapter 5 Settlement classification in South Africa	2000) phases. This chapter explored the urban hierarchy in South Africa from the perspectives of the White Paper on Local Government (South Africa, 1998), the Council for Scientific and Industrial research (CSIR), the National Urban Development Framework (NUDF) and the, National Treasury. Lastly, this chapter captured the migration patterns in democratic South Africa and how this influenced the growth and development of the various human settlements in South Africa.	after 1994, hence contributing to the second and third objectives of this study. This chapter contextualised the study from a human settlement perspective and explored the definition of metropolitan settlements in South Africa. Thus contributing to answering the first objective of the study.
Chapter 6 Reviewing the MDB Methodology of Demarcation in South Africa	This chapter provided a brief background on the legislation and processes that guide the demarcation of local government boundaries in South Africa. It investigated the requirements as set out by the White Paper on Local Government (South Africa, 1998); the Municipal Demarcation Act (32 of 1998), and the Municipal Structures Act (117 of 1998). Furthermore, it investigated and explained the methods followed by the MDB to categorise municipalities in South Africa.	This chapter explained the criteria that had to be adhered to by each administrative structure for them to be demarcated and categorised. Contributing to the second and third objective of the study.
Chapter 7 Research design	This chapter captured and explained the research design of this thesis. It explained process evaluation and the steps followed in the research to collect both quantitative and qualitative data. Furthermore, it explained the method used to analyse the data. Lastly, this chapter explained the reliability and trustworthiness of the data collection method.	This chapter explained the ethical aspects of the study and the data validity.
Chapter 8 Empirical research findings	This chapter discussed how the research was conducted and how the findings were captured thematically according to the themes/criteria of Section 2 of the Municipal Structures Act (117 of 1998). Furthermore, the	This chapter's main focus was to clearly discuss the findings from the empirical research. Hence the purpose of this chapter is to answer the primary

Chapter	Content	Purpose of Chapter
	findings from the interpretation and implementation of the Section 2 criteria were captured through comparing and contrasting case study analyses. Lastly, the chapter concluded by discussing the study's main findings.	research question or KEQ of this study.
Chapter 9 Conclusions	This chapter drew conclusions from the empirical and theoretical investigations regarding the categorisation of metropolitan municipalities in South Africa. It structured the findings according to the research questions initially proposed in Chapter 1 and provided answers to these questions based on the findings from this study.	This chapter provides answers to the research questions, which were undertaken in support of the study.
Chapter 10 Implications of findings	This chapter proposed recommendations for future research.	This chapter addressed the fourth objective and the final research question of this study. By recommending how the future administrative categorisation processes should be approached in South Africa based on the literature review and empirical findings.
Chapter 11 Contribution to planning profession	The research concluded by discussing the study's contributions to the planning profession's body of knowledge.	This chapter presents the main contributions of the study.

Source: Own construction (2018)

CHAPTER 2: THEORETICAL UNDERTONES OF URBAN SETTLEMENTS

2.1 Introduction

Human settlements are dynamic and unique entities created through combinations of sources that include history, physical geography, political policies, native culture, demography, and evolving economic bases (McGee, 1991; Robinson, 2006; Duranton, 2013). The product of these forces is a range of settlements from small rural hamlets to gigantic regional metropolitans. However, the terms conventionally used to label and categorise these human settlements are vague and shift in meaning according to the contexts they are used in. For example, a small city in one country might be referred a town or village in another. This vague categorisation makes it particularly challenging for academics globally to compare various settlements (Baudrillard, 1986; Ginsburg *et al.*, 1991). The result is uncertainty at the level of settlement development from national and global perspectives (Haub, 2009; UN, 2014b).

From a theoretical perspective, static traits such as urban form, level of infrastructure, population density and economic activities were previously used to classify settlements as either urban or rural settlements (Berry & Horton, 1970; Haig, 1927; Ohlin, 1933; Alonso, 1971; Richardson, 1988; Henderson, 1974; Thompson, 1965; Meyer, 1963; Tiebout, 1956). However, the dynamic nature of the world's settlement structures in the 21st century has made it difficult for academics to classify settlements based on these static forms; rather, these settlements should be classified by functionality (Wyly, 1999; Roy, 2007; Wirth, 1956; Adams, 1994; Evans, 2009; Roberts, 2014).

The one aim of this chapter is to reflect on the development, formation and structure of metropolitan regions from a theoretical perspective. Firstly, it will seek to explain the differences between the historical classification of rural and urban areas. It will then explore the theoretical foundations of the evolution of human settlements and how they have been categorised from a demographic and administrative perspective. This chapter will then proceed to explore the structures of settlements and how they have evolved. Lastly, it will explore structural spatial urban development from a functional perspective with an emphasis on de-concentrated concentration urban development. The above will be discussed as point of departure to gain a better understanding of the structure and composition of metropolitan regions. This is aligned

with the first aim as well as the third objective of this thesis, which seek to gain insight into metropolitan formation in South Africa.

2.2 Defining urban and rural areas

Individuals always have and continue to respond to changes in economic opportunities, which can be observed in their choice of location (Berry, 1973a). Previously, communities would settle in spaces with natural transport systems like rivers, fertile soil, or mineral wealth (Geyer, 2002; Geyer, 2003). Today, individuals seek spaces that offer employment and/or an acceptable quality of life. Based on the concentration of these economic activities and of individuals in these centres, settlements were previously classified under two broad categories: urban and rural (Haub, 2009; World Bank, 2009a; Christaller, 1933; Losch, 1944; Rodríguez-Pose & Fitjar, 2013; Duranton & Puga, 2004; Odum & Moore, 1938).

Until the 1950s the demarcation between urban and rural was distinct. Urban comprised towns and cities where inhabitants could access higher-order services, and the rest was considered rural (Wirth, 1956). This uncomplicated approach was consistent with the view that urban areas offered more economic functions and were more advanced than their rural counterparts (Christaller, 1966). However, with increased development and use of the automobile the distinction between urban and rural became less clear (UN, 2009).

Literature reveals that each country has its own definition of what it considers to be urban and rural (OECD, 2014a; World Bank, 2009a, WHO, 2014; Haub, 2009; UNICEF, 2012; UN, 1998, 2004, 2012): In some countries, rural is defined as that which is not urban. In Canada, France, the UK, and the USA, an urban area has been defined as a continuously built up settlement with more than 50 000 inhabitants and a minimum population density of 400 persons per square kilometre (City Mayor Statistics, 2007), while settlements with less than 50 000 inhabitants and which are not continuously built-up, found outside the city limits, and occupied with agricultural activities are classified as rural (OECD, 2014a; United States Department of Agriculture, 2016). In South Africa no such definitions exist for what constitutes urban and rural, which has stimulated considerable debate and ambiguity in the country (South Africa, 1998). According to the White Paper on Local Government (South Africa, 1998), urban areas comprise formal cities or towns that could include high and low-income, medium or high-density settlements with high levels of economic activity and land values. Rural areas, on the other hand, are defined as low-density, planned or unplanned (homelands or townships) settlements with populations of over 5 000 people situated either close to other urban areas or located in the countryside, but with small economic bases (South Africa, 1998; South Africa, 2012).

So, where does urban end or rural begin, and are there different degrees of urban and rural? If so, what is the point of transition from urban to rural, and can it be clarified? Section 2.3 will consider the classifications of a variety of human settlements in light of the criteria of the Human Settlement Foundation of the United Nations (UN, 2014). As alluded to in the introduction of this thesis, the definitions, classification, and categorisation of human settlements across the world vary tremendously. However, the United Nations (UN) is a global organisation that seeks to bring together all of its member states (144 states, including South Africa) in finding solutions to the challenges that are common to all human settlements (UN, 2014). One of these challenges is that of developing human settlements in a sustainable manner. Therefore, in providing a standardised explanation of how settlements are categorised, section 2.3 will explain the UN's categorisation of human settlements.

2.3 Theoretical classification of human settlements

To understand how urban processes dictate the implications of urban growth and development, urban planners, sociologists, economists, and geographers have classified settlements according to settlement types (Pacione, 2010; Beaverstock *et al.*, 1999; OECD, 2013b). In some cases, this hierarchy is based on a little more than a ranking of cities based on population distribution regularities (Zipf, 1949), the number of economic activities they house (Christaller, 1966; Song & Rodriguez, 2005), or the extent of the built-up area (Du Plessis & Bonseier, 2014; Duncan *et al.*, 1960; Parr, 2007 Hoover, 1937; Isard, 1956; Marshall, 1920; Jacobs, 1986; Lösch, 1954; Philbrick, 1957; Berry, 1973b; Christaller, 1966; Von Thünen, 1966).

In 2012 the United Nations Urbanization Prospects Report (UN, 2012) outlined a systematic approach to categorising settlements, as captured in Figure 2-1.

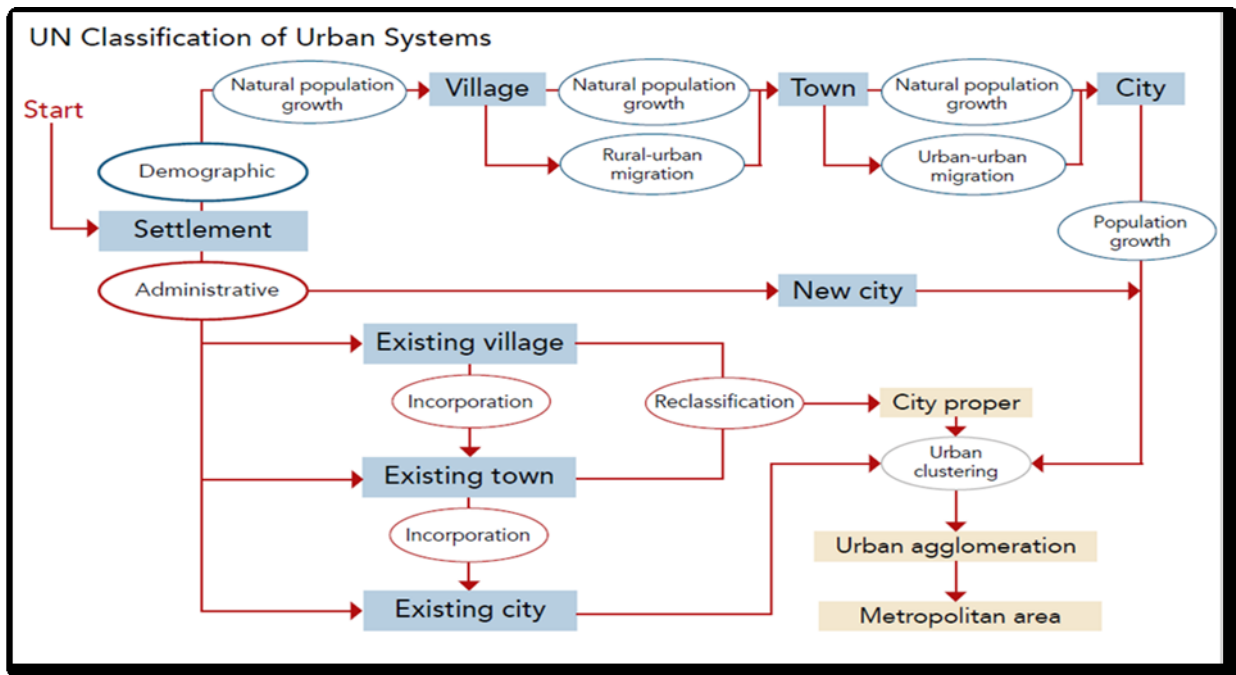


Figure 2-1: United Nations classification of urban systems

Source: United Nations (2018)

Figure 2-1 illustrates that there are two ways in which settlements advance: demographically (naturally) or administratively (promoted, forced, or artificially stimulated), as explained accordingly.

2.3.1 The demographic approach to categorisation of human settlements

One way in which settlements develop is through natural forces of demographic growth. In this scenario natural population growth (birth and in-migration) in a rural hamlet, which is based on subsistence farming, develops by extending its land use to eventually form a settlement called a village. These villages have a rural character with most of their population employed in agriculture while being larger than a hamlet. Regardless of size, both these settlements (hamlets and villages) are known to offer limited economic services, which result in inhabitants travelling to larger centres to acquire higher-order goods and services (OECD, 2013b).

With time and investment these villages develop through demographic growth and economic development to form what is often referred to as a town. Towns are known to have larger populations, more urban features (infrastructure and formal housing), and more varied economic bases than villages. As time progresses and with further investment and demographic growth, these towns become cities (Duranton, 2013; UNICEF, 2012). Cities are known to have

large populations, high densities, and diverse economies that are not agriculturally based, thus giving these settlements an urban character.

Consequently, over the years the term *city* appears to have been replaced by *region* to describe what is essentially the same phenomenon, but on a larger scale (Parr, 2007; Sinclair-Smith, 2015; UNICEF, 2012; Hugo, 2017; Brochie *et al.*, 2017). A region is created through population growth and physical expansion of a few settlements that are not socially, politically, or economically equal merging to form one urban area known as a metropolitan region (Geddes, 1915; Parr, 2004; Parr, 2012; Meyer, 1963). These regions are known to offer an appropriate scale for policy intervention and analysis (Scott, 1998; Parr, 2007; Sinclair-Smith, 2015; Parr, 2004; Turok & Bailey, 2004).

2.3.2 The administrative approach to categorising human settlements

The other way in which human settlements are created is administratively. This can be practiced by artificially stimulating urban and economic development in two ways.

The first approach, according to Figure 2-1, is called the *new town* approach. This is where the central government identifies a site for a settlement and economically invests in this locality with the hope that it would attract private investment and migrants (Rondinelli, 1985; Unwin, 1989). However, the application of this method in Latin America and Africa have been unsuccessful, since the expected rural development turned into increased urban development instead, thereby creating ghost towns and increasing inequality in those countries (Unwin, 1989; Hugo, 2017).

The second administrative approach involves superficially forming and categorising settlements by means of legal incorporation (UN, 2014). In this case an existing village and an existing town can be amalgamated or annotated to legally create what can be referred to as a *city proper* (Duranton, 2013). This settlement has a similar definition to that of a city but has administrative jurisdiction over the region within which it is contained.

According to the UN (2011), the city proper and an existing city can also be combined and reclassified administratively by means of urban clustering to create an urban agglomeration. This agglomeration theoretically comprises several separate but densely populated areas which are functionally linked within a political administrative boundary (UN, 2012; OECD, 2013b; UNICEF, 2012). However, the categorisation of an agglomeration is more complex than any one-size-fits-all approach, and the simple clustering of settlements of an area does not automatically form an urban agglomeration (Soja, 2015; Fang & Yu, 2017; Porter, 1998; Richardson, 1972).

From a theoretical urban planning perspective, urban agglomeration has been described and measured in six different ways (Fang & Yu, 2017): 1) the ecological perspective, which considers urban spatial form as self-organising with its morphology being a by-product of symbiotic growth (Saarinen, 1918; Anderson, 2006; Ratcliffe, 1949; Lefebvre, 1970; Harvey, 1973; Wirth, 1938); 2) the static perspective, in which the spatial size is identified by population density, land use, and economic function (Howard, 1922; Christaller, 1966; Silva *et al.*, 2016); 3) the region's functional interconnectivity and accessibility (Parr, 2007; Geyer *et al.*, 2014; Christaller, 1966; Geddes, 1915; Gottmann, 1957; Doxiadis, 1968; Lewis & Prescott, 1972; Fawcett, 1932; Krings *et al.*, 2009); 4) the minimum population of the core (Howard, 1898; Howard, 1922); 5) the minimum population reached at the periphery or suburbs (Geddes, 1915); and 6) the maximum daily travelling distance of a four-hour commute (Fang & Yu, 2017; Parr, 2004; Geyer *et al.*, 2012). From these descriptions it becomes apparent that the definition of urban agglomeration is still inconclusive (Soja, 2015; Scott & Stoper, 2014; Fang & Yu, 2017; Lewis & Prescott, 1972), and it remains unknown whether large agglomerations always generate more benefits than smaller agglomerations, whether a network of small agglomerations generate more impulses than one large agglomeration, or whether specialisation or diversity is more important to the success of economic clusters (Soja, 2015; Geyer, 2009; Myrdal, 1939; Scott & Stoper, 2014; Fang & Yu, 2017; Lewis & Prescott, 1972).

Consequently, how and when an urban agglomeration evolves into a metropolitan administrative area remains uncertain. A simplified explanation provided by the UN (2012) is that a metropolitan area's surrounding territories should comprise both high-density and lower-density areas which are connected through linkages or commuting facilities to form an administrative entity (UNICEF, 2012) and should have a population of at least half a million people (UNICEF, 2012).

This perspective differs from the demographic and theoretical understanding of a metropolitan in the sense that the administrative area does not have to be intensively developed but should be functionally linked with other settlements (Hugo, 2017). However, the question of scale, composition, and definition from a legal perspective still remains open to debate because of the different ways in which human settlements present globally (Parr, 2007; OECD, 2013a; Geyer *et al.*, 2015; Jonas & Ward, 2007; Sinclair-Smith, 2015; Roy, 2007).

Each settlement structure, regardless of size, is influenced by three socio-economic forces: 1) centripetal forces, which are attractive forces based on technology and economy; 2) agglomeration forces, which concentrate in the form of economies of scale and profits; and 3) centrifugal forces, which disperse development by means of their internal spatial structures

(Henderson, 2003; Pacione, 2005; Hugo, 2017; Brothie *et al.*, 2017; Scheer, 2017). To provide background on the debate on structure and scale, the following sections will explore the structures of settlements from the traditional monocentric village to the more modern polycentric urban region structure to contextualise the structure of metropolitan areas from a theoretical perspective.

2.4 The urban structure

In the early 1900s academics modelled the urban structure according to their understanding of rivalry for land, where the most dominant economic activities occupied the central and most densely developed location in the city while the affluent individuals occupied the periphery (Burgess, 1925; Cooke, 1990). This perspective inspired the concentric zone model (Burgess, 1925), the sector model (Hoyt, 1939), and the multiple nuclei model (Harris & Ullman, 1945) (see Figure 2-2).

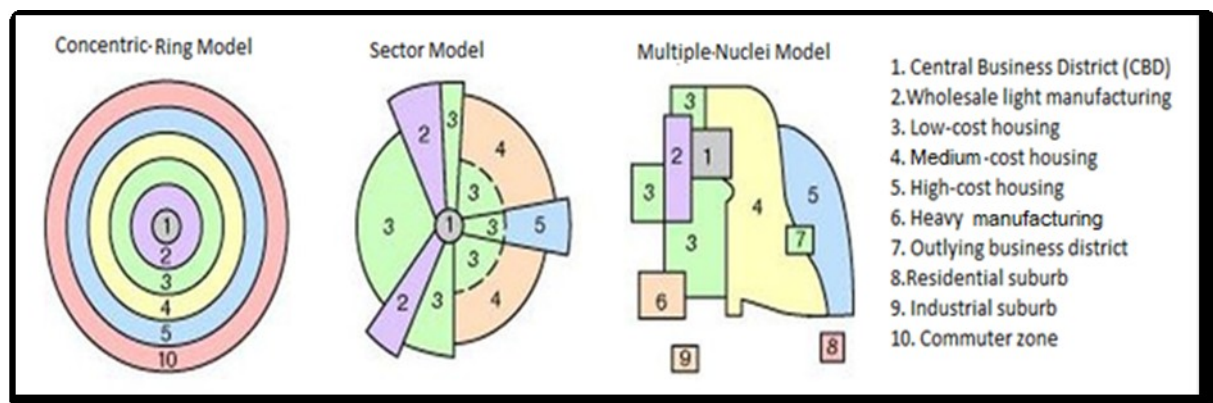


Figure 2-2: Images of urban model

Source: Adapted from Burdett (2014)

According to Burgess (1925) and Hoyt (1939), the central business district (henceforth CBD) should be located at the centre of the city, which is then surrounded by zones of high-density development and low-income residences while the more affluent individuals locate in low-density suburbs further from the CBD. This settlement structure was befitting of villages and small towns but became outdated as the settlements grew into cities and started housing more economic activities.

The beginning of the 1940s saw the introduction of modern transport methods, which allowed for mobility of labour and decentralisation of businesses (Bruegman, 2005; Musterd & Van Zelm, 2001). The filtering model explains that with mobility the high-income residences moved outside of the older, congested CBDs to newer, less-developed areas. They were followed by

landlords who decreased investment in aged and crowded areas in favour of newer locations situated on the outskirts of the city where high-income residences were located (Smith, 1963; Hoyt 1933). Consequently, the low-income inhabitants then succeeded them in the older city centres (Wirth, 1956). Harris and Ullman (1945) tried to capture this phenomenon in the multiple nuclei model when they observed that city spatial forms comprised progressive integration of multiple commercial centres and residential suburbs (Pacione, 2005) (see Figure 2-3). This marked the introduction to the urban realm model (Vance, 1964), which sought to improve the multiple nuclei model of Harris and Ullman (1945). It proposed that each edge-city or realm is socio-economically independent and fulfils a unique function politically while still being functionally linked to the central city to form one metropolitan framework (Vance, 1964) (see Figure 2-3 below).

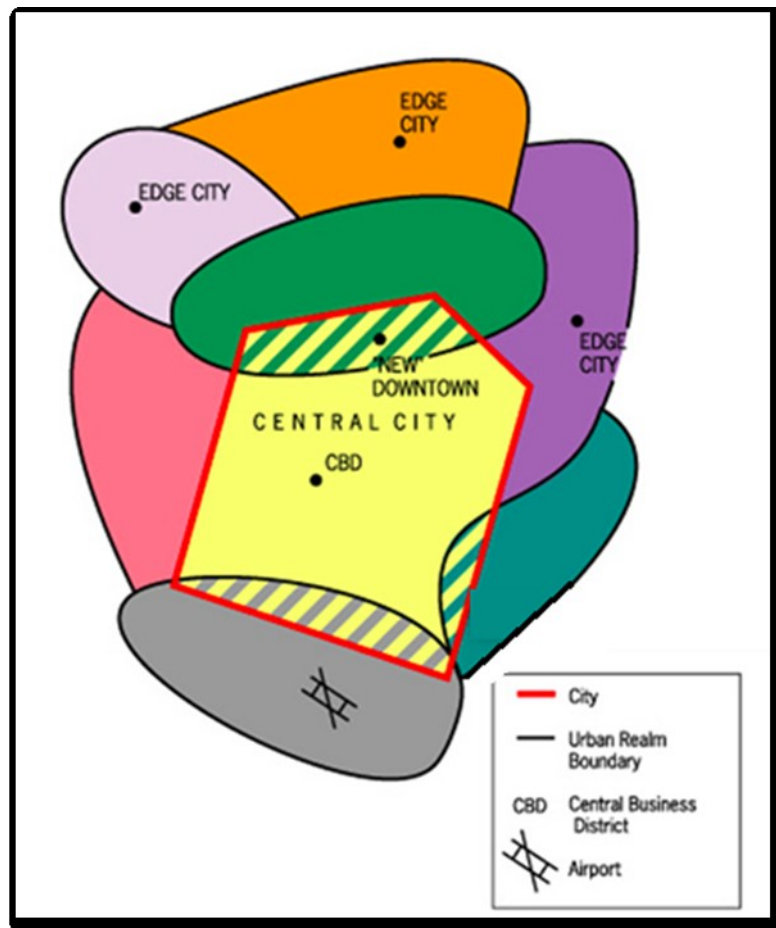


Figure 2-3: The urban realms model

Source: Boyd & Carter (2015)

However, the effects of decentralisation and freedom of movement brought about by the automobile were not just restricted to these settlements but also extended over the region in the

form of demographic movement and economic investment. Myrdal (1957) captured this phenomenon precisely in his model of polarisation from an urban and regional system perspective (see Figure 2-4).

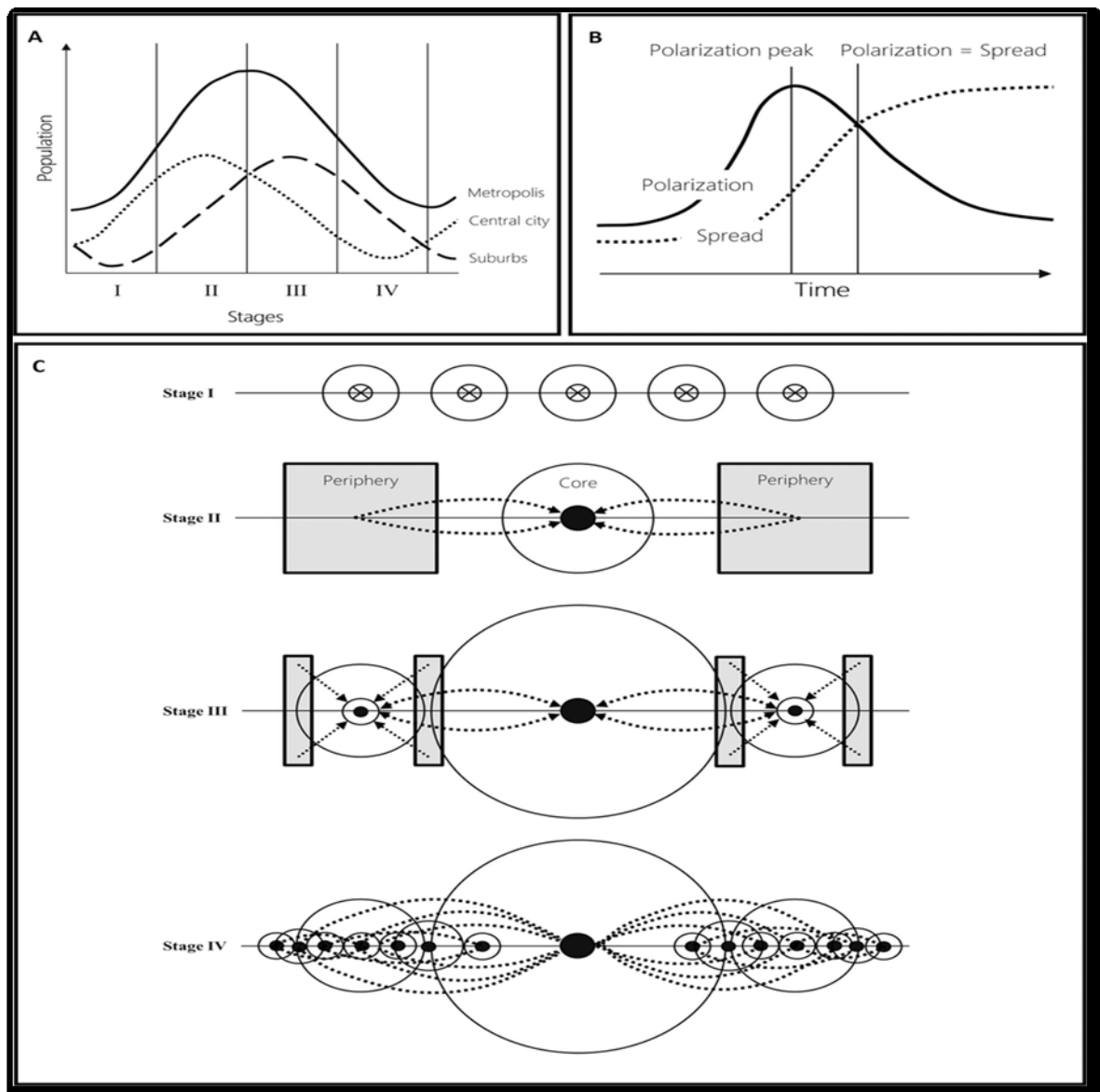


Figure 2-4: Urban development model

Source: Scheuer *et al.* (2016); Myrdal (1957)

In this model, Myrdal (1957) explains how individuals migrated from the suburbs (or rural areas) to the city centres (or urban areas) (centripetal forces) during the initial phases of settlement development, leading to the growth and development of the city centre (or urban settlement/agglomeration). As the density in this area (settlement) increased, the more affluent individuals chose to locate in less congested locations (rural areas) on the periphery (centrifugal

forces), inhabitants who then commuted back and forth form a corridor or axial development between the settlements, thereby introducing a polycentric urban form with functional linkages between centres (Geyer & Kontuly, 1993). According to Webster and Muller (2017:282), the region between the contiguous built-up urban settlement and the outer rural settlement can be referred to as a peri-urban zone and can sometimes extend as far as 150 kilometre (km) from the core city, or as in the Chinese case, as far as 300 km. This zone is characterised by mixed landusage with both urban and rural characteristics and is typically split between a number of administrative areas making its development rather difficult (Webster and Muller, 2017:283).

As a result, the transformation of peri-urban zone occurs gradually in physical, economic, and social terms, whereby rural communities are forced to adjust to urban ways of life over time. This adaption occurs due to either high level of in-migration of individuals from urban areas to the outer rural areas (See section 5.6 for migration trends) or an increase of Foreign Direct Investments (FDI) into the area to take advantage of cheaper labour (polarisation reversal). However, Friedmann (1978), who built on of Myrdal's theory of unbalanced regional growth, opposed the idea that secondary centres or rural areas will grow at the same rate as the larger centres, since the larger centres would already have the advantage of decreasing cost benefits of urbanization economies (economics of scale). These factors would work to the advantage of core regions over the periphery, which is incumbent in the economic development game (Webster and Muller, 2017: 285).. This would then result in further unbalanced economic development. Subsequently, Friedmann (1978) further acknowledged that growth and development in the area could also be externally induced by local political leadership and economic entrepreneurship. This would be achieved by extending the administrative boundaries to include the entire region (Urban, rural and the peri-urban zone) to form one administrative entity - which is what can be referred to as *metropolitan regions* (Vance, 1964). A region that encapsulates many integrated but separate administrative regions, to form one entity.

Figure B of Figure 2-4 illustrates how the settlement structures first concentrate and then de-concentrate and then spread further out over administrative boundaries – this could be a result of the inhabitants' growing activity spaces, resulting in what is known as *sprawl* (see Figure 2-5 below).

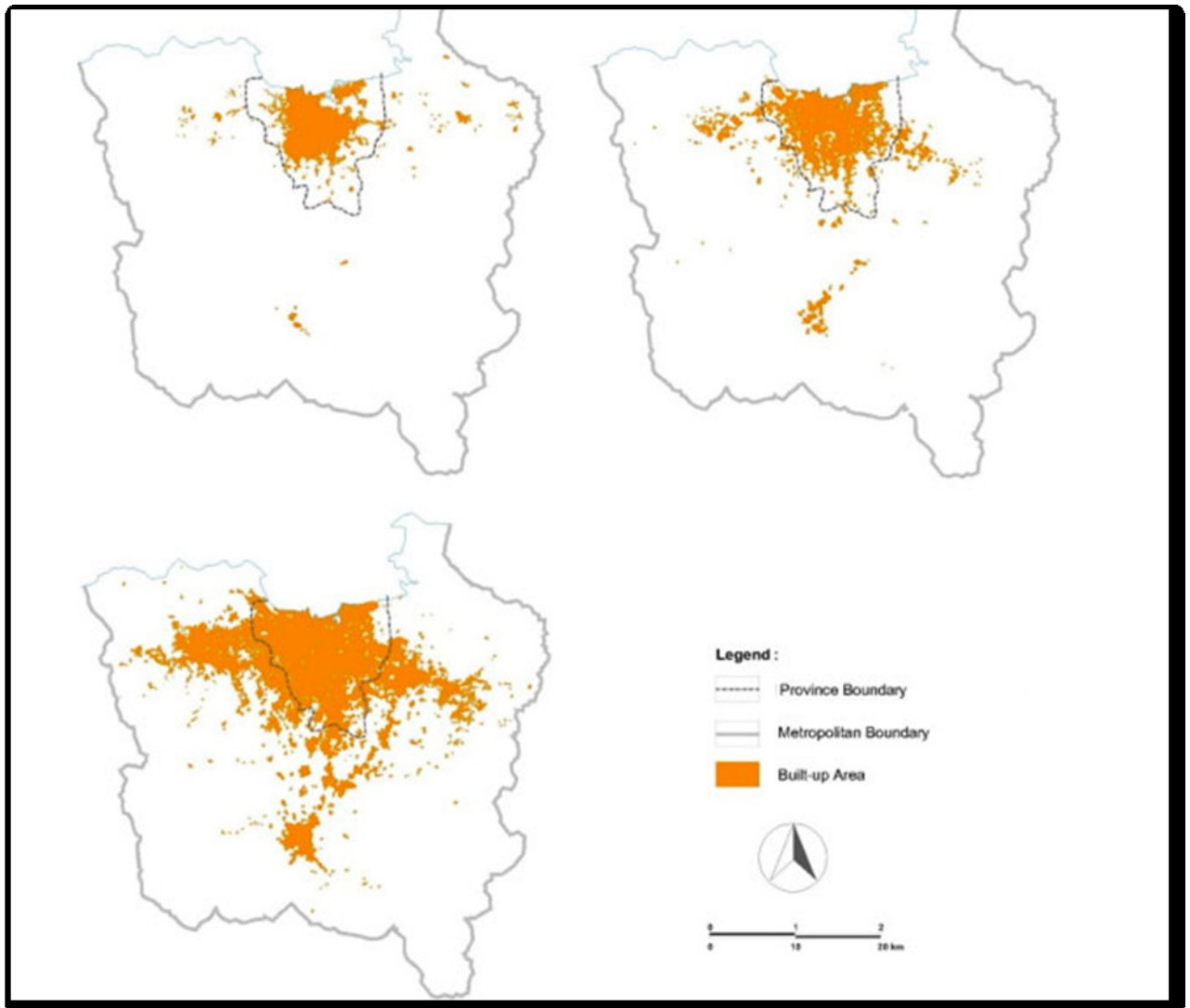


Figure 2-5: Sprawling cities

Source: International Urban Development Association (2015)

The linkages between where a person lives and where they work, shop, access health care, and recreate, can be called a person's activity space (Philbrick, 1957; Pacione, 2005; White, 1987). When the activity spaces of many people are aggregated, a socially and economically integrated area can be defined as a *functional area* (Sinclair-Smith, 2015; Martin, 2017).

This functional space is more abstract than the urban form in the sense that the settlement limit cannot be as easily seen, and it could include in its form perspectives that would be considered both urban and rural. According to Salat and Bourdic (2012) the urban form and structure restricts the functionality of the city whereas the functionality of the city modifies its form and structure (as can be noted from the Figure 2-5 above). As a result, the World Bank Report (2009b) called for the city functionalities to be studied to analyse their forms and structures.

Therefore, Section 2.5 will investigate the functionality of settlements to understand the spatial-structural linkages between the various settlements and how they influence the urban form from an administrative perspective (Brotchie *et al.*, 2017).

2.5 The structural and functional relationships between settlements

According to Waldo Tobler (1970), “everything is related to everything else, but near things are more related than distant things”. At the very least, this theory implies that there is either a positive or negative correlation between various entities in the spatial landscape. This is most clearly evident in the relationship between rural and urban areas as well as cores and peripheries (Myrdal, 1957; Geyer, 2001). Newton’s law of universal gravitation holds that gravity is a universal force among all bodies, and the strength of the attractive force between two bodies is directly proportional to their masses and inversely related to the square of the distance between their centres (Frino, 2014). An analysis of the underlying principles of Newton’s gravity concept reveals that spatial interactions and flows (force) can be described on the same premise and are supported by two principles, namely agglomeration advantages (mass) and distance costs (distance) (McGranhan *et al.*, 2009; Weber, 1909; Isard, 1956; Marshall, 1920; Hoover, 1933; Lösch, 1938; Hoover, 1948; Njikamp, 2013). Hence, the larger the centre, the stronger the body’s attraction force; however, the force of attraction also decreases with distance (Christaller, 1966; Geyer, 2001).

According to Christaller’s (1966) central place model, smaller human settlements (hamlets, villages) should only house lower-order economic services since they do not have the population to support the higher-order services. For this reason, its inhabitants would travel to the closest, largest centre to acquire higher-order goods (Morudu & Du Plessis, 2013; Scheer, 2017). This model can be brought into relation with the demographic growth model discussed in section 2.3 of this chapter, where human settlements were classified according to their population concentration and the economic activities that they housed.

However, in recent years this central place model has been criticised for being too static and rigid, and modern day literature argues urban systems based on scale and distance to be outdated (Taylor, 2009; Raagmaa & Kroon., 2005; Brotchie *et al.*, 2017; Scheer, 2017), since the automobile enables freedom of movement and choice among individuals. In addition, the digital age allows for online buying methods where goods and services can be accessed regardless of their location. This means that location is not as important as it used to be, having been replaced by efficiency (Taylor, 2009; Raagmaa & Kroon, 2005; Brotchie *et al.*, 2017; Scheer, 2017; Hickman & Banister, 2017).

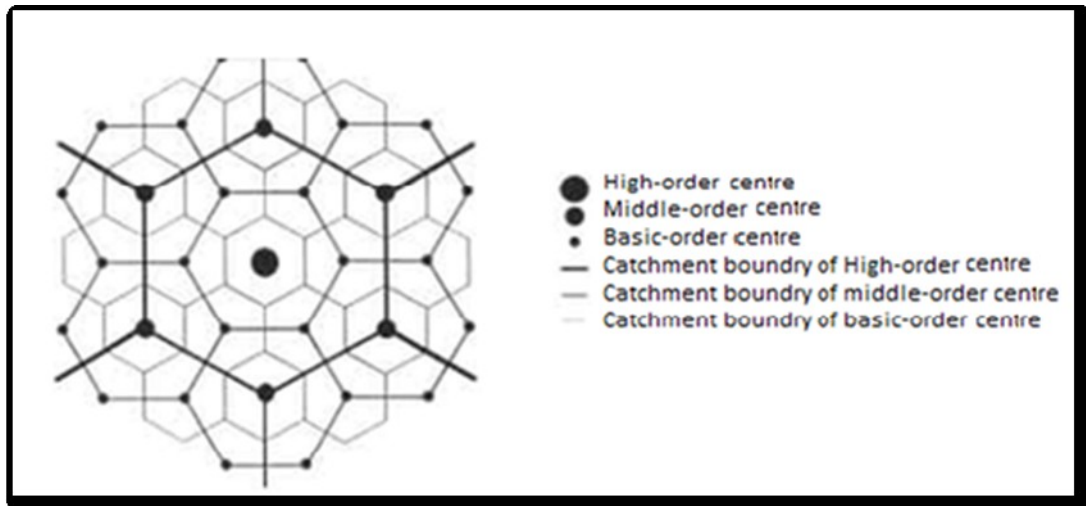


Figure 2-6: Central place model

Source: Adapted from Christaller (1933)

Hence, it was proposed that the central place model be replaced with a model that promotes specialisation and efficiency in a less rigid and hierarchical manner (McCann & Acs, 2011; Jacobs, 1961; Hall, 1997; Kloosterman & Musterd, 2001; Sinclair-Smith, 2015; Rogerson, 2006). This new urbanism ideology of the 1980s is aligned with the administrative argument of urban classification in section 2.3 on how settlements can be legally created to form administrative entities, since the activities and functional spaces of individuals extend beyond the urban edge by freedom of movement (Brotchie *et al.*, 2017).

The network model is a result of this criticism. Although this concept is not clearly defined, it is interpreted as the interdependence between a set of cities with various sizes that results in increased interaction within the region rather than outside it (Sinclair-Smith, 2015; Buralassi, 2010; Meijers, 2008; Parr, 2004). Similar terms in the literature include *conurbation* (Geddes, 1915), *networked city-regions*, *multicore city-regions* (Boudeville, 1967) and *polynucleated metropolitan regions* (Kloosterman & Musterd, 2001; Parr, 2004; OECD, 2006; Meijers, 2007; Geddes, 1915).

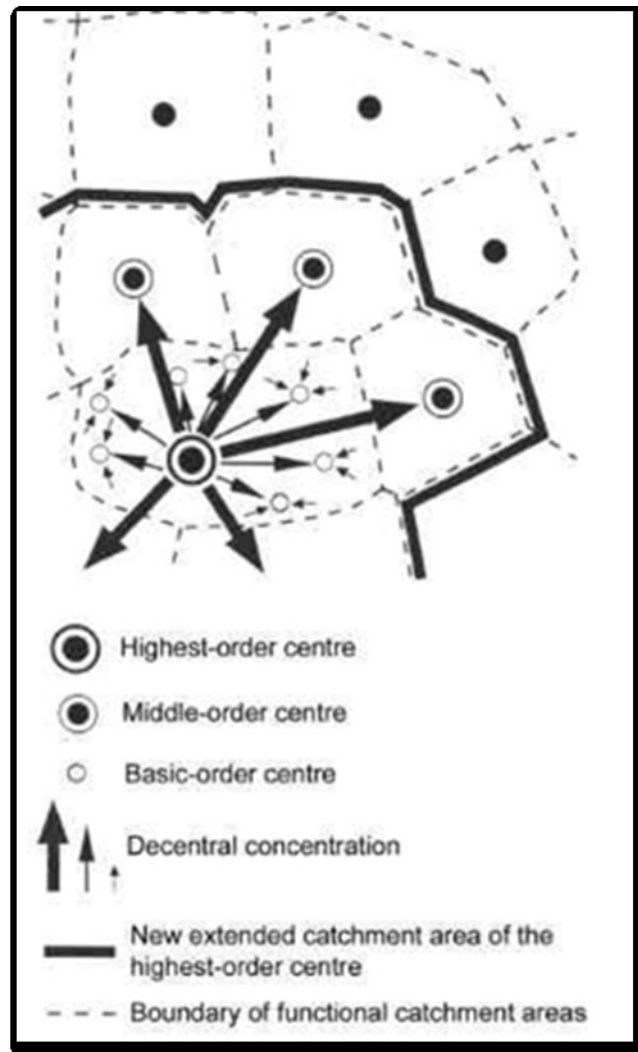


Figure 2-7: De-concentration concentration model

Source: Steins (1994)

By implementing the network model, the highest-order centre of the region remains the centre that offers the most economic activity to a diverse and large population, while the middle-order centres with less economic activity act as the city suburbs, filling intermediate-order functions and residential centres (Steins, 1994; Geyer & Kontuly, 1993). However, between these centres exist smaller basic-order centres (rural areas) which are included under the urban regions, that may specialise in particular economic functions that are normally only found in large centres, thus leading to the “breakdown in size-function relationships” (Douglass, 1999; Tacoli, 1998; Sat Aydan, 2018).

The interaction patterns of strongly-networked polycentric regions are characterised by higher levels of interdependency and more equal and complex interactions between centres of varying sizes (see Figure 2-8) (Sinclair-Smith, 2015). Hence, the network urban development model

(also known as the polycentric urban region, or PUR) is promoted with the intention of increasing equality in the region while maximising the economic benefits of economies of scale without the obvious disadvantages that include high-factor costs, congestion, pollution, and sprawl (European Commission, 1999; Parr, 2004; Turok & Bailey, 2004; Meijers, 2008; Rogerson, 2006; Duranton & Puga, 2001; Sat Aydan, 2018).

However, problems such as dispersed urban population, long travelling distances, small-scale infrastructure facilities, the lack of high-order business services, and the division of efforts among competing centres may all become unfavourable to the investment environment, thereby contributing to the problem of regional economic adjustments and rendering network polycentric urban regions as areas of economic stress. This is, of course, the unattractive perspective of the theory (Alonso, 1964; Alonso, 1971; Sinclair-smith, 2015; Davoudi, 2003; Parr, 2004; Sat Aydan, 2018). That being said, the success or failure of network regions can with no certainty be attributed solely to spatial structuring and the advantages that come from it (Parr, 2007; Lambooy, 1998).

The said (network) model is different from the demographically classified settlements of Christaller's (1933) central place model. Rather than attempting to form a single, large, primary city dominant in a vast region (intensive, unbalanced development), the network polycentric model concept focuses on the administrative clustering of many settlements of different sizes and categories to form an entity (extensive, balanced development) (Friedmann & Douglass, 1975; Camagni, 1993; Douglass, 1998a; Kloosterman & Lambregts, 2001; Meijers, 2007; Geyer & Kontuly, 1993; Sat Aydan, 2018) (see Figure 2-8 below).

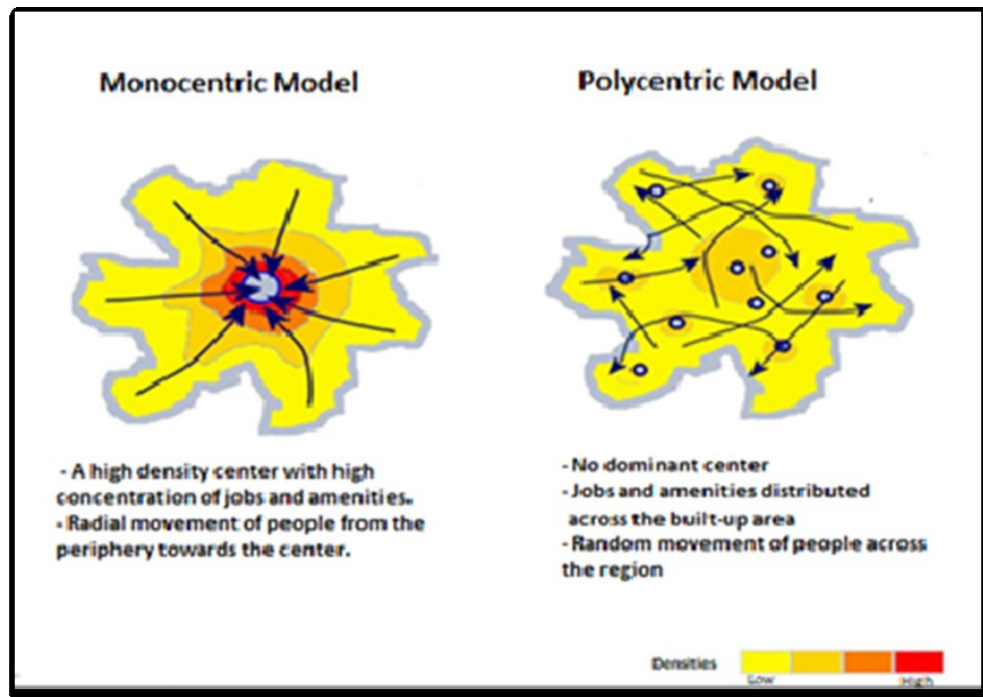


Figure 2-8: Monocentric (central place) vs. polycentric (network) relationships

Source: Adapted from Hayward (2013)

Figure 2-8 above clearly illustrates the primary difference between a demographically created metropolitan region, i.e. a central place model which has one high-density centre offering amenities and jobs to the surrounding lower-density settlements, and the polycentric model, which is an administratively created metropolitan region with no dominant centre but which comprises a number of settlements, each offering employment opportunities and amenities. This results in there being functional linkages between settlements within the administrative region (Sat Aydan, 2018).

The question that arises from the polycentric urban region is how these regions are to be delineated. Chapter 3 will reflect on this.

2.6 Conclusion to Chapter 2

Human beings have a need to name and categorise objects, concepts, and places to make sense of their surroundings in order for them to function more efficiently (Anderson, 1991). However, naming objects is a challenge in an open system that is influenced by various dependent and independent factors. Likewise, the classification of human settlements is a complex issue given that they are also open systems influenced by different factors.

In this regard there exist three primary constantly active forces within the spatial landscape: centripetal, centrifugal, and agglomeration forces. Centripetal forces attract migrants and economic activities to an area; agglomeration occurs when individuals and economic services are concentrated within a region; centrifugal forces arise once the area loses its appeal and individuals and economic activities begin dispersing outwards, causing de-agglomeration. This dispersion pattern has become more pronounced since the introduction of the automobile in the late 1940s, which allowed freedom of movement and the enlargement of functional spaces.

To date, numerous academics have tried to capture this phenomenon and categorise settlements, but without much success. As a result, there is no shared understanding across the world of how settlements should be categorised. To provide a consistent understanding of the settlements across its member countries, in 2012 the UN proposed a framework by which settlements can be categorised. They proposed that settlements can be categorised either 1) demographically (classic approach), or 2) administratively (which is a more contemporary approach).

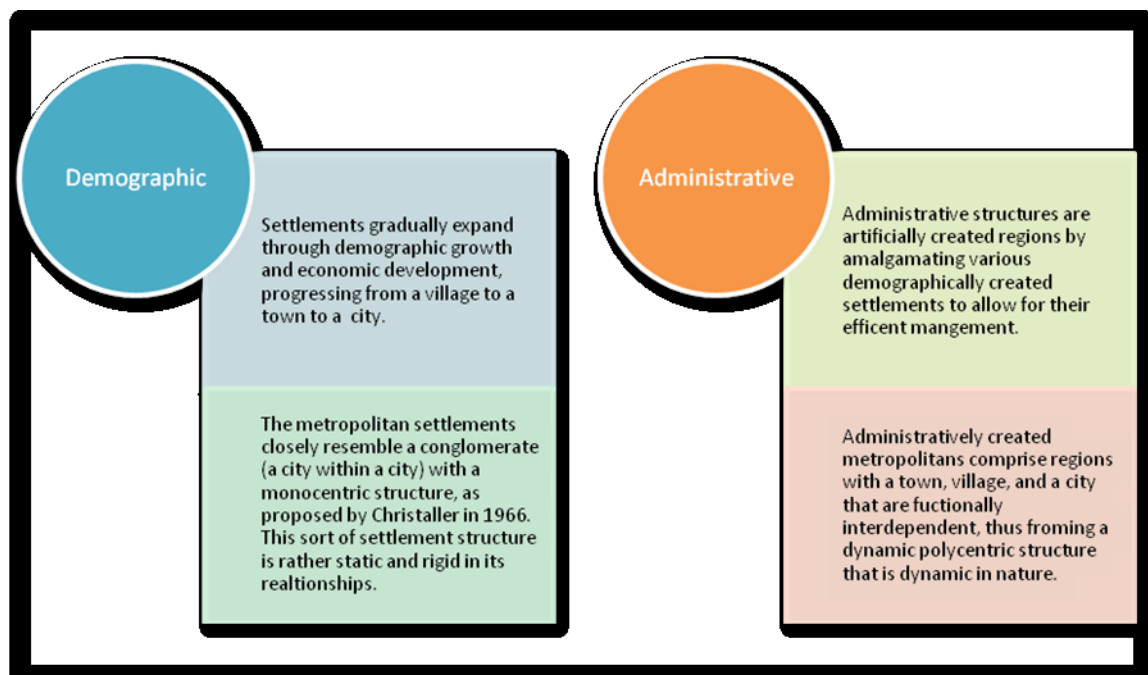


Figure 2-9: The difference between demographically created and administratively formed settlements

Source: (Own construction)

In theory exist many definitions for what a metropolitan region comprises, including a *formless city* (Mumford, 1961), the *primate city* (Jefferson, 1939), the *higher-order city*, (Christaller, 1933,

1966), and a *conurbation* (Geddes, 1915). Many classical theorists regard it as a region that comprises a densely populated urban core and less populated interdependent surrounding settlements, which together create a single morphologically large entity (Doxiadis, 1974; Bertaud, 2004; Morrill, 1987; Pacione, 2010).

The literature from this chapter has revealed that a metropolitan region does not necessarily have to be an intensively developed region with the structure of a city within a city. It can also be a cluster of settlements of various sizes grouped together based on their functional relationships to form an administrative region. This answers the aim of the chapter on how metropolitan regions are formed from a theoretical perspective.

This chapter has explained the structure and composition of human settlements but has not offered insight on how the regions are delimited. As a result, the Chapter 3 will reflect on how regions are delineated theoretically. This chapter has revealed that the demographically defined settlements are outdated. Chapter 3 will explore the delineation of regions from a contemporary administrative perspective.

CHAPTER 3: STRUCTURAL REFORM OF ADMINISTRATIVE ENTITIES

3.1 Introduction

Chapter 2 revealed that technological changes, population growth, and economic development have expanded the functional space of urban inhabitants beyond the urban edge (Sinclair-Smith, 2015). This has resulted in unplanned and uncoordinated spatial development known as urban sprawl (see Figure 2-5 and Figure 2-7) (Taylor, 2009; Raagmaa & Kroon, 2005; Smith, 1985; Ramutsindela, 2010; Perroux, 1950). According to Leeman (1970), this spatial form has in turn hindered efficient economic growth and development of settlements (Cameron, 1999; Leeman, 1970; Krettl, 2006). In response to this challenge, many countries globally have resorted to restructuring their administrative boundaries to contain the activity spaces of their inhabitants within a neatly packed administrative boundary toward making administrative management more efficient (Caiden, 1971).

A boundary is a topographical or imaginary line used to separate things that are different (Storey, 2001). In political terms it is used to separate areas by claiming jurisdiction over a region while in urban planning terms it could be used to separate areas that are not morphologically or functionally interrelated (Caiden, 1971). From an administrative perspective, boundaries are used to separate and categorise areas based on historical, social, economic, and political pretexts of determining effective functioning of those areas (as discussed in 2.3) (Scott & Stoper, 2014; Faguet, 2005; Dollery & Robotti, 2006; OECD, 2014b; Wilson, 1887; Krettl, 2006; OECD, 2014; Gulick, 1937; Wright, 1997; Skaburskis, 1992; Sharpe, 1995; Parr, 2007; Cameron, 1999; Barlow, 2001; Appleby, 1945; Dahl, 1947; Finer, 1941; Friedrich, 1940; Goodnow, 1900; Mosher, 1982).

Ultimately, this chapter reflects on how administrative boundaries should be delimited theoretically and is aligned with the second objective of this thesis, which seeks to understand how administrative areas are delineated theoretically. In view thereof, this chapter will firstly explore the need for the administrative management of urban settlements, then proceed to reflect on the theory of the various typologies used to demarcate administrative boundaries. Lastly, this chapter will focus on the administrative structural reforms of purposefully selected countries of Canada, Denmark, Australia, Turkey, and South Africa in order to reflect on how the various theories have been implemented in different countries since the 1970s and on the respective successes.

Subsequently, to understand contemporary administrative management it is essential to grasp the basis of its development and evolution. Section 3.2 will explore such as a point of departure.

3.2 Evolution of administrative management in urban settlements

The economic growth and development of rural settlements brought about by urbanisation and industrialisation have increased the demand for public services such as sewage disposal, street cleaning, traffic regulation, public health measures, and recreational activities (Sikander, 2017). Initially, this demand increase was met by landlords or local administrations employing series of ad hoc, single purpose bodies to oversee and provide certain services such as paving, cleaning, infrastructure development, lighting of streets, and the provision of watchmen (Sikander, 2017).

Until the early 19th century this urban management system functioned satisfactorily while the needs of communities were still small (Sikander, 2015). However, the psychological lures of city life that persisted through rural-urban migration resulted in further population increase, and the administrative areas previously drawn by the central governments no longer coincided with the settlements' growth patterns (see section 2.4). These "single-purpose bodies" were failing to keep up efficiently with the growing demand for basic amenities that came with the influx of new inhabitants (Leemans, 1970; Norton, 1994; Cameron, 2006; Cameron, 2008). As a result the previous form of cooperative municipal management with external employees proved inadequate and costly in meeting the needs of the new expanding urban areas (Cameron, 1999). Consequently, national governments took over the responsibility of providing services and managing the development of human settlements during the 1950s and 1960s with a top-down planning approach (Beauregard, 1991).

Under a direct or top-down planning approach, national governments would pass laws according to their political value sets, although the details of administration would be carried out by government officials throughout these countries (Mcdonald, 1995; Rhodes, 1986; Friedman, 1989). The primary aim of development at that time was to achieve a state of greater equity between regions and a more balanced development approach in standardising policies at operational levels (OECD, 2014a; Rowat, 1980; Beauregard, 1991; Brueckner, 1987; Brueckner, 2007). This planning approach is evident in the standardised urban models discussed in section 2.4 and a similar approach was adopted by South Africa through the apartheid urban model (see section 4.2), in which one development model was implemented in all settlements and regions. By the early 1980s this approach was said to be indifferent to the needs of the local contexts, and development was still sprawling over the boundaries (Haughton *et al.*, 2000).

Developments of 1980s and 1990s fuelled the birth of the modern day local government, which came as a reaction to the failures of the former centralised top-down approach (Devas, 2005; Friedman, 1989; Mawhood, 1993; Sikander, 2015; Haughton *et al.*, 2000). In response to the shortcomings of the top-down approach, a bottom-up planning approach in the form of indirect decentralisation was introduced, which allowed for public participation in matters of policy (Larrison, 2000; Sikander, 2015; ul Haque, 2013). This approach was adopted with the aim of creating more efficient, effective, integrated, and equitable societies (South Africa, 1997; South Africa, 1998; South Africa, 1996; Beall & Todes, 2004; Meligrana & Razin, 2005; Cameron, 2010; Rondellini, 1981; Wallis & Oates, 1988; Sikander, 2015; Rondellini, 1981; World Bank, 2009b; UNDP, 1993).

However, the constant public engagement in aspects of local planning disrupted the desired outcomes and led to constant altering of processes and goals, which in turn compromised productivity and financial cost to government entities in addition to opening doors for corruption (Samoff, 1990; Smith, 1985; Solnick, 1996).

During the crisis of the recent economic recession of the 2000s, many national governments sought to save on costs and become more efficient in their territorial structures, which have renewed interests in the makeup of the administrative structures of their countries (OECD, 2014a). Many of these countries had separate administrative entities for the various settlements, but these governments revisited these administrative structures during restructuring processes. In new administrative structures, entities (regions) in these countries were made up of more than one settlement (see section 2.3 and 1.2) in acknowledgement of their interdependent relationships, which had been formed to respond to changes in the socio-economic environments of their inhabitants without requiring any further changes to the administrative boundaries, thereby saving on costs (Norton, 1994; Dollery & Robotti, 2006; Cameron, 1999).

Many organisations of economic co-operation and development (OECD) and non-OECD countries have undergone government reforms to ensure more profitable, efficient, and responsible administrative structures (such as Ireland, England, Australia, Turkey, and Canada). In these countries, two common forms of administrative reform have taken place (OECD, 2014a):

- Municipal mergers, to reduce the number of municipalities by increasing their sizes and containing urban sprawl;

- Inter-municipal cooperation, which encouraged the sharing of resources and investment between municipalities who were functionally linked, but whose administrative areas remained separate.

The restructuring exercises were based on the value preferences of central governments (Cameron, 1999). Where preference was given to strong democracies requiring public participation and social development, smaller local municipalities with higher densities had been formed (Cameron, 1999; OECD, 2014b). On the other hand, where socio-economic development, financial viability, and administrative efficiency were sought, larger municipal entities with larger populations and more extensive forms of development had been preferred (Cameron, 1999; Leemans, 1970). Lastly, if the primary aim of boundary organisation was to increase the catchment areas of public services, then the size of the area would be determined based on the optimal size for that particular service (Leemans, 1970). Section 3.3 will explore the motivations for these restructures, which from a theoretical perspective either follow an extensive or a more intensive development approach.

3.3 Determining administrative boundaries

Presently, theories and good practices that can be referred to when making administrative boundary decisions are limited (Meligrana, 2004; Boyne, 1992; Oakerson, 1999; Bish, 2000; Sancton, 2000; Allan, 2001; Dollery & Chong, 2008; Shale, 2005). As a result, substantial evidence with which to determine what the most efficient size of an administrative region should be is also lacking (Hårsman *et al.* 2009; Scott & Stoper, 2014; OECD, 2012; Ratcliff, 1949; Weber, 1958; Wirth, 1938; Mumford, 1961; Weber, 1909; Sassen, 1991; Knox & Taylor, 1995; Doxiadis, 1970; Harrison & Dourish, 1996; Sikander, 2015; Parr, 2007; Guillain & Gallo, 2006). For the reasons given, the manner in which spatial-administrative reform has occurred globally has been subject to debate and its implementation based on a trial and error (Cameron, 1999; Leeman, 1970; Dollery & Robotti, 2006; OECD, 2014a). Governments rarely, if ever, provide motivations for restructuring their administrative structures, and would state only that they intended on saving on costs (Barlow, 2004; Wright, 2007; Peters, 2002). Politicians use terms such as *optimal operations*, *financial viability*, *cohesiveness*, *equality*, or *functionality* to motivate restructuring processes. Section 3.3.1 below will offer a possible explanation of the theory behind these motivations by discussing as themes two primary motivations for restructuring, namely technical and subjective (Cameron, 1999) (see Figure 3-1 below).

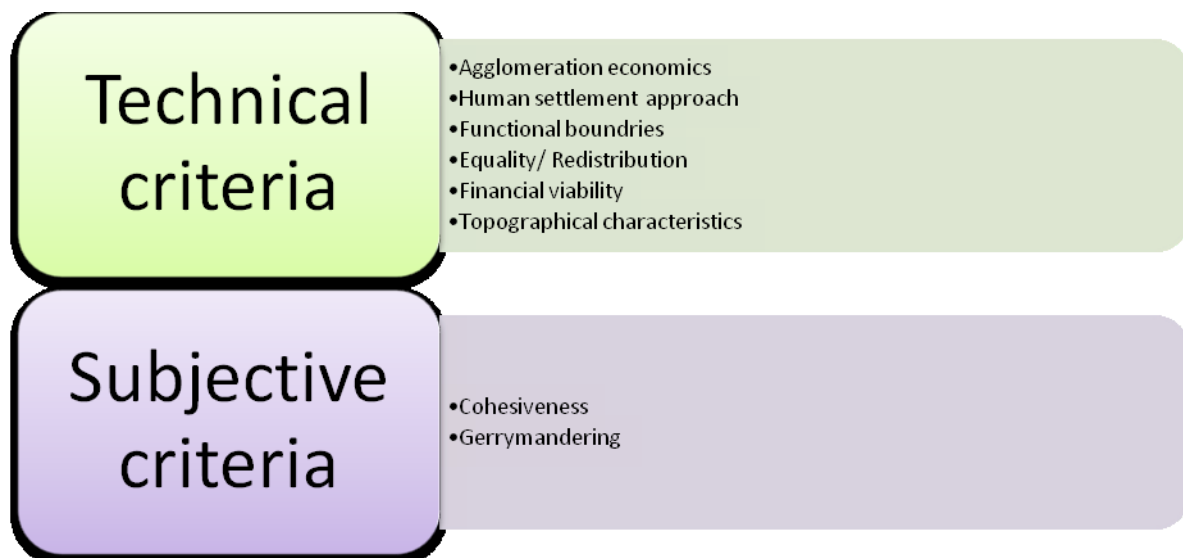


Figure 3-1: Motivating factors behind boundary demarcation

Source: (Own construction)

These motivations (Figure 3-1) for restructuring boundaries will be discussed in the sections below (see section 3.3.1 to section 3.3.2).

3.3.1 Technical considerations to restructure boundaries

From an economic standpoint, efficiency refers to a state in which resources are used optimally and waste is minimised. Ensuring efficiency is largely a technical process that can be represented in various ways within the administration process. This approach attempts to capture the administrative region under one unified system, either extensively or intensively, based on economic, equal, social, geographical, and functional criteria. This section will explore each of the technical approaches (as mentioned in Figure 3-1) and the successes of these respective attempts (Wallis & Oates, 1988).

3.3.1.1 Agglomeration economics

Agglomeration economics leverage the benefits associated with the clustering of economic activities in close proximity (Glaeser, 2011; Parr, 2012). This interaction (force) can be likened with the principles of Newton's law of gravity in that individuals will use facilities and services nearest to them (distance) to decrease transportation costs. Hence, this good practice is motivated largely by the principles of efficiency, accessibility, and decreased transportation costs (Glaeser, 2011).

In using this concept, central governments cluster or agglomerate settlements with higher socio-economic connectivity and interactions to create clusters (larger administrations), rather than having separate administrations of settlements with high levels of interaction (see Figure 3-2 below) (Marshall, 1920; Overman, 2010; Potter, 2012). This notion proposes that consolidating separate administrative areas can reduce the fixed costs of infrastructure and administrative duplication while containing sprawl within the municipal boundaries (Rosenthal & Stange, 2001; Keating, 1995; Krugman, 1991a).

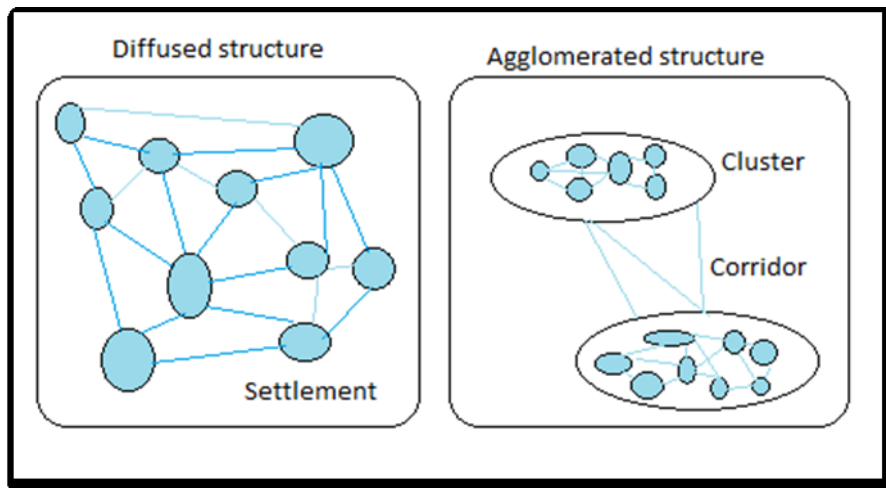


Figure 3-2: Agglomeration structure

Source: (Own construction)

The rationale of the concept agglomeration economics is closely related to the theory of economies of scale, in which the cost of providing a service or goods declines with the increase in demand (larger population) and decrease in transportation costs (Palander, 1935; Weber, 1909; Richardson, 1995; Cameron, 1999; Smith, 1993; Paddison, 2001; Rowat, 1980; Ciccone & Hall, 1996). However, there is also a trade-off between the size of a local authority and the quality of its performance (Wheaton & Shishido, 1981; Petrakos, 1992; Allen, 1991; Sharpe, 1988). Smaller administrative areas with high densities have costs associated with congestion, pollution, social ills, and longer commuting times (Kahn, 2010; Wheaton & Shishido, 1981b) while, on the other hand, the disadvantages of a larger administration with lower population densities is that it is too costly to manage and does not attract much investment. However, they do have a lower cost of living (housing prices) and are found to be more productive in terms of travelling time (see Figure 3-3 below).

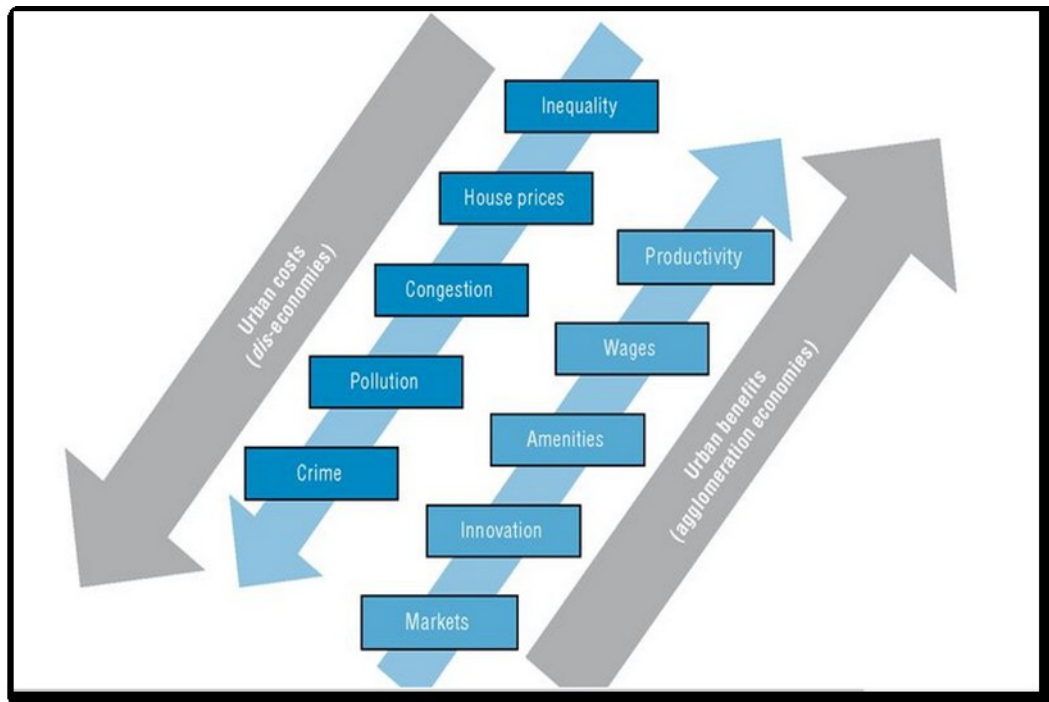


Figure 3-3: Urban costs and benefits associated with agglomeration economics

Source: OECD (2014)

Subsequently, public choice theorists would fundamentally disagree with the agglomeration economics argument in favour of a more dispersed or segregated form of administration, since they believe that smaller administrations would promote competitive behaviour amongst themselves, which would necessitate greater efficiency (Keating, 1995). Furthermore, they add that smaller administrative entities with lower population densities are likely to provide a more diverse range of services, lower living costs, better quality of services, and shorter commuting costs than a single large administration (Duranton & Kerr, 2015; Tiebout, 1956).

To date, most research conducted in the UK, Canada, Australia, and the USA seem to suggest that the relationships between size, performance, and agglomeration are inconclusive (Paddison, 2001; Reese, 2004; Puga, 2010; Sonja, 2009; Byrnes & Dollery, 2002; Slack & Bird, 2010; Found, 2012; Boyne, 1992; Siegel, 2005; Kumelo & Ncube, 2016; Sharpe, 1988; Honey, 1982; Soja, 2015), since it is largely unknown how population size decreases the costs of providing services given that the factors and circumstances of each municipality differ (Cameron, 1999). Furthermore, it is difficult to measure governance performance solely with reorganisation of the administrative boundary (Keating, 1995).

In light of the inconclusive nature of this discussion, the agglomeration of scale argument can be used in support of both small and large territories (Honey, 1982; Cameron, 1999;

Henderson, 1974; Arnott, 1976; Villamil, 2011) – small territories with higher densities to promote economics of scale and large territories for being the most cost efficient tools to counteract sprawl (Honey, 1982).

3.3.1.2 The human settlement patterns approach

A century ago urban theories were based on the transportation of physical goods from an industry to a marketplace while allowing the maximum accessibility to a pool of labour (Weber, 1909; Palander, 1935; Hoover, 1937; Isard, 1956; Krugman, 1991b). Today, however, the time and cost between where a resident lives and where they work have become more important, since human time has become more valuable within the tertiary economic sector (Glaser, 2010). The socio-geographic approach seeks to analyse spatial behaviour to understand social, economic, and cultural linkages between and within local areas so as to form an administration area that is most efficient in respect of cost and time (Cameron & Meligrana, 2010).

Commuting patterns are one of the most common attributes that define a metropolitan area or large municipality, since there is usually a strong interrelationship between residential suburbs and a commercial centre. Planners argue that the integration of economically interdependent areas is required to sustain social and economic development (Sharpe, 1970; Cameron, 1999; Cameron, 2005; Cameron & Meligrana, 2010); hence their suggestion that interdependent settlements/areas operate as a single administrative entity.

However, defining the spheres of influence involves identifying the status of the centres by the services they provide (Christaller, 1966), and then by measuring traffic, economic transactions, and recreational habits between the various settlements, which is rather difficult to estimate accurately and is time consuming (Cameron, 1999; Krings *et al.*, 2009; Gottman, 1957; Smith, 1993; Sharpe, 1995).

In this regard, Bennett's (1989) typology of bounded municipalities is useful in embodying this socio-economic approach. On the one hand is the concept truly-bounded, which is a direct correlation between activity spaces and administrative structures. However, more commonly administrative structures are under-bounded structures when the administrative sizes of municipalities are smaller than the range of socio-economic activities of many of their citizens (resulting in sprawl). On the other hand, over-bounding occurs when the administrative sizes of municipalities exceed the range of socio-economic activities of many of their citizens (Meligrana, 2004; Ramutsindela, 2010) (see Figure 3-4 below).

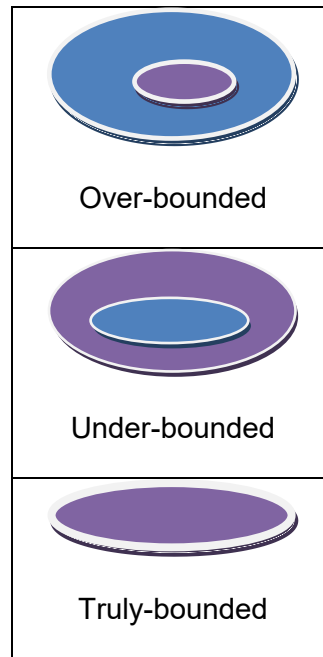


Figure 3-4: Bennett's typology of bounded municipalities (1989)

Source: (Own construction)

As ideal as it would be to have a truly-bounded municipality, it is not always easy to identify the natural boundaries of communities and match them accordingly (Ramutsindela, 2010), and in the cases where they can be matched there exists no consensus about the intensity of the activity required for it to form an administrative entity (Cameron, 1999). In addition, central governments may constantly have to revise their boundaries on an annual or semi-annual basis to keep them updated, which is costly (Bennett, 1989). The opposite approach is a one-time, over-bounded, large boundary adjustment. This approach increases the administrative size beyond the range of normal activities of the majority of the people, thereby allowing for future growth and expansion (Cameron, 2010; Ramutsindela, 2010).

The problem with this overly-bounded approach is that the region could be too large to properly administrate, resulting in the region becoming non-profitable or being put under economic stress.

3.3.1.3 Functional boundaries

In economic terms, a function refers to the relationship between two variables or entities. This relationship is an interdependent one that can create a system of its own (Christaller, 1933, 1966; Scott, 1982; Weber, 1909; Hall, 1966; Hoover, 1968; Lever, 1972; Pred, 1964). A functional area can be defined by a system of economic and social interactions in the labour market between the built-up areas of the city and the surrounding residential and rural territories

(Coombes, 2005; Parr, 2004; OECD, 2010; Marshall, 1920). In other words, this approach requires most workers in the region to have jobs within the region's limits and the region to be financially self-sufficient (Berry, 1973b; Hall & Hay, 1980; Lewis & Prescott, 1972).

This approach shares obvious links with the agglomeration economics approach in that a functional boundary would have to support a minimum population economically for it to be economically efficient and provide for the effective use of resources within its administrative entity (Craythorne, 2006; McGranhan *et al.*, 2009; Njikamp, 2013). That is, the less important the economic functions on offer in the centre are, the smaller the agglomeration size should be and conversely (Christaller, 1933; Christaller, 1966; Losch, 1944; Honey, 1982). There are also links with the socio-geographic approach when it comes to the importance of commuting between regions (Bennett, 1989; Njikamp, 2013). This approach can be said to promote integration from the agglomeration clusters and efficiency by providing maximum access to individuals and all services in the administration (see Figure 3-5).

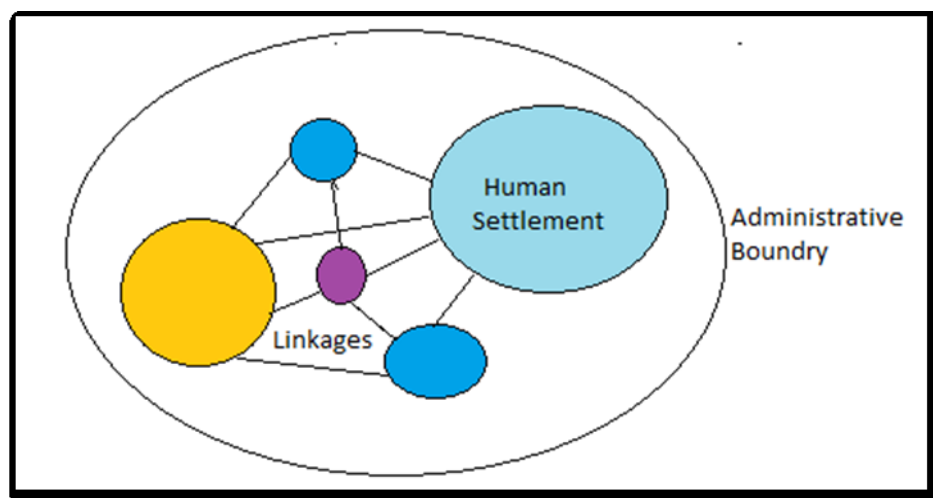


Figure 3-5: Graphic representation of functional linkages in the delineation of administrative boundaries

Source: (Own construction)

This methodology enables comparing functional urban areas with urban classifications of similar sizes across countries. For example, the OECD (2014b) proposes that functional urban areas can be categorised into four types according to population size:

- Small urban areas, with a population of below 200 000;
- Medium-sized urban areas, with a population of between 200 000 and 500 000;

- Metropolitan areas, with a population of between 500 000 and 1.5 million;
- Large metropolitan areas, with a population of 1.5 million or more.

The suggested advantage of this functionalist approach is that it provides a precise guideline as opposed to vague subjective criteria on how boundaries should be demarcated and urban areas classified (Cameron, 1999; Slack & Bird, 2010). Nonetheless, while function-based criteria are useful, on their own they do not provide a clear basis on which to determine boundaries or administrative classification, since they do not necessarily reflect the values of the local governments and their political objectives (Cameron, 2005; South Africa, 1997).

Furthermore, functional regions are fluid ones and will need to be re-examined at least every five to 10 years, depending on the rate of demographic growth and economic development, which is costly (Sutcliffe, 1999; Giraut & Maharaj, 2002; OECD 2006).

3.3.1.4 Equity/redistribution policies

This approach seeks to balance the need for the speedy and sustainable delivery of services with the concern of addressing inequalities. From a socio-demographic perspective it is argued that a more equitable distribution of services and taxes could be achieved by merging a city with its poorer surrounding areas through consolidation, incorporation, or amalgamation (Cameron, 2009; Glaeser, 2010) and sharing finances and services from richer areas with poorer areas to ensure that the most essential services are delivered (Cameron, 1999). This principle has been used implicitly in boundary demarcation globally (Cameron, 1999). From this perspective the central city and its surrounding suburbs and edge cities are consolidated to allow for a more equitable distribution of services and taxes (Paddison, 2001), since a larger and more consolidated administrative area would be more likely to have a mixture of rich and poor inhabitants, making it easier to facilitate redistribution. On the other hand, in small administrations there would be a greater chance of isolation of the rich and the poor, and a weaker redistribution of resources between them would be more likely (Oates, 1977; Cameron, 1999).

However, researchers have reservations about using this approach to create metropolitan regions that will produce a more equal society, as local governments are believed to be an inappropriate site for redistribution because municipalities would risk losing their more affluent ratepayers, who would object to paying higher taxes and instead attract less affluent citizens (Cameron, 1999; Cameron, 2009; Geyer & Kontuly, 2001; Geyer, 2007; Geyer *et al.*, 2014),

Nevertheless, these scenarios are influenced by the politics of the consolidated municipalities (Cameron, 1999).

3.3.1.5 Financial viability

Financial viability is defined as a municipality's ability to meet its expenditure commitments and obligations (costs) from its own income stream (revenues, delivery of services, property taxes, and transfers) (National Treasury, 2011; Local Government Fiscal Framework, 2015; Harrison & Todes, 2016). In other words, if a municipality is not financially viable, self-sufficient, or self-reliant, it will not be able to afford its expenses from its own revenue and will depend on funding by national government (Khumelo & Ncube, 2016).

The agglomeration economics approach and the functional approach reveal that the administrative unit needs to be a certain optimal size for it to have a tax base that will enable it to be profitable and financially viable (Rondellini *et al.*, 1984; Cameron, 1999).

Since the 1960s, urban economists and geographers focused on the problem of the optimal city size by exploring the relationship between increasing returns (tax and rates) and urban size (see Figure 3-6) (Alonso, 1971; Glaeser *et al.*, 1992). Optimal in this sense refers to the urban size that would offer the greatest return. This is where the total benefit (average revenue and marginal revenue) is higher than the total cost (average cost and marginal cost) (see Figure 3-6 below). This is the point of maximum efficiency and financial viability (Camagni *et al.*, 1986).

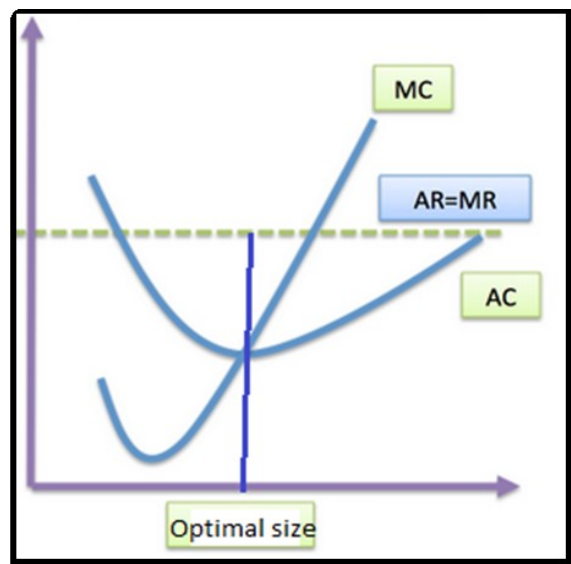


Figure 3-6: Urban growth by means of financial viability

Source: (Own construction)

As the settlement continues to grow, it enters a point of instability where the marginal cost is higher than marginal benefit. In these areas the metropolitan will have to be innovative to attract further investment while retaining its demand for higher-order goods if it is to remain efficient and financially viable (Camagni *et al.*, 1986). This efficiency model teaches that as long as the revenue is higher than the cost, the settlement will be efficient, financially viable, and operate optimally (see Figure 3-6 above) (Capello, 2004; Alonso, 1971; Richardson, 1978).

However, human settlements are characterised by different specialisations, population compositions, and economic functions that subject them to forces of innovation (Henderson, 1974; 1985; 1996). As a result, the efficient range of settlement size would vary extensively according to internal factors such as function, population size, and structure (Richardson, 1972), as well as external factors such as exogenous shocks, different industrial compositions, income curve profiles, and technologies (Cameron, 1999; Partridge, 2010). Therefore, financial viability is not related only to structure but also the ability to attract higher-order economic functions while retaining demands for the other economic goods where the revenue would be higher than the cost of running the administration (Camagni *et al.*, 1986; Honey, 1982; Norton, 1994).

According to Khumelo and Ncube (2016), there is no apparent connection between financial viability and administrative restructuring since many factors can cause a municipality to become financially nonviable, including poor management, political and administrative issues, poor investment decisions, low revenue bases, unemployment, high dependency, and poverty levels within its borders (South Africa, 2014; Rondinelli *et al.*, 2012; McCullough, 1983; Cameron, 1999). Hence, administrative restructuring will not necessarily make weaker municipalities financially viable, self-sufficient or self-reliant, but could result in the contrary if internal issues are not addressed appropriately (Cameron & Meligrana, 2010).

3.3.1.6 Topographical characteristics

Areas should have uniform topographical features and, if inhabitants depend on them for economic activities, this could be a reason for changing boundaries if they are split over two regions (Smith, 1985; Cameron, 2005; Pacione, 2005).

These characteristics reveal that not all motivations for administrative restructuring can be measured and reduced to an equation – some factors that motivate the categorisation and demarcation of administrative entities are frequently more subjectively based on the specific community needs and wants of politicians. Section 3.3.2 below will explore subjective motivations for the demarcation of various administrative entities.

3.3.2 Subjective criteria for restructuring boundaries

The Oxford dictionary (2016) defines a “subjective” criterion as a perspective of the world by the individuals living in it; perspectives are influenced by individual taste, preference, and feelings. Subsequently, in some instances the administrative boundary could be used to reach the objectives of a politician or a dominant community. Section 3.3.2.1 below will explore how boundaries are drawn subjectively to achieve cohesiveness in administrative regions.

3.3.2.1 Cohesiveness

Bennet (1989) states that a sense of community is a form of collective identity that requires common history, culture, geography, social, and economic conditions. He goes on to say that the smaller the unit, the greater the sense of community (Skaburskis, 1992), and disturbing this cohesion by proposing reorganisation and reform could result in conflict (Morrill, 1987).

Two views on cohesiveness are dominant. The first view is where boundaries are demarcated on ethnical lines to diffuse cultural conflicts. From this perspective, the smaller the municipality, the more homogenous the composition. This could, however, emphasise differences and cause conflict between regions (this is aligned with the apartheid model). Alternatively, the second view maintains that these ethnical lines are exchanged with national lines to create a large municipality with a heterogeneous population to incorporate a nationalist (South Africa’s democratic) mindset (Allen, 1991; Leemans, 1970). However, this heterogeneity could give rise to cultural conflict and feelings of underrepresentation on the part of the minority populations (Morrill, 1987; Leemans, 1970; Bird & Slack 2004; Cameron, 1999).

A common application of this principal can be observed in the objective amalgamation of urban and rural areas (Allen, 1991). It is argued that rural inhabitants travelling to urban cores for social and economic activities does not necessarily imply forging strong cultural or political sentiments (Smith, 1985; Leemans, 1970; Mawhood, 1993). In this sense many traditional communities prefer their own identities despite accessing services from urban centres (Cameron, 1999). On the other hand, a consolidated municipality that combines rural and urban areas makes for easier planning and coordination in the region, thereby making it more efficient and economically viable (Paddison, 2001; Cameron, 2005). A boundary demarcation based on cohesiveness will therefore depend on the political value preferences of the national government.

In other cases, restructuring is not based on technical considerations or subjective perceptions, but on political motivations, which is also rather subjectively motivated. Section 3.3.2.2 below will offer one such motivation in the form of gerrymandering.

3.3.2.2 Gerrymandering

Political motivations for boundary adjustments can sometimes involve seeking influence over administrative restructuring to secure maximum votes or supporters in a region, since achieving this guarantees ruling power within that region. This is referred to as gerrymandering.

There is also a perception that over-expanding local municipalities can threaten central governments politically (Barlow, 2004), especially in cases where different tiers of government are controlled by different political bodies (Cameron, 1999; Sharpe, 1988; Leemans, 1970).

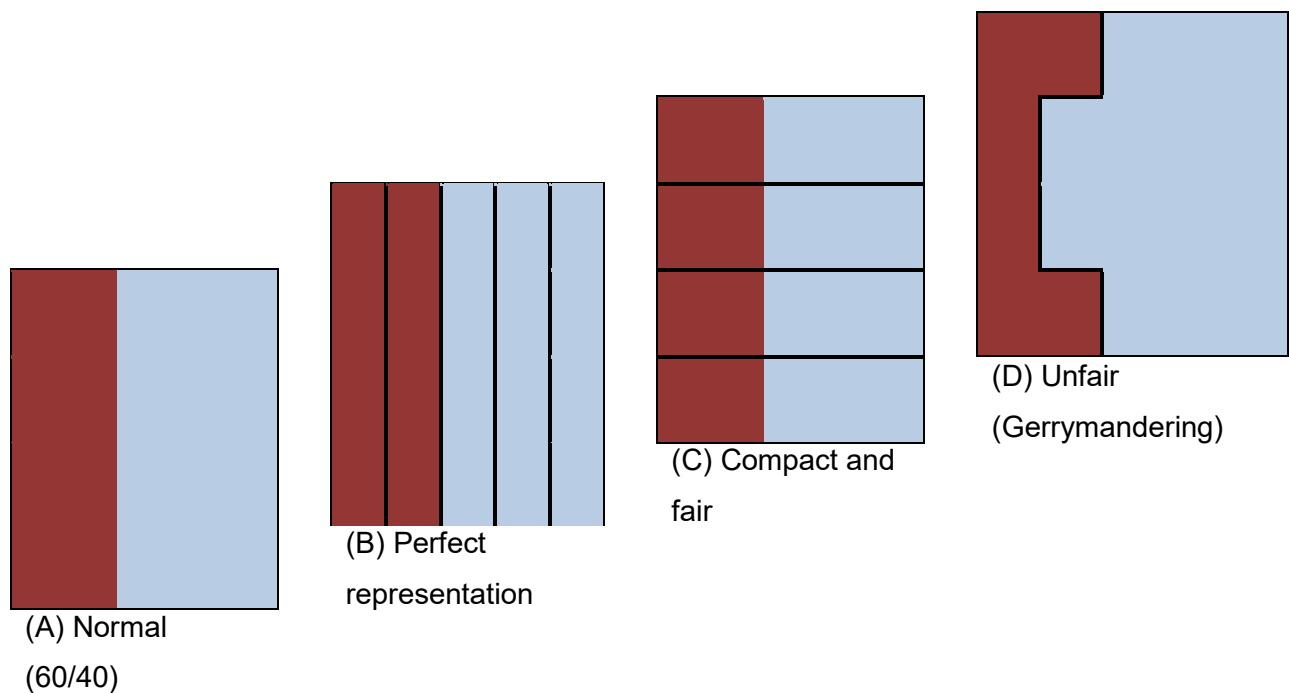


Figure 3-7: Representation of gerrymandering

Source: (Own construction)

Gerrymandering involves acts in which political parties engage to manipulate administrative boundaries to attain more votes and gain political advantage by increasing their jurisdictions. To explain how this occurs, the illustration above indicates ways in which the blue party, who is the majority party, can decide how boundaries should be drawn (Figure 3-7). (A) represents a naturally demarcated system in which the blue party attained 60% of the votes and the red party 40% during elections. In (B) the boundary lines are manipulated to be drawn vertically, with the

blue party attaining 60% (3 columns) of the votes in the district and the red party 40% (2 columns) while still attaining votes proportional to the area's naturally presented distribution. In (C), the boundary lines are drawn horizontally with the rows displaying districts that create a compact version of the representation, though it is still a fair representation of election results. However, in (D), the blue party gives itself the advantage by drawing their boundaries so that they capture some of the red party's jurisdiction. This is what is referred to as gerrymandering (Cameron, 1999).

Clearly, demarcation or delineation of administrative entities is not a definite science that can be simplified to an equation, but rather a pseudoscience based on observation and theory, since each context is different (Jacobs, 1961; Marshall, 1920). The use of scientific knowledge in urban planning is encouraged to guide decision making on a case-by-case basis, with diagnoses and prescriptions within the context of specific bases (Jacobs, 1961; Jacobs, 1984).

None of the practices discussed above could clearly motivate whether larger administrations or smaller administrations are more successful, since each depends on varying factors including the political will and context in which they are located. They do however provide a theoretical explanation of how administrative regions can be delineated. Still, structural reform through boundary demarcation has not been found to not solve all urban administrative problems since it does not restrict the movement of individuals unless it is complimented by laws and policies that control migration (Turok, 2015). Implementing policies duly in support of the demarcation can play a role in redistributing and creating a more cohesive and equal society. Section 3.4 below will reflect on boundary demarcation in purposefully selected countries around the world and analyses their respective successes in the categorisation and demarcation of administrative regions from a theoretical perspective.

3.4 Reflecting on the administrative reform in various countries

To contextualise the practical aspects of administrative reform, the Table 3-1 below summarises the structural reform experiences of Canada (North America), Denmark (Europe), Turkey (Europe), Australia (Australia), and South Africa (Africa). These countries were purposefully selected to capture a holistic worldview on structural reform practices across the globe from as early as the 1970s to recent times, each having different motivations for and outcomes of their administrative structural reform experiences. The sample is therefore neither a comprehensive sample nor is it representative of administrative reform; rather it is an informative sample which provides insight into the application of the different approaches followed to demarcate administrative areas and their respective outcomes (Kim, 2013; Cameron & Meligrana, 2010).

Therefore, each of these case studies captured in the Table 3-1 below will be discussed accordingly in respect of the timeframes within which administrative restructuring has taken place, the motivations for the restructures, the theory supporting the motivations, and the outcomes.

Table 3-1: Demarcation criteria in multiple countries

Jurisdiction	Administrative Reform	Timing	Method	Outcomes	Sources
Canada	Decreased 851 municipalities to 444 (mergers and cooperation). In addition, created five single-tier municipalities (metropolitans)	1998–2009	Socio-geographic; financial viability; equality	Amalgamation received little support and failed to solve any of the problems the merged municipalities faced prior to amalgamating.	Slack & Bird, 2010
Australia	Reduced municipalities from 869 in 1980 to 565 in 2014	1980–2014	Agglomeration economics	The findings reveal no correlation between city size and performance.	Dollery & Byrnes 2008
Denmark	Condensed 1 386 boroughs in 1970 to create 275 municipalities. These municipalities were then merged to create 98 municipalities and created 5 new regions in 2007.	1970–2007	Functional approach	Higher efficiency in voluntary amalgamation than compulsory amalgamation. The cost of providing services has been higher than expected.	Hanes & Wikstrom, 2010
Turkey	Compulsory amalgamation of municipalities with less than 2 000 inhabitants. Merged 3 225 municipalities to 2 950 in 2008. In 2012, 2 950 municipalities were merged to 1 395 in 2014.	2008–2014	Agglomeration economics and functional linkages	New metropolitan regions were created through mergers and agglomeration. Research shows that it had limited success.	OECD, 2016
South Africa	Reduced 1 262 local municipalities to 286 municipalities in 2011.	From 1993	Socio-geographic; equality and functional linkages; financial viability; agglomeration economics.	Mixed results and limited research.	Cameron, 2010

Source: Adapted from OECD (2014); Cameron & Meligrana (2010)

3.4.1 Structural reform in Canada (North America)

The Canadian structural reform was premised on its number of ineffective boundaries and the desire to avoid administrative duplication and inefficiency. Consequently, the National Government of Canada implemented the socio-geographic and financial viability methods, resulting in the reduction of their local government structures from 851 to 444 municipalities between 1998 and 2009 (OECD, 2014b; Slack & Bird, 2013).

Three unique features arise from the structural reform approach in Canada, the first being the creation of an over-bounded, large-scale amalgamation which included the old CBD, its surrounding suburbs, and the rural areas that are functionally linked. In this case special attention was given to equality in the rural communities, incorporating it with the urban districts, and addressing their concerns (Slack & Bird, 2013). In the second case, municipalities once consolidated were de-amalgamated or fragmented to form smaller entities (e.g. Montreal). Thirdly, municipalities could volunteer for amalgamation on condition that they were linked to a province and implemented the planning policies of that province (municipal cooperation) (Slack & Bird, 2010).

By amalgamating bigger municipalities with smaller municipalities, the smaller municipalities received little support from the larger administrative entities. Hence, this approach has failed to a certain extent to solve any of the problems they faced prior to amalgamating. However, the outcomes of each of the implemented approaches above are largely unknown since analysing them is challenging, and it is still too early to identify and evaluate any respective advantages and disadvantages (Slack & Bird, 2010; Sancton, 2001). Nevertheless, what is evident from the Canadian approach is that the structural reform approach is adapted for local circumstances and is not a one-size-fits-all approach (Sancton, 2008a).

3.4.2 Structural reform in Australia

The Australian administrative structural reform has been driven largely by the state's premise that "bigger is better" – hence smaller councils were amalgamated into larger organisations resulting in the reduction of 869 local municipalities in 1980 to 565 local municipalities in 2014. The motivation behind this is that fewer administrative entities would allow for cost savings by means of agglomeration and economies of scale benefits (Dollery & Byrnes, 2008). However, empirical results from studies conducted in the country have had mixed results, with some mergers being more successful than others, bringing into question the success of the mergers (Dollery & Byrnes, 2008).

An alternative approach practiced in this country is the partnership between local councils and shared service provisions without amalgamation – this approach has been more successful than the top-down enforced amalgamation of local councils (Dollery & Byrnes, 2008; Banks, 2014). However, it cannot be stated with certainty that the amalgamation has increased investments in these regions or stimulated economic development (Banks, 2014).

3.4.3 Structural reform in Denmark

Denmark's municipal reform was largely driven by the functional approach in addressing its inefficient health and tax system. This structural reform sought to enhance the efficiency and attain the ideological goal of achieving of a more market-based public sector through reducing the number of small municipalities (Vrangbæk, 2005). This reform created a new map of Denmark.

The 1 386 boroughs from the 1970s were condensed to form 275 municipalities and 13 counties. In 2007, 98 municipalities and five regions replaced the previous 275 municipalities and 13 counties with most of the new municipalities now having population sizes above 20 000, and between 577 000 and 1.6 million inhabitants per region (Houlberg, 2007).

Recent analyses have found that the administrative costs of the new municipalities have increased and efficiency decreased (Houlberg, 2007) and that the exercise of administrative amalgamation has been costly in respect of stress on personnel. Current assessments show that the expected benefits have not (yet) realised and that administrative costs have in fact risen in the amalgamated municipalities since the reform (Houlberg, 2007). Investigation into the structural reform has however revealed that there are higher levels of efficiency in voluntary amalgamation than compulsory amalgamation within Denmark; however the cost of providing services has been higher than expected (Hanes & Wikstrom, 2010).

3.4.4 Structural reform in Turkey

The structural reform of Turkey was premised by the need to play a more active role in the global economy and become members of the European Union (EU). Subsequently, administrative reform had been done in anticipation of attracting more foreign direct investment (FDI) and tapping into the benefits of agglomeration. Two main territorial reforms took place: In 2008, 3 225 municipalities were merged to create 2 950 municipalities, and in 2012 the 2 950 municipalities were further consolidated to create 1 395 municipalities (Zengin, 2014). These reforms were results of either compulsory amalgamations of municipalities with less than 2 000 inhabitants into larger municipalities (socio-geographic approach), or of the inclusions of

residential areas in close vicinities of the metropolitans into those metropolitans (agglomeration economics).

The effects of this amalgamation are inconclusive to date. However, it has been found that the management of these entities are still very much top-down and this might hinder the very objective of efficient planning (Sozen, 2012; Zengin, 2014; OECD, 2016).

3.4.5 Structural reform in South Africa

South Africa's spatial reform was a result of a change in political power. Prior to 1993 the apartheid government formed administrative structures within the country based on race. The new democratic government sought to reverse this effect and form a more integrated and cohesive administrative structure within the country. This resulted in the reduction of 1 262 racially segregated municipalities to 286 racially integrated municipalities in 2011 (Cameron & Meligrana, 2010).

In light of the complexity of the administrative reform, the remainder of the literature study is divided under three chapters. Chapter 4 will offer a background on and insight into the administrative restructuring outcome within South Africa and the factors that influenced it during the pre-interim (1993–1995), interim (1996–1999) and the post-interim (post–2000) phases. Chapter 5 will focus on the human settlement classification in South Africa and the migration trends that have influenced their development during these phases. Lastly, Chapter 6 will provide a review of the methodology adopted by the MDB to demarcate and categorise metropolitan municipalities in the country over this period (1993 to post–2000) and the challenges that they experienced in implementing the legislation (see Figure 3-8 below for an overview).



Figure 3-8: Overview of the South African Administrative reform discussion

Source: (Own construction).

3.5 Conclusion to Chapter 3

Recent economic recessions have required many governments globally to revise and restructure their internal administrative boundaries to save on costs and become more efficient (see section 1.2, 2.2 and 3.2). Available literature on guiding how these new boundaries could or should be drawn to form more efficient administrative entities is limited (see section 3.3). As a result, boundaries are drawn based on many different perspectives, none of which are proven to have had any true success thus far (see section 3.4). Table 3-2 provides a snapshot of the degrees to which the various demarcation approaches implemented in the different countries were successful (see section 3.4).

Table 3-2: Overview of the degrees to which the various demarcation approaches implemented in the different countries were successful

Country	Approach followed	Outcome	Reason
Canada	Socio-geographic and financial viability	Limited Success	Integration of rich and poor areas – division still continued. Costs have however gone up for basic services.
Australia	Agglomeration and economies of scale	Limited success	No evidence of investment increasing after agglomeration.

Denmark	Functional approach	Limited success	To restrictive and no proof provided that employment, economic growth, or investment have increased.
Turkey	Economies of scale	Limited success	Found to be inefficient in its management which is still influenced by top-down planning.
South Africa	Socio-geographic; agglomeration, cohesiveness; functional linkages; equality; financial viability; political will	Largely unknown	Limited research conducted to date. The reminder of the study would explore this further.

Source: (Own construction)

As described in Table 3-2 above, research conducted in Canada found that the amalgamation of richer cities with poorer cities was successful in integrating cooperation and redistribution of resources from rich to less affluent regions (Reese, 2004; Cameron, 1999; Oranje & MCA Planners, 2005), although this came at the sacrifice of the larger richer cities. One direct result of the amalgamations has been increases in the cost of basic services, since a larger underdeveloped area now needed to be served (Baglolle, 2001; Slack & Bird, 2010; Reese, 2004). Additionally, a study conducted in Canada found that even after the integration of municipalities, the old settlements divisions were still prominent and certain areas remained favoured by people above others. Furthermore, studies conducted in Denmark (Blom-Hansen, 2010), Canada (Sancton, 2008a), and Australia (Dollery & Byrnes., 2008; Crase, 2008) found that there was no evidence to show that investments, economic growth or employment opportunities had increased after amalgamation. Turkey restructured its country to become a global player, however the management of its administrative entities was found to be inefficient since they are still managed from a top-down planning approach.

Though many of these reforms have occurred over a period of 40 years, literature reveals that research on the success of these approaches globally is limited. Subsequently, this chapter has demonstrated that there is no one-size-fits-all approach for administrative restructuring and development practices, since each situation is unique and thus the approach followed should be context-specific. Moreover, until and unless it is understood what an agglomeration really is (as discussed in Chapter 2), the boundaries around the administrative entries will continue to be used as political tools for achieving one-sided objectives and capturing maximum votes. Chapter 4 will explore administrative development in South Africa post-1994 to gain a better understanding of the administrative restructuring processes that were implemented in the country after apartheid.

CHAPTER 4: ADMINISTRATIVE RESTRUCTURING IN SOUTH AFRICA

4.1 Introduction

In the past, modernist states politically dictated how and where development should take place (Oranje, 2002a; Nel & Rogerson, 2016; Roberts, 2014; Cronje, 2014; Harrison & Todes, 2013). Existing policies have taken on a more neoliberal approach with national governments only providing frameworks and perspectives on how growth should occur and consult citizens on how to develop the areas according to their needs and opinions (Faludi & Waterhout, 2002; Oranje & Van Huyssteen, 2007; Moini, 2017).

Administrative development in South Africa has been no different. From the 1940s right up to the late 1980s the South African apartheid government dictated how and where urban development and migration should take place based on its political ideology of racial segregation. However, since the early 1990s the democratic government has taken on a more neoliberal perspective by allowing public participation and freedom of movement (Schneider, 2003; South Africa, 1996). Nevertheless, this new-found freedom has come at the cost of rapid migration out of areas with weak economic bases to human settlements which were perceived to offer more economic opportunities, resulting in unbalanced and complex spatial developments in the country (Rogerson, 2016; Harrison & Todes, 2013; Turok, 2012).

Consequently, the new democratic government attempted to restructure its administrative structure by integrating areas which had previously been excluded to form cohesive entities that would allow for more efficient administration. However, this integrated municipality approach was easier to pen on paper than it would be to implement in practice (Marais *et al.*, 2016; South Africa, 1997; South Africa, 1998; South Africa, 2015; Harrison & Todes, 2014; South Africa, 2013). Acknowledging this complexity of restructuring a fragmented and racially segregated administrative structure, the Local Government Transition Act (209 of 1993) proposed that the restructuring take place in three phases: the pre-interim (1993–1995), interim (1996–2000), and the final phase (post–2000) (South Africa, 1998).

Subsequently, this chapter will explore the evolution of the administrative structures during each of these phases and investigate the development of the country's current administrative structures. This chapter will also discuss the factors that influenced administrative restructuring processes before 1993. Next, it will explore the government's attempts to restructure the country during the pre-interim phase (1993–1995) and explain how the final Constitution (South Africa, 1996) had formalised the restructuring processes during the interim phase (1996–2000). Lastly,

this chapter will explain how municipalities have been demarcated and categorised after the first local government elections in 2000. This chapter is aligned with the third objective of this thesis, which is to provide a background on how, why, and where category A metropolitan municipalities have been created in South Africa between 2000 and 2011, and it offers insight into the administrative restructuring outcome in South Africa post-1994.

4.2 South Africa's administrative structure during apartheid (pre-1993)

South Africa's spatial-economic arrangement was initially influenced by Dutch and British colonists and their needs for trade and resource extraction (Roberts, 2014), after which the apartheid government influenced this arrangement through various legislations with which to accomplish racial segregation and economic de-concentration in the country (Fair, 1965; Stern, 1985; Schoeman, 1987; Roberts, 2014; Cronje, 2014; Harrison & Todes, 2013; Bos, 1989; Luiz & Van der Waal, 1997). The most influential of these legislations were the Native Areas Act (1923) and Group Areas Act (41 of 1950), which assigned different versions of local administration to different sections of the cities according to racial profiles (Cameron, 1999; Cronje, 2014; Van der Merwe, 1992; Marais *et al.*, 2016).

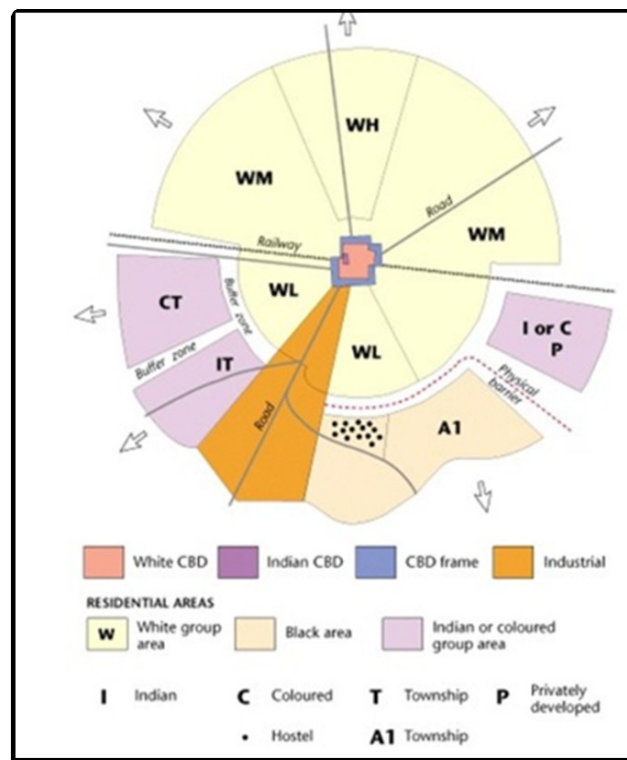


Figure 4-1: Apartheid urban mode displaying racially classified administrative entities

Source: Olivier (2016)

On the macroscale, the apartheid master programme implemented an unbalanced planning approach by forcibly removing blacks from urban areas designated for white occupation and relocating them in rural homelands with limited economic bases (Lemon, 1991; Schoeman, 1987; Marais *et al.*, 2016; Mabin, 1992; Turok, 2014; Harrison & Todes, 2015) (see Figure 4-1). The outcome of these legislations was a patchwork of supposedly independent homelands within the country (see Figure 4-2 below).

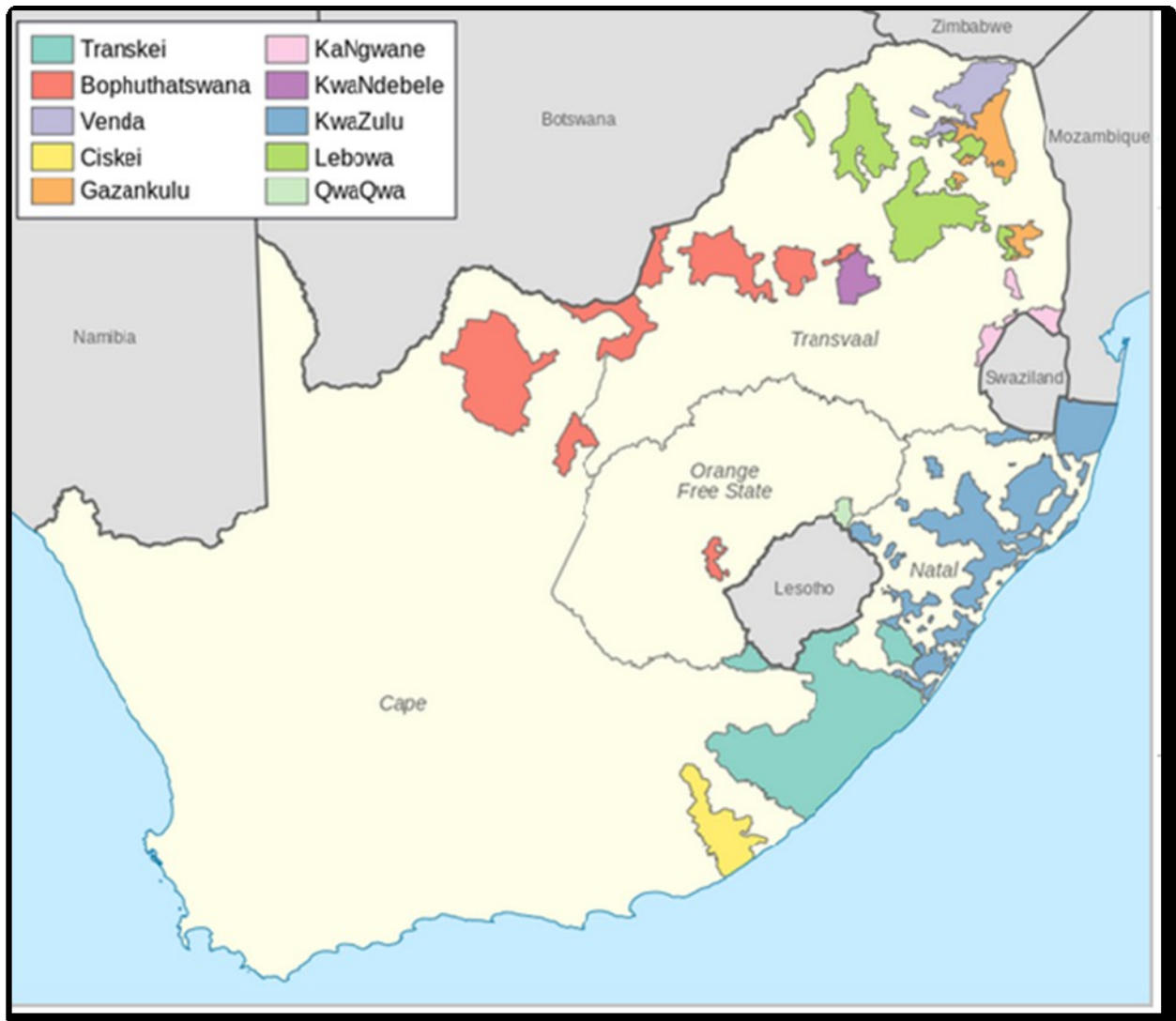


Figure 4-2: Macro administrative boundaries in apartheid South Africa

Source: Htonl (2013)

These homelands really formed cohesive regions based on language and culture. That is, Zulu speaking individuals who were not economically active in the white urban areas of South Africa were banished to KwaZulu-Natal to live among their own people. Similarly, the homelands of Ciskei and Transkei housed Xhosa speaking people while Bophuthatswana was the homeland

of Tshwana people, Lebowa of the Pedi and Northern Ndebele, Venda of Venda speaking individuals, Gazankulu of Shangaan and Tsonga people, and lastly QwaQwa of Basotho speaking individuals. This created a complex settlement and administrative structure in South Africa, with some regions being more densely populated but less economically active than others (Butler *et al.*, 1977) (see Figure 4-2 above).

As a result, growth points, new towns, industrial development points, and de-concentration points or nodal points which housed economic activities were established on the borders of the white urban centres and black homelands so that blacks would have to migrate back and forth to earn an income (Turok, 2014; Marais *et al.*, 2016; Schoeman, 1987; Drewes & Bos, 1995; Geyer, 1989), resulting in spatial mismatches between where people lived and where they worked (Todes & Turok, 2018).

Accordingly, these legislations gave rise to the creation of one of the most inefficient, unequal, complicated, haphazard urban systems in the world (Roberts, 2014; Swilling *et al.*, 1991; Naude, 2001; Smith & Vawda, 2003; Pieterse, 2002; Nel & Rogerson, 2016; Turok, 2011; Todes, 2013; Rogerson, 2006; Drewes & Bos, 1995). By the late 1980s the unbalanced economic growth and racial segregation promoted by the policies of apartheid had failed (Turok, 2016; Roberts, 2014); influx control measures were lifted almost immediately, which resulted in rapid migration of individuals from the former homelands to the larger urban centres in search of a better quality of life. However, the rapid urbanisation of poor households and unskilled labour brought with it many new challenges for the urban areas, including inequality, exclusion, poverty, and financial pressure on local administration (Watson, 2003; South Africa, 2012). As a result, the Local Government Transition Act (209 of 1993) encouraged administrative restructuring in an attempt to make the country and its settlements more economically efficient while promoting a more inclusive and integrated growth path (Marais *et al.*, 2016; Donaldson, 2001).

The concern at that time was that many of the country's different categories and types of municipalities were redundant since the administrative boundaries drawn during apartheid were racially delineated and based on an inequitable tax base that did not acknowledge the interdependence of people and communities, which were now obsolete (Fair, 1956; Lemon, 1991). Furthermore, the functional boundaries of its inhabitants were not functionally synchronised, and large areas outside the municipalities were without access to basic services (Lemon, 1991; Schoeman, 1987). In addition, many of the municipalities formed under the apartheid regime lacked the capacity and resources to perform their functions efficiently (Cameron, 2005; Cameron, 2004).

Section 4.3 will briefly explore the processes that were followed by the democratic government in restructuring the administrative entities in South Africa after apartheid in three phases: pre-interim, interim and post-interim. Therefore, it will consider administrative restructuring during the pre-interim phase.

4.3 Pre-interim phase of urban development (1993–1995)

In 1993 an interim constitution was implemented to set the scene for national administrative restructuring. This legislation mainly promoted a one-city-one-tax base principle and a wall-to-wall system of inclusive development to create racially integrated and financially viable municipalities that would assist in overcoming past inequalities and spatial fragmentation (South Africa, 1993; Schoonraad, 2000; Donaldson & Van der Merwe, 2000; Pieterse, 2008; Pillay, 1999; South Africa, 2009; South Africa, 2010). The first step in its implementation was to dismantle the four previous provinces along with the homelands to form nine racially integrated provinces (Ramutsindela, 2010; Steytler, 2006; Van der Merwe, 2000) (see Figure 4-3).



Figure 4-3: Provinces of democratic South Africa

Source: Htonl (2013)

Administrative restructuring at the local level comprised merging former white municipalities and their official black townships by using the nearest neighbour principle, or the socio-geographic approach (Giraut *et al.*, 2002). The Interim Constitution (South Africa, 1993) made provision for these structures to be categorised into three discrete classes of local government administrations – metropolitan, urban, and rural – each having differentiated powers, functions, and structures (Cameron, 2005; Naude, 2001).

The structure and composition of the metropolitan municipalities are prescribed in the Local Government Transition Act (209 of 1993). According to this Act, a metropolitan municipality is defined as: a) an area that is extensively developed or urbanised with more than one central business district, industrial area, and concentration of employment; (b), an area that forms a functional unit that comprises various smaller units which are interdependent in respect of

economy and services; C) an area that is densely populated with intense movement of people, goods, and services within the area; d) an area with multiple local government jurisdictions; and e) an area generally perceived as separate from nearby rural areas.

Urban areas, on the other hand, are defined as regions governed by a local authority but without a metropolitan (as stated above) or rural character, while the rural areas are defined as areas that did not previously have a local authority and did not have many economic activities (Atkinson, 2014). Hence, the definition of urban and rural settlements has been debateable since no real criterion exists with which to differentiate them.

Regardless, this classification of administrative entities resulted in the merging of the previous 1 262 racially defined and unequal administrative structures into 843 transitional local authorities (TLA) (Naude, 2001; Cameron, 2005). Of these 843 transitional local authorities (TLA), only five municipalities were categorised as metropolitan municipalities, namely Gauteng (three), KwaZulu-Natal (one), and Western Cape (one), each comprising an urban core (white areas) along with peripheral black townships and suburbs, although the surrounding rural areas were excluded from the metropolitan areas and categorised as separate municipalities (Cameron, 2008). According to Cameron (2000b), even though this demarcation exercise managed to break down the previous apartheid settlement approach to some extent, its boundaries were inconsistent as they had been demarcated by nine separate provincial demarcation boards who did not apply the same demarcation approaches (Cameron, 1999).

Sutcliffe (1999) explains that boundaries demarcated in the pre-interim phase did not acknowledge the linkages between urban and rural areas (South Africa, 1998; Cameron, 2008; RSA, 1998). This hindered the integrated and inclusive socio-economic development of regions and further strained equality between settlements (South Africa, 1998; Cameron, 2008) – the criteria used for categorising municipalities in South Africa had to be revised to acknowledge the interdependence of all areas. Furthermore, the subjective nature of classifying metropolitan areas led to disputes between municipalities regarding whether they qualified for metropolitan status or urban status, and further uncertainty persisted around whether a small town should be classified as an urban or a rural administrative entity (Cameron, 1999). Subsequently, the drafters of the national Constitution (1996) took these uncertainties into account and introduced a new form of categorisation. Section 4.4 below will explore this new approach in more detail (Cameron, 2005). The local government elections of 1996 marked the end of the pre-interim phase and the beginning of the interim phase.

4.4 Interim phase of urban development (1996–2000)

The interim phase (1996–2000) established the foundation for the transformation of local government. This included the adoption of the final Constitution (South Africa, 1996), which outlined the framework for democratic and developmental local governments. Unlike the pre-interim phase in which urban and rural structures were separate, the interim phase recognised that addressing the broader urban challenges required a broader approach (South Africa, 1997). In response, Section 155 (1) of the Constitution (South Africa, 1996) made provision for integrated urban and rural areas and introduced the category A (metropolitan), category B (local), and category C (district) municipalities' administrative structures respectively (South Africa, 1996).

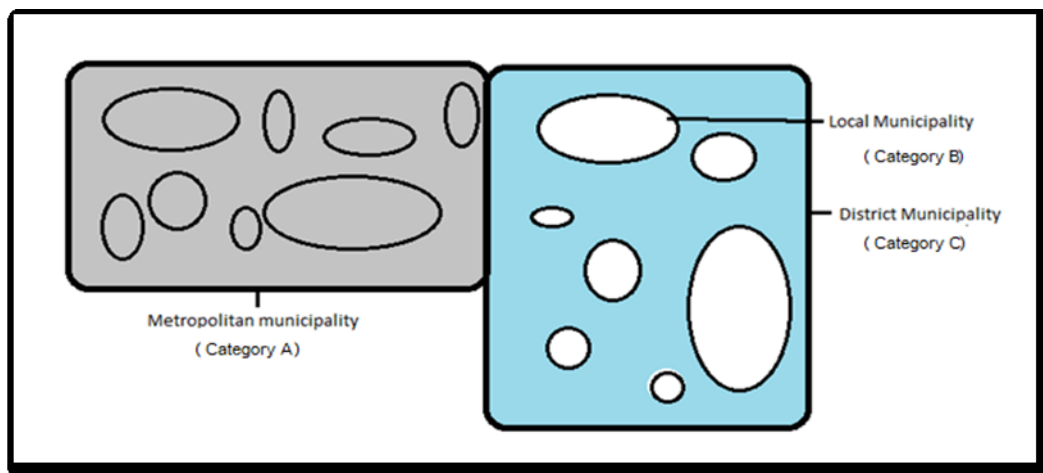


Figure 4-4: Graphic representation of categories of municipalities in South Africa

Source: (Own construction)

Outside of the metropolitan (category A), which is a unitary entity, lie uniform systems of two or more local municipalities (category B) located within a district municipality (category C) (Cameron, 1999; South Africa, 1996) to create a two-tier governance system in which the district municipality is responsible for providing services to the local government in its jurisdiction. Furthermore, the validation of each of these municipalities as stipulated in the Constitution (South Africa, 1996) means that each municipality should to a greater or lesser extent contain both urban and rural areas (South Africa, 1998; Huyssteen *et al.*, 2010), thus continuing to promote a broader balanced development approach to address the country's socio-economic inequalities while promoting economic agglomeration and improving and accelerating social development (South Africa, 1996; Oranje, 2010; Naude & Krugell, 2005a; Geyer *et al.*, s.a; Donaldson, 2001).

The concepts introduced in the 1996 Constitution were legislated with the passing of the Organised Local Government Act (52 of 1997), Municipal Demarcation Act (27 of 1998), Local Government Municipal Structures Act (117 of 1998), and the Municipal Systems Act (32 of 2000). To contextualise the roles of these acts, the Municipal Demarcation Act (27 of 1998) allows for the demarcation of so-called areas but not for the categorisation of municipalities while the Municipal Structures Act (117 of 1998) provides criteria for the categorisation of these municipalities (discussed in detail in Chapter 6). The Municipal Systems Act (32 of 2000), on the other hand, was expected to give these structures “character”.

In February of 1999, as per the requirements of the Constitution (1996), a single municipal demarcation board (MDB) was established and tasked with the responsibility of demarcating both the outer boundaries of these local government municipalities (category A, B, and C) and the internal ward boundaries (SALGA, 2016). By the end of 1999 the 843 municipalities of the interim government had re-demarcated and categorised according to the criteria as set out in Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) and Sections 2 and 3 of the Municipal Structures Act (117 of 1998). During this phase the MDB relooked the previously demarcated five metropolitan administrations, namely the Cape Metropolitan Council, Greater Johannesburg, Greater Pretoria, Khayalami, and Durban metropolitan (Cameron, 2005; Ncube & Vacu, 2016; Cameron, 2000; Huyssteen *et al.*, 2010; Naude, 2001). Furthermore, Port Elizabeth (Nelson Mandela Bay) was identified as a borderline case for a metropolitan (Cameron & Game, 2010). The MDB further identified five regions which could be “regarded as aspirant metropolitan areas” (MDB, 2003), in other words, which did not fulfil the criteria for category A but had the potential to. These aspirant metropolitan areas were Greater Vereeniging-Kopanong (Lekoa-Vaal); Greater Pietermaritzburg, Greater East-London, Greater Bloemfontein, and Greater Richard's Bay (Girut & Maharaj, 2002; Cameron & Game, 2010).

4.5 Post-interim phase of urban development (post–2000)

In 2000 the MDB implemented the demarcation principles as stated in Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998), Section 2 of the Municipal Structures Act (117 of 1998) and the principles prescribed in the White Paper on Local Government (South Africa, 1998) to categorise category A municipalities and in so doing categorise category B and C municipalities (see section 1.2). This saw a significant reduction from 843 local structures to 284 municipalities. Six of these municipalities under consideration (as mentioned in section 4.4) were categorised as category A metropolitan areas (including Port Elizabeth), but the Kyalami metropolitan municipality was replaced by the Ekurhuleni metropolitan municipality (see section 1.2). 231 municipalities were categorised as category B local municipalities, and 47

municipalities were categorised as category C district municipalities (South Africa, 1999; Ramutsindela, 2010; MDB, 2013).

The delimitation and categorisation of these municipalities would be determined within a short 12-month period (1999–2000) so that it would be completed in time for the 2000 local government elections (Cameron, 2005; Sutcliffe, 1999). This short period did not allow for careful consideration of each boundary, resulting in the categorisation of numerous cross-boundary municipalities (Sutcliffe, 1999; Cameron, 1999). This presented several operational challenges at both local and provincial levels that include service delivery confusion, underperformance of districts, and the duplication of service provision (MDB, 2013). As a result, refining municipal boundaries has been an ongoing process since 2000, resulting in both considerable and practical boundary adjustments (MDB, 2013).

Amid the cross boundary challenges other pressures began to emerge between 2006 and 2008 (see the Regional Integrated development strategy (RIDS)) including the matter of defining the roles and responsibilities of secondary cities (category B1 municipalities) and district municipalities (South Africa, 2006; MDB, 2013; South Africa, 1998; Business Day Reporter, 2006; South Africa, 2009; Oranje, 2010).

In response, the National Government contemplated the need for additional category A metropolitan municipalities, and the MDB began its assessments of the next largest cities in respect of population and economic activities. In 2008 the aspiring Buffalo City, Mangaung, and Msunduzi local municipalities were investigated against the Section 2 criteria with a view to becoming metropolitan municipalities (MDB, 2013) (refer to Chapter 6 for details). It was during this period that the MDB would make the policy decision to increase the number of local municipalities contained within a district municipality area to three or more rather than the constitutional requirement of only two (South Africa, 1996). This was premised on the Board's finding that districts with only two local municipalities did not demonstrate enough critical mass or economies of scale. As such, the Alfred Nzo District was increased from two to four local municipalities, the Metsweding district municipality was disestablished, and the local municipalities were incorporated with the Tshwane metropolitan municipality (MDB, 2013; MDB, 2007).

Table 4-1: Number of municipalities in South Africa pre–1994 to post–2016

Year	Number of local municipalities	Number of district municipalities	Number of metropolitan municipalities	Total
Pre–	Non-existent	Non-existent	Non-existent	1262

1994				
1994–2000	Non-existent	Non-existent	5	843
Post–2000	231	47	6	284
Post–2006	231	46	6	283
Post–2011	226	44	8	278
Post–2016	205	44	8	257

Source: MDB, (2013); Thupana, (2016)

The administrative division of these municipalities are further explained in Table 4-2 below.

Table 4-2: Total number of municipalities in South Africa in 2011

Province	Category A	Category B	Category C
Eastern Cape	2	37	6
Free State	1	19	4
Gauteng	3	7	2
KwaZulu-Natal	1	50	10
Mpumalanga		18	3
North West		19	4
Northern Cape		25	5
Limpopo		27	5
Western Cape	1	24	5
Total	8	226	44

Source: MDB (2013)

By the 2011 local government elections, the 47 district municipalities established in 2000 had been reduced to 44. Two additional metropolitan areas were introduced, namely Mangaung metropolitan municipality and the Buffalo City metropolitan municipality. Local municipalities were reduced by five (from 231 to 226) (MDB, 2013; Moodley, 2016) (see Table 4-2).

Of these municipalities, the Gauteng province had the most category A municipalities and the fewest category C municipalities. Conversely, KwaZulu-Natal had the greatest number of category B and C district municipalities in the country, while provinces such as Limpopo, Northern Cape, North West, and Mpumalanga had no category A municipalities.

In 2012 the National Development Plan (NDP) 2030 vision addressed the unbalanced development and acknowledged the ambiguity around the roles and responsibilities between the various tiers of local government and that it resulted in uncertainty, inefficiency, and duplication within categorisation practices (South Africa, 2012). It proposed creating a national spatial development framework and a national integrated development plan to guide further investments and advise the country's development at the macroscale so that it would be easy to trace national development and the areas in which it still needed to take place (South Africa, 2012).

Consequently, in 2016 the Integrated Urban Development Framework (IUDF) was introduced to manage the scale and growth of South Africa's cities and towns (South Africa, 2016) and address the shortcomings of the NDP 2030 toward establishing a unified understanding of how best to manage development and address current urban inefficiencies at a national scale (South Africa, 2016). However, this document made no mention of how many metropolitan municipalities the country should ideally have and where they should be located to tap into the economies of scale benefits or spill-over effects, or how to develop underdeveloped areas.

Subsequently, after the August 2016 local government elections, eight metropolitan municipalities and 44 district municipalities had remained, and the 227 local municipalities of 2011 had been reduced to 205 local municipalities (Moodley, 2016; Van Rooyen, 2016). According to the chairperson of the MDB, Ms Jane Thupana, the reduction in municipalities was motivated by Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) to make governance more sustainable and financially viable (MDB, 2015; Moodley, 2016; Thupana, 2015). For this thesis it is relevant to note that the Naledi local municipality was amalgamated with the then recently-formed Mangaung metropolitan municipality, thus forming an even larger metropolitan municipality. During this period, in 2014 two municipalities from the Gauteng province applied to the MDB to be re-categorised as Category A metropolitan municipalities, namely the aspirant Lekoa-Vaal that more recently became known as the Vaal River metropolitan (Sedibeng District municipality, the Emfuleni local municipality, and the Midvaal local municipality), and the West Rand district municipality. However, the MDB found the research that motivated their categorisation proposals to be inconclusive and that re-determining these would require further investigation (Midvaal, 2012; Thupana, 2015; MDB, 2016; Moodley, 2016; Thupana, 2017).

A lack of understanding and the ambiguity around how these municipalities were categorised are apparent when considering country's settlement structures. Therefore, Chapter 5 will reflect on the shift in classifying human settlements in the country during the pre-interim, interim, and

post-interim phases of administrative restructuring to understand the composition of the administrative structures from a human settlement perspective. In addition, Chapter 6 will investigate the legislative criteria for a municipality to be categorised as a category A metropolitan municipality.

4.6 Conclusion to Chapter 4

Over the last 22 years, local governments in South Africa have emerged from being institutions that were subservient, racist, and illegitimate to institutions with a democratically elected government, constitutional status, and a developmental agenda that is more inclusive and integrated and promotes equality (De Vissier & Poswa, 2017; Todes & Turok, 2018; Roberts, 2014; Harrison & Todes, 2014). However, the relationship between economic growth and competitiveness on the one hand and the required economic development and socio-economic-spatial redress on the other have been one of the key points of contention within the scope of South Africa's administrative reform (Schoonraad, 2000; Cameron, 2000; Huyssteen *et al.*, 2010; Roberts, 2014; South Africa, 2010; South Africa, 1996; Todes & Turok, 2018). This resulted in categorisation of administrative entities being changed over the years, where previously the government allowed for the formation of metropolitan administrative areas, urban areas, and rural areas. In 1996 this categorisation was revised to recognise and account for the interdependence of urban and rural areas. As a result, the Constitution (South Africa, 1996) would make provision for three classes of administration: category A, category B, and category C municipalities. However, the rushed categorisation process of 1999 has resulted in constant revision of boundary demarcations and categorisations of municipalities within South Africa.

Overall, the re-categorisation and demarcation exercises have resulted in the reduction of the 1 262 racially based administrations to 257 racially integrated municipalities. Eight of these newly demarcated municipalities were categorised as category A metropolitan municipalities. Figure 4-5 below summarises the effect of the administrative restructuring process on South Africa's spatial landscape.

This chapter has provided insight into the administrative restructuring outcome of South Africa post-1994, though none into what a metropolitan city is or what it comprises in South Africa. In light thereof, Chapter 5 will explore how metropolitan settlements are classified in South Africa while Chapter 6 will investigate the methodology adapted by the MDB for categorising administrative category A metropolitan municipalities. This is aligned with the third objective of this study, which reflects on the formation of metropolitan regions in South Africa.



Figure 4-5: Summarisation of the administrative reform in South Africa pre–1994 to post–2011

Source: (Own construction)

CHAPTER 5: CLASSIFICATION OF HUMAN SETTLEMENTS IN SOUTH AFRICA

5.1 Introduction

To date, research into the South African urban hierarchies has been limited with no formal definition on how the different cities, towns, and rural settlements have been categorised or are currently defined within the country. Before democracy, terms such as metropolitan area or urban agglomeration, city, town, and village in English and *metropolitaanse gebied*, *stad*, *dorp*, and *gehuggie* in Afrikaans were used to define the various settlements (Harrison, 2013; Fair, 1965; Davies, 1967). However, these settlement classifications did not include the black residences (homelands) which fell outside of the white administrative structures (De Villiers, 1986), and left uncertainty regarding how these once excluded settlements should be classified or what they should be called since being included. Consequently, this chapter will reflect on the classification of the different human settlements in South Africa to gain insight into what is considered a metropolitan city in the South African context.

Subsequently, the aim of this chapter is to contextualise the study from a human settlement perspective and gain insight into the formation of metropolitan regions in South Africa. In this regard, this chapter will explore the classification of the urban hierarchy in South Africa during apartheid followed with and reflect on how the democratic government had initially interpreted and defined settlements within the country during the interim phase (see Chapter 4). It will then explore how the Council of Science and Industrial Research (CSIR) (2008), National Urban Development Framework (NUDF) (2009) and the National Treasury (2011) have classified settlements in South Africa during the post-interim phase (see Chapter 4). Lastly, this chapter will capture the migration patterns in democratic South Africa between 1994 and 2011 to determine how the trends have affected the country's spatial landscape, thereby contributing to the body of knowledge on the human settlement hierarchy in South Africa.

5.2 Classification of settlements during apartheid (pre–1993)

In 1967 Davies found that there was no exact classification to describe the status of urban places in South Africa beyond the use of such terms as metropolitan area, city and town in English and *metropolitaanse gebied*, *stad*, *dorp* and *dorpie* in Afrikaans. According to Golden (1981) settlements during apartheid were defined according to the United Nations' (UN) definitions set out in Table 5-1 below:

Table 5-1: Defining human settlements during apartheid

Settlement Type	Definition	Source
Metropolitan area (<i>metropolitaanse gebied</i>) / urban agglomeration	A region that contains a central city and their surrounding suburban areas or towns	(Golden ,1981; Mostert <i>et al.</i> ,1997)
City (<i>stad</i>)	A settlement with a high population concentration within the central business district and its surrounding suburban areas	(Golden, 1981; Mostert <i>et al.</i> ,1997)
Town (<i>dorp</i>)	A settlement with medium density and its residential suburbs of lower densities	(Golden, 1981; Mostert <i>et al.</i> , 1997)
Village (<i>gehuggie</i>)	A low-density settlement with rural characteristics	(Golden, 1981; Mostert <i>et al.</i> , 1997)

Source: (Own construction)

Although density has been used as criterion for differentiating settlements during this period, no numerical points of reference have been given as to how density would define categories of settlement (Mostert *et al.*, 1997). Furthermore, this settlement categorisation did not include settlements in the homeland regions or other settlements that were located outside the administrative areas (Collinson *et al.*, 2006).

In addition to the above settlement categorisation, Fair (1982) stated that South Africa's spatial system at that stage was regarded as comprising three main elements: The core – comprising the major metropolitan areas (PWV, Cape Town and Durban-Pinetown) as well as the minor metropolitan areas (Port Elizabeth, East London, Pietermaritzburg, Bloemfontein and Kimberley). The inner periphery – comprising of the rest of South Africa in White, Coloured and Asian ownership and lastly the outer periphery, which comprised of the African homelands or Black national states. Furthermore, the population within these settlements were rather stable, since migration into these settlements or regions was controlled by means of influx control measures (see Chapter 4). Until 1996, urban areas were defined as areas that had a local authority regardless of their spatial features, the rest were considered rural (Atkinson, 2014).

From this, it can be noted that there was limited understanding of urban hierarchy in South Africa during apartheid. With settlements being categorised according to the demographic categorisation method (see section 2.3 above) without specifying the criteria for categorisation nor including the full population. In response to this shortcoming, in 1998 the White Paper on Local Government (South Africa ,1998) provided a description of settlement types found in democratic South Africa by focusing on the function, form, structure, finance, and location of

these settlements and classifying them accordingly (SACN, 2014; Marais *et al.*, 2016; Van der Merwe, 1992; Golden, 1981; Mostert *et al.*, 1997). Section 5.3 below will explore these settlement types with their corresponding definitions.

5.3 The classification of human settlements in democratic South Africa (interim phase 1996–1999)

The categorisation of settlements according to the White Paper on Local Government (South Africa, 1998) sought to address the spatial challenge that came with the diversity of settlements in post-apartheid South Africa. This document was published only four years after the rise of democracy in South Africa during the interim phase of the administrative reformation of its formerly racially segregated and fragmented spatial landscape (see section 4.2). That being said, these definitions and categorisation methods were still broad in their application (see Chapter 4), with the White Paper on Local Government (South Africa, 1998) using terms such as *urban core*, *urban fringe*, *small towns*, *dense rural settlements*, *betterment settlements*, *informal settlements*, *agri-villages*, and *scattered settlements*, each of which is defined in the Table 5-2 below:

Table 5-2: Human settlement categorisation in South Africa according to the White Paper on Local Government (South Africa, 1998)

Settlement type	Definition
Urban core	High-density region comprising a formal city and towns and which includes the former white municipal and surrounding non-white township areas. These areas are characterised by high levels of economic activity, high population densities and consequently higher land values.
Urban fringe	Medium-density towns and cities located outside of the urban core but still found in an urban municipality (as per the Interim Constitution of 1993) and comprising a mixture of low-income and high-income settlements (South Africa, 1998).
Small town	Low to medium-density settlement but whose structure varied greatly and was associated with the economic and social linkages they shared with the surrounding rural hinterlands.
Dense rural settlements / betterment settlements	Some had a formal structure while others had an informal, unplanned settlement structure with a population over 5 000.
Villages	Smaller traditional rural settlements with a population of between 500 and 5 000 people mostly employed in the agricultural sector. This was considered a rural area during the interim phase (1996–1999) (see Chapter 4).
Unplanned	Settlements with a low population of less than 500 people.

dispersed rural settlements	

Source: (Own construction)

Each class of settlement above is broadly defined and the composition of each category is complicated by variations in feature and makeup. This categorisation by the democratic government was just an attempt to understand the urban hierarchy in post-apartheid South Africa. Yet in this phase it was important to understand what comprised an urban and a rural area, since the democratic spatial administrative legislation required the administrative areas to contain both urban and rural areas. However, as highlighted in Section 5.3 above, no such clear definitions exist, since the former homeland settlements had unusually high population densities but lacked economic bases.

5.4 Human settlement classification post-interim (post–2000)

The year 2000 is synonymous with the year of administrative change because it was the year in which the MDB implemented the various legislations that were tabled in the interim phase to demarcate and categorise municipalities as the Constitution (South Africa, 1996) had required (Cameron & Game, 2010). This section will briefly explore the classification of the settlements during this phase (post–2000) by recording the various attempts by academics and institutions to generate a better understanding of settlements in South Africa and assist with the legislative requirements of the administrative restructuring process.

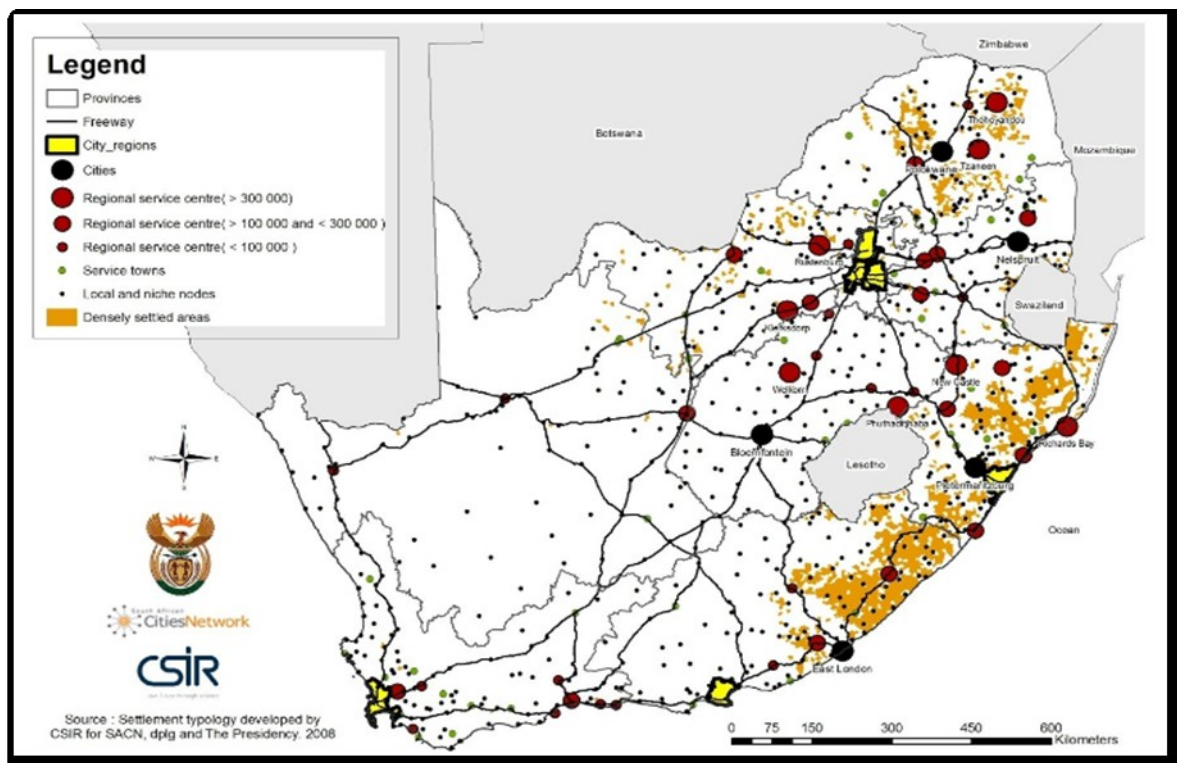
The human settlement classification has been based on extensive development and did not define the concept settlement as a single component in isolation, but rather as one comprising an administrative region made up of more than two settlements that were functionally linked to form a single entity. This marks a paradigm shift in the approach to categorising settlements – where settlements in the country had once been categorised based on race, size, and density, post-apartheid, they were now classified according to their functional and socio-geographic configuration (as discussed in Chapter 4).

Section 5.4.1 will discuss the various attempts at classification of settlements chronologically by evaluating the CSIR (2008) settlement classification against that of the National Urban Development Framework (NUDF) (2009) and then against the settlement classification used in the National Treasury's urban classification (2011).

5.4.1 Council for Scientific and Industrial Research (CSIR) settlement classification (2008)

Close to 10 years after the publication of the White Paper on Local Government (South Africa, 1998) and almost 14 years after democracy, in 2008 the CSIR together with SACN and the Presidency first conducted research on the South African spatial economy, focusing mainly on size and function indicators in the various settlements that made up the administrative entities as required by the Constitution (South Africa, 1996; CSIR, 2008; Marais *et al.*, 2016).

The CSIR categorised these settlements as *city-regions*, *cities*, *regional service centres*, *service towns*, *local niche towns*, and *dense rural settlements*. Map 5-1 below represents the location of these settlements within the country while Table 5-3 will later provide the details of the categorisations.



Map 5-1: Topology of settlements according to CSIR, SACN, DPLG and the Presidency

Source: CSIR (2008)

At the top of the CSIR settlement hierarchy were four city regions that comprised Gauteng, Cape Town, eThekweni, and Nelson Mandela Bay. These centres were categorised as such because they were the most economically productive and diversified economies with international connectivity and extensive hinterlands that offered prospects of future growth and

development (Turok & Borrel-Salden, 2014; CSIR, 2008). According to Geyer *et al.* (2012), these settlements were morphologically polycentric with clusters of cities that had populations of over a million people and could thus be referred to as metropolitan areas. Primary challenges that these centres faced included their ability to absorb large scale in-migration and the integration of the entire region in a cost-efficient and effective manner to bring structure and stability to the communities within them (Harrison & Todes, 2016; CSIR, 2008; Geyer *et al.*, 2012; South Africa, 2009b).

Beyond the city regions were seven free-standing cities, including Bloemfontein (Mangaung), Pietermaritzburg (Msunduzi), East London (Buffalo City), and Nelspruit (Mbombela). According to Geyer *et al.* (2012), these settlements housed populations of less than a million but more than 400 000 and usually had a monocentric structure, a well-established economic base, and reliable infrastructure to provide essential services to the surrounding towns (CSIR, 2008). However, the National Urban Development Framework (NUDF) found that one of the main challenges these centres faced was their ability to develop distinctive economic niches and have positive economic spill-over effects on surrounding hinterlands (South Africa, 2009b).

During the interim phase (1996–1999) of the country's administrative reform, many of the abovementioned cities were reclassified as aspiring metropolitan regions by the MDB (Cameron, 1999; MDB, 1999a, 1999b, 1999e, 2003), although the 2012 State of the Cities Report referred to them using the term secondary cities because they were smaller than the metropolitan regions and could also be referred to as “micropolitans”. However, during the post-interim phase (2011), the MDB reclassified two of these regions (Buffalo City and Mangaung) as category A metropolitans (or city regions, as explained above), claiming that these “free-standing cities” had actually adhered to the Section 2 criteria (Cameron, 2008) (see Chapter 6 for details of criteria).

Regional service centres were smaller urban settlements and fulfilled a social and economic role for the surrounding towns and their suburbs. The settlements accommodated populations of between 100 000 and 400 000 inhabitants and included centres that were close to or within the old homelands (Polokwane, Queenstown, Mthatha, and Thohoyandou) and former mining towns (Welkom, Witbank, Klerksdorp, and Tzaneen). Trade activities and cultural and educational functions typically dominate these centres (CSIR, 2008; Geyer *et al.*, 2012). However, job prospects in these centres are lower than in other centres in the country. Hence, the NUDF has asserted that if the poor planning persisted in these settlements along with an inadequate revenue collection, these centres stood at risk of becoming ghost towns (South Africa, 2009b; Turok & Borrel-Salden, 2014).

Lower in ranking were smaller service centres with a population of between 10 000 and 100 000 and an economy that was largely agricultural or subsistence-based, offered limited employment opportunities and the bulk of the infrastructure (Turok & Borrel-Salden, 2014). These settlements are scattered across the country (Geyer *et al.*, 2012, Turok & Borrel-Salden, 2014).

The classification of small towns differed between countries as a result of the different social, economic, demographic, and political circumstances. In South Africa small towns were defined by the population size, which was between 5 000 and 100 000 (Rezvani *et al.*, 2009). However, these towns are important centres for offering lower-order goods and services to the residents in their peripheries in addition to offering access to regional and national transportation networks (Turok & Borrel-Salden, 2014), yet research into these towns has found that many attracted few migrants even though a considerable proportion of their labour force comprised non-agricultural jobs (Geyer *et al.*, 2012; Turok & Borrel-Salden, 2014). What is more, a large number of these settlements were found across the country.

The remaining settlements could be classified as rural areas made up of different types of settlement: commercial farms, towns, villages, and informal settlements (Harrison & Todes, 2016). These rural areas are principally small to medium-sized settlements with low population densities (40 to 150 people per square kilometre), with most of the population occupied primarily in agricultural activities, and access to basic services (OECD, 2014; Geyer *et al.*, 2012; Turok & Borrel-Salden, 2013). For practical purposes, these characteristics have been used to describe “rurality” even in South Africa (Tacoli, 1998) (see Table 5-3 below).

Section 5.4.2 below will explore the settlement categorisation used in the National Urban Development Framework (South Africa, 2009). This categorisation was developed over 15 years (1994–2009) after the rise of South African democracy, by which time the government should have had a better understanding of its country’s constituent settlements and how they should be categorised. This strategy sought to create a unified understanding of how best to manage development in the country in respect of settlements and propose a way to address the then current urban inefficiencies at national scale (South Africa, 2009; Harrison, 2013; Turok, 2013; South Africa, 2016).

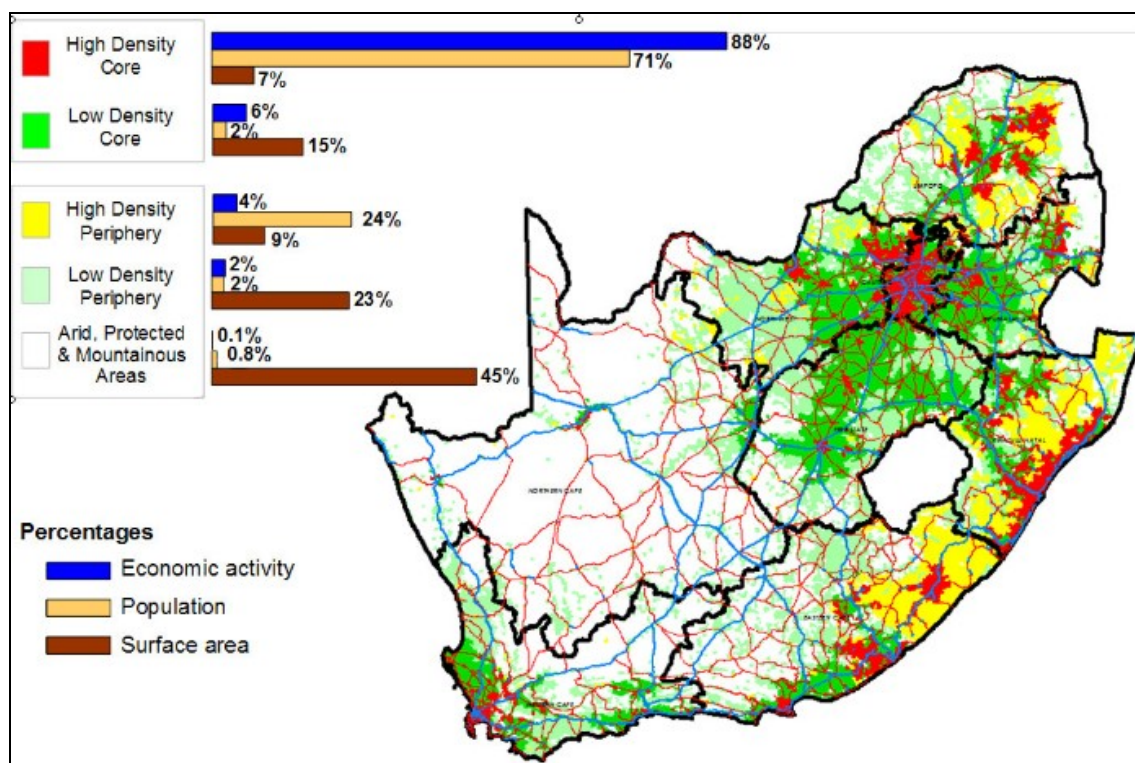
Table 5-3: CSIR settlement classification

Urban classification	City type	Population range	Population (per % of national)	Population growth 1996-2011 (% p.a.)	Economic activity (% of national)	Urban function index (UIF)
City regions	Metropolitan cities	>1 million	42.2	3.04	56.8	Above 40
Free-standing cities	Secondary cities	1 million–400 000	7.5	2.62	8.5	11–40
Regional service centres	Secondary cities	399 999–100 000	14.1	1.89	11.0	2–10
Service towns	Small cities	<100 000	5.3	3.07	4.2	1–2
Small towns	Small cities	<100 000	8.7	1.81	6.0	0.1–1
Rural area	Rural	<100 000	22.2	22.2	13.5	0

Source: Adapted from CSIR (2008), South Africa (2009b) and Geyer *et al.*, (2012)

5.4.2 The National Urban Development Framework's (NUDF) urban classification (2009)

The first urban development framework (UDF) was passed by the national cabinet in 1997. However, not long after its publication it the urban challenge had been found to extend over the urban boundaries such that a broader approach would be required to address these issues (South Africa, 2009). In this regard, the National Spatial Development Plan (NSDP) was issued in 2003 and revised in 2006, thus introducing a new way of discovering the spatial dynamics at play between urban and rural areas and understanding the various roles played by the settlements in the country. This policy document advocated for unbalanced spatial development stating that resources should be concentrated in regions that provide the greatest return. Subsequently, the NUDF (2009) identified the settlements or the regions with the greatest economic potential and population concentration. It presented five settlement typologies based on population density, economic activity, and area of coverage (South Africa, 2009; Harrison, 2013; Harrison & Todes, 2013). These typologies are categorised as high-density core areas, low-density core areas, high-density peripheries, low-density peripheries, and lastly, the deep periphery areas (see Map 5-2 below).



Map 5-2: NUDF urban classification

Source: South Africa (2009b)

The high-density inner core comprises the large metropolitan agglomerations and secondary cities (Gauteng City Region, Western Cape Urban agglomeration, KwaZulu-Natal coastal urban agglomeration, Nelson Mandela Bay, Mangaung, Buffalo City, Msunduzi, Polokwane, Free State Goldfields, Mbombela, Sol Plaatje, and the Cape South Coast Tourism Belt). According to the NUDF (South Africa, 2009b), approximately 88% of the country's economic activities are located in these high-density inner cores and 71% of its population resides in only 7% of the country's land area. This data has provided an indication of what high-density population might entail. This description resembles the *urban core regions* defined by the White Paper classifications (South Africa, 1998a), the *city regions* of the CSIR classification (2008), and the category A municipalities of the National Treasury (2011). Interestingly, analysing the map above reveals high-density inner core regions in the North West Province, Limpopo, and Mpumalanga, though none of these provinces have metropolitan municipalities (as discussed in Chapter 4), which displays further inconsistency in practice regarding what is categorised as a metropolitan settlement and a metropolitan municipality.

The low-density outer core comprises the large towns with major service functions, medium-sized mining centres, and peri-urban agglomerations around the inner core, as well as large agglomerations around previous homeland capitals (e.g. Newcastle, Kroonstad, Grahamstown, Phalaborwa, Mthatha, and Thohoyandou). According to the NUDF (South Africa, 2009b) 15% of this region's land area houses only 2% of the country's population and indicates a low density. This stands in contrast to the *free-standing city* described by the CSIR (2008), category B1 municipality by the National Treasury (2011), and the *urban periphery settlement* by the White Paper on Local Government classifications (South Africa, 1998), since these settlements have been classified to have high to medium densities. The inconsistency with which settlements have been classified in South Africa is illustrated yet again.

The high-density semi-periphery consists of medium-sized towns with established infrastructure, secondary mining outliers, and the more densely settled parts of the previous Bantustans, with local economies producing more than R1 billion per year (including Vryheid, Kuruman, and Springbok). According to the NUDF (2009b) at least 24% of the country's population resides in these regions and they only occupy 9% of the land area. These settlements could be linked to the category B2 settlements of the National Treasury (2011), small towns of the CSIR (2008), and densely populated rural towns as described in the White Paper on Local Government (South Africa, 1998a).

Low-density peripheries comprise small service centres with established basic infrastructure, small mining economies, and previous Bantustan economies with output of between R0.4 and

R1 billion per year (e.g. Calvinia, Dannhauser). According to the NUDF (2009b) only 2% of the country's population lives on 23% of the land area. These are similar to the densely populated *rural area* definition of the White Paper on Local Government classifications (South Africa, 1998), the *service towns* defined by the CSIR classifications (2008), and the B3 municipality as defined by National Treasury (2011) (see discussion in section 5.4.3).

The deep periphery comprises small settlements with very marginalised local economies with economic outputs of less than R0.4 billion per year (e.g. Jansenville, Tarkastad, Boshof, Harding, Poffadder, Warrenton). The NUDF (South Africa, 2009b) found that only 0.8% of the population resides on 45% of the land area. This can be likened with the *scattered rural settlement* defined by the White Paper on Local Government (South Africa, 1998), *rural area* by the CSIR (2008), and B4 municipality by the National Treasury (2011).

Table 5-4: The National Urban Development Framework's (NUDF) urban classification

Category	Settlement composition	Economic output in Rands per annum	Population percentage
High-density core	Metropolitans	More than 2 billion	71%
Low density Core	Large towns	More than 2 billion	2%
High-density periphery	Medium size towns	More than 1 billion	24%
Low-density periphery	Former mining towns and Bantustans settlements	0.4–1 billion	2%
Arid, protected and mountainous areas	Small settlements	Less than R 0.4	0.8%

Source: (Own construction)

The above classification reveals that by 2009, the understanding on how to classify settlements in South Africa remained limited, with no agreement on what constituted the concepts high, medium, or low-density. To date, the categories remain largely subjective and are not in line with the constitutional requirements on how settlements should be categorised.

These classifications discussed are not in conformity with the constitutional requirements of the National Government as they do not specify settlements as category A, B or C, although they still provide a better understanding of the different types of settlements found in the country and the approximate populations found within these settlements. In 2011 the National Treasury

sought to address the shortcoming of classifications that were not aligned with the constitutional categorisation requirement.

5.4.3 National Treasury classification (2011)

In 2011 the National Treasury acknowledged the shortcomings of urban classification in South Africa according to the constitutional categorisation of administrative regions (South Africa, 1996). They pointed out further that the Constitution of South Africa (1996) had only acknowledged metropolitan and non-metropolitan municipalities and it did not say anything about the settlements which constituted them (see interim phase discussion in Chapter 4). The White Paper on Local Government (South Africa, 1998) only described that local municipalities (category B municipalities) could comprise either urban areas only, urban and rural areas, or rural areas only, but made no mention of which settlements should constitute the administrative categorisation. In reaction the National Treasury expanded the classification in the White Paper to form definitions for the various settlements that made up the category B local government municipalities in accordance with definitions in the Constitution (South Africa, 1996).

The National Treasury (2011) segmented the 231 category B local municipalities as demarcated by the MDB under the following subcategories: B1 (21 secondary cities), B2 (29 large towns), B3 (111 small towns), and B4 (70 rural areas) (SACN, 2014). This system is based on the socio-economic and geographic characteristics of municipalities (South Africa, 1998; MDB, 2011; John, 2012; Cameron, 2008; Sutcliffe, 1999; Cameron & Meligrana, 2010) (see Table 5-5 below).

Category A is a primate city and is defined as an agglomeration that operates as one large administrative entity (National Treasury, 2011; Woolridge, 2002; MCA Planners & Oranje, 2005; Geyer *et al.*, 2015). The categorisation criteria for these municipalities are stipulated in Section 2 of the Municipal Structures Act (117 of 1998) (see section 6.3 for details).

According to the National Treasury, category B1 local municipalities comprise secondary cities. Jefferson (1939:226) suggests that secondary cities are not the smallest next to primate cities, “but are [rather] far smaller than the primate city”. The term secondary city or second-order city infers that it is not a primary city nor is it likely to be a small city, but rather a city with a population between 500 000 and 1 million (Rondinelli, 1983a; Rondinelli, 1983b; UN-Habitat, 1995; Marais *et al.*, 2016). In South Africa, numerous and varied references are made to secondary cities when informally describing the South African urban landscape, but with such references varying widely in use both in respect of their criteria for selection and their purpose.

However, local research suggests that secondary cities refers to other large (non-metro) cities with population ranges of 200 000 to 750 000 (Marais *et al.*, 2016; Cameron & Game, 2005).

Initially, category B1 municipalities were classified as such by the National Treasury mainly because of their budget sizes but would later include aspects like population size and economic outputs as classifications for the criterion (National Treasury, 2011). In that regard, B1 municipalities can be said to be the same as the *free-standing cities* defined by the CSIR. However, the CSIR prescribed that these cities should have a minimum population of 400 000 instead of the 200 000 required by the National Treasury. Yet again this demonstrates inconsistencies that prevent the objective classification of cities in the country.

Category B2 municipalities comprise large towns which are smaller than secondary cities but larger than smaller cities and towns. They are categorised by their average population density, operating and capital expenditures, and staff employed. The average population of these municipalities in 2010 was 140 902, and they have proven to be largely self-sufficient (Cameron & Game, 2010). These resemble the regional service centre as defined by the CSIR (as discussed in section 5.4.2 above).

Category B3 municipalities include small towns with the lowest average population density. These municipalities contain sparsely populated agricultural areas and populations with low levels of education and capacity (Cameron & Game, 2010; Nel, 2012; Turok & Borrel-Saldin, 2014). These can be compared to the *small town* defined by the CSIR (See section 5.4.2).

Category B4 municipalities comprise settlements which are the most rural, have higher average population numbers, and more scattered while also performing the fewest economic functions (Cameron & Game, 2010), thus similar to the *rural area* description of the CSIR.

Category C1 municipalities have limited service delivery obligations and tend to be largely aligned with secondary cities and larger towns but perform more functions than C2 municipalities (Cameron & Game, 2010).

Category C2 municipalities are aligned with rural and smaller towns. They have higher population densities and perform fewer functions than C1 municipalities (Cameron & Game, 2010)

Table 5-5: Municipality categories in South Africa in 2011

Class	Characteristics	Number
Category A	A single unitary city that operates as a metropolitan.	6
Category B1	Secondary cities.	21
Category B2	Large towns with an urban core and high population numbers. There is a difference in population size between these municipalities.	29
Category B3	Small towns which do not have lots of economic activities and have small populations. Rural areas in this category are characterised by the presence of commercial agricultural bases.	111
Category B4	These areas are characterised as being mostly rural and with a presence of one or two small towns in their areas, communal tenure, and scattered dwellings (former homelands).	70
Category C1	District municipalities that are not water service providers.	25
Category C2	District municipalities that are water service providers.	21

Source: Adapted from Palmer Development Group (PDG) (2010)

Although this list has no official status, it has also been employed by the Municipal Infrastructure Investment Framework (MIIF) and the Department of Cooperative Governance and Traditional Affairs (CoGTA) in their turnaround strategy (Cameron & Game, 2010). This has been useful in understanding the differences between the various settlements that constitute the country's local municipalities (PDG, 2010). However, the above categorisation method falls short in providing clear criteria by which these categories can be differentiated – the criteria provided above are subjective and say little about the settlements within these categories in respect of their populations, population densities, or economic compositions. Furthermore, still no clear definition had been provided as to what comprises an urban area and a rural area respectively.

5.5 Reflecting on human settlement categorisation methods in South Africa

Table 5-6 below compares the categorisation of settlements in South Africa in light of the three methods discussed above.

Table 5-6: Summary of settlement types in South Africa

<i>White Paper on Local Government</i>	<i>CSIR/SACN</i>	<i>NUDF</i>	<i>Treasury</i>
Urban core	City region	High density core	Category A
Urban fringe	Free-standing city	Low density core	Category B1
Small town	Regional service centre	High density periphery	Category B2
Dense rural settlement	Service town and small town	Low density periphery	Category B3
Village	Rural area	Arid, protected and mountainous areas	Category B4

Source: Adapted from IUDF (2016)

Evidently, the situation on the ground is highly complex, but the above analysis insinuates large-scale spatial transformation across towns and cities in post-apartheid South Africa (Harrison & Todes, 2013; Geyer *et al.*, 2012). Yet, settlement classification criteria still cannot be objectively defined. The most recent contribution by the NUDF (South Africa, 2009) replaced by the IUDF (South Africa, 2016) on how settlements are classified uses broad terms such as high-density core regions, stating that in this region 71% of the population lives on 7% of the land area. However, it does not provide a numerical range that qualifies as high-density in respect of people per square kilometre, or for low-density areas. 25 years later, knowledge on settlement classification in South Africa or what the settlements should be referred to is still limited with little understanding of how these settlements are clustered and categorised administratively.

As underlined in Chapter 2 of this thesis, settlements are not static entities, and hierarchical analyses often overlook the fact that cities are dynamic and diverse and that they ascend and descend the national hierarchy (World Bank, 2009a, World Bank, 2009b). These movements and changes in settlement sizes are largely a result of freedom of movement by individuals and the absence of economic barriers. As a result, ad hoc migration patterns are encountered within the country and for those who leave the country (South Africa, 1996; Harrison & Todes, 2013; Turok & Borrel-Saldin, 2014). Accordingly, section 5.6 below will explore the migration trends in South Africa as they occurred after apartheid with the primary objectives of determining how they influenced the development of the urban systems in South Africa and gaining a better understanding of urban classification from a demographic perspective.

5.6 Reflecting on the migration trends and the impact on the settlement formation in South Africa

Population movement is driven by the pursuit of a better quality of life, employment opportunities, or a higher income (Turok & Borrel-Saldin, 2014; Turok & Parnell, 2009; Turok & McGranahan, 2013; Mabogunje, 1970). The motivations for rural-urban or urban-urban migration in South Africa are similar to those of any other part of the world (Turok, 2012; Duranton & Puga, 2004) (see Figure 5-1 below).

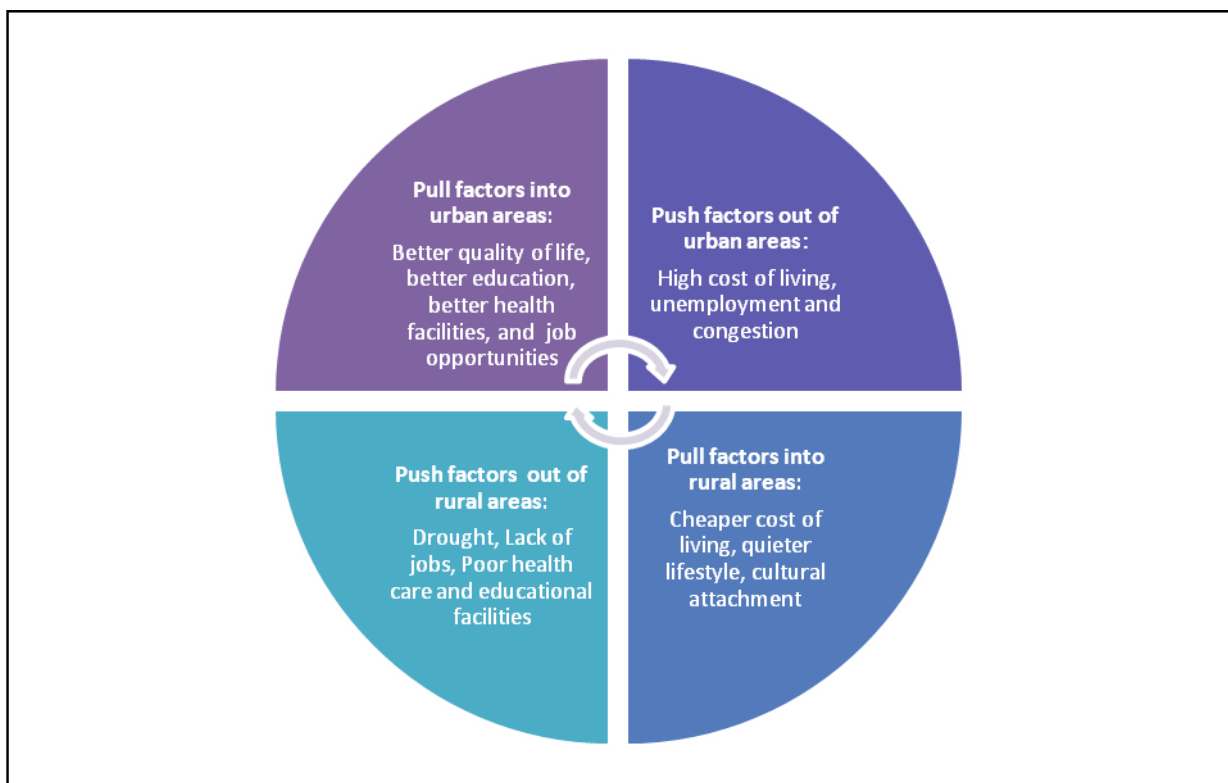
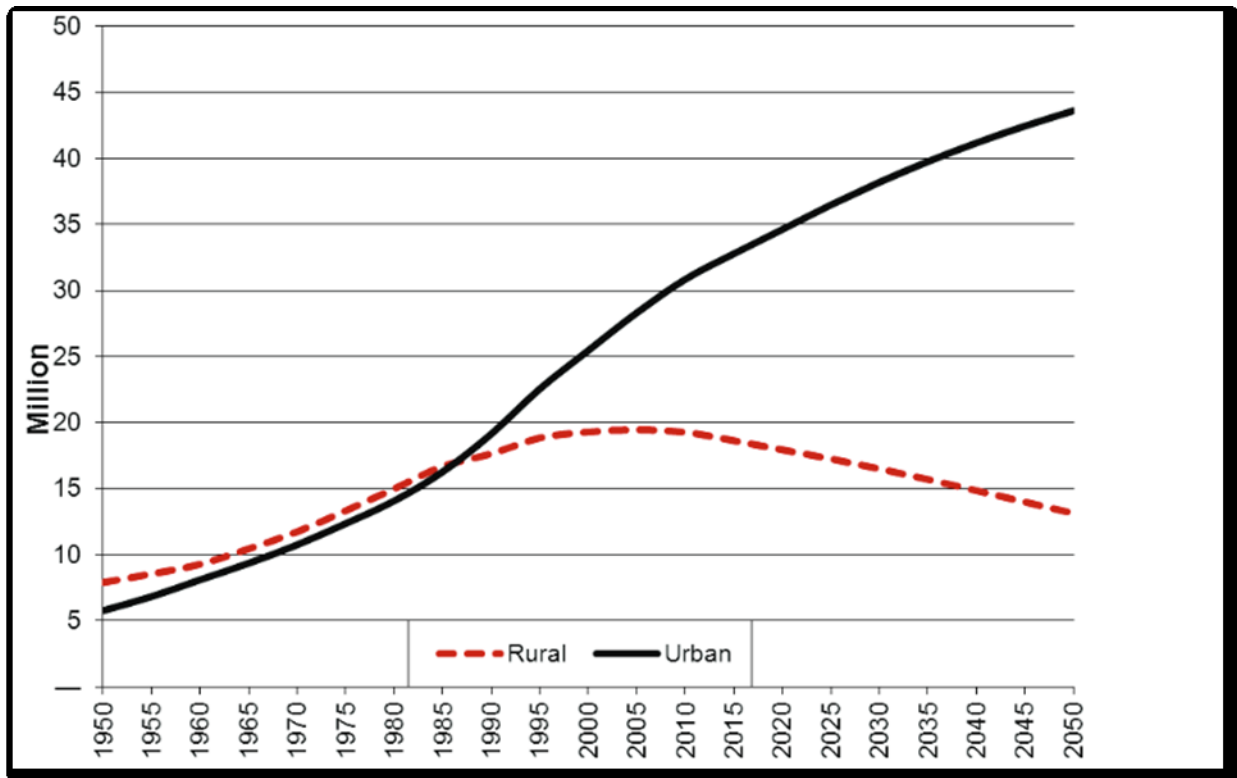


Figure 5-1: Factors that influence migration

Source: Adapted from Mabogunje (1970)

Individuals are either pushed or pulled from one area to another – this is what is referred to as migration (Pacione, 2005). According to Figure 5-1 factors such as job losses in commercial agriculture, poor quality of life, and degraded soil of rural areas often push inhabitants out of these areas. They are then pulled or attracted to urban areas by the prospects of better economic opportunities quality of life overall. However, once these immigrants settle in urban areas, some realise the cost of living to be much higher in urban areas and that employment is scarce (Mabogunje, 1970; Hugo, 2017). As a result, many are pushed back to the rural areas in pursuit of a low cost of living or a quieter lifestyle. It is important to note that the push and pull

forces do not manifest in a balanced fashion unless they are controlled by policy that often results in an unbalanced spatial landscape, with some areas housing more individuals than others (Tacoli, 1998; Pacione, 2010; Hugo, 2017). Graph 5-1 below displays the migration patterns as observed in South Africa since the 1950s.



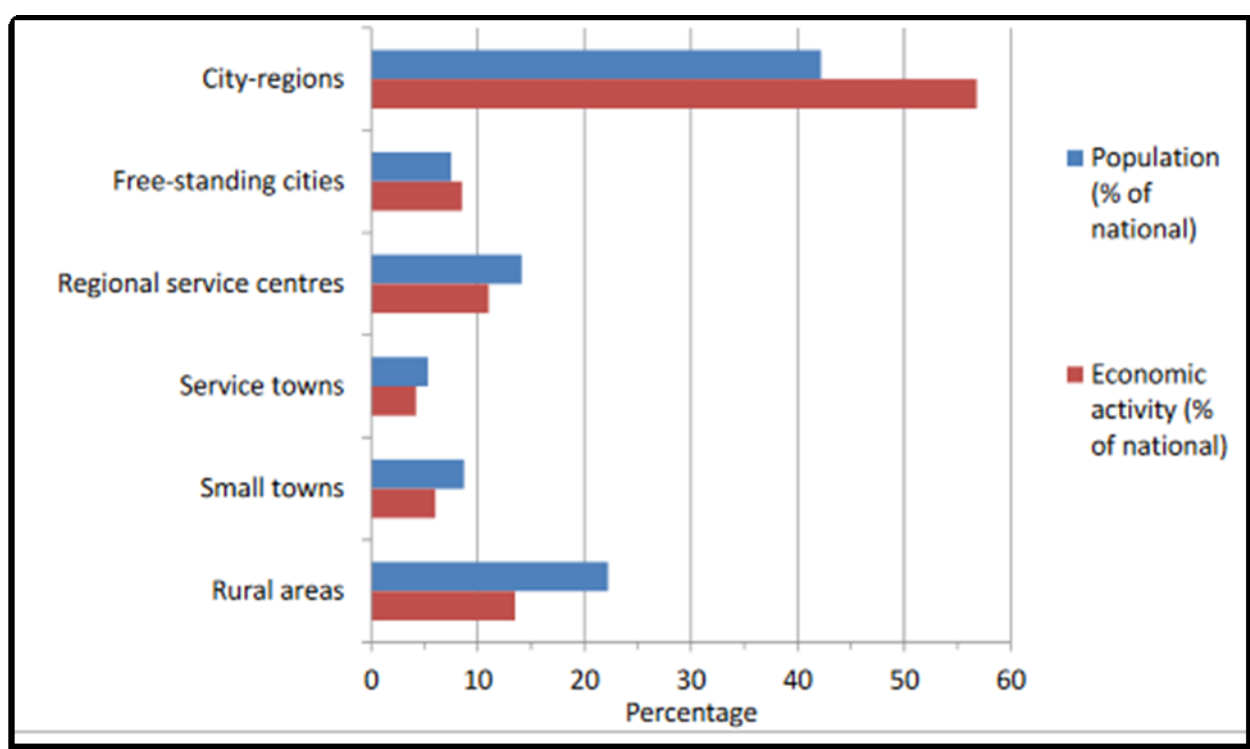
Graph 5-1: Migration trends in South Africa 1950–2050

Source: UN (2012)

Migration trends in South Africa display a rather diverse pattern. In the timeframe of the 1950s to the 1980s, extensive government intervention influenced migration patterns within the country. A higher rate of migration into rural areas than into urban areas can be observed in this period (1950–1985). This trend was informed by the master programme of the apartheid government which displaced the black race from the white urban areas to the rural homelands (UN, 2012). In 1985 the influx control was abolished and there was an upsurge in movement from rural areas to urban areas (Harrison & Todes, 2012; UN, 2014). As a result, by 1996 approximately 55.1% of the country's population lived in urban areas such as regional centres, intermediate centres, and metropolitan areas (Todes *et al.*, 2010a; Geyer *et al.*, s.a.). However, this trend slowed down considerably after 1996, revealing a growth pattern similar to that of the 1970s and 1980s in South Africa (Cohen, 2006; Todes *et al.*, 2010; Geyer *et al.*, 2012; Turok, 2012).

This slowdown, according to Cross *et al.* (1999), can be attributed to stepwise migration in which many migrants who were not able to move directly to metropolitan cities moved to the nearest small towns or secondary cities instead (Gelderblom, 2005). Another reason for the slowdown was the already permanent migration to cities, with approximately 62% to 78% of the total population living in urban areas in 2013 (CSIR, 2013). This migration has been matched by a permanent return to rural areas since individuals have been able to use technology and infrastructure to access services from urban areas without having to be located or travel there. Furthermore, migrants can access housing and basic services at a lower cost in rural areas than urban areas (Todes *et al.*, 2010a; Cross, 1999; Cameron, 2000; Gelderblom, 2005).

Graph 5-2 illustrates the distribution of population and economic activities according to the CSIR classification in 2011.



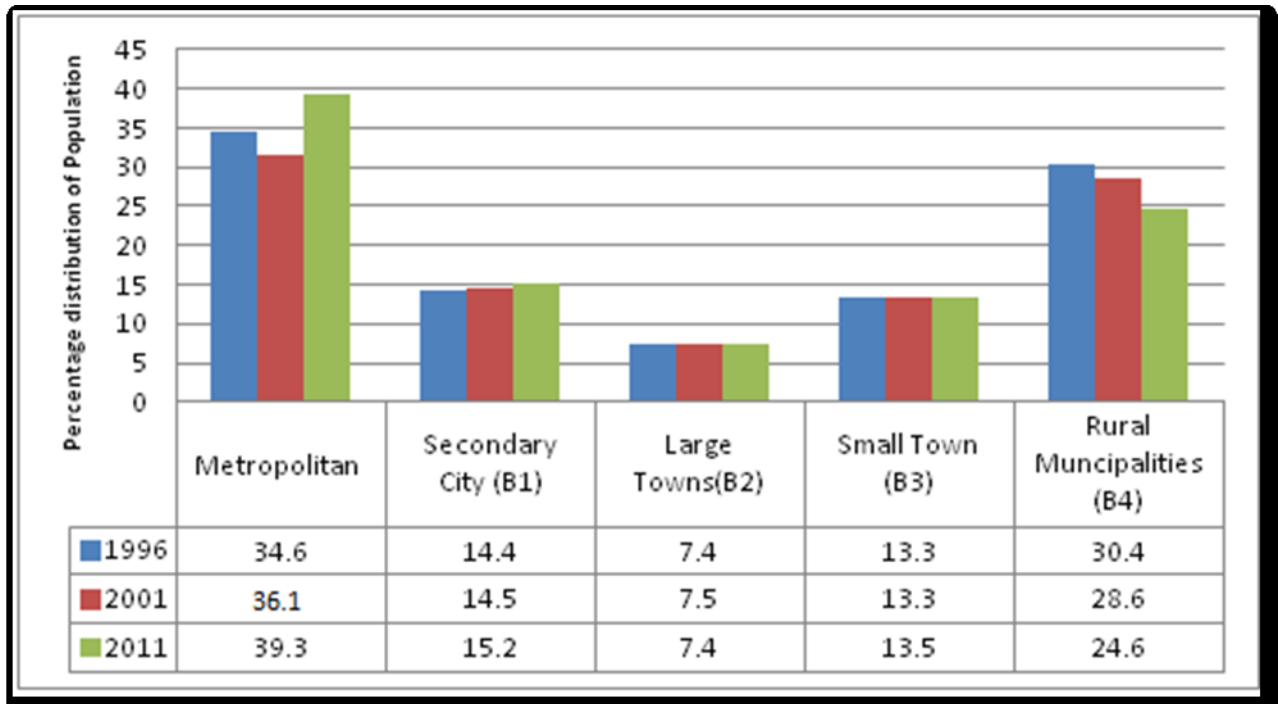
Graph 5-2: Population and economic activity by CSIR Classification, 2011

Source: CSIR (2013)

The analysis reveals a discrepancy in the relationship between the distribution of the population and economic activities across the country. Note how in city regions (or category A metropolitan municipalities) and free-standing cities (category B1 municipalities), employment growth has been higher than the population growth rate, yet how in regional service centres (category B2 municipalities), services towns, small towns (category B3 municipalities), and rural areas

(category B4 municipalities), the population growth rate has been higher than that of economic activity growth. This indicates an unbalanced economic growth pattern for the year 2011 (Turok, 2013).

The same data analysed from the National Treasury's categorisation method displays the following trend in Graph 5-3 below:



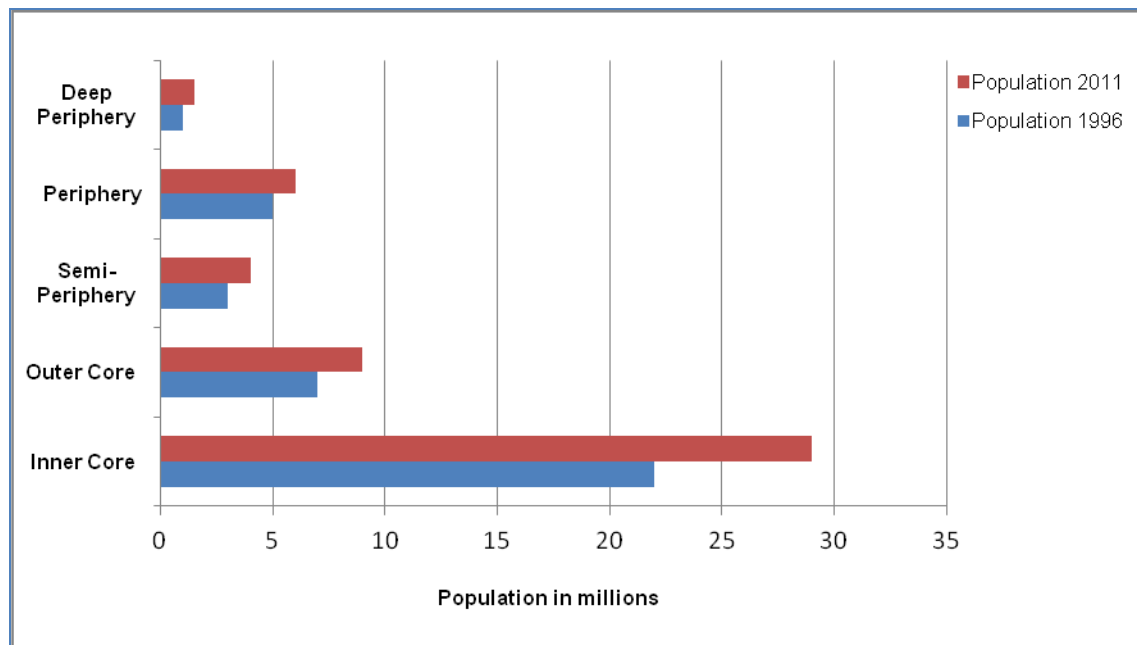
Graph 5-3: Distribution of South African population according to the national treasury classification, 1996–2011

Source: Statistics South Africa (2013)

According to Statistics South Africa, in 1996 the metropolitans (category A) accommodated 52% of all jobs in the country, but only 34.6% of the population. By the 2001 census the population growth rate had increased by 1.5% for the metropolitans and only 0.01% for secondary cities. However, in 2011 the metropolitan population increased by 3.2% and the secondary city population by 0.7%. During this census period, metropolitan and secondary cities collectively accommodated 54% of the country's population. The opposite applied in the small towns and rural areas, where the population growth was found to have been either stagnating or declining. This reiterates the CSIR's findings in 2011 from which can be deduced that the population exhibits a movement pattern from small towns and rural areas to more urban areas (Turok, 2013; Todes *et al.*, 2010b; Marais *et al.*, 2016), thereby reiterating the unbalanced development

approach in which metropolitan settlements (city regions or category A municipalities) house a higher percentage of the population than the other settlements.

To gain a holistic picture of migration patterns in the country, Graph 5-4 below displays migration according to the NUDF settlement classification as captured in the Integrated urban development framework (IUDF) for the periods 1996 and 2011.



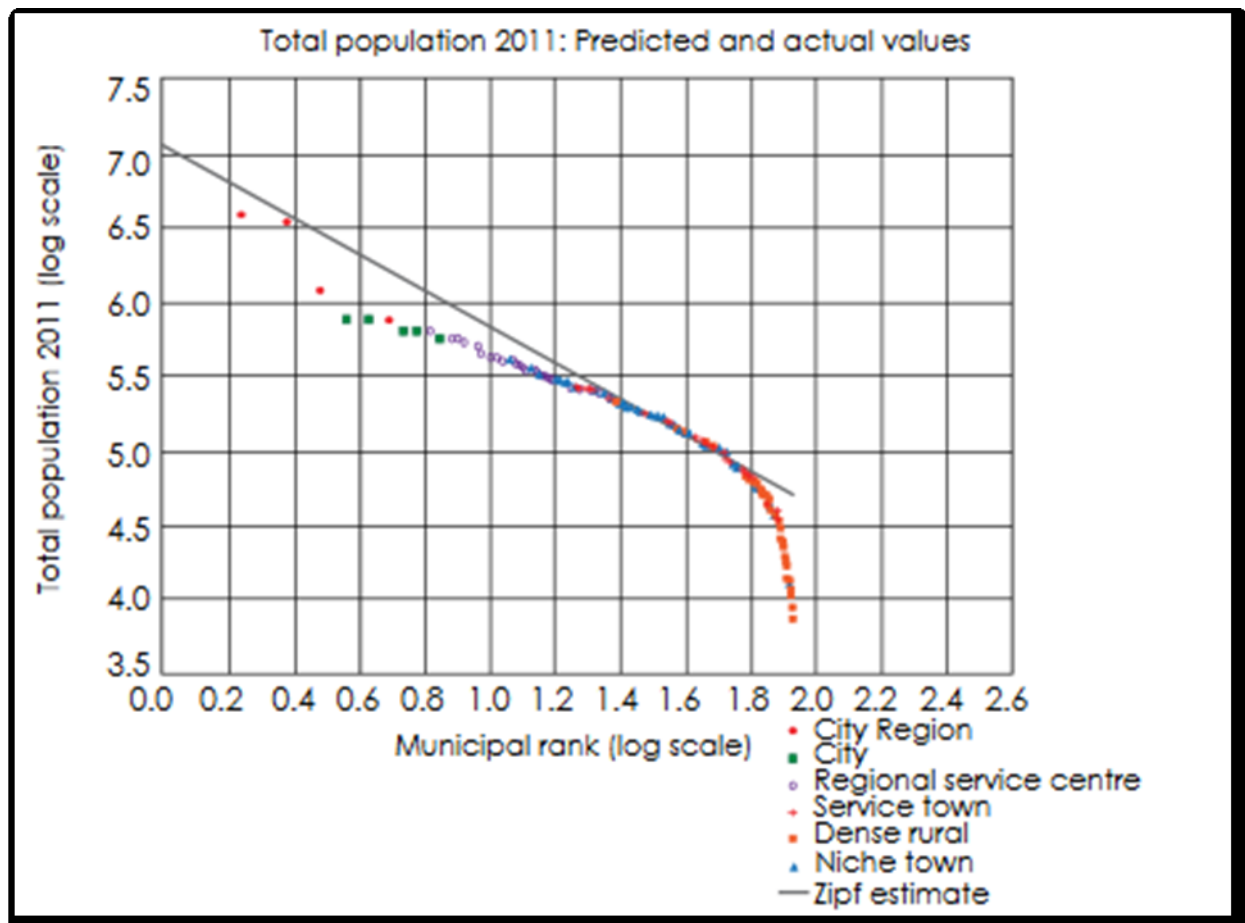
Graph 5-4: Population growth between 1996 and 2011 according to the NUDP's urban classification

Source: Adapted from South Africa (2016)

From Graph 5-4 above it is evident that the population has increased in all five the settlement typologies over the 15-year period, with the largest population being found in the inner and outer core regions (category A metropolitan municipalities and category B1 municipalities). Interestingly, the figure indicates that the deep periphery, which comprises rural scattered settlements (category B4 municipalities), has also increased in population. The graph however does not distinguish whether natural birth or migration had caused this population growth. Still, natural population growth was found to have influenced the population growth in part between 1996 and 2011 in the peripheral regions while migration has contributed to growth in the core regions (Todes *et al.*, 2010a; Huyssteen, 2010).

To conclude this chapter, Graph 5-5 below analyses the distribution of the population in 2011 in the country according to municipal rank against the Zipf estimate. The sample comprised nine

city regions (category A metropolitans), 32 city municipalities (B1 municipalities), 39 service centres (B2 municipalities), 57 niche towns (B3 municipalities) and 49 dense rural settlements (B4 municipalities) (see Graph 5-5 below).



Graph 5-5: Ranking of South African cities in 2011 according to Zipf's law

Source: Morudu & Du Plessis (2013)

The Zipf law states that the largest city should be twice the size of second largest city and three times the size of the third. If the city rankings abide by this law, the rankings will display a straight, slanted line to the right (see Graph 5-5 above) (Zipf, 1949). However, when compared with the population size of settlements in South Africa, a majority of the settlements are found to be below the Zipf estimate curve. Graph 5-5 above reveals that settlement sizes in South Africa vary vastly, with only two city regions ranking high on the scale and a large number of low populations in dense rural areas.

This is of particular interest for this thesis in exploring the eight metropolitan regions. According to Morudu and Du Plessis (2013), the Gauteng City region was the largest city region in the country, while Cape Town ranked second and eThekweni third. Nelson Mandela Bay ranked

fourth and Emfuleni Municipality seventh in 2011, both of which have been classified as city regions. Buffalo City, which ranked fifth and Mangaung sixth, have been classified as cities in this analysis. The middle section of the graph comprises 195 dense settlements and niche towns which are consistent with the Zipf estimate line. These towns are encountered in the Eastern Cape, KwaZulu-Natal, North West, and Limpopo where the former homeland areas had been established. This graph reveals the potential for growth of South Africa's cities, with Buffalo City and Mangaung municipality being the largest settlements next to the city regions (category A metropolitan municipalities). This is consistent with the findings from Chapter 4 of this thesis about the MDB's investigation of the capacity for these settlements to become category A metropolitan municipalities during the post interim phase.

An analysis of the findings from this chapter has revealed that there is no shared understanding of how settlements in the country are classified. Furthermore, an understanding of which settlements types are found in which municipal administrations is also limited. Hence, Chapter 6 will review the administrative criteria as stated in Section 2 of the Municipal Structures Act (117 of 1998) for a settlement or a region to be categorised and classified as a category A metropolitan municipality in South Africa in correspondence with the first three objectives of this thesis (see section 1.4.2 above).

5.7 Conclusion to Chapter 5

Structuring a country administratively requires an understanding of the types of settlements it comprises to make it more consistent and efficient.

This chapter has revealed that at the end of apartheid, a shared understanding of the settlement types in the country was lacking and it imposed further limitations on how exactly these have been classified, as African settlements or administrative areas had largely been excluded from this classification until then. Furthermore, the classifications of settlements which the academics had provided were vaguely defined as and subjectively based on high, medium, and low-density.

In response to these limitations, during the interim phase of administrative restructuring in South Africa the democratic National Government conducted a study to understand the sizes, functions, forms, and locations of its various settlements in a racially integrated manner. However, the understanding of these settlements was also broad and vague. The limited timeframe the political government provided for restructuring in the country had resulted in the limited understanding of settlement structures on the basis of how the administrative structures were to be demarcated and categorised by the MDB in 2000.

As a result, over 11 years later it would remain largely unknown which settlement types could be found in which municipalities. Subsequently, in 2011 the National Treasury commissioned a study toward understanding what these municipalities comprised in terms of settlements. The Palmer Development Group's classification linked settlement types with the constitutional categorisation of municipalities. Although this classification has no legislative standing, it does provide academics with a better understanding of the composition of municipalities in South Africa. However, the manner in which the settlements are defined is still subjective and no objective definition for high, medium, or low-density or what defines a metropolitan city exists.

This chapter has acknowledged that no settlement is static in respect of its structure, and it has investigated the migration patterns in the country since 1994 and their effect on the settlement structures. Moreover, this study has indicated South Africa's development patterns to be unbalanced, with continued migration to metropolitan settlements (i.e. category A: city regions or high-density urban cores) and other large urban areas. In light of this the study will enquire which criteria should be adhered to by settlements from a legislative perspective for them to be categorised as category A metropolitan municipalities.

In light of this, Chapter 6 will investigate the legislative requirements for demarcating a municipality in South Africa and the criteria that should be adhered to for each to be categorised accordingly.

CHAPTER 6: REVIEW OF DEMARCATION AND CATERGORISTATION METHODOLOGY BY MDB

6.1 Introduction

As dynamic as the human settlement, so too is the socio-political and economic environment in which it operates. Government policies are known to change according to the needs and expectations of the ruling party and their objectives (Easton, 1957). As a result, the nature of spatial programmes, strategies, and frameworks being implemented within countries change with these objectives. The outcome of these changes can most clearly be observed in the structures of the country's administrative entities (South Africa, 1998).

Historically, under South Africa's centralist form of governance, national and provincial governments have defined the functions, powers, size, and scope of local government entities (Spatial Planning and Land Use Management Act (SPLUMA) 16 of 2013; De Visser & Poswa, 2017). The 1993 Interim Constitution of South Africa (1993) changed this centralist form of governance materially when the responsibility of demarcating municipal boundaries during the transitional phase had been left to nine separate demarcation boards – one for each province. (Cameron, 2006). However, numerous disputes arose between the provinces concerning the processes followed and the boundary outcomes, which in many cases were suspected to have been products of gerrymandering (Sutcliffe, 1999; Cameron, 2006; Mabin, 1999; Pillay, 1999; Cameron, 2006).

Consequently, with the implementation of the new democratic Constitution in 1996, Sections 152, 156, and 229 provided some guidelines on how the local governments should be categorised nationally (category A, B, and C) (South Africa, 1996; Cameron & Meligrana, 2010). Furthermore, the Constitution (South Africa, 1996) called for the appointment of an independent municipal demarcation board (MDB) to take over the demarcation of the country's boundaries and thereby avoid inconsistent demarcation practices and minimise gerrymandering (Cameron, 2006; South Africa, 1996; Sutcliffe, 1999). Furthermore, the National Government provided a framework for adherence in Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) and the categorisation of these municipalities in Sections 2, 83 and 89 of the Municipal Structures Act (117 of 1998 as amended in 2000). The Constitution (South Africa, 1996) further required that the public be consulted for their opinions on how the administrative regions should be demarcated and categorised (Todes *et al.*, 2010b; Cameron, 2000, Sutcliffe, 1999; MDB, 1999d; MDB, 2003; Tsenoli, 2016).

Abovementioned legislations in principal promote the categorisation and demarcation of local municipalities, recognise linkages between urban and rural settlements, and require their boundaries to be drawn whichever way would promote the socio-economic integrations and developments with the primary role of rebuilding the country's societies (see section 4.3 and 4.4 for details) (South Africa, 1997; South Africa, 1998).

The National Government would only formally appoint the MDB in 1999 once the Municipal Demarcation Act (27 of 1998) and the Municipal Structures Act (117 of 1998) were in place. This chapter will reflect on the formation of metropolitan regions in South Africa by unpacking the demarcation procedures and legislative requirements practiced by the MDB of South Africa. It will firstly inquire into the ways the local government boundaries have been demarcated by exploring the legal procedures that the MDB must follow before a municipality can be demarcated or re-demarcated. Secondly, this chapter will unpack Section 2 of the Municipal Structures Act (117 of 1998) to provide an understanding of the various criteria by which the municipalities have been categorised. The chapter will then proceed to contextualise the criteria used by the MDB to categorise municipalities as category A, B, and C municipalities and their respective roles and responsibilities. Lastly the chapter will conclude by reflecting on the experiences of the MDB in implementing the various legislations.

Section 6.2 will explore the adherence requirements of this Act in demarcating administrative boundaries in democratic South Africa, regardless of categorisation.

6.2 Reflecting on the demarcation of boundaries in post-apartheid South Africa

Municipal boundaries are key planning tools used to contain a region's growth (Zhang *et al.*, 2017). In democratic South Africa determining and demarcating these boundaries are prescribed by Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998). These criteria are a one-size-fits-all approach on how all municipal boundaries should be demarcated regardless of how they are categorised (South Africa, 1998).

Accordingly, Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) will be considered to determine how they are applied by the MDB towards gaining a better understanding of the factors that require adherence for determining and demarcating municipal boundaries.

6.2.1 Section 24 of the Municipal Demarcation Act

In terms of Section 24 of the Municipal Demarcation Act (27 of 1998), when determining a boundary, the municipality being demarcated should allow the local government to fulfil its

constitutional obligations, which involve providing efficient, effective, and integrated structures that have an inclusive tax base (Cameron, 1999). The following is will investigate each criterion by critically analysing each point in Section 24 to determine which factors require adherence. These demarcation objectives are largely lifted from Section 152 of the Constitution (South Africa, 1996), which sets out the objectives of local government, and Section 24(a) (i) to (iv) (see section 6.2.1.1.1- 6.2.1.1.4)., with Sections (b) to (d) being insertions (see section 6.2.1.2 – 6.2.1.4). (Cameron & Meligrana, 2010). Thus, when the Board determines a municipal boundary, its objective is to establish an area with the traits discussed below.

Each area's boundaries must: Enable the municipality of the area to provide democratic and accountable governance of the local communities, which would

6.2.1.1 Enable the municipality of that area to:

6.2.1.1.1 Provide democratic and accountable governance of the local communities

The principles provided by Section 195(1) of the Constitution (South Africa, 1996) state that municipal councils should be democratically elected through an election process (IEC, 2016). Once the government comes into office, they should represent community interests within the councils and promote public participation by consulting citizens on matters that affect them directly. Moreover, the local government should be transparent, equitable, and accountable to the inhabitants of the municipality (South Africa, 1998). Three acts can be used to enforce accountability of local councillors and the local council. These acts are the Promotion of Access to Information Act (2 of 2000), the Protection of Disclosures Act (26 of 2000), and the Promotion of Administrative Justice Act (3 of 2000). The theory from Chapter 5 found that smaller municipalities allow for greater democratic representation. While this is a useful indicator it does not reveal the quality of democratic representation (Cameron & Meligrana, 2010). However, the White Paper on Local Government (South Africa, 1998) found that municipalities with over a million inhabitants were less accountable and had poorer democratic participation than smaller municipalities (South Africa, 1998). The MDB is therefore recommended to demarcate municipalities to have populations of less than a million inhabitants.

6.2.1.1.2 Provide equitable and sustainable services to the communities

For a municipality to be sustainable it would have to be financially viable. In this regard the municipality would have to be large enough to generate its own income and ensure that it promotes income and employment opportunities for all its inhabitants. Furthermore, for it to retain its citizens it would have to ensure that all inhabitants in both urban and rural areas have

equal access to services like education, healthcare, basic services (water, sewage, refuse removal, decent quality housing) (South Africa, 1998; Cameron & Meligrana, 2010). This speaks to the primary functions of local government as listed in Schedules 4(B) and 5(B) of the Constitution (South Africa, 1996).

6.2.1.1.3 Promote social and economic development

The promotion of social and economic development in a municipality is a constitutional objective of local government. Although local government is not directly responsible for creating jobs, it is responsible for ensuring that the overall economic and social conditions of the locality are conducive to the creation of employment and investment opportunities (South Africa, 1998). Furthermore, it is on this scale that development programmes are carried out by all three spheres of government (Cameron & Meligrana, 2010).

6.2.1.1.4 Promote a safe and healthy environment

According to the World Health Organisation (WHO), a healthy city is one that continuously recreates and improves its physical, social, and economic environment to improve the quality of life of its inhabitants (Dahl, 1947). It achieves this by allowing inhabitants to have control over its development and providing the option of choice (WHO, 2014).

6.2.1.2 Enable effective local governance

For citizens to participate effectively in government, they should both understand the government policies and processes as well as have confidence in them. This will enable, empower and strengthen citizens' participation in the decisions that shape their lives (South Africa, 1996; South Africa, 1998). This form of participation is conducted in the form of ward committee meetings and community meetings headed by a ward councillor (South Africa, 1998; Cameron & Meligrana, 2010).

6.2.1.3 Enable integrated development

Local municipalities in South Africa use integrated development planning (IDP) as a method to plan for future development in their areas (South Africa, 1996). These plans aim to co-ordinate investments between the spheres of government coherently to provide services in areas that are lacking. The IDP aims are intended to improve the efficiency and functioning of the municipality for achieving spatial-economic reformation and development of the municipality as a whole, which are central to nation building (Bertaud, 2009; South Africa, 1996). However, determining areas for inclusion is subjective and difficult since these processes are not defined

and depend on various factors including the capacity of staff, available financial resources, thresholds of functions performed, and the available infrastructure within the municipality (Cameron, 2000; Cameron & Meligrana, 2010; Zhang *et al.*, 2017).

6.2.1.4 Have a tax base that is as inclusive as possible to users of municipal services

Previously, municipalities had different tax rates based on racial profiles, and not everyone was given equal access to its services (Lemon, 1991). This criterion seeks to correct these measures by ensuring that the municipality has a one-city-one-tax base and equal access to services for all its citizens. Cameron (2006) maintains that the redistributive policy strongly emphasises drawing wider local boundaries to create conditions for redistribution, rather than perhaps functional coherence.

As discussed in 6.2.1.1. to 6.2.1.4, the objectives set out in Section 24 of the Municipal Demarcation Act (27 of 1998) are higher-order outcomes relevant to all spheres of local government (category A, B and C municipalities). 6.2.2 below will discuss the futuristic requirement of Section 25 of the Municipal Demarcation Act (27 of 1998) to complement the Section 24 outcomes (Cameron & Meligrana, 2010; Cameron, 1999).

6.2.2 Section 25 of the Municipal Demarcation Act

No weighting is allocated to or definitions provided for the criteria listed in Section 25 of the Municipal Demarcation Act (27 of 1998). Thus, the discretion to interpret and decide which factors are more important and which are less important in the demarcation of regions lies with the MDB (Cameron, 2006; Craythorne, 2006). This flexibility of interpretation allows for the criteria to suit the local circumstances. Hence, for this section local literature and various policies and legislation that used similar terms will be considered to facilitate the interpretation of each criterion.

6.2.2.1 The interdependence of people, communities and economies by the existing and expected patterns of human settlement and migration, employment, commuting, spending, use of amenities and commercial and industrial linkages

Section 25(a) embodies several of the objectives found in Section 24, including “enabling integrated development” and “having a tax base as inclusive as possible of users of municipal services in the municipality” (Cameron & Meligrana, 2010). Commuting patterns and functional linkages are two of the most common attributes in this respect that define relationships between areas that could link them under one municipality (OECD, 2006). While being useful indicators, the use of commercial and industrial linkages as a basis for boundary demarcation must be

done with discernment and with caution: Consider how a large amount of steel that is transported from the Durban Port (KwaZulu-Natal) to Vanderbijlpark (Gauteng) does not mean that the two cities should become a single municipality. Hence, distance is also a matter of consideration when demarcating municipalities (Cameron & Meligrana, 2010).

6.2.2.2 The need for cohesive, integrated and un-fragmented areas, including metropolitan areas

This is an almost universal boundary criterion which states that areas included as part of a municipality should not be fragmented and should form a contiguous and compact region with a density that will ensure feasibility as a single municipality (Cameron, 2005; Craythorne, 2006; Cameron & Meligrana, 2010). This factor reiterates the requirements of Section 24 (see section 6.2.1.3 as discussed above). However, determining which areas should be included in the IDP is a subjective and difficult process that involves consideration of suitable areas for planning based on the service systems and administrative management of the respective areas (Cameron & Meligrana, 2010).

6.2.2.3 The municipality's financial viability and administrative capacity to efficiently and effectively perform municipal functions

The municipality should be self-sufficient and self-reliant (in terms of skills), generate enough of its own income revenue (property rates, taxes, levies) and have municipal staff to ensure that it can operate efficiently (Cameron & Game, 2010). These components underpin the constitutional objective listed in Section 24(a)(ii), of the Municipal Demarcation Act (27 of 1998), as discussed in section 6.2.1.2 (Cameron & Meligrana, 2010).

6.2.2.4 The need to share and redistribute financial and administrative resources

This criterion seeks to promote the equitable distribution of municipal resources. However, imbalances in the revenue-generating abilities of municipalities result from the differences in land areas and the resulting revenue from property taxation (Dahlman & Renwick, 2016). Growing municipalities and municipalities with large commercial and industrial land uses in particular generally have higher revenues than municipalities with largely residential land use. Boundary adjustments in this regard could enable and promote equitable taxation across the entire city-region (Dahlman & Renwick, 2016; South Africa, 2000). This reiterates the one-city-one-tax base criteria of Section 24(d) (see Section 6.2.1.4) and gives effect to Section 24(b) (see Section 6.2.1.2) (Cameron, 2006; Craythorne, 2006; Cameron & Meligrana, 2010). Creating a single municipality comprising previously advantaged and disadvantaged areas can

very well be conducive to redistribution (Cameron, 1999; Cameron & Meligrana, 2010) (see also the equity/redistribution demarcation approach in Section 3.3.1.4).

6.2.2.5 Provincial and municipal boundaries

Existing municipal boundaries should not be split unless clearly motivated. If no reason can be provided for such actions, municipalities should remain within their current municipal and provincial boundaries (South Africa, 1998).

6.2.2.6 Areas of traditional rural communities

Categories of local government under the apartheid government were previously divided under urban, rural, and traditional regions. Until recently, urban municipalities were not seen as managers of agricultural lands and traditional homelands (Cameron & Game, 2008). Ward boundaries were introduced in response, which were sensitive to traditional and cultural communities and form part of urban municipalities (South Africa, 1998). Craythorne (2006) mentions that the inclusion of traditional areas with urban areas has been known to cause problems amongst municipal authorities. As a resolution, including them in municipalities and providing them with their own ward councillors would still give its people a voice within these municipalities.

6.2.2.7 Existing and proposing functional boundaries, including magisterial districts, health, transport, police, and census enumerator boundaries

Adjusting a municipal boundary means that municipal services (police, health, fire-fighting, sewage, and refuse removal) would have to serve a larger area (Nelson & Duncan, 1995). Where municipalities are amalgamated, these services would need to be consolidated to serve the new municipality (Cameron & Game, 2008). Therefore, the coordination and cost-effective use of resources should be demonstrated and supported by inter-municipal development plans (Cameron, 2005). This is also a contextual factor that gives effect to Section 24(c) (see section 6.2.1.3) to enable integrated development (Cameron & Meligrana, 2010).

6.2.2.8 Existing and expected land use, social, economic, and transport planning

Any new boundary should account for the anticipated growth and development of the region (Nelson & Duncan, 1995). Hence, such a boundary should contain a reasonable mix of land uses and the region should be managed as a whole within its boundaries. This will aid the community in becoming more efficient and cost-effective in providing basic infrastructure and promoting socio-economic development (South Africa, 2000; Oranje & Merrifield, 2010), which

can be represented in the use of the IDP. This criterion gives effect to Sections 24(a) (iii), namely “the promotion of social and economic development” (see section 6.2.1.1.3), and 24(c) (see section 6.2.1.3), namely “to enable effective integrated development” (Cameron, 1999; Cameron, 2008).

However, taking future land use into account is challenging since it is difficult to predict how the municipality will develop in 20 to 25 years. To this effect, findings from international literature suggest that municipalities should have over-bounded boundaries based on existing servicing systems and administrative manageability of the areas (Cameron & Meligrana, 2010).

6.2.2.9 The need to coordinate municipal, provincial and national programmes and services, including the needs for the administration of justice and health care

Section 154 of the Constitution (South Africa, 1996) promotes government cooperation through providing services while alleviating poverty and promoting development (see Chapter 4). A shared vision between the different developmental dimensions, i.e. the vertical dimension (national and provincial), the horizontal dimension (between provinces and municipalities), the regional or supra-regional dimension (between district and regions), and the relationship dimension (between civil society and private sector) are essential to the country’s multifaceted success (Braine, 2016; South Africa, 2015; Leemans, 1970; Savitch & Vogel, 1996; Hamilton, 2002; South Africa, 2009; South Africa, 1996; South Africa, 2000). This criterion gives effect to Sections 24(a)(ii) (see section 6.2.1.1.2) and 25(g) (see section 6.2.2.7) of the Act (Cameron & Meligrana, 2010).

6.2.2.10 Topographical, environmental and physical characteristics of the area

The topographical, environmental, and physical characteristics of regions were not considered under apartheid (Cameron & Game, 2009) but have since come to be globally recognised and acknowledged (Craythorne, 2006; Dollery & Chong, 2008). Thus, demarcating boundaries in the democratic era involves managing topographical boundaries as one entity (see section 3.3.1.6).

6.2.2.11 The administrative consequences boundary demarcation on: (i) municipal creditworthiness; (ii) existing municipalities, their council members and staff; and (iii) any other relevant matter

According to Sutcliffe (1999), this criterion gives effect to Section 24(a)(ii) (see 6.2.1.1.2), namely “the provision of services to the communities in an equitable and sustainable manner”.

The creation of a local government unit or its alteration from one category of local government to another is based on the verifiable indicators of financial viability and its capacity to provide services. These urban municipalities therefore need to hire staff or acquire a possible change in staff member skill sets and salaries to ensure that the municipality is financially viable and runs efficiently (Craythorne, 2006).

Creditworthiness of a municipality is another important factor since it affects the interest rate the municipality will pay on its loans or whether it can borrow money (Craythorne, 2006). An indication of creditworthiness is a municipality's credit rating according to its economic base, that is, the economic base and the ability of its residents to absorb debt (National Treasury, 2011). A good example of such a rating is Moody's credit rating system, which considers the viability and creditworthiness of municipalities (Cameron & Meligrana, 2010). Evidently, a large portion of a municipality's inhabitants should be employed for it to pay its debt.

6.2.2.12 The need to rationalise the total number of municipalities within different categories and different types to achieve the objectives of effective and sustainable service delivery, financial viability, and macro-economic stability

Neither the Constitution (South Africa, 1996), the White Paper on Local Government (South Africa, 1998) nor the NDP (2030) (South Africa, 2012) gives any information on how many municipalities the country should have, the number of municipalities that each category should have, or where they should be located on a macroscale to reap the benefits that spatial development can offer.

The demarcation objectives above in terms of Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) reveal a strong focus on the socio-geographic approach, that is, the interdependence of people, communities, and economics including employment, commuting, spending, commercial and industrial linkages, and amenities toward creating more integrated societies within the country. The Act also alludes to the creation of "overly-bounded municipalities" (South Africa, 1998) to allow for more efficient planning in the long run.

However, it is important to note that boundary demarcation is not a fixed process and boundaries will still need to be reviewed constantly to account for new developments. Section 6.2.3 below will review the procedure for reviewing the boundaries that were demarcated in 2000 by the MDB.

6.2.3 Reflecting on the procedure to re-demarcate a municipal boundary

In South Africa are only three instances in which a municipal boundary as demarcated against Sections 24 and 25 criteria of the Municipal Demarcation Act (27 of 1998) can be adjusted. These are: 1) of its MDB initiative; 2) at the request of the Minister of Provincial and Local Government; or 3) at the request of the Member of the Executive Council (MEC) responsible for local government in a province or municipality (note the Mangaung municipality in 2008, the Buffalo City metropolitan in 2008, and the Vaal metropolitan in 2012). In addition, municipal boundaries can be re-determined in three ways (Sutcliffe, 1999; MDB, 2016):

- **Technical or minor boundary redeterminations**, which are minor-scale boundary redeterminations that seek to align the boundaries to topographical features. Their impact on administrative capacities, geographic areas and the number of voters in these municipalities is minor.
- **Consolidation and annexations**, which are medium-scale boundary redeterminations with the purpose of correcting inconsistencies that affect service delivery and further prevent the functional integration of communities and economies. These could result in increases in the geographic areas and the number of voters in the municipalities but are not anticipated to impact the capacities of the affected municipalities to deliver services.
- **Amalgamation and categorisation**, which is a large-scale municipal boundary redetermination comprising the amalgamation of fragmented adjacent municipalities toward establishing new municipalities. This has a significant impact on geographic areas, the number of voters, and the capacities of the affected municipalities and requires extensive motivation and sufficient supporting evidence that must satisfy the outlined Section 2 criteria of the Municipal Structures Act (117 of 1998) and Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) (MDB, 2016).

If a municipality submits a request to the board to re-determine its boundaries, that municipality must already have received consensus and support from any other municipality that is affected by the proposed changes and should motivate how the boundary would comply with Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998). Where a request is received from a minister or the MEC responsible for local governance, the MDB would negotiate and inform the surrounding municipalities (Sutcliffe, 1999, 2005; MDB, 2016; Craythorne, 2006).

According to Section 26 (1) of the Municipal Demarcation Act (27 of 1998), before the Board considers re-determining any boundary, a Section 26 Notice on the amendment would have to

be published in a newspaper and broadcasted via radio or other communication modes, inviting public participation in the demarcation process through written representations and views within 21 days (South Africa, 1998; Sutcliffe, 1999). After the 21 days the Board would then examine the written public representation for any opposition to the demarcation in terms of Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) and decide whether a public meeting should be convened.

Following this decision, the Board would publish its determination or redetermination in the relevant Provincial Gazette. Any person who objects the determination would have 30 days to submit their objections in writing to the Board. Thereafter, the Board would consider any objections and either confirm, vary, or withdraw its determination. Should the Board decide to confirm the determination, the confirmation would be published in the Provincial Gazette (Sutcliffe, 1999; Craythorne, 2006) (see Figure 6-1 below).

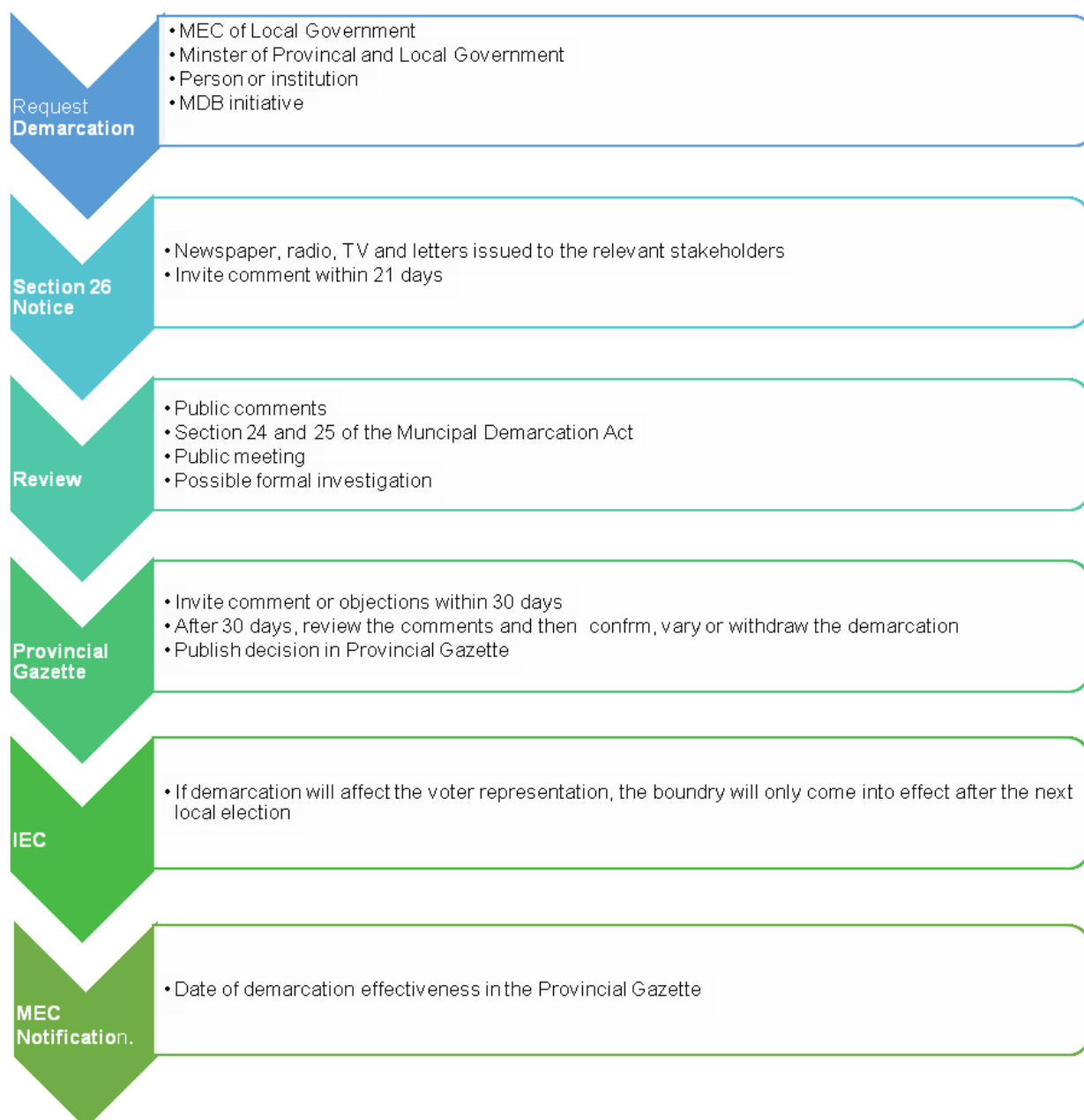


Figure 6-1: Demarcation process in South Africa

Source: (Own construction)

The Board would send the particulars of the determination to the Independent Electoral Commission (IEC). If the IEC is of the view that the boundary determination would affect the representation of voters in the relevant councils, the boundary changes would only take effect from the date of the next local elections (MDB, 2016), as boundary demarcation should not materially affect the representation of voters in the councils. This process is a measure to avoid gerrymandering, and boundary determination will only take effect from a date determined by

notice in the Provincial Gazette by the MECs responsible for local government of the province concerned (South Africa, 1998; MDB, 2016; Sutcliffe, 1999).

Once the boundaries are determined according to Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) or re-determined according to the procedure discussed above, the municipalities would have to be categorised and assigned roles and responsibilities to ensure the socio-economic development of the country as a whole. Section 6.3 below will explore the categorisation of municipalities as discussed in the Municipal Structures Act (117 of 1998) and the associated roles and responsibilities as prescribed in the White Paper on Local Government (South Africa, 1998). Furthermore, it will discuss the methodology adapted by the MDB to categorise these municipalities in South Africa.

6.3 Categorisation, roles, and responsibilities of municipalities in South Africa

The overarching responsibilities of the three spheres of local government include the racial integration and management of its administration in an equitable manner while raising its own local budget and meeting the basic needs of its inhabitants in an inclusive manner (South Africa, 1996). This section of the chapter will explore the methodology followed by the MDB in classifying category A, B, and C municipalities respectively according to the criteria set out by the Municipal Structures Act (117 of 1998 as amended in 2000) (see section 4.4).

Section 6.3.1 will begin by explaining the requirements for categorising metropolitan municipalities and assigning their roles and responsibilities, followed by a similar discussion for both category B and category C municipalities.

6.3.1 Category A metropolitan municipalities

A category A municipality as described in Section 155(1) of the Constitution (South Africa, 1996) is a large city-region which is both developed and governed by a single unitary municipal body (South Africa, 1996). The White Paper on Local Government (South Africa, 1998) refers to category A municipalities as metropolitan municipalities (South Africa, 1998:7). The criteria by which these municipalities should be categorised are stipulated in Section 2 of the Municipal Structures Act (117 of 1998). Section 6.3.1.1 below will provide a detailed explanation of these criteria.

6.3.1.1 Categorisation criteria of category A municipalities

The MDB adapts the classification criteria of a category A municipality from the Local Government Municipal Structures Act (117 of 1998 as amended in 2000). According to this act

a category A municipality should display all the following features before it can be categorised as such.

6.3.1.1.1 A conurbation with:

A: AREAS OF HIGH POPULATION DENSITY

According to the MDB methodology, this indicator describes the average number of people occupying one square kilometre. This definition suggests that a category A municipality must include substantial areas of high population by South African urban standards and not merely small pockets of high densities. Furthermore, the region should have more than one settlement which could be either urban or rural (i.e. a conurbation). Hence, for the average density of the municipality to be high, the metropolitan municipalities should have more urban settlements than rural settlements, since urban areas are known to have higher densities (Cameron & Meligrana, 2010).

The density indicator serves as a measure of efficiency and intensity, since theoretically an increase in density is believed to improve the cost efficiency of infrastructure and services and allow for the sustainable use of resources. However, a density that is too high can compromise quality of life and can increase environmental pressures (Stoeglehner *et al.*, 2016) (see section 3.3.1.1).

B: AN INTENSE MOVEMENT OF PEOPLE, GOODS, AND SERVICES

This criterion suggests that there is a range of movement intensities, whether of people, goods, or services. The degree of commuting intensity would separate a metropolitan area from a non-metropolitan area. This criterion was put in place during the one-city-one-tax base rallying call of the late 1980s and early 1990s, which intended to integrate the black townships with their main white urban areas where African workers had worked and shopped (Cameron & Meligrana, 2010). When the Board demarcated boundaries between 1999 and 2000, it maintained that metropolitan or local councils should encompass at least 50% of all people who live, work, and shop within that area. This conforms to international experience, which suggests that least 50% of the employed labour force living in a certain municipality works in the urban core (OECD, 2014b).

However, Cameron and Meligrana (2010) suggest that the MDB uses data on household surveys, significant transport and commuter infrastructure, average time from place of residence to place of work, the extent to which public transport systems are provided efficiently, and integrated land use and transport development potential to determine the movement intensity between settlements. These databases can be accessed from Statistics South Africa, the

Department of Transport, and the Department of Human Settlements (Cameron & Meligrana, 2010). Cameron and Meligrana (2010) criticises this sub-criterion for being unclear in respect of defining the movement intensity that is required for a municipality to qualify (also see section 3.3.1.3).

C: EXTENSIVE DEVELOPMENT

Extensive development implies issues of scale. A small urban area would not qualify to have a category A municipality. It also implies continuity of development in that a category A area should be more or less continuously developed in respect of commercial and industrial areas (Cameron & Meligrana, 2010).

However, this criterion cannot be interpreted too literally to mean that the area may have no breaks in development. Apartheid's segregation development patterns resulted in many black townships being built some distance from the core urban areas. Legislation such as the Local Government Transition Act (209 of 1993) intended such townships to be combined with white local authorities. However, according to Cameron and Meligrana (2010) this criterion can include multiple well-separated urban areas which may be regarded as conurbations on the bases of their interdependence and strong movement patterns, but of which substantial separation suggests that they do not meet this sub-criterion.

Furthermore, according to Cameron and Meligrana (2010), extensive development can be determined by the contribution of the cities to the national economy. Data that can be used to measure this would be the growth rate of the Gross Domestic Product (GDP) per person employed, the Gross Valued Added (GVA), the employment to population ratio, the proportion of employed people living below \$1 a day (approximately R15 per day), the Human Development Index, the Deprivation Index, and job creation through Expanded Public Works Programme (EPWP) (Cameron & Meligrana, 2010).

D: MULTIPLE BUSINESS DISTRICTS AND INDUSTRIAL AREAS

The term conurbation suggests an extensive urban development with more than two different business centres and industrial areas. A key issue in the application of this criterion is the question of scales of the various business districts.

According to Cameron and Meligrana (2010), the data that can be used to measure this includes the number of business districts and industrial areas, identification of significant commercial and industrial linkages between municipalities such as raw production in relation to manufacturing or processing, processing in relation to sales, and the extent to which a

municipality is an importer or exporter of commercial goods or services to or from other municipalities.

In 2016, Minister of Cooperative Governance and Traditional Affairs (CoGTA) proposed an amendment of Section 2 of the Municipal Structures Act (117 of 1998) to group together the criteria “extensively developed” and “multiple business and industrial districts” as one criterion, thereby amending the Act to require either of them and not both of them.

6.3.1.1.2 A centre of economic activity with a complex and diverse economy

This term indicates two necessary conditions for recognising metropolitan areas – they must form “centres of economic activity” as well as have a “complex and diverse economy” (Municipal Structures Act 117 of 1998). The notion *centre of economic activity* implies a reasonably sized settlement offering economic services or products. The second aspect of the criterion is that of the complex and diverse economy. Many moderately sized towns also contain a range of commercial, industrial, and other activities that could define them as being diverse and complex. According to Cameron and Meligrana (2010), this criterion is based largely on scale in the sense that larger centres would have larger economies. Alternatively, it could also be seen as a centre of employment (see section 3.3.1.1).

According to Cameron and Meligrana (2010), data that can be used to measure these criteria includes total employment and unemployment or total employment income.

6.3.1.1.3 A single area for which integrated development planning is desirable

The promotion of an IDP is a desirable goal. As discussed previously, determining which areas should be integrated is subjective and difficult (see section 6.2.1.3). Another problem is that these criteria apply to the demarcation of both district and local municipalities, so it is challenging to determine what the size of the municipality should be to differentiate it from district and local municipalities.

Based on the abovementioned criteria together with the requirements of the Constitution (South Africa, 1996) and the Municipal Demarcation Act (27 of 1998), the MDB states three principles that should guide the demarcation of category A municipalities, based on integration (Cameron & Meligrana, 2010) as captured in the Table 6-1 below:

Table 6-1: Integration principals found in the criteria of category A municipalities

Principle	Indicator
Economies of scale	Extensive development Multiple business districts Economic centre with complex and diverse economy
Functional integration	Commuting patterns Intense movement of goods and services Socio-economic linkages
Human settlement approach	Population density Integrated development

Source: Adapted from Cameron and Meligrana (2010)

Regardless, the criteria are still subjective and the manner in which the MDB determines how regions should be integrated remains unknown (see section 3.3 and 6.2.1.3 for details).

6.3.1.1.4 Have strong interdependent social and economic linkages between its constituent units

This criterion reinforces previous criteria in some ways. Firstly, it suggests having a number of constituent units (rural and urban areas, multiple business districts, and industrial areas), and secondly, that functional linkages should exist between them. Thirdly, those linkages must be both social and an economic nature. This criterion suggests that residential areas should be part of the municipal boundary to which the largest proportion of commuters from the specific residential area travel to work. In other words, the region should display growth potential and have strong functional linkages (Craythorne, 2006).

According to Cameron and Meligrana (2010), data that can be used to measure these criteria includes identified commercial and industrial linkages between municipalities, commuting patterns between residences and work, spending patterns between municipalities, the use of amenities and recreational facilities, and the extent to which a municipality is an importer or exporter of commercial goods or services to or from other municipalities. The researcher proposes that using the abovementioned indicators to measure socio-economic linkages would be challenging since no criteria state what the intensity of the interactions should be for an area to qualify.

The analysis above reveals that section 6.3.1.1.3 and section 6.3.1.1.4 are closely related. Hence, in 2016 CoGTA proposed an amendment of Section 2 of the Municipal Structures Act (117 of 1998) by tabling a bill proposing that criteria (6.3.1.1.3 above) and (6.3.1.1.4 above) be

considered together as one criterion, thereby amending the Act to state either (6.3.1.1.3) or (6.3.1.1.4).

The abovementioned criteria interpret a metropolitan region as a large, highly populated region with both rural and urban municipalities that are functionally, socially, economically, and spatially interconnected to form a single entity (Marais *et al.*, 2016). However, the requirements are largely subjective because they are left to interpretation (Cameron & Meligrana, 2010). Based on these criteria, six metropolitans were demarcated in 2000, though Mangaung and Buffalo City were excluded from this classification and categorised as aspirant metropolitans (category B1 municipalities). Yet, upon the application by the MEC in 2008, the MDB granted metropolitan status to both these municipalities in 2011.

6.3.1.2 Roles of category A municipalities

It is believed that in the absence of a unitary metropolitan government, municipalities that are interdependent may compete excessively for investment and generate negative perceptions through separate and uncoordinated investment strategies (South Africa, 1998). Therefore, the role of metropolitan municipalities is to coordinate and integrate the growth and development of large, high-density urban areas (South Africa, 1998; Craythorne, 2006; Cameron, 2005).

6.3.1.3 Responsibilities of category A municipalities

Category A municipalities are expected to fulfil their spatial responsibilities by means of a city-wide IDP (South Africa, 1998). This plan must assist in determining the needs within the region and managing the provision of public goods and services within the region in a developmental manner, thereby improving the quality of life of all its inhabitants (South Africa, 1996; South Africa, 1998). To this effect, the municipality's responsibilities include the regulation of air pollution, electricity and gas reticulation, local tourism, municipal public transport, health services, fire-fighting, education, refuse removal, street lighting, storm water, water and sanitation services, urban planning, municipal public works, and trading regulations amongst others (South Africa, 1996). Hereby it can be stated that a metropolitan municipality has the combined responsibilities of both category B and category C municipalities.

6.3.2 Category B municipalities

These municipalities share municipal executive and legislative authorities in their areas with a category C municipality (South Africa, 1996). According to the White Paper on Local Governments (South Africa, 1998), three types of local governments are classified, namely

urban municipalities, amalgamated municipalities (urban and rural municipalities), and lastly, rural municipalities (South Africa, 1998) (see Table 6-2 below)

Table 6-2: Composition of category B municipalities according to the White Paper on Local Government (South Africa, 1998)

Municipality	Definition	Source
Urban municipality	Comprises larger towns and cities but not rural areas. This means that in many instances it does not include the expanding townships which are located just outside the urban edge.	South Africa, 1998
Urban-rural municipality	Has both urban and rural settlements either through amalgamation or boundary extension based on the functional linkages between settlements.	South Africa, 1998 and South Africa, 1996.
Rural municipality	Comprises of a range of rural areas in the country ranging from high-density areas while others are more sparsely populated (as discussed in Chapter 5).	South Africa, 1998.

Source: (Own construction)

6.3.2.1 Categorisation criteria of category B municipalities

The White Paper on Local Government (South Africa, 1998) recommends that the demarcation and categorisation of category B local municipalities should be flexible to accommodate the diversity of non-metropolitan areas. That being said, a district municipality should still provide consistency across the country to ensure uniformity (South Africa, 1998).

The MDB set the following principles for demarcating local government boundaries based on Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998). According to Cameron (2004), the area should allow for geographical continuity and coherence, capacity development, and resource sharing, should be of a manageable size, and should be functionally related. These principles were applied in the Municipal Structures Act (117 of 1998) as follows:

- Demarcation should follow the nearest neighbour principle, or the human settlements approach, that is, to consolidate category B municipalities the areas should be geographically coherent and continuous, since municipal government is closely related to local identity and accessibility.
- Local government boundaries were demarcated mainly on the bases of commuting and socio-economic patterns to assume manageable sizes of 3 500–10 000 square kilometres and have over 20 000 but below 80 000 persons.

- Functional linkages should exist where settlements with internal linkages were amalgamated to create one municipality. These linkages should be captured either in transportation routes or topographical features which have previously altered the boundaries of a region (Cameron & Meligrana, 2010).
- Consolidating areas should contribute to developing municipal capacity (staff, assets, and finances) and facilitate resource sharing between municipalities (Cameron & Meligrana, 2010; Cameron, 2005; Cameron, 2004) to realise the objectives of economies of scale.

These principles attempted to redress the effects of apartheid-era displacements while making provision for future growth. A criticism offered on these principles is that the emphasis on minimum sizes have led to many of the MDB's local boundaries being over-bounded, which arguably in some cases has led to the formation of municipalities with communities who have little in common. According to Cameron and Meligrana (2010), not only were peri-urban and black dormitory towns included, but in some cases deep rural areas with few linkages to urban areas were included to create one municipality, which led some local municipalities to complain that their areas of jurisdiction were too large to service adequately and that they were stretched financially and administratively in delivering services in areas they were not really connected to (Cameron & Meligrana, 2010).

6.3.2.2 Role of category B municipalities

Category B municipalities are also known as non-metropolitan cities and share power and functions with district municipalities (South Africa, 1996). The primary role of this sphere of government is a developmental role within their regions (South Africa, 1998).

6.3.2.3 Responsibility of category B municipalities

This developmental role is fulfilled through measures toward ensuring that all South Africans have access to adequate housing, healthcare, education, food, basic services, and social security (South Africa, 1998). These are provided in consultation with citizens to ensure that their needs are met, especially those of women, disabled people, and the poor (South Africa, 1998). Furthermore, local municipalities are responsible for developing a community that is cost-effective and encourages the economic growth of the area (South Africa, 1998).

6.3.3 Category C municipalities

Previously, if a local government was not a metropolitan area then it was a town or a regional service council (South Africa, 1998). Areas which were not classified as either would be

excluded from the tax base and did not have access to basic services unless they were privately provided (South Africa, 1998). As a result, some dormitory townships with farm workers and members of the rural populations did not have access to basic services. To correct this, the Democratic Government formed a district municipality (category C municipalities) to serve areas that had been located outside of local municipalities (category B municipalities) (South Africa, 1998a; South Africa, 1998b). Consequently, district municipalities were created as umbrella municipalities that had executive and legislative authority in said municipal regions (South Africa, 1996). District municipalities are also spatially larger and more diverse than local municipalities and have both rural and urban features (South Africa, 1998; Cameron & Meligrana, 2010). However, neither legislation nor the MDB guidelines make any mention of an optimal number of local municipalities that should make up a district (Cameron, 2000). That being said, the Constitution (1996) does allude to a district municipality being made up of two or more local government municipalities (South Africa, 1996).

6.3.3.1 Categorisation criteria of category C municipalities

Districts are more diverse than metropolitans, making it more challenging to create a national framework. The White Paper on Local Government (South Africa, 1998) has made provision for rural areas to be consolidated with urban areas to create a more equitable society that is integrated and form a non-metropolitan local government (category B municipalities). The Municipal Structures Act (117 of 1998) does not specify any categorisation criteria for district municipalities.

In light of this the MDB has suggested four principles that should underpin the categorisation of a district municipality (Cameron, 2005):

- The region should contain functional linkages that display a coherent socio-economic base around which districts coalesce. This includes spending patterns, economic activity, and migration patterns.
- The settled area/urban area of the district should exceed 50 to 100 kilometres.
- The district population should not be too large to achieve economies of scale and should have a base population of 100 000 per district.

The district should have a coherent economic base which it can use as a competitive advantage (Cameron & Meligrana, 2010; Cameron, 2005).

6.3.3.2 Role of category C municipality

According to the White Paper on Local Government (South Africa, 1998), a district municipality should standardise planning and development within its regions by means of district-wide, integrated development planning that includes land use planning, economic planning and development, and transport planning for the entire area, including the local municipalities. It should also provide infrastructural and bulk services for the region by funding it through the Regional Services Council levies. It should also serve as a mentor and manager to the local municipalities within its region and provide on-demand assistance and support in a capacity-building role (South Africa, 1998).

6.3.3.3 Responsibilities of category C municipalities

The responsibilities of a district municipality are to promote the integrated, sustainable and equitable social and economic development of its area as a whole, supply bulk infrastructural services (water, waste water, sewage, disposal sites, electricity, roads development and construction, health services, and fire-fighting), promote development, and provide services for the region as a whole (that is, within the district and the local municipalities located within it). Furthermore, it should build the capacities of local municipalities so that they are capable of functioning autonomously and should enable the equitable distribution of resources between municipalities within the district in a cooperative manner (South Africa, 1999; South Africa, 1998). In light of this, the district has the power to impose and collect taxes, levies, and duties for the functions it fulfils in local municipalities according to the Municipal Structures Act (117 of 1998 as amended in 2000) (see Table 6-3 for summary).

Table 6-3: Summary of the various municipalities in South Africa regarding roles, responsibilities and classification for categorisation

Criteria	Category A	Category B	Category C
Governance	Single-tier	Two-tier	Two-tier
Role	Coordinate and integrate large high-density urban areas	Developmental role	Connect urban and rural settlements
Responsibility	Create a base for an equitable and socially just society	Ensure that all South Africans have access to adequate housing, healthcare, education, food, basic services, and social security	Promote the integrated, sustainable, and equitable social and economic development of its area as a whole
Categorisation criteria	A conurbation featuring: - Area of high population density - Intense movement of people, goods, and services - Extensive development - Multiple business districts and industrial areas - Centre of economic activity with a complex and diverse economy - A single area for which integrated development planning is desirable - Strong interdependent social and economic linkages between its constituent units	Demarcation should follow: - The nearest neighbour principle - The areas should have a number of settlements (towns, cities or villages) - Functional linkages between areas that are of a manageable size - Where possible, municipalities should house 80 000 persons and no less than 20 000	- Functional linkages between the rural and urban areas - The district should be no larger than 50–100 kilometres - The area of the municipality should be around 3 500 square kilometres - The areas should have two or more local municipalities - Should have a base population of 100 000 per district

Source: Adapted from Cameron (2005)

6.4 The implementation of municipal demarcation and structuring legislation in South Africa

According to Cameron (2005), even though the MDB had a clear plan on how the various municipalities should be demarcated and categorised in 2000, the implementation proved to be challenging in practice.

At the time of the initial demarcation in 1999, the MDB did not have many permanent employees nor did it have premises of its own for its operations and therefore had to hire various consultants from around the country to assist in establishing municipal boundaries within an extremely short period (Sutcliffe, 1999; Cameron, 1999; Thupana, 2017). According to Cameron (2005) the insufficient period in which demarcation was expected to take place was the root of all the problems, since many of the consultants did not understand the criteria and could not communicate it to the public.

In addition, there was no shared interpretation of the criteria between the MDB and the consultants nor was there consensus on how they should be implemented. As a result, some consultants did away with using the MDB criteria and instead decided to use community consensus as a basis for demarcating boundaries and categorising municipalities. However, they could not justify these boundaries to the MDB through the submission of reports which in turn produced a sense of mistrust under citizens, who accused the MDB of not being transparent, and resulted in uncertainty on how demarcation was taking place in the country (Cameron, 2005; Steytler, 2015; Ndaba, 2015, Omarjee, 2018).

Furthermore, the short deadline in which these boundaries had to be demarcated did not allow for revision of misaligned boundaries, ultimately resulting in many of the local government boundaries requiring revision in recent years (Cameron, 2005).

One of the main criticisms against the method used by the MDB is that the municipal boundaries that were demarcated are over-bounded. In light of the approach in the White Paper on Local Government (South Africa, 1998), this socio-geographic approach was adopted to allow for the integration of urban and rural areas, which in many instances were separated by buffer zones that extended over long distances, toward attaining interdependence. The implication of this approach is that the larger the area of interdependence, the larger the municipality would be (as in the case of Mangaung), making efficient administration difficult since municipalities would be overextended in respect of finances and administrative power (Atkinson, 2014). As a result, the Department of Finance requested that the MDB review the manner in which it demarcated local municipalities (category B) in 2000 (Cameron, 2005).

According to Cameron (2005), the MDB never once claimed the municipalities it had demarcated to be financially viable. To the contrary, it openly acknowledged that 102 of its 243 municipalities were weak in their administrative powers and finances. In light of this, in 2011 former Minister of Finance, Pravin Gordhan and former Chairman of the Demarcation Board, Mr Lindiwe Mahlangu, called for the amalgamation of financially nonviable municipalities with

stronger and more financially viable municipalities (Ndaba, 2015; Steytler, 2015; Omarjee, 2018). However, as revealed in Section 3.3.1.5 above, amalgamating weaker municipalities with stronger municipalities does not necessarily make them stronger, but in some instances weaker, especially where limited resources are involved which would now have to be spent on the development of an already large and lacking area (Steytler, 2015).

This has brought into question the implementation and categorisation processes of demarcation in South Africa post-2000, especially the interpretation and implementation of Section 2 of the Municipal Structures Act (117 of 1998). As the criteria currently stand, they are largely subjective and open to interpretation (as discussed above). Chapter 7 will provide a review of the methodology followed by this thesis to determine the interpretation and implementation of the Section 2 criteria by the MDB to categorise the eight category A metropolitan municipalities between 1999 and 2011.

6.5 Conclusion to Chapter 6

Since 1999 the South African Government has permanently employed an independent MDB to demarcate and categorise its administrative municipalities. Furthermore, it provided a framework according to which the Board was expected to demarcate municipal boundaries (Sections 24 and 25 of the Municipal Demarcation Act 27 of 1998) and categorise municipalities (Sections 2 and 3 of the Municipal Structures Act 117 of 1998). However, the Government left the interpretation of these criteria to the MDB.

This chapter has revealed that the interpretation of the Municipal Demarcation Act (117 of 1998) is complex and subjective owing to the vagueness of its criteria. The Act has many requirements, though none are clear. In addition, the Municipal Structures Act (117 of 1998) only provides subjective, broad criteria for what a category A metropolitan municipality should comprise. It further states that if a municipality does not adhere to the criteria for a category A municipality, it should be categorised as either a category B or category C municipality, making it difficult to discern what exactly a category A municipality is since there are no criteria against which it can be measured.

Accordingly, Cameron (2005) highlights how the MBD has addressed this challenge in demarcating the municipalities initially in 2000. Though the complexity and vagueness of the criteria have been mentioned, nothing has actively been done to correct it. Consequently, South Africa had many cross-boundary municipalities and still has many other municipalities that are either financially nonviable or too large to administer efficiently.

To date, limited research is available on how the various municipalities have been categorised. As a result, the remainder of this thesis will reflect on the interpretation and implementation of the Section 2 criteria by the MDB in categorising metropolitan municipalities to provide insight into how metropolitan municipalities have been categorised in the country. Therefore, Chapter 7 will provide a review of the research methodology that was employed in this study.

CHAPTER 7: EMPIRICAL RESEARCH DESIGN

7.1 Introduction

Many national governments implement plans, policies, acts, and frameworks that dictate actions for achieving the goals that these governments envision. However, the level of adherence to the prescribed criteria varies since it is influenced by multiple internal and external factors. This results in outcomes varying greatly from initial intentions (DeGroff & Cargo, 2009; Scheirer, 1981).

Empirical research is the process by which various methods and techniques are used to find answers to a set of problems (Cahoy, 2018). If areas in which policy criteria are expected to have been implemented incorrectly, it would naturally require evaluation – understanding a problem often requires returning to the steps that were taken to reach a particular outcome. Only once this is understood can such criteria or process be corrected and replicated with consistency and integrity (Parsons, 1995, Scheirer, 1981; Weiss, 1972; Weiss, 1998).

Twenty (20) years have passed since the Municipal Structures Act (117 of 1998) has been implemented in an attempt to restructure the administration of South Africa. As highlighted in Chapter 6, the Section 2 criteria are subjective and lack clear definitions, making the implementation of these criteria complex. A 2012 study conducted by the SACN questioned the process by which these criteria had been implemented (John, 2012). Accordingly, this thesis aims to evaluate the interpretation and implementation of the Section 2 criteria by the MDB in categorising metropolitan municipalities in South Africa to provide a deeper understanding of these practices and guide future administrative categorisation in South Africa.

According to Weiss (1972) four minimum requirements need to be adhered to make for a scientifically sound and reliable process evaluation. These are: a) a key evaluation question (KEQ); b) a conceptual logic or theory of change; c) a research design; and d) the manner in which data is analysed and collected (Weiss, 1998; Weiss, 1972; Wholey, 1972). Hence, this chapter will explicitly state the key research question or KEQ and the theory of change which it informed. This will in turn inform the research design, the data analysis, and the data collection methods required to answer it. This chapter will conclude by explaining the reliability and relevance of the empirical study.

7.2 Key evaluation question (KEQ)

A key evaluation question was used to structure the research. In this regard, this thesis will reflect on the consistency of the application of the Section 2 criteria in the categorisation of the eight metropolitan municipalities (City of Johannesburg, City of Cape Town, Tshwane, Ekurhuleni, eThekweni, Nelson Mandela Bay, Mangaung, and Buffalo City) in South Africa between 1999 and 2011. This particular timeframe has been used because it was during this time that the current eight metropolitan municipalities had been categorised. Thus, the overall aim is to determine the interpretation and implementation of the Section 2 criteria in the categorisation of metropolitan municipalities over the 11-year period and contribute to a better understanding of how metropolitan municipalities (category A) are categorised in South Africa.

7.3 Research methodology

A research methodology is a roadmap that explains how the empirical research was implemented to achieve the outcome posed by the KEQ as well as how the adherence to this vision can be measured (White, 2015).

To determine the interpretation and implementation of the Section 2 criteria, this study has employed a contrast and compare strategy (CCS) for the eight metropolitan municipalities with a focus on understanding and tracing the adherence of these eight metropolitan municipalities to the themes in the Section 2 criteria (Walk, 1998). However, the current vague and subjective nature of the criteria required this study to test for consistency or lack thereof in the interpretation of the Section 2 criteria from three perspectives. This test involved 1) acquiring a theoretical perspective based on the literature review as captured in Chapter 2 through 6 of this thesis; 2) acquiring the planning profession perspective based on data captured from structured and semi-structured questionnaires with purposefully selected professional planners; and 3) acquiring an MDB perspective from MDB reports and semi-structured questionnaires from the MDB employees (MDB, 2008). The findings from these three perspectives have been analysed and triangulated to determine the interpretation of the Section 2 criteria (Walk, 1998; White, 2015).

Once this had been established, a comparative analysis was conducted to compare the adherence levels between the eight metropolitan municipalities (City of Cape Town, City of Johannesburg, Tshwane, Ekurhuleni, eThekweni, Nelson Mandela Bay, Buffalo City, and Mangaung) to the Section 2 criteria according to the MDB's interpretation and the manner in which it was implemented between 1999 and 2011.

While investigating the factors that required adherence for being granted metropolitan status, a counterfactual was established in the forms of Mangaung and Buffalo City, for which a deeper and more detailed analysis was required since the MDB only provided the researcher with the investigative reports that motivated reasons for these two municipalities becoming metropolitans and not all eight metropolitans. Subsequently, this analysis has also addressed the SACN's enquiry on how the Buffalo City and Mangaung metropolitan municipalities had managed to adhere to the Section 2 criteria for them to be categorised as category A municipalities in 2011.

7.4 Research design

A research design is a framework used in a study to produce a set of conclusions from an initial set of questions (as stated in section 1.4. and section 7.2) (Yin, 2003). The evaluation design of this study was informed by the theory of change (as discussed in section 7.3 above).

This study's research design entailed evaluating the criteria that Section 2 of the Municipal Structures Act (117 of 1998) prescribed for categorising metropolitan municipalities and how these criteria had been interpreted and implemented by the MDB in categorising metropolitan municipalities in South Africa between 1999 and 2011. This is referred to as programme evaluation.

Programme evaluation is commonly defined as the systematic method of collecting, analysing, and using data to answer questions about a particular programme (Weiss, 1998; Weiss, 1972; Monette *et al.*, 1994). Academically speaking, programme evaluation approaches have been categorised under four main themes (Monette *et al.*, 1994; Weiss, 1972, Yin, 2003; Yin, 1994):

- **Formative evaluation:** This form of evaluation seeks to ensure that the programme is appropriate, acceptable, understandable, sustainable, and financially attainable before it is implemented. The outcomes from the evaluation assist in its modifications before implementation.
- **Process or implementation evaluation:** A process evaluation seeks to determine how the adherence to a particular criterion (X factor) is related to a particular outcome (Y factor). This process is also referred to as programme monitoring (Rossi *et al.*, 2004).
- **Outcome-based evaluation:** This evaluation approach seeks to measure the effects of a programme's implementation.
- **Impact or summative evaluation:** This evaluation assesses the effectiveness of the programme in reaching its desired outcome.

For the purposes of this thesis, Section 2 of the Municipal Structures Act (117 of 1998) have been investigated by means of a programme evaluation process to evaluate the Section 2 criteria at multiple levels through defining, describing, deconstructing, and analysing the various points from a geographic, social, organisational, and functional perspective. Firstly, this process assisted in providing a holistic picture of how each theme has been defined and understood, secondly, it determined what each theme in the criteria requires, and lastly, it established how the criteria had been implemented in categorising the eight metropolitan municipalities.

These objectives have been accomplished by employing multiple research methods (qualitative and quantitative) and integrating both secondary data sources (analyses of archives, programme documents, and socio-economic statistical data) and primary data sources (independent and respondent observations, key stakeholder and expert semi-structured interviews, and structured questionnaires) to ensure depth, scope, and validity of the findings (Yin, 2003; Goodrick, 2014).

7.5 Data collection methodology

The success of any programme evaluation and data analysis lies in the methods and measures used to collect the necessary and relevant data (Duerden & Witt, 2012). This thesis employed a mixed methods approach in using both quantitative and qualitative data from primary and secondary sources to analyse the data and gain a deeper insight into the interpretation and implementation of the various themes in Section 2 of the Municipal Structures Act (117 of 1998) (see Table 7-1 below for details) (Duerden & Witt, 2012; Yin, 2003; Goodrick, 2014; Weiss, 1972).

Figure 7-1 below provides a detailed record of how the data was collected, which measures were used, and why.

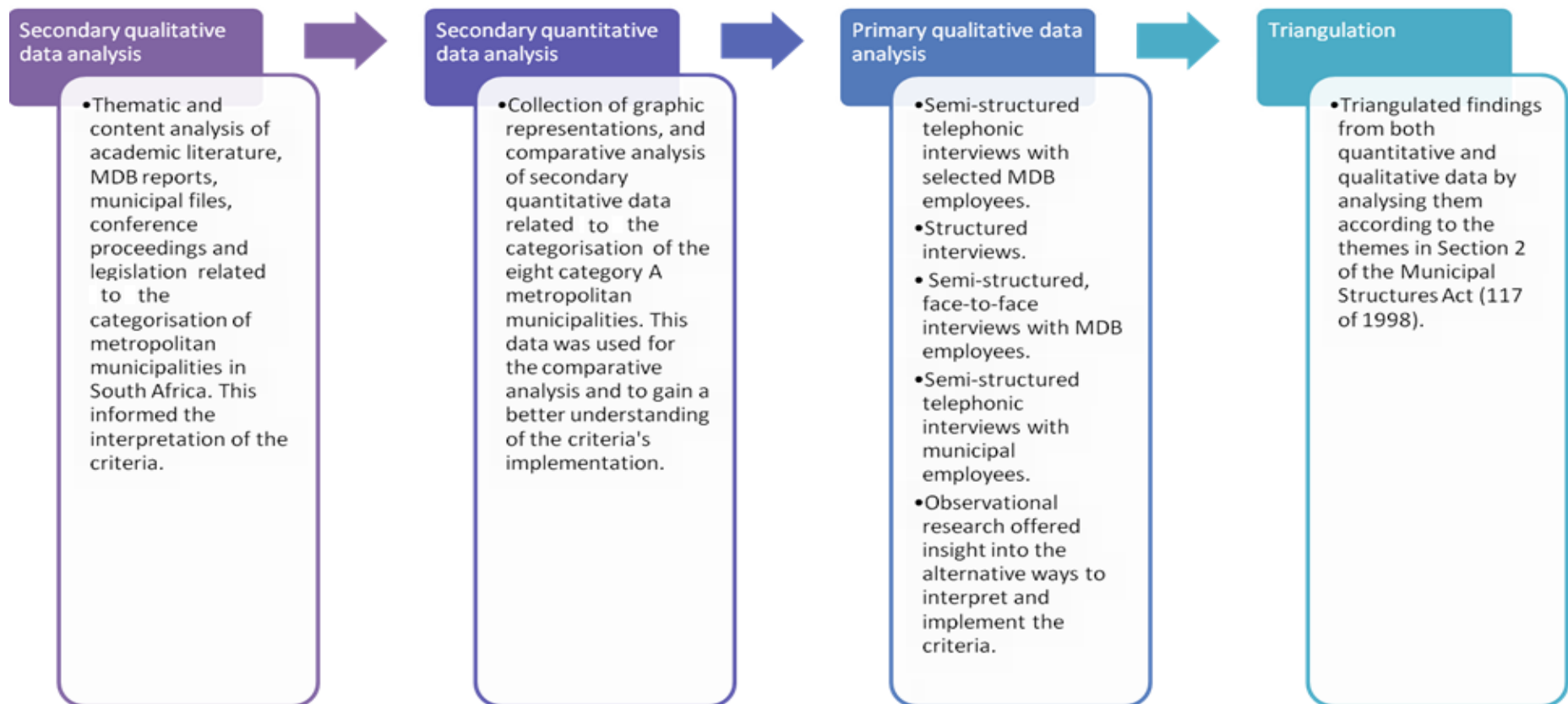


Figure 7-1: The methodology for the study

Source: (Own construction)

The methodology will be discussed below.

7.5.1 Step 1: Secondary qualitative data collection and analysis

Academic articles, MDB reports, municipal applications, archival records, legislation, books, and conference proceedings were reviewed to gain a better understanding of what defines a category A metropolitan municipality and how it differs from district (category B) and local (category C) municipalities (see Chapters 2 through 6). This provided an understanding of how the criteria had been interpreted by the MDB. The data from this step was coded through open coding (Neuman, 2011), during which notes were made of identified themes in relation with the research aims. These codes were highlighted and memos drafted on additional information that was required. These memos were in turn used to draft both the structured and semi-structured interviews of the study.

7.5.1.1 Step 1.2: Semi-structured telephonic interviews with purposively selected personnel at the MDB

This step of the research took place concurrently with the literature review process (step one see section 7.5.1) and quantitative data collection (step three) to verify the understanding of the various criteria components and their interpretation by the MDB. The primary purpose of these semi-structured interviews was to interview purposefully selected employees and key role players from the Demarcation and Delimitation Department at the MDB to form a proposition and clear any misunderstandings that might have resulted from reviewing the documentation and literature in step one. Once it had been established that the interpretation and the implementation of the criteria from the MDB's perspective had been correctly understood, the researcher proceeded to code the findings from these interviews and capture them under the headings *Interpretation* or *Implementation* for the themes of the Section 2 criteria (see Chapter 8).

7.5.2 Step 2: Secondary quantitative data collection

Secondary quantitative data was collected from the Quantec, Global Insight, and the Statistics South Africa database platforms, based on the interpretation and implementation of the themes found in Section 2 of the Municipal Structures Act (117 of 1998) (see Table 7-1 for themes that were analysed). The collected data was used to conduct a comparative analysis across the eight metropolitan municipalities. The data comprised the following (see Table 7-1):

Table 7-1: Quantitative data collected according to the Section 2 criteria

Criteria	Data	Reasons
Conurbation	Statistics South Africa data on urban and rural settlements.	Provided an understanding of what percentage of rural and urban settlements make up the conurbation.
High-density	Statistics SA population data and geographical areas in square kilometres.	Density calculated by population numbers divided by the area (per square km) provided insight on the number of people living within these municipalities.
Extensively developed	GVA	Gave an indication of the value added by the region for it to be regarded as extensively developed and efficiently managed.
Multiple commercial centre	Land uses in the region through analysing. Commercial vs. industrial vs. Residential land usages	Provided an indication of percentage of land used for commercial purposes.
Functional linkages	Google Earth with mileage and travelling time between centres at 7:30am, 12:30pm, and 17:30 pm.	Google Earth's main source of data comes from commuter smart phones, which provide drivers' locations, relative speeds, and, itineraries. This was used to calculate the density of traffic on a particular stretch of road. The findings were analysed to determine the functional linkages in the region.

Criteria	Data	Reasons
Economic centre with a diverse and complex economy	Employment and unemployment data.	Percentage of employment in the centre provides an indication of the centre's economic wellbeing.
	Location quotient.	Location quotient is used to determine the diversity of the economy in the context of the national economy for 1999, 2008, and 2011.

Source: (Own construction)

Abovementioned secondary quantitative data was either tabulated or graphed under the themes identified in Section 2 of the Municipal Structures Act (117 of 1998) and are captured under the subheading *Implementation* (see entire Chapter 8). This allowed for contrast and comparison between the metropolitan municipalities and provided new insight on the implementation of the Section 2 criteria over the 11-year period. Two themes remained under the Section 2 criteria which could not be measured quantitatively, namely *integrated development* and *socio-economic development*. Collecting primary qualitative data offered insight on how these themes have been interpreted and implemented by the MDB.

7.5.3 Step 3: Primary qualitative data collection

Three methods were employed to collect primary qualitative data for this thesis. Each will be explained briefly below.

7.5.3.1 Online structured interviews with professional planners, academics, and public sector employees

The results from steps one and two were used to draft a structured online questionnaire (see Addendum A). Respondents were identified based on their experiences relating to either their academic publications, conference proceedings, and written reports, or from positions held at institutions or the municipality and were purposefully selected for the structured online interview. This step was included in the study to gain insight into the interpretation of the Section 2 criteria of the Municipal Structures Act (117 of 1998) from a professional planning perspective, since no literature is available on how these criteria can be interpreted. This in turn offered insight on the

possible levels of consistency of the interpretation of the various themes in Section 2 of the Municipal structures Act (117 of 1998).

Non-probability sampling was used to select respondents for the online structured interviews, since it was largely unknown whether the study represented the population well, though it is difficult to prove otherwise. However, in applied social research, probability sampling is not feasible or practical, as is the case for this thesis, since it is unknown how many people are aware of the municipality categorisation processes.

Sampling was conducted in a purposeful manner and a group of 50 individuals who were known to be familiar with the municipal categorisation process were identified. The sample comprised three employees from metropolitan municipalities, five employees from the MDB, six employees from the National Treasury, three from CoGTA, 16 researchers from the CSIR, SACN, and Human Sciences Research Council (HSRC), 10 academics across various universities in the country, and 10 urban planners in private practice. Each of the identified individuals were contacted telephonically and introduced to the study between 31 July and 25 August 2017. Thereafter, 50 structured questionnaires were e-mailed to interviewees via Google Forms. Of the 50 respondents, 16 completed the interview with valid responses – one of which was blank. As a result this study has 15 respondents. It is largely unknown why the response rate was so low, considering that all individuals contacted had agreed to complete the questionnaire.

7.5.3.2 Semi-structured interviews

Due to the low-level responses from the structured online interviews, three (3) telephonic interviews were conducted with employees at the Determination and Delimitation Department of the MDB and a (1) face-to-face interview was conducted with the Chairperson of the MDB toward gaining a better understanding of the interpretation and implementation of the Municipal Structures Act (117 of 1998), with a special emphasis on how integrated development and socio-economic development had been measured in the municipalities. These interviews overlapped with those mentioned in steps one, points two and four of this section. The findings from these interviews were coded and captured under the subheading *Implementation* for some of the thematic discussions in Chapter 8.

Furthermore, telephonic interviews were conducted with randomly selected employees in the Mangaung (1) and Buffalo City (1) metropolitan municipalities to gain insight into the IDP processes and the functioning of these metropolitans as entities. These two metropolitans were chosen for the interviews because the observational study revealed a fragmented urban structure within these municipalities. Therefore, these six semi-structured interviews were

conducted to either approve or reject the findings from step one. The findings from these interviews were captured and analysed under themes in Chapter 8 to provide insight into the implementation of these criteria.

7.5.3.3 Observation of the eight metropolitans

Ethnography is largely known as the study of culture. The most common manner in which it is practised is through in-depth participant observational research, which is also known as natural experimentation. This method entails observing a phenomenon in its natural setting, which leads to greater ecological validity (Oswald & Bernard, 1989). For this thesis the eight different municipalities (City of Johannesburg, eThekweni, Ekurhuleni, Tshwane, Nelson Mandela Bay, Cape Town Metropolitan municipality, Mangaung, Buffalo City, and Msunduzi) were visited personally by the researcher between December 2016 and January 2017, each municipality for four days, to understand the state of the local economy, spatial structure and social composition of these municipalities. Findings from this step were captured under the appropriate themes in Chapter 8 to either approve or disapprove the qualitative and quantitative findings of this thesis.

7.5.4 Step 4: Data triangulation

This final step attempted to attach a level of plausibility to the interpretation and application of the Section 2 criteria in the categorisation of metropolitans. Triangulation is often used in evaluations to verify answers against descriptive questions (Yin, 2003).

For example, a respondent's statements can be compared with a direct observation. In the case of this thesis, the statements of the IDP could be verified against observations and responses from the municipal employees and the MDB. In addition, triangulation can be used in comparative case studies to verify and strengthen answers to causal questions by providing alternative explanations to the phenomenon (Weiss, 1998; Goodrick, 2014). Thus, the triangulation process informed a summative approach to each theme and produced critical findings from the study by providing a holistic picture of how metropolitan regions in South Africa are formed, based on qualitative and quantitative analyses (Goodrick, 2014).

7.6 Unit of analysis

Analysis brings order, structure, and meaning to data. Strictly speaking, analysis does not occur in a linear fashion. Rather, it is a cyclic process that seeks to find answers by interpreting and theorising various data and literature sources (Schwandt, 2007). Analyses require the implementation of both inductive and deductive reasoning in presenting data in an interpretable

form to identify trends and relationships in line with the research aims and generate conclusions (Best & Khan, 2006) (see section 1.6 and 1.7).

As a result, this thesis used both qualitative and quantitative methods of analysis to attain its objectives. Subsection 7.6.1 will discuss the qualitative method of data analysis conducted for this thesis.

7.6.1 Qualitative data analysis to determine the interpretation of the Section 2 criteria

Qualitative data analysis can be interpreted as a measure to understand people's understanding of a situation, theme, or category by using inductive and deductive reasoning and by comparing and contrasting the various understandings (Schwandt, 2007). In this study, qualitative data was collected from the previous step and thematically evaluated against the individual themes in Section 2 of the Municipal Structures Act (117 of 1998) to structure the analysis process (NSF, 1997).

The analysis entailed three steps: define, describe, and interpret. Firstly, the data was analysed to define what was needed and why it was needed (see section 1.6, 1.7 and 7.5.1). Secondly, data was mined from steps two, three, and four in the previous sections (see section 7.5.2, 7.5.3, and 7.5.4) to provide a description on how this theme could be interpreted differently. Lastly, the remaining data collected from steps one and two was analysed to understand how the criteria has been interpreted by the MDB (see section 7.5.1 and 7.5.2). This analysis offered insight into the interpretation of the Section 2 criteria, whose findings were triangulated and captured under the subheading *Interpretation* under each theme in Chapter 8 (Schwandt, 2007; Best & Khan, 2006) toward answering the KEQ.

Once the interpretation of the themes in Section 2 of the Municipal Structures Act (117 of 1998) had been established, a comparative analysis of the quantitative data was conducted (Schostak & Schostak, 2008). Section 7.6.2 will offer a description of the quantitative data analysis process.

7.6.2 Quantitative data analysis to determine the implementation of the Section 2 criteria

The quantitative data analysis allows for standardisation of numerical data with a single objective in mind and for the testing of qualitative data previously collected for reliability (Goodrick, 2014). For this study, secondary quantitative data (as collected in step three, section 7.5.3) was analysed according to the themes from Section 2 of the Municipal Structures Act (117 of 1998) for the eight metropolitan municipalities (City of Johannesburg, City of Cape

Town, Tshwane, Ekurhuleni, eThekweni, Nelson Mandela Bay, Buffalo City, and Mangaung) over the timeframe 1999 to 2011. The data was captured in tables, pie charts, and line graphs, which were analysed by comparing and contrasting the data to gain a better understanding of the implementation of the Section 2 criteria by the MDB over said period (Goodrick, 2014; Guba & Lincoln, 1994; Guba & Lincoln, 1983).

Comparing similar administrative settlements within a particular country would be possible since the administrative entities are all subject to the same policy and should thus be consistently categorised (Bartlett, 2017). The findings from this analysis are captured under the subheading *Implementation* under each Section 2 theme in Chapter 8.

Both the qualitative and quantitative analysis approaches above are highly appropriate in process and programme evaluation since they require no controls, treatments, or subjects and analyse programmes because they were naturally implemented (Goodrick, 2014). Section 7.7 will explain how this analysis process contributed to the validity of the data.

7.7 Data validity

Yin (1994) describes validity as a criterion that tests the quality of the research design. The reliability or trustworthiness of the process evaluation is determined by how it obtained the objectives of the study (Guba & Lincoln, 1983). In this regard the collected data and the research design would need to prove four aspects (Guba & Lincoln, 1983; Guba & Lincoln, 1989):

- Credibility: to prove that the research is believable.
- Transferability: the degree to which the results can be transferred to another context.
- Dependability: by fulfilling the objectives of the study.
- Conformability: by producing results that can be collaborated on by others.

Having these criteria inform the research design would prove the legitimacy of findings (Yin, 1994).

To this effect, the researcher conducted all fieldwork and data collection personally, which ensured consistency in data collection and understanding. However, the validity of the primary qualitative data collected through the structured and semi-structured interviews were difficult to establish, especially since the measured criteria were subjective and vague. Thus, to ensure the

best possible insight into the interpretation and implementation of the criteria, interviewees were asked about their experiences, qualifications, and familiarity with the categorisation of municipalities. Only those who claimed to have been familiar with the process were included in the study (see 1.9 and 8.2). Moreover, secondary quantitative data from more than one data source were included to confirm the findings. The quantitative data was compared across the eight metropolitans for the same years using the same indicators and the same municipal boundaries (2011) – this ensured the reliability, validity and transferability of findings (see section 1.10). Additionally, constant discussion with the MDB took place to ensure that the data measured what it intended to measure – this ensured the creditability, dependability and conformability of the research (see section 1.10 and 7.5.1).

Once all the primary and secondary data had been collected, the data was triangulated to ensure further conformability of findings.

Lastly, to ensure the trustworthiness and reliability of findings a 100% sample size was used in the study. Whereby all eight current category A metropolitan municipalities were included in the study.

7.8 Conclusion to Chapter 7

The ability to demonstrate whether legislation is being interpreted and implemented consistently is important for its sustainability and ultimate success. This chapter has explained the evaluation process that was used to measure the extent to which Section 2 of the Municipal Structures Act (117 of 1998) has been and is being consistently implemented by the MDB. However, since the criteria lend themselves to subjective interpretation, this chapter has explained that data was collected based on how the criteria was first interpreted and implemented. Thus, a mixed methods research methodology was followed to gather both qualitative and quantitative data related to the Section 2 criteria of the Municipal Structures Act (117 of 1998).

Findings from this data collection process offered insight into the various ways in which the criteria can be interpreted and compared other than how the MDB interprets it. Furthermore, the analysis of this data was intended to develop an understanding of those structures and characters which gave a municipality category A metropolitan status. Moreover, the data helped determine whether the criteria were implemented consistently by the MDB over the 11-year timeframe or not. These findings can inform policymaking and possibly assist the government in improving the country's structural programmes to make it more efficient and integrated.

Chapter 8 will present the findings from this research design and employed methodology.

CHAPTER 8: REFLECTING ON THE FORMATION OF METROPOLITAN REGIONS IN SOUTH AFRICA

8.1 Introduction

The previous chapters of this thesis revealed that human settlements are not static entities but dynamic organisms that evolve with time (see Chapter 2). In many cases their growth brings with them a need for new administrative structures that would manage settlement development spatially, socially and economically (see Chapters 2 and 3). However, as discussed in Chapters 3, 5, and 6, the criteria used to delimit these administrative boundaries lend themselves to subjective interpretation, and to date little theory is available on the categorisation of administrative structures. The reason for this limitation is that each context is unique and there is no one-size-fits-all approach when it comes to delimiting and categorising administrative entities (Cameron & Meligrana, 2010) (see Chapters 3 and 6).

Within the South African context the National Government has provided a framework in Section 2 of the Municipal Structures Act (117 of 1998) for categorising metropolitan municipalities. According to this Act – which was reiterated by the Chairperson, Ms Jane Thupana, and employees of the Demarcation and Delimitation Department of the MDB during the semi-structured interviews – a municipality can only be a category A metropolitan municipality if it meets all the criteria stipulated in the Municipal Structures Act (117 of 1998) (Thupana, 2017).

However, the adherence to said criteria and their interpretation are left to those who implement them, that is, the MDB. In light of these uncertainties, this chapter will investigate the criteria as it is applied by the MDB to categorise category A metropolitan municipalities in South Africa. For a thematic analysis of each criterion under the themes set out in Section 2 of the Municipal Structures Act 117 of 1998, see Chapter 6 of this thesis as well as Figure 8-1 for themes

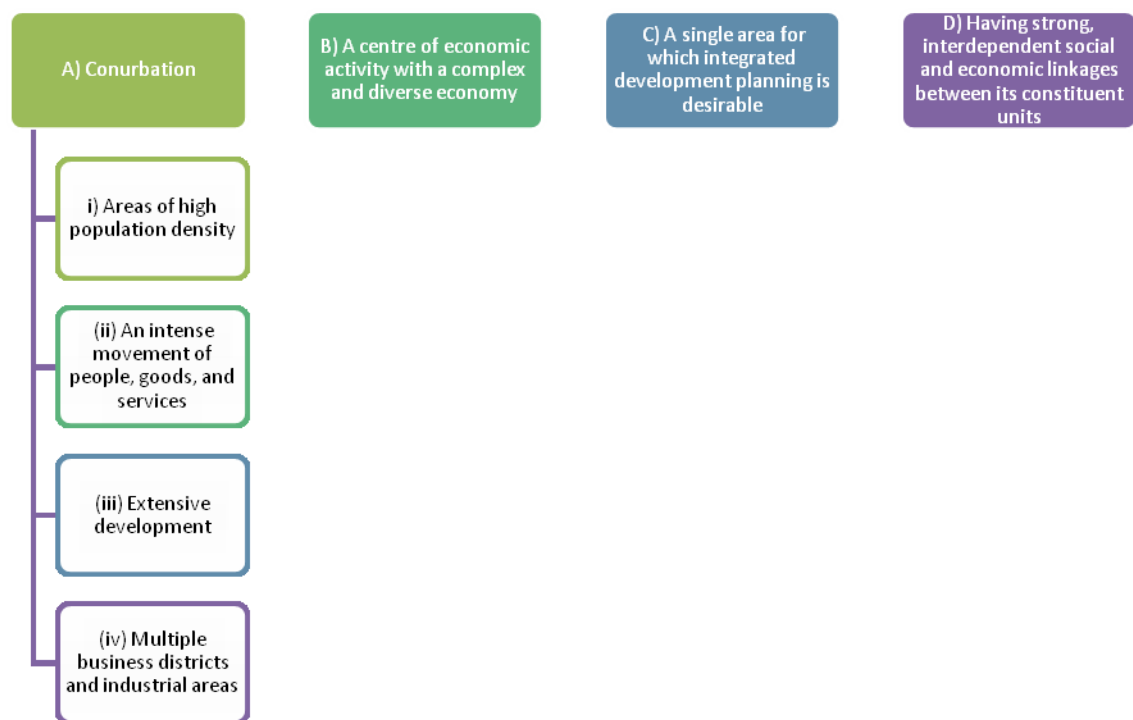


Figure 8-1: Section 2 criteria

Source: (Own construction)

Each theme in Figure 8-1 above will be discussed in this chapter in a chronological order concerning the findings from the application of the research methodology (see Chapter 7). This chapter will first define the criteria and then triangulate and capture the findings from the theoretical (literature) perspective, professional planners' perspective (structured and semi-structured questionnaires), and the MDB perspective (from the MDB reports), which are found under the heading *Interpretation*. A discussion will follow on the MDB's implementation of the criteria in the form of a comparative analysis of the eight metropolitan municipalities between 1999 and 2011 – the findings from the semi-structured interviews as well as the observational findings were triangulated and captured under the heading *Implementation*. This chapter will conclude by triangulating all the data and drawing up findings around the interpretation and implementation of the Section 2 criteria.

This study pursued constant discussion with MDB personnel to ensure that the data measured what it intended to measure – this ensured the creditability, dependability and conformability of the research. Many data sources were used in this study to ensure the creditability and transferability of the findings. Together, these factors ensured that the findings from this study would be reliable.

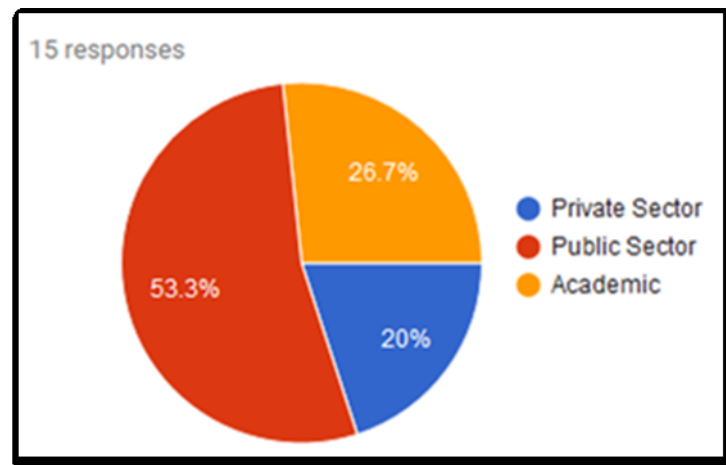
Section 8.2 will proceed with describing the profiles of the respondents included in the empirical investigation of this study.

8.2 Respondent profiles

The profile for urban planning respondents who participated in the structured online interview is captured accordingly in section 8.2.1, while Section 8.2.2 will follow to present the profile of urban planning individuals who participated in the semi-structured interviews.

8.2.1 Respondent profile for structured online questionnaires

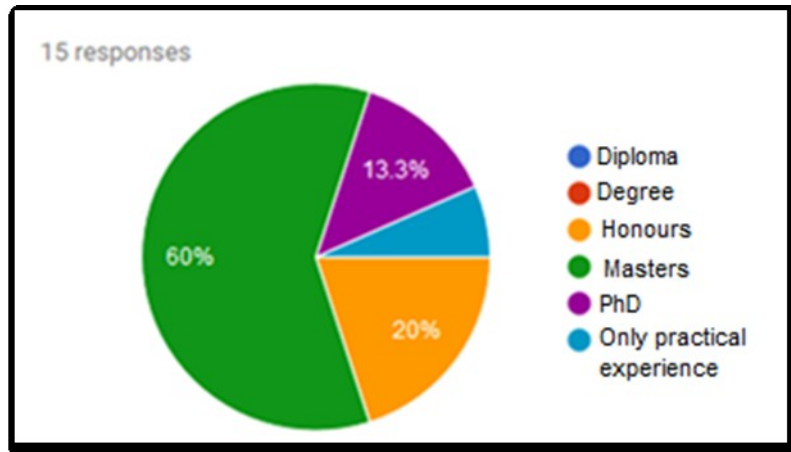
Of the online structured questionnaires received, 53.3% (eight) of the respondents were from the public sector, 26.7% (four) were from the academic sector, and 20% (three) were from the private sector.



Graph 8-1: Respondent employment sectors

Source: (Own construction)

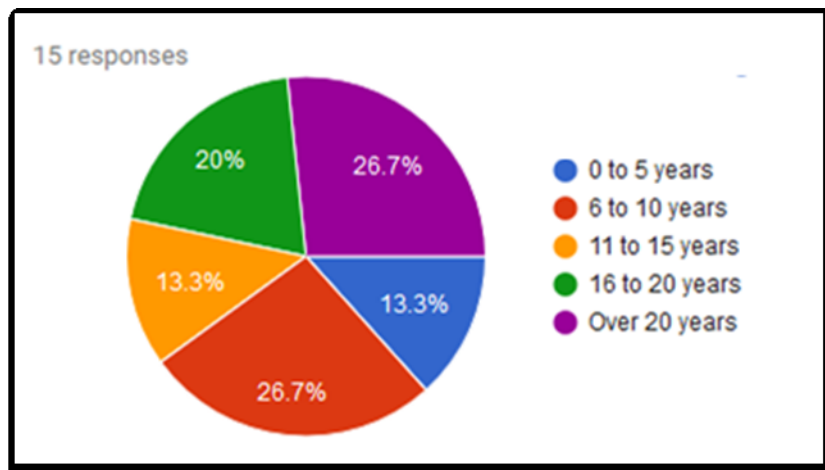
Only 6.7% (one) of the respondents claimed to have had only practical experience, while 20% (three) had honours degrees, 60% (nine) of the respondents had master's degrees, and 13% (two) had doctorate degrees. This information indicates that all the respondents were highly qualified (see Graph 8-2).



Graph 8-2: Respondent qualifications

Source: (Own construction)

Only 13.3% (two) of respondents had between zero and five years of experience and occupied junior positions in the planning profession, while the next 26.7% (four) had between six and 10 years of experience. 13.3% (two) had between 11 and 15 years of experience. 20% (three) of the respondents had between 16 and 20 years of experience. At least 26.7% (four) of the respondents had over 20 years of professional experience (see Graph 8-3).

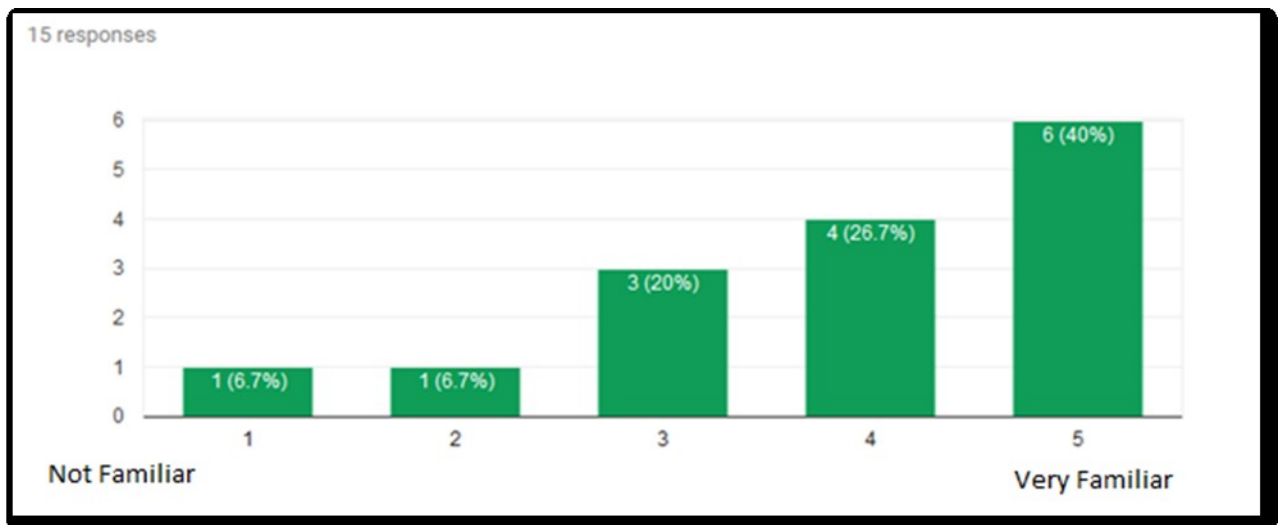


Graph 8-3: The professional experience of respondents

Source: (Own construction)

In the structured online questionnaires, upon being asked about their familiarity with the demarcation and categorisation of municipalities in South Africa, only 6.7% (one) of the respondents indicated that they were not familiar with the categorisation process. Another 6.7% (one) indicated that they were a little familiar with the process, and at least 20% (three) of the

respondents claimed to be familiar with the process. The remaining 66.7% (10) of the respondents indicated that they were very familiar with the categorisation of municipalities in South Africa (see Graph 8-4).



Graph 8-4: Respondents' familiarity with the demarcation and categorisation of municipalities in South Africa

Source: (Own construction)

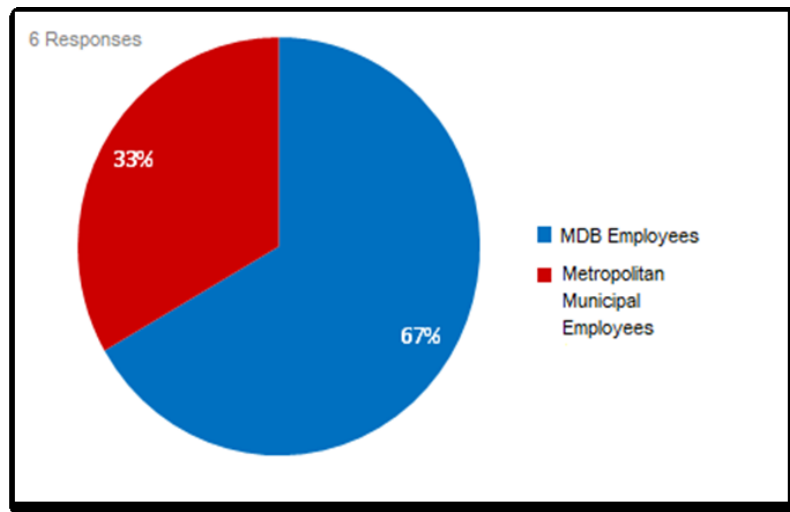
Overall it can be stated with certainty that 86.7% (13) of the online structured interview respondents were familiar with the municipal categorisation process in South Africa.

To summarise the respondent profile, participation in the study comprised individuals who occupied positions in the private, public, and academic sectors of the planning profession, of which most had postgraduate degrees and between six and over 20 years of professional experience. Of these, 86.7% were familiar with the municipal categorisation processes in South Africa. The findings from these interviews are captured under the subheadings Interpretation in each theme below.

8.2.2 Profile of semi-structured Interview respondents

From the six individuals who were selected to be interviewed in a semi-structured manner. Three (50%) were from the demarcation and delimitation department at the MDB and one (16.6%) was the Chairman of the MDB. Thus, four (66.6%) of the responses come from MDB personnel which provided first-hand insight into the demarcation and categorisation process of municipalities in the country. Furthermore, two (33.3%) employees from metropolitan

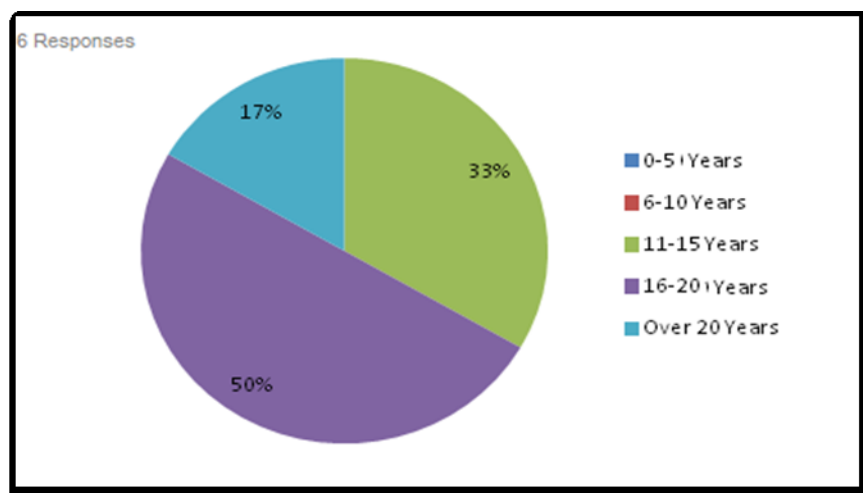
municipalities were interviewed to gather information of their experiences on the categorisation and demarcation of their municipality (see Graph 8-5).



Graph 8-5: Semi-structured questionnaire respondents employment sector

Source: (Own construction)

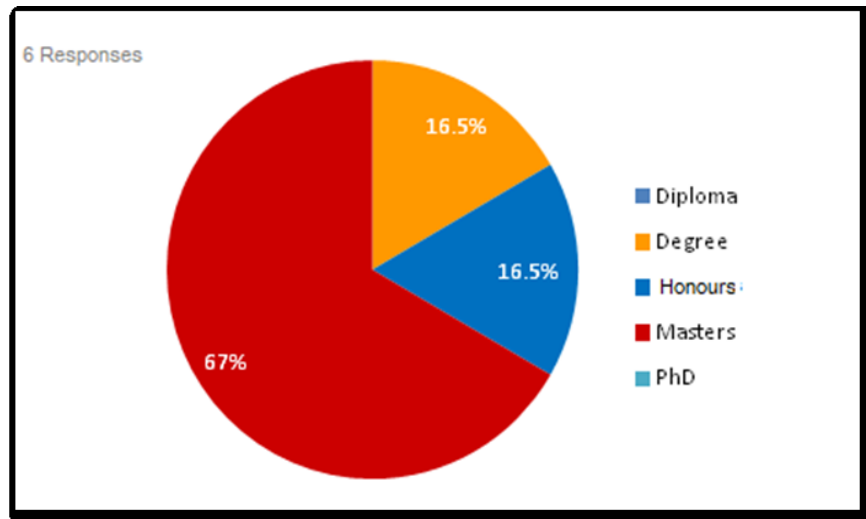
Two (33%) of the respondents had between 11 and 15 years of professional experience, while three (50%) of the respondents had between 16 and 20 years of experience. The last respondent claimed to have over 20 year of experience. From this can be deduced that respondents occupied senior positions within the institutions (see Graph 8-6).



Graph 8-6: Professional experience in years of respondents from semi-structured questionnaire

Source: (Own construction)

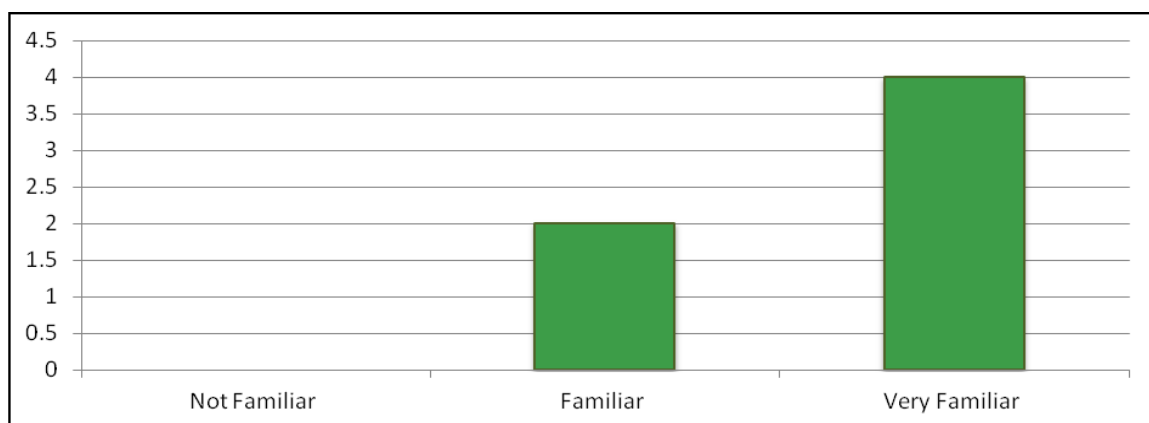
When asked about their qualifications, one (16.5%) respondent had only a degree in town and regional planning, while one (16.5%) of the respondents had an honours degree in urban planning. The remaining four (67%) of the respondents each had master's degrees in urban and regional planning (see Graph 8-7).



Graph 8-7: Qualifications of respondents from semi-structured questionnaires

Source: (Own construction)

Upon questioning respondents on their familiarity of the categorisation and demarcation criteria and process, two (33.3 %) of the respondents said that they were familiar with the process while the remaining four (66.6%) of the respondents claimed to be very familiar with the process (see Graph 8-8)



Graph 8-8: Semi-structured respondent familiarity with categorisation and demarcation criteria

Source: (Own construction)

The above serve to illustrate that all respondents of the semi-structured questionnaires held senior positions at their respective institutions and had between 11 and over 20 years of experience. Majority of the respondents claimed to have had master's degrees in urban and regional planning and that they were very familiar with the demarcation and categorisation process. Section 8.3.1 will present the outcomes of the interpretation and implementation of the various themes in Section 2 of the Municipal Structures Act (117 of 1998) for the period between 1999 and 2011. It will begin by analysing and reflecting on the concept *conurbation*.

8.3 Results of the interpretation and implementation of Section 2 of the Municipal Structures Act

8.3.1 Conurbation

The Municipal Structures Act (117 of 1998) requires an area to already be a conurbation before it can be classified as a category A municipality. Theoretically, a conurbation is a large urban area consisting of several towns, cities, or urban settlements together with their residential suburbs, all who have merged and are functionally linked to form a collective whole (region) (Geddes, 1915). These conurbations may or may not have open rural land between them (Sinha, 2016). The literature review in Chapter 2 revealed that a conurbation could also be referred to as a *formless city* (Mumford, 1961), a *primate city* (Jefferson, 1939), or a *higher-order city* (Christaller, 1933; 1966), implying that the administrative area should be expansively developed (see also section 2.4 and 2.5).

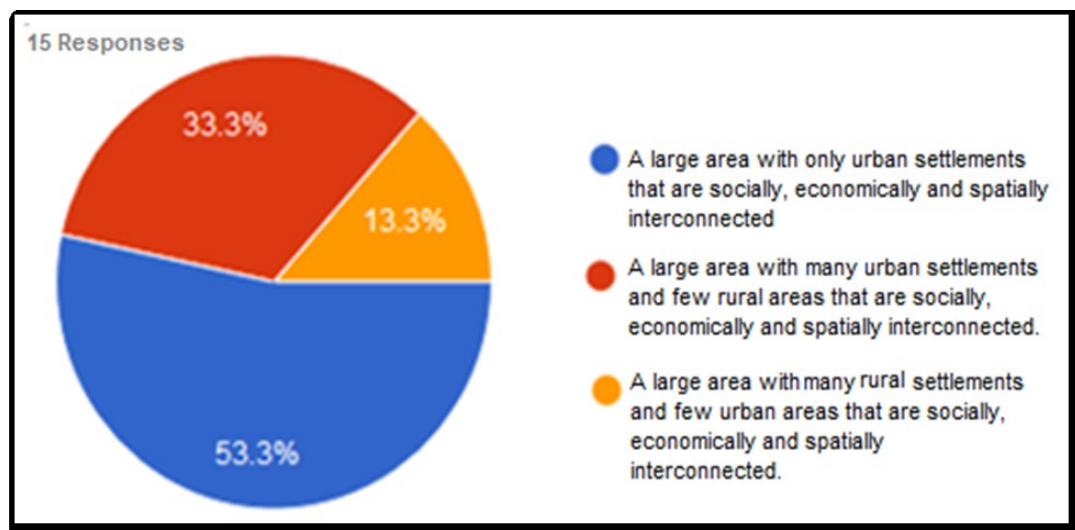
In relating these definitions with the classification of settlements in South Africa, the CSIR (2008) refers to a *city-region* as a settlement with a polycentric structure and a population of over a million inhabitants (the NUDF and IUDF refers to the largest cities as high-density cores, and the National Treasury refers to them as category A municipalities (see Chapter 5).

8.3.1.1 Interpretation of the criterion: conurbation

The apartheid government of South Africa categorised administrative areas according to racial profiles. These administrative areas were separated by buffer zones (open land/green spaces), however these were functionally linked to the white urban areas where most of the economic activities were located. Together these racially classified administrative areas formed settlements of either towns, cities, or metropolitan areas (see section 5.2). Consequently, in 1993 the Interim Constitution (South Africa, 1993) called for the racially-based administration to be amalgamated to form one integrated municipality with a single tax base (see section 4.3). This amalgamation formed municipalities which were classified as either urban, rural, or

metropolitan (see Chapter 4). Subsequently, in 1998 the White Paper on Local Government (South Africa, 1998) called for all municipalities to have both urban and rural areas to promote a more balanced development and hence a more polycentric structure for these administrative entities (see section 4.4, Chapters 4 and 6).

However, as discussed in Chapter 2, there is no shared understanding globally of the particulars of what defines urban and what defines rural, since this is influenced by various factors. Likewise, there is no standard, shared understanding of what makes an area urban or rural in South Africa (see Chapter 5) (Laldaparsad, 2007) – how much urban character a municipality should have for it to qualify as a conurbation is open to question. Fifteen (15) respondents of the online structured questionnaires were asked to define a conurbation in South Africa. The following responses were captured (see Graph 8-9):



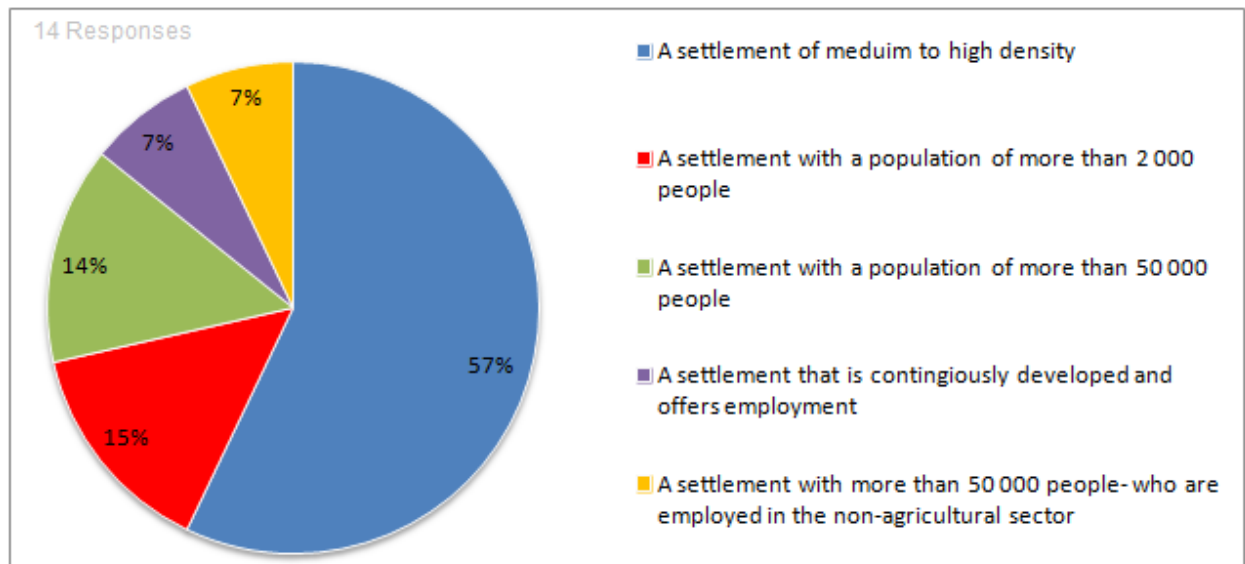
Graph 8-9: Respondent definitions of a conurbation

Source: (Own construction)

The online structured questionnaire revealed that there was no consistent understanding among the online respondents of what a conurbation should be or is in South Africa, with 53.3% (eight) of the respondents thinking that a conurbation is a settlement that should comprise only urban settlements that are interconnected socially, economically, and spatially, and 33.3% (five) thinking that a conurbation is a large region with many urban areas that could also include a few rural areas into its administration as long as they are socially, economically, and spatially interconnected. Only 13.3% (two) of the respondents said that a conurbation in South Africa could be a large area made up of mostly rural settlements and a few urban areas which are

connected socially, economically, and functionally. The above responses reveal the inconsistent understanding on how settlements are classified in South Africa, as alluded to in Chapter 5.

A breakdown of how urban is defined according to the respondents of the structured questionnaire, is offered in Graph 8-10.

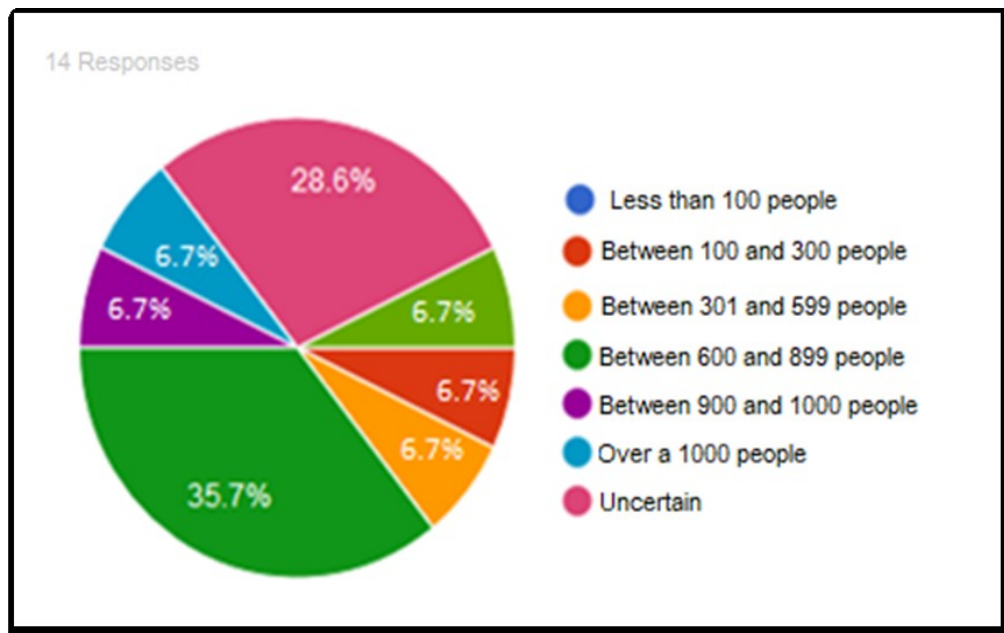


Graph 8-10: Respondent understanding of urban areas in South Africa

Source: (Own construction)

Of the 14 responses received from respondents, two (14.3%) felt that an urban area is any settlement with than 2 000 inhabitants, the majority of whom must be employed in the non-agricultural economic sector. The next two (14.3%) felt that a settlement should have at least 50 000 inhabitants who are employed in the non-agricultural sector for it to qualify for urban status. One (7.1%) of the respondents added that they felt that any settlement that is continuously built up and offers any form of employment should be an urban area. Regardless of these varied understandings amongst the respondents, the majority (57.1%) of the respondents in the interviews replied that an urban area in South Africa is a human settlement with a medium to high-density population with the majority of the citizens employed in non-agricultural sectors. This definition corresponds with that of the White Paper on Local Government (South Africa, 1998). This displays a near-shared understanding of what urban areas are in South Africa under professional planners, however it also displays the need to educate planners further on this classification.

To further gauge the understanding of the majority (57.1%) of the respondents (eight), the online structured questionnaire requested that they define medium-density in South Africa (see Graph 8-11).



Graph 8-11: Respondent definition of medium density

Source: (Own construction)

As highlighted in Chapter 5, currently there is no shared understanding of how to measure density in South Africa. In agreement with this observation, 28.6% (four) respondents responded that they were uncertain. However, 35.7% (five) of the respondents agreed that a settlement with a population of between 600 and 899 people per square kilometre could be classified as medium-density. The remainder of the respondents were conflicted on how this should be defined. These findings correspond to that of Chapter 5 and calls for policy to clearly and objectively define what an urban area is and what a rural area should be. As it currently stands, there is no shared understanding of how to classify either of them.

8.3.1.2 Implementation of the criterion: conurbation

In light of the inconsistent understanding of the criteria for what made a conurbation, this study proceeded to determine how these criteria have been implemented by the MDB. A 2008 MDB report titled *Investigation into Possible Demarcation of More Metropolitan Authorities and the Extension of the Municipal Areas of Existing Metropolitan Areas* investigated Buffalo City and Mangaung municipalities as possible category A metropolitan municipalities. It claimed that there was no information at that time and level on the number of households that were urban

and rural in the municipality (MDB, 2008:21) as a result of the government moving away from classifying settlements as urban or rural settlements (in 1995) and categorising them as municipalities instead, as required in the final 1996 Constitution (Laldaparsad, 2007). However, Table 3 of the same report does consider the number of rural and urban households in each of the metropolitan municipalities using 2001 census data. The dataset reveals that “98.99% of households in Johannesburg were urban based and only 1% was rural based”, and in Cape Town “99.29% [was] urban and only 0.71% rural”. At that stage Mangaung was “95.22% urban and only 4.78% rural”. Buffalo City, on the other hand, was “78.32% urban and 21.68% rural”. The report motivated that with at least 70% of the population being urbanised, the municipalities Mangaung and Buffalo City did indeed meet the criteria for being conurbations (MDB, 2008).

This report revealed that the MDB requires a region to have more urban areas and fewer rural areas to be considered a conurbation according to the requirements of the White Paper on Local Government (South Africa, 1998). This response corresponds with only 33.3% of the online respondents’ interpretation of the criteria, which stated that though a municipality should be more urban than rural, it should comprise both features. However, the MDB provided little motivation as to why it required 70% urbanisation and not 80% or 90% as qualifiers for a conurbation, nor did the report define how urbanisation was measured. Thus, despite the report (MDB, 2008) and the IDP documents of Mangaung (IDP, 2011) and Buffalo City (IDP, 2007) having acknowledged that both these municipalities were not as urbanised as the other demarcated metropolitans of 2000, they were still approved for metropolitan status (MDB, 2008).

There is no standard definition or measure for what constitutes urban and rural or any data to support this categorisation. This section concludes by stating that there is currently no consistent understanding of what a conurbation is in South Africa, nor is there any way in which it can be measured or implemented in the future since Statistics South Africa no longer collects data at the settlement level.

8.3.2 Areas of high population density

Population density is a basic indicator and is regarded as the most common measure for comparing and analysing urban form and access (Burton, 2002; Bradford, 2016). Theoretically and geographically speaking, population density is measured by dividing the total population of the municipality by its total land area.

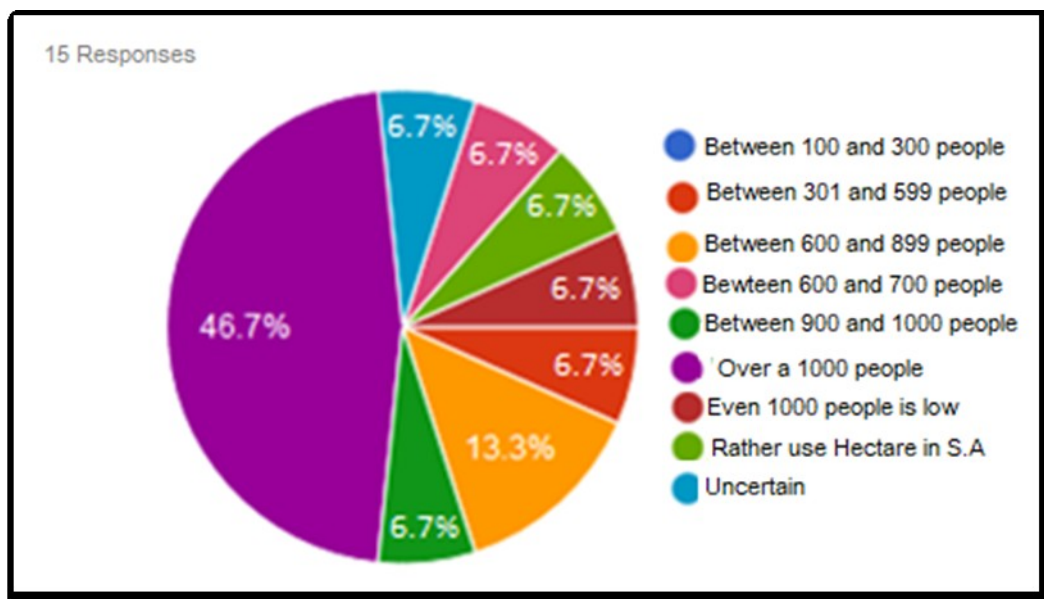
The answer to the above formula is used to measure the city’s level of efficiency, since higher population density usually implies more efficient land use, less travelling time within the

municipality, better access to job opportunities, increased social integration, and lower service and infrastructure costs. Conversely, low-density values imply a less efficient and more costly type of urban expansion (Harrison & Todes, 2013).

8.3.2.1 Interpretation of the criterion: high density

International comparisons of population densities reveal that density in metropolitan regions differs tremendously across the world. Tokyo (Japan) has 4 300 people per square kilometre, Jakarta (Indonesia) a density of 9 400 people per square kilometre, Mumbai (India) a density of 29 650 people per square kilometre, Cairo (Egypt) a density of 10 400 people per square kilometre, Sao Paulo (Brazil) a density of 9 000 people per square kilometre, and Lagos (Nigeria) a density 18 150 people per square kilometre (Cox, 2012).

In South Africa, the Municipal Structures Act (117 of 1998) requires a conurbation to have a high average density area. However, it does not define what high-density is or what it should be quantitatively speaking. In response to this shortcoming, 15 respondents from the online structured interview were asked to define what they thought high density would be in South Africa. The results revealed (see Graph 8-12):



Graph 8-12: Responses to what defines high-density in South Africa

Source: (Own construction)

46.7% (seven) of the respondents from the online structures survey responded that they felt that high density in South Africa should be measured at over 1 000 people per square kilometre. A further, 13.3% (two) of the respondents felt that high-density should constitute between 600 and

899 people per square kilometre. Interestingly, the majority of these respondents gave similar values to define medium-density (see conurbation discussion in 8.3.1.1). The rest of the respondents were conflicted about what considered high-density in South Africa. One (6.7%) of the respondents also replied that they felt that 1 000 people per square kilometre is too low and that high-density should constitute over 2 000 people per square kilometre.

The responses from the structured online interviews reveal that the idea of high-density numbers in South Africa is relatively lower than that of international standards and that there is no consistent understanding of how it should be currently measured.

8.3.2.2 Implementation of the criterion: high density

The contextual analysis of the MDB reports, conference proceedings, and reviews of the responses from the semi-structured interviews with three employees at the MDB revealed that the MDB does not explicitly have a standard definition for density or what high-density should be. Hence, to determine how this criterion was implemented, the study compared the population densities of the eight category A metropolitan municipalities in South African from 1999 to 2011 (see Table 8-1).

Comparing the 2007 data of the six already established metropolitans with the two then proposed metropolitans reveals that the City of Johannesburg had a density of 2 398 people per square kilometre, and the municipality with lowest density was Mangaung at 106 people per square kilometre. This gives a difference of 2 292 people per square kilometre, with Mangaung accounting for only 4.4% of Johannesburg's density. This brings into question the density criteria used by the MDB. A 2008 MDB report acknowledges that the populations of the Mangaung and Buffalo City municipalities are lower than that of their predecessors, yet it offers no motivations for classifying them as metropolitans based on density. Moreover, the densities of both Mangaung and Buffalo City have not increased significantly since 2000, yet a 2003 MDB report denied these municipalities category A status for not meeting the very same criteria. How is it that these municipalities were able to meet the criteria in 2011? (See Table 8.1)

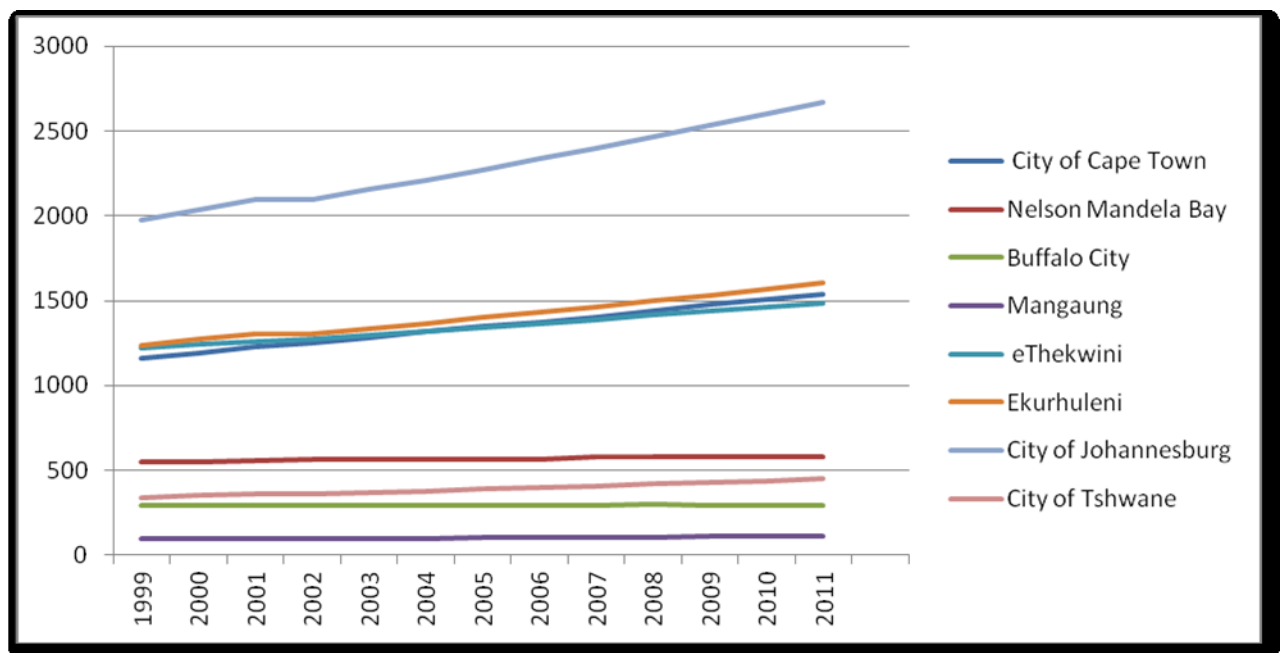
The graphic representation in Graph 8-13 below table 8.1 clearly shows four classes under the implementation of the high-density criterion for metropolitan municipalities. In the first class with the highest density is the City of Johannesburg, with a density of just below 2 000 people per square kilometre. In the second class with a density of between 1 000 and 1 500 are the City of Cape Town, Ekurhuleni, and eThekweni, all of whom were granted metropolitan status with densities of between 1 200 and 1 300. In the third class is Nelson Mandela Bay at just over 500

people per square kilometre. In the last and lowest class are Tshwane, Buffalo City, and Mangaung, all with densities below 500 people per square kilometre.

Table 8-1: Population density in the eight metropolitan municipalities of South Africa

	Geographic Area (2011)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
City of Cape Town	2454.7	1162	1194	1228	1248	1285	1316	1348	1370	1400	1442	1475	1507	1539
Nelson Mandela Bay	1958.9	548	552	557	565	566	566	566	564	578	580	580	580	580
Buffalo City	2527.8	290	291	293	296	297	297	296	295	296	298	297	296	296
Mangaung	6284	94	95	96	97	99	101	103	104	106	109	111	112	114
eThekweni	2291.9	1225	1243	1262	1277	1300	1321	1342	1361	1388	1417	1439	1460	1484
Ekurhuleni	1924.4	1236	1271	1301	1303	1333	1365	1399	1430	1463	1497	1533	1571	1609
City of Johannesburg	1645	1974	2034	2093	2098	2156	2213	2272	2335	2398	2467	2532	2599	2670
City of Tshwane	6237.5	342	351	360	361	370	379	389	398	408	419	430	441	452

Source: Global Insight data (2016)



Graph 8-13: Population density in the eight metropolitan municipalities of South Africa

Source: (Own construction)

Observations of these metropolitan municipalities display pockets of high densities and large areas of sparsely populated areas. In line with international comparisons, observational studies reveal that low-income areas have higher densities than their surrounding higher-income areas. In South Africa, the African townships situated at the peripheries of settlements are the most densely populated. In view of this many academics find density to be an inadequate measure for defining metropolitan areas, as it neglects to account for spatial variation of the region, thereby only being a watered-down estimation. The cases of Mangaung and Tshwane (Du Plessis & Bonsier, 2014; Harrison & Todes, 2013; Bradford, 2016) illustrate that the larger the administrative area is, the lower the average density will be (See table 8.1).

To summarise this section in view the above, without a clear and consistent definition for the criterion high-density, it has been and will continue to be applied on a preferential and subjective basis. This is evident from the various ways in which the 15 urban planning professional respondents of the structured online survey have defined high-density and from the manner in which this criterion has been implemented by the MDB. This criterion undeniably requires a more detailed specification of density to ensure consistency of its application.

8.3.3 Intensive movement of goods and services

This aspect of the criteria concerns accessibility to or the level of integration of the city with its periphery in terms of functional linkages (see section 2.4, 2.5 and 3.3.1.3).

Chapters 2 and 3 revealed that the aspects of accessibility and movement have both a spatial (distance, friction of distance, ease of infrastructure) and a non-spatial (cost) dimension (Harrison & Todes, 2013). The spatial dimension that influences the movement of goods and services is complex on its own and depends on the structure of the city, the use of technology in the vicinity, and the locations of services and infrastructure that connect the city with its surroundings (Harrison & Todes, 2013).

8.3.3.1 Interpretation of the criterion: intensive movement

With due consideration of the complexity involving the understanding of this criterion, the respondents (15) from the online structured surveys were asked about how they would apply and measure these criteria (see section 6.3.1.1.1.). Responses included the use of global positioning systems (GPS), origin and destination mapping, traffic counts, Google Maps for analysing average travelling time, public transport movement and established infrastructure statistics, Department of Water Affairs (DWA) census data, and SARS data. Other respondents claimed that this criterion is too complex and therefore challenging to measure since available data on the origin and destination of traffic is lacking. Furthermore, the level of intensity that would be acceptable in adhering to this criterion is also unknown.

This feedback from the open-ended questionnaire suggests that the criteria can be measured in many different ways depending on who is interpreting it.

8.3.3.2 Implementation of the intensive movement criteria

The 2008 MDB report that was used to motivate the categorisation of Mangaung and Buffalo City metropolitans offers little information on how this criterion was met by any of the municipalities. In addition, the MDB report (2008:37) states there is “no information on commuting patterns in the municipality” and leaves these criteria as such. No further investigation was conducted or motivation given with which to determine how these municipalities met the criteria. It does, however, look at the modes of transport (MDB, 2008:37) used in the municipality and stated that “advanced modes of transport are used in metropolitans” [sic]. Furthermore, the report used income data to motivate spending patterns and functional linkages within the municipality (MDB, 2008:38), stating that it found [“...no consistent pattern of income in metros being higher than category B municipalities, nor that of

there were more low-income earners in non-metropolitans [sic]" (MDB, 2008:38). That is, the MDB report found income levels to be the same in both metropolitans and non-metropolitans. Hence, this criterion could not be used to differentiate between the municipalities.

These motivations offered no correlation between spending patterns or income earned and the "intensive movement of goods and services". Cameron and Meligrana (2010) propose that Google Maps data be used to measure average travelling time between nodes (see Chapter 6 on MDB methods for categorising metropolitan municipalities). Google Earth uses cell phone signals from commuters to determine average travelling times on roads. This data has been available since 2007 but was never used by the MDB to motivate the "intensive movement of goods and services".

The average travelling time for three peak travel periods (7:30am, 12:30pm, and 17:00pm) were used for this thesis within the eight category A metropolitan municipalities to gauge the intensive movement of goods and services within each (see Table 8-2).

The movement of goods and services is admittedly challenging to measure since the traffic origins and destinations are unknown. However, this thesis has discovered that on average the smaller and more densely populated the metropolitan municipality is (i.e. Cape Town, Johannesburg, Tshwane, and Ekurhuleni), the longer the travelling time, with a distance of 15 km taking close to 110 minutes to travel (1 hour and 50 minutes) in Johannesburg. The accessibility problem seems to decline with the reduction in density and increase in area, provided that the necessary infrastructure is in place. In this regard the travelling time in Buffalo City and Mangaung is less, with 31 km only taking 40 minutes to travel, as verified in the observational study.

These criteria revealed that the 2008, MBD report's requirement of intensive movement of goods and services seeks to measure accessibility within the municipality. However, the 15 professionals in the interviews agreed that this is a rather challenging factor to measure – indeed, little motivation was given by the MDB (2008) report on how the municipalities met the criterion of intensive movement or distance travelled, or how they were or should be measured. Cameron and Meligrana (2010) offer a possible solution by suggesting that Google Earth Traffic be used to measure accessibility in the municipalities. Upon investigating the travelling times within each of the eight metropolitan municipalities, this research revealed that the smaller and more densely populated metropolitan municipalities do have more intense movement within the municipalities and hence longer travelling times than the larger, less dense municipalities who have fewer intensive movements (see Table 8-2).

Table 8-2: Distance between settlements and movement times within metropolitan municipalities

Municipality	Number of settlements	Main centre	Smaller centre	Distance between centres in km	Main centre to small centre in minutes			Small centre to main centre		
	Number	Names	Names		7:30	12:30	17:00	7:30	12:30	17:00
eThekweni	9	Durban	Pinetown	21.7	18–35	18–26	20–35	16–22	16–24	18–35
			Umkomaas	49.6	30–45	30–45	35–50	35–60	30–45	30–45
			Amanzimtoti	32.7	20–28	20–30	24–35	26–50	20–28	20–35
			Isipingo	26	20–26	20–28	22–35	22–40	20–28	22–30
			Tongaat	48.4	45–85	40–55	45–85	45–85	40–60	40–60
			Verulam	33.9	35–70	24–40	30–70	30–60	26–45	28–50
			Westville	14.4	14–22	14–20	14–26	10–22	10–18	12–20
			Hillcrest	34.9	30–45	30–45	35–55	30–70	30–45	30–45
Ekurhuleni	9	Alberton	Benoni	49.1	40–65	35–50	45–65	35–55	35–45	45–70
			Germiston	20.6	20–35	20–28	20–35	20–35	18–28	22–35
			Kempton Park	39.2	40–65	30–45	40–60	35–55	30–45	45–75
			Boksburg	25.4	24–40	24–35	26–45	24–45	24–35	30–45
			Brakpan	39.5	30–45	30–45	35–60	30–50	28–40	30–45
			Edenvale	28.8	35–60	26–40	30–50	28–50	26–40	40–70
			Nigel	54.3	40–55	40–50	40–50	40–50	40–50	40–50

Municipality	Number of settlements	Main centre	Smaller centre	Distance between centres in km	Main centre to small centre in minutes			Small centre to main centre		
	Number	Names	Names		7:30	12:30	17:00	7:30	12:30	17:00
			Springs	52	35–55	35–55	40–60	35–55	35–55	40–65
Nelson Mandela	6	Port Elizabeth	Uitenhage	36.4	28–35	30–35	30–40	30–40	30–35	35
			Despatch	25.4	26–35	30	30–40	30–40	30	30
			Blue Horizon	45.2	30–40	35	40	35–55	30–45	30–45
			Sea View	36.7	30	30	30	26–45	30	30
			Motherwell	24.5	24–30	24–28	26–40	24–35	24–30	24–30
Tshwane	6	Pretoria	Centurion	23.6	28–55	28–40	30–55	30–60	26–40	26–40
			Rosslyn	38.4	26–40	28–40	35–55	30–50	28–40	28–45
			Soshanguve	47.8	30–45	30–45	40–60	35–55	30–45	30–45
			Hammanskraal	46.6	30–45	35–45	40–55	35–55	35–45	35–45
			Winterveld	70.4	60–75	60–75	60–100	65–80	60–80	65–80
Cape Town	7	Cape Town	Belville	23.2	20–40	20–35	45–85	40–75	20–40	24–50
			Claremont	12.4	16–26	16–26	28–60	20–45	14–24	14–26
			Tygerberg	22.9	22–40	22–40	35–60	40–80	22–40	22–45
			Hout Bay	24.7	22–30	22–35	28–50	30–50	22–35	24–35

Municipality	Number of settlements	Main centre	Smaller centre	Distance between centres in km	Main centre to small centre in minutes			Small centre to main centre		
	Number	Names	Names		7:30	12:30	17:00	7:30	12:30	17:00
			Lansdowne	12.7	14–20	14–20	35–65	26–50	14–20	14–20
			Milnerton	14.6	16–30	14–24	24–45	26–55	14–26	16–30
Johannesburg	11	Johannesburg	Midrand	8	14–35	12–22	14–35	12–30	14–26	14–35
			Roodepoort	30.8	26–50	24–40	35–70	35–60	29	28–50
			Randburg	12.8	22–45	16–26	20–40	22–50	18–35	22–45
			Diepsloot	15.8	45–85	40–65	60–110	55–100	45–70	65–110
			Sandton	15.2	26–65	20–40	20–45	28–60	22–45	35–70
			Rosebank	10.2	20–50	16–35	16–40	18–35	18–35	22–50
			Killarney	6	14–35	14–24	16–30	14–30	14–24	18–35
			Melrose Arch	10	18–40	14–26	14–30	20–45	16–30	24–50
			Sunninghill	32.1	35–70	28–50	35–70	35–55	30–45	50–90
			Soweto	27.2	30–45	30–45	40–65	35–60	30–45	30–45
Buffalo City	4	East London	King Williams Town	58.7	55	55	55	50	50	55
			Bhisho	62	55	55	50	55	55	55
			Mdantsane	31.5	45	45	45	45	40	40
Msunduzi	8	Pietermaritz-	Ashburton	12.3	14–18	14–20	14–22	16–22	14–18	16–20

Municipality	Number of settlements	Main centre	Smaller centre	Distance between centres in km	Main centre to small centre in minutes			Small centre to main centre		
	Number	Names	Names		7:30	12:30	17:00	7:30	12:30	17:00
		burg								
			Claridge	10.2	18–24	20–24	18–22	18–24	20–24	22–30
			Elandskop	96.7	80–90	80–90	80–90	75–85	80–85	80–90
			Kanzakane	N/A						
			Sweet Waters	14.6	26	26	26–30	22–28	24	24
			Taylor's Halt	28.5	35–40	40	45	35–45	40	35–45
			Thornville	16.5	18–24	20–24	24–35	20–30	20–24	22
			Howick	28.4	26–35	30	28–30	26–35	30	26–30
Mangaung	4	Bloemfontein	Thaba 'Nchu	70.2	55–80	55–70	60–70	55–70	60–70	55–70
			Mangaung	23.1	22–28	22–26	22–26	20–24	22–24	22–24
			Botshabelo	67.1	55–80	55–70	60–75	55–70	60–75	55–70

Source: Google Maps (2017)

8.3.4 Extensive development

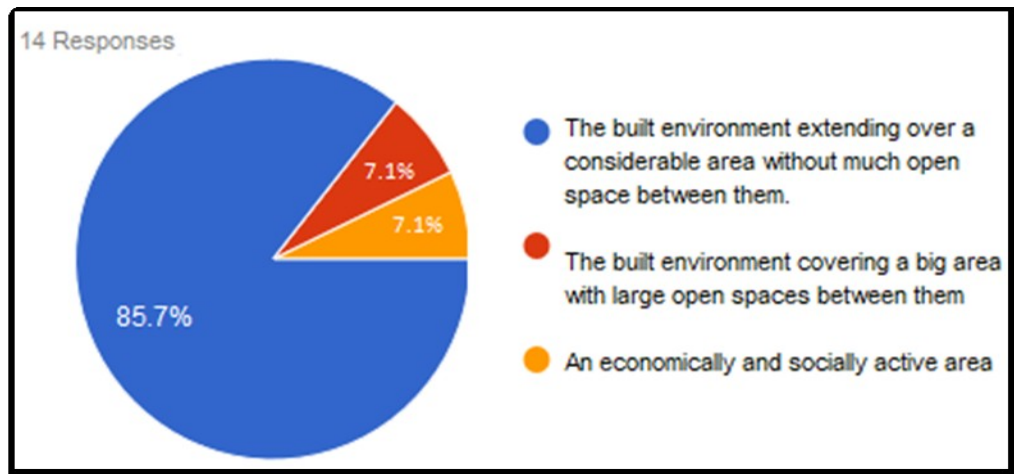
Extensive can be defined as “large-scale, expansive or wide” (Merriam Webster, 2017). In economic terms, extensive growth refers to growth that occurs when inputs are increased to receive increased outputs. Hence, economically speaking an increase in GDP or GVA can be said to result in an increase in economic land use (business, industrial, services, commercial, agriculture), which would in turn result in the definition of an area being “extensively developed” (Bjork, 1999).

In urban terms there is no clear definition for extensive other than when a region that spans a wide-spread piece of land. Development on the other hand is defined as a process of growth and advancement (Donaldson, 2001). Together, these terms define a large area that is undergoing a process of advancement. Hence, this criterion implies that the metropolitan municipality should already comprise of a large area that is progressively developed, which can be determined by measuring the economic activities that contribute to its economy.

8.3.4.1 Interpretation of the criterion: extensive development

According to Donaldson (2001), extensive development would appear on the surface were a city is within a city. In light of this one could say that extensive development in this sense can be interpreted as compact development. Compact development is aligned with the requirement of high densities and requires the intensive use of land to take advantage of existing infrastructure, thus making the delivery of basic services more efficient and effective. This concept of compact development was also encouraged in the Development Facilitation Act (67 of 1995) and the Integrated Urban Development Framework (IUDF) to discourage sprawl and create more sustainable cities (South Africa, 2016).

During the structured online interviews, 15 urban planning professionals were asked to define *extensive development*. They responded as follows:



Graph 8-14: Responses for the definition of extensive development

Source: (Own construction)

Twelve (85.7%) of the respondents felt that an extensively developed area is a built-up area with few open spaces (see Graph 8-14). However, in the case of South Africa, provision must be made for open spaces within the municipality since the apartheid planning left many buffer zones between racial settlements, which will take time to fill and integrate. Only one respondent (7.1%) took this into consideration and stated that in the South African context an extensively developed area would be a built environment which covered a large area but which had large open spaces within it. The last response added to this by stating that regardless of the spatial structure the area should be economically and socially active.

Hence, the discussion above reveals that there is uncertainty concerning the understanding of what an extensively developed area should be or is in South Africa. To gain a better insight, section 8.3.4.2 will investigate how the MDB implemented the criteria.

8.3.4.2 Implementation of the criterion: extensive development

In light of the above findings, one of the questions that arose during the semi-structured interview with the Chairperson of the MDB was: “how much open space should be allowed between settlements for it to be regarded as extensively developed?” The Chairperson stated that she “could not answer this, since each municipality is different”. When probed further about Buffalo City, which has approximately 50 kilometres of open land (Undeveloped land) between its settlements, she said that this “would clearly be unacceptable” (Thupana, 2017). Thus, one of the questions for further research would be to determine the maximum distance that should

be allowed for an area to be integrated, demarcated, and categorised as one municipality while still being regarded as extensively developed.

According to the Urban Development Framework (South Africa, 1997) and the IUDF (South Africa, 2016), compact cities – or in this case extensively developed municipalities – would need to prove that most of their land is in use and contributes to the region's Gross Domestic Product (GDP) or Gross Value Added (GVA) (Donaldson, 2001). The GVA offers insight on the extent to which each municipality contributes to the economic value of the national GVA on an annual basis (Cameron & Meligrana, 2010).

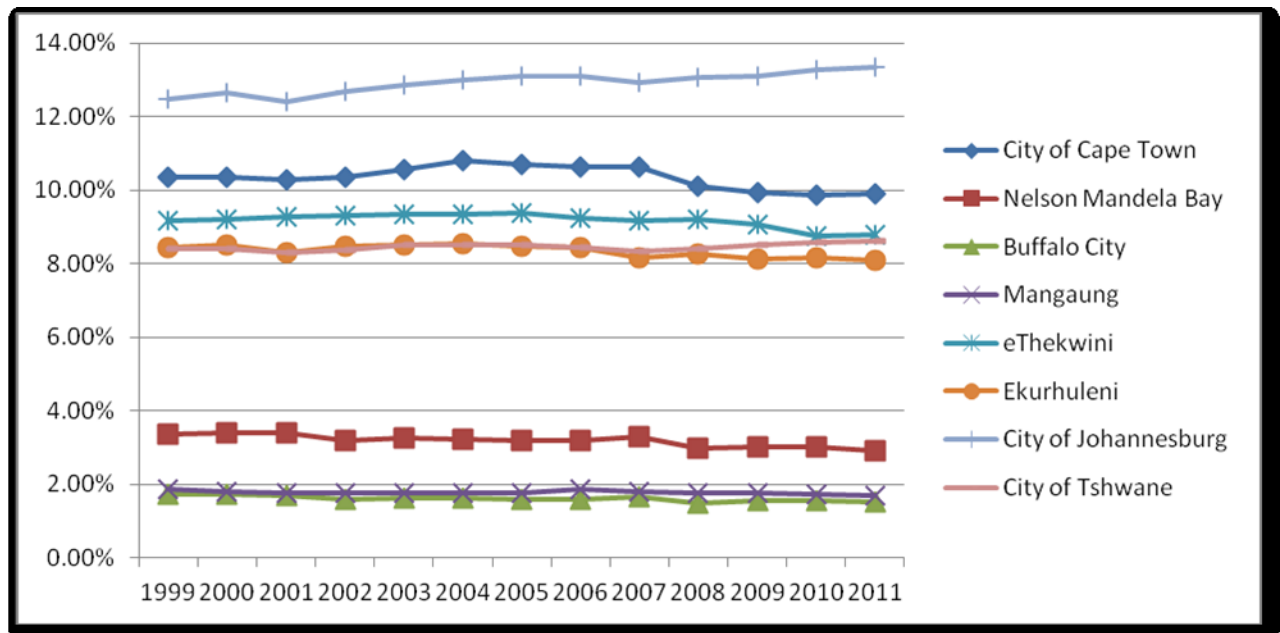
The MDB report (2008:28) expressed the municipal GVA as a percentage contribution of the national total. This comparison is an acknowledgement of the fact that the contribution of Mangaung (1.78%) and Buffalo City (1.65%) in 2008 were “marginally lower” than that of Nelson Mandela Bay at 2.94%. However, the report does not indicate how the MDB determined the region to have been extensively developed from the GVA indicator (i.e. what was the minimum contribution required?).

Table 8.3. below provides the GVA data for each of the eight metropolitan municipalities from 1999 when the first metropolitans were categorised until 2011 when the last two metropolitan municipalities were categorised to compare and determine the implementations of these criteria.

Graph 8-15 below shows that the City of Johannesburg is the largest contributor to the National GVA and thus the most extensively developed. Mangaung and Buffalo City have the lowest GVA and should thus be less extensively developed. The GVA national contribution by the Nelson Mandela Bay metropolitan in 2000 when it was demarcated as such was 3.3%, which is close to double the contributions of Mangaung (1.7%) and Buffalo City (1.5%) in 2011 when they were demarcated as metropolitans. Interestingly, the table reveals that the GVA contribution of Nelson Mandela Bay, Mangaung and Buffalo City declined, rather than increased, over the 11 years. As in the case of the previous categorisation in 2000, they were denied metropolitan status due to not being extensively developed, so the question stands: how have these municipalities gained metropolitan status if they did not meet the minimum GVA contribution requirement?

According to theory, this criterion was intended to measure a municipality's compaction. However, this concept was not clearly defined and when the MDB used the GVA data to determine the extensive development of the area, they provided little motivation in their report on how this data was applied in categorising metropolitan municipalities. That is to say, no minimum national GVA contribution is stipulated for a municipality to qualify as a metropolitan.

Clear classification in this regard is lacking and this has led to inconsistencies during the implementation of the extensive development criterion.



Graph 8-15: GVA contribution of each metropolitan municipality in South Africa between 1999 and 2011

Source: (Own construction)

8.3.5 Multiple business districts, industrial areas, and a centre of economic activity

This criterion can be understood in the context of commercial and industrial activities that were once restricted to the formal CBDs and industrial areas. To qualify for metropolitan status, the administrative area should have two or more business districts or industrial areas. This requirement involves the administrative area displaying a polycentric urban form (see section 2.4 and section 2.5).

Table 8-3: Total regional output and Gross Value Added by region as a percentage (%) to national contribution (GVA-R)

	1999 (%)	2000 (%)	2001 (%)	2002 (%)	2003 (%)	2004 (%)	2005 (%)	2006 (%)	2007 (%)	2008 (%)	2009 (%)	2010 (%)	2011 (%)
City of Cape Town	10.37	10.36	10.30	10.34	10.55	10.79	10.70	10.63	10.64	10.12	9.92	9.85	9.91
Nelson Mandela Bay	3.36	3.38	3.38	3.19	3.26	3.21	3.19	3.19	3.28	2.96	3.03	3.03	2.90
Buffalo City	1.73	1.72	1.69	1.58	1.63	1.61	1.60	1.60	1.65	1.49	1.55	1.56	1.50
Mangaung	1.85	1.79	1.77	1.75	1.75	1.75	1.75	1.85	1.78	1.74	1.74	1.73	1.70
eThekwini	9.17	9.20	9.29	9.31	9.36	9.35	9.37	9.24	9.18	9.22	9.06	8.74	8.80
Ekurhuleni	8.44	8.52	8.28	8.47	8.52	8.54	8.49	8.43	8.18	8.25	8.14	8.16	8.09
City of Johannesburg	12.49	12.64	12.40	12.70	12.86	13.00	13.11	13.09	12.92	13.07	13.09	13.27	13.33
City of Tshwane	8.41	8.41	8.30	8.36	8.50	8.51	8.51	8.45	8.33	8.39	8.50	8.58	8.61

Source: Quantec (2016)

8.3.5.1 Interpretation of the criterion: multiple business districts, industrial areas, and a centre of economic activity

In recent years initiatives to promote mixed land use has been driven by new urbanism and smart growth in which commercial activities are encouraged in residential areas to reduce travelling time and promote more sustainable communities (see 2.4 and 2.5). This results in a deviation from the central place urban model to the network-based polycentric model where small centres and rural or residential areas can have higher-order commercial/tertiary activities and industrial land usage. In this regard the location of these economic activities would not be found in districts or areas per se but would be scattered across the municipalities. This criterion is again subjective because it does not specify what businesses types these districts should have. Theoretically, a regional commercial centre is not the same as a neighbourhood centre. Would a city with three neighbourhood centres be more suited for meeting this criterion than a city with two regional shopping centres? This criterion is debated.

Due to the apparent straight-forward requirement of this criterion, respondents from the online structured interview were not asked how they would define or measure it and hence it is interpreted by the researcher.

8.3.5.2 Implementation of the criterion: multiple business districts, industrial areas, and a centre of economic activity

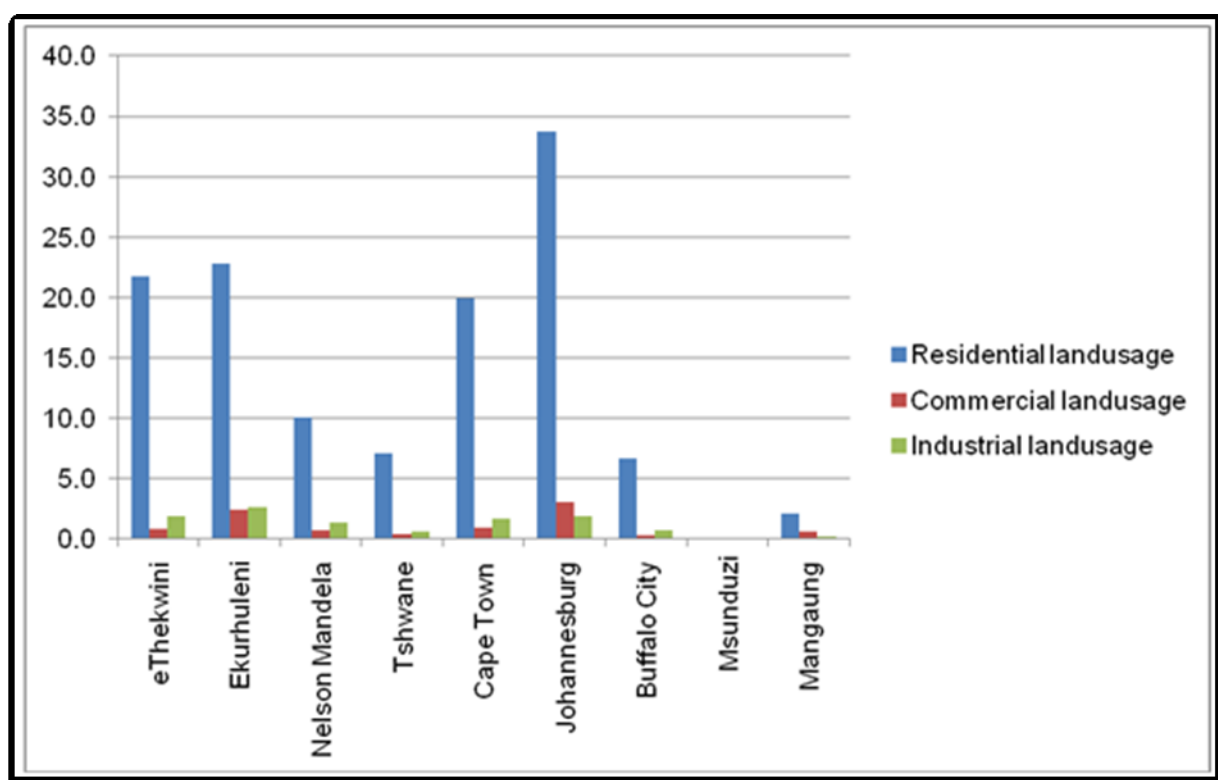
However, upon analysing the content of the MDB report (2008:24) the researcher found that the MDB used the number of settlements or nodes, such as larger towns and smaller towns, within the municipalities (as indicated in Table 8-4) and claims that these settlements give an indication of commercial and industrial activities in the region and serve as a “reflection of development [sic]”. The report further claims that “metropolitans have a higher number of nodes than non-metropolitans [sic]” (MDB, 2008:25). However, in the same paragraph the MDB clearly acknowledges that Mangaung, Buffalo City, and the Nelson Mandela Bay have fewer of these urban nodes than the five larger metropolitans.

To address the existing bias on what should be measured to meet this criterion, this thesis has analysed the land use allocated to business and industrial activities in the municipalities to determine its significance economic in the region.

Table 8-4: Residential, commercial, and industrial land use per municipality expressed as a percentage in 2011

Municipality	Residential land use	Commercial land use	Industrial land use	Other land use
eThekweni	21.7	0.8	1.9	75.6
Ekurhuleni	22.8	2.4	2.6	72.2
Nelson Mandela	10.1	0.7	1.3	87.9
Tshwane	7.1	0.4	0.6	91.9
Cape Town	19.9	0.9	1.7	77.5
Johannesburg	33.7	3.0	1.9	61.4
Buffalo City	6.7	0.3	0.7	92.3
Mangaung	2.1	0.6	0.2	97.1

Source: Global Insight (2016)



Graph 8-16: Land usage in the metropolitan municipalities

Source: Global Insight (2016)

From the above data (see Table 8.4 and Graph 8-16) it is evident that Johannesburg (33.7%) and Ekurhuleni (22.8%) have large residential areas and large industrial and commercial land uses. Buffalo City's residential use is only 6.7% while its commercial and industrial land use is 0.3%, which is just 0.1% lower than that of Tshwane. However, even though Mangaung metropolitan covers the largest land area, its residential land use is the lowest at 2.1% and its commercial land use is 0.2% than that of Tshwane. Yet, as in the case of population density, land use a municipality's land use is also a watered-down measure, as each municipality is differently sized, and the extent of development would differ according to the land that can be developed. Furthermore, using the land use as an indicator cannot gauge what type of businesses or industrial activities are housed in these municipalities.

It can be concluded that measuring this criterion is more complex than was initially anticipated. In this thesis alone, the criterion was interpreted and measured in three different ways. One way was to acknowledge that the spatial forms of municipalities have changed, and that business and industrial activities are no longer bound to being located in business districts and industrial areas. Secondly, the criterion seems vague in the sense that a municipality with more small business districts and fewer large business districts may or may not be more qualified in meeting this criterion. Thirdly, the study analysed land use patterns in the municipalities to determine how much of the land has been allocated for business activities. However, this was also found to be an inadequate measure as the larger municipalities cannot be compared with smaller municipalities because the land area dilutes the land use. Therefore, the study found that the criterion is vaguely defined for interpreting and implementing, resulting in its inconsistent application.

8.3.6 A centre of economic activity with a complex and diverse economy

According to the Oxford dictionary (2017) economic is a term that is "associated with industry or trade or services in a region or society", where a centre is defined as "a hub of activity". Thus, this theme can be interpreted as a hub which offers many different economic goods and services (see section 2.4), i.e. High-order centre.

8.3.6.1 Interpretation of the criterion: centre of economic activity with a complex and diverse economy

Christaller (1966) categorised human settlements as central places according to the economic activities that they housed. For example, if a settlement offered one or two economic services (i.e. a shopping centre) it was classified as a low-order economic service. However, if a settlement offered many specialised economic services it was known as a "high-order economic

centre” (Christaller, 1966). However, this theory did not specify how many economic activities were required or what sort of activities needed to be located in a centre for it to be classified as a “higher-order”. In recent years it has been found that some high-order economic services such as IT or online commercial activities have decentralised and located in smaller urban centres (see section 2.4 and 2.5).

Therefore, it is unknown how a municipality with a centre of economic activity can be said with certainty to be complex and diverse.

8.3.6.2 Implementation of the criterion: centre of economic activity with a complex and diverse economy

For this criterion the MDB report (2008:26-27) investigated the relative importance of sectors in respect of employment and motivated that “both metropolitans and category B municipalities (Mangaung and Buffalo City) had high rates of employment in manufacturing, wholesale and retail, finance and insurance, real estate, business services, community, and social and personal services; hence it stated that they have complex and diverse economies and should thus become metros” [sic].

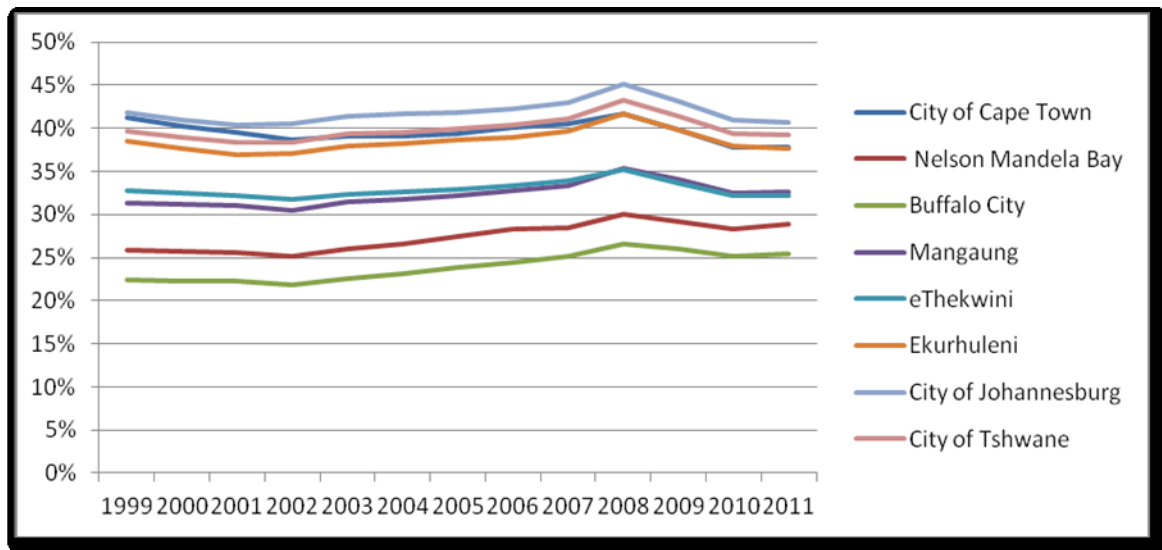
However, upon analysing the data of the Mangaung and Buffalo City metropolitans, the MDB concluded that even though both Mangaung and Buffalo City had a lower compliance to this criterion, they compared “relatively” (MDB, 2008) to the other metropolitan municipalities. The MDB (2008) report also used the GVA contribution to determine whether the municipality was an economic centre (see Table 8-3). As indicated in the analysis above, the GVA data also reiterates the finding of both Mangaung and Buffalo City having contributed marginally less than the other metropolitans and thus did not comply to this criterion either.

Analysing the content of the MDB (2008) report revealed that it failed to provide an inadequate explanation on what a centre of economic activity with a complex and diverse economy should be, since it was vague in its explanation on how the municipality met the criterion. For this thesis, this criterion was broken down into two segments: A) economic centre as a centre of employment; B) complex and diverse economy. Each will follow accordingly.

A: AN ECONOMIC CENTRE AS A CENTRE OF EMPLOYMENT

This criterion was evaluated by looking at what portion of the municipality’s population is employed and unemployed to determine the “economy of the centre”. The level of employment in the centre would be a good indication of the growth and development of the municipal

economy. A quantitative comparative analysis of the eight metropolitans revealed how this sub-criterion was implemented (see Graph 8-17 below).



Graph 8-17: Employment data for the eight metropolitans 1999–2011

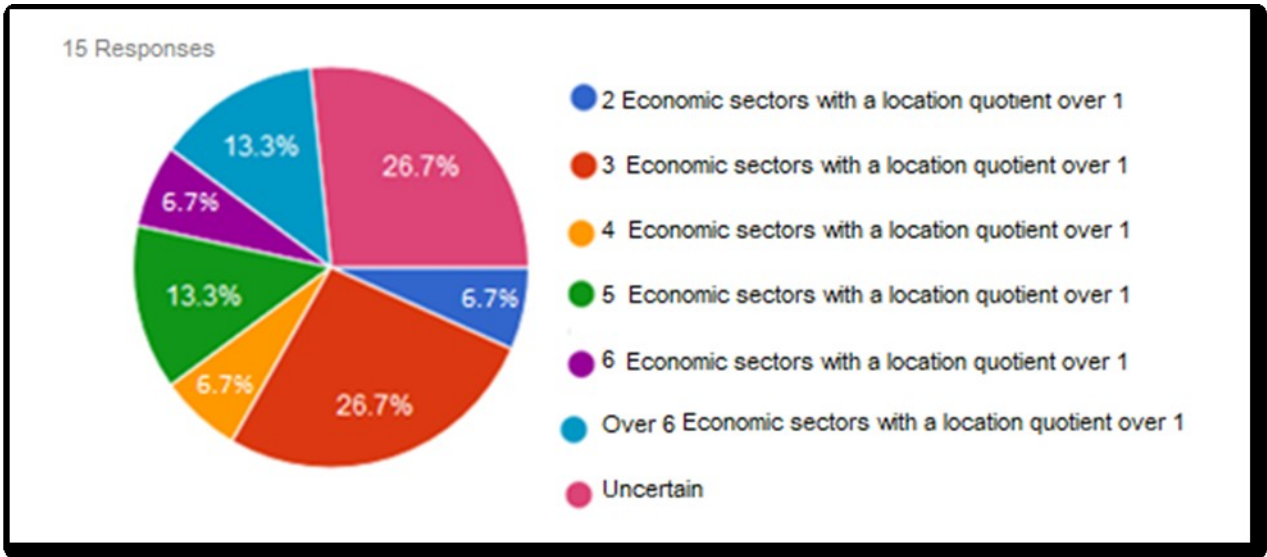
Source: Adapted from Quantec (2017)

Abovementioned data indicates three different classes of employment levels in the metropolitans. The first class comprises Ekurhuleni, Tshwane, Cape Town and Johannesburg who, with an employment rate of between 37% and 43% at the time, were categorised as metropolitans. The second class comprises eThekweni and Mangaung, who had employment rates of between 32% and 33% in 2000. Yet, only eThekweni was granted metropolitan status in that year, and Mangaung was only granted metropolitan status in 2011 despite having the same level of employment. The third class comprises Nelson Mandela Bay, who was granted metropolitan status in 2000 with an employment rate of 25%, which is below that of Mangaung. Buffalo City had the lowest employment rate in the time-series. With an employment rate of 23% it was denied metropolitan status, but in 2011, with an employment rate of 25%, it was granted metropolitan status. From this the threshold for employment appears to be 25%, which might question why the Mangaung municipality was denied metropolitan status in 2000 with an employment figure of 31% (see Graph 8-17).

The MDB (2008) report is silent on how many of the municipality's inhabitants should be employed for it to qualify as an economic centre. The second section of this criteria will explore the complexity and diversity of the economy by using location quotient.

B: A COMPLEX AND DIVERSE ECONOMY

The location quotient (LQ) is a valuable way of quantifying how concentrated a particular industry, occupation, or demographic group is in a region as a compared percentage of the nation. It can reveal what makes a particular region “unique” when compared with the national average. The quotient works in the following manner: if the industry has a quotient of one, it means that it is at the same level as the nation; if it has a quotient over one it means that it is more specialised than the nation; and if the quotient is less than one it is the least specialised in that sector (BEA, 2017). Most respondents from the semi-structured questionnaires felt that a municipality has a diverse economy (see Graph 8-18).



Graph 8-18: Responses to what makes an economy diverse

Source: (Own construction)

At least 26.7% (four) of the respondents were uncertain of how to measure economic diversity while another 26.7% (four) stated that for an economy to be diverse it should have at least three sectors over a quotient of one, while 13.3% (two) of the respondents felt that five sectors with a quotient of over one would be a better gauge. Another 13.3% (two) felt that six sectors with a quotient of over one would be more suited. These findings reveal that there is no consistent understanding of what makes an economy diverse.

A comparative analysis of the location quotient of eight metropolitan municipalities – when the first six metropolitans were categorised in 1999 and in 2011 when the last two metropolitan municipalities were categorised –revealed what is presented in Table 8-5 below.

In 1999, Buffalo City, eThekweni and City of Johannesburg had the most diverse economies with eight sectors over one. However, Buffalo City was excluded from being regarded as a metropolitan since the MDB found it not to have a diverse economy. Subsequently, Nelson Mandela Bay and Tshwane only had five sectors over a quotient of one and were both granted category A metropolitan status. Interestingly, the Mangaung location quotient has seven sectors over one and was also thought not to have a diverse economy. To contextualise this finding, this study analysed the same data for 2008 (see Table 8-6 below) when the initial enquiry into making Buffalo City and Mangaung Municipality metropolitans was initiated by the MDB.

In 2008, the diversity of the metropolitans declined and were found to have become more concentrated, with the City of Cape Town, Buffalo City, Mangaung, eThekweni, and Ekurhuleni all showing the same level of diversity but in different sectors. The City of Cape Town specialised in estate and business services, Buffalo City specialised in retail trade, catering and accommodation, Mangaung specialised in social and personal services, eThekweni specialised in transport, storage and communication, and Ekurhuleni specialised in manufacturing. Nelson Mandela Bay was found to have the least complex economy with only four sectors over a location quotient of one. The location quotients in 2011, when Mangaung and Buffalo City were granted metropolitan status, were analysed in this research to contextualise the diversity discussed in this paragraph (see Table 8-6).

Similar to the findings from 2008, in 2011 four metropolitan municipalities (City of Cape Town, Buffalo City, Mangaung, and Ekurhuleni) had the most (six) economic sectors with a location quotient of over one, and continued to specialise in the same economic sectors, while Nelson Mandela Bay continues to be the least diverse economy, but was joined by Tshwane who also only had four sectors with a quotient of over one (see Table 8-7).

The comparative analysis of data for these criteria revealed that Mangaung and Buffalo City have lower employment rates than the six other metropolitan municipalities. However, both Mangaung and Buffalo City have more complex and diverse economies than Nelson Mandela Bay and Tshwane who were demarcated as metropolitans in the 2000s. Interpreting and analysing centres of economic activity with complex and diverse economies has provided a new perspective on how the eight metropolitan municipalities adhered to these criteria. Furthermore, the study found that each metropolitan municipality specialised in different economic sectors. The findings are mixed and reveal that the Mangaung municipality is more adherent to these criteria than Nelson Mandela Bay. This calls for further research into how the municipalities adhered to this criterion, or the manner in which the MDB interpreted or implemented it, since the criteria as discussed in the MDB (2008) investigation report are found to be inadequate.

Table 8-5: Location quotient for metropolitans, 1999

Industry	Agriculture, forestry and fishing	Mining and quarrying	Secondary sector	Manufacturing	Electricity, gas and water	Construction	Wholesale and re-tail trade, catering and accommodation	Transport, storage and communication	Finance, insurance, real estate and business services	General government	Community, social and personal services	Sectors over 1
City of Cape Town	0.5	0.0	1.2	1.2	0.9	1.2	1.1	1.3	1.6	0.7	1.3	7
Nelson Mandela Bay	0.2	0.0	1.2	1.4	0.4	0.9	1.5	1.2	1.3	0.9	0.9	5
Buffalo City	0.2	0.0	1.0	1.0	0.9	1.0	1.5	1.0	1.2	1.2	1.2	8
Mangaung	0.5	0.0	0.8	0.6	1.3	1.2	1.4	1.4	1.2	1.1	1.5	7
eThekwini	0.4	0.0	1.4	1.5	1.0	1.4	1.1	1.6	1.1	0.9	1.0	8
Ekurhuleni	0.2	0.2	1.5	1.7	1.1	0.9	1.0	1.4	1.0	1.0	0.9	7
City of Johannesburg	0.2	0.1	1.1	1.2	1.0	0.9	1.0	1.0	1.6	1.1	1.0	8
City of Tshwane	0.3	0.0	0.9	1.0	0.8	0.8	0.8	1.0	1.2	1.9	1.1	5

Source: Quantec (2017)

Table 8-6: Location quotient for metropolitans, 2008

Industry	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas and water	Construction	Wholesale and retail trade, catering and accommodation	Transport, storage and communication	Finance, insurance, real estate and business services	General government	Community, social and personal services	Sectors over 1
City of Cape Town	0.5	0.0	1.1	0.8	1.1	1.1	1.2	1.5	0.6	1.2	6
Nelson Mandela Bay	0.2	0.0	1.5	0.3	0.8	1.3	1.1	1.1	0.9	0.9	4
Buffalo City	0.3	0.0	1.0	0.7	1.0	1.4	0.9	1.1	1.3	1.3	6
Mangaung	0.5	0.1	0.6	1.5	0.8	1.3	1.3	1.1	1.2	1.6	6
eThekweni	0.4	0.0	1.4	0.9	1.2	1.1	1.5	1.0	0.8	1.0	6
Ekurhuleni	0.2	0.2	1.5	0.9	1.0	1.0	1.3	1.0	1.0	0.8	6
City of Johannesburg	0.1	0.1	1.0	0.9	1.0	0.9	1.0	1.6	1.0	0.9	5
City of Tshwane	0.2	0.1	1.0	0.8	0.9	0.8	1.1	1.2	1.7	1.0	5

Source: Quantec (2017)

Table 8-7: Location quotient for metropolitans, 2011

Industry	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas and water	Construction	Wholesale and retail trade, catering and accommodation	Transport, storage and communication	Finance, insurance, real estate and business services	General government	Community, social and personal services	Sectors over 1
City of Cape Town	0.5	0.0	1.1	0.8	1.1	1.0	1.2	1.5	0.7	1.1	6
Nelson Mandela Bay	0.2	0.0	1.5	0.3	0.9	1.3	1.2	1.1	0.9	0.9	4
Buffalo City	0.4	0.0	1.0	0.7	1.1	1.4	0.9	1.0	1.2	1.3	6
Mangaung	0.4	0.1	0.6	1.5	0.8	1.2	1.3	1.1	1.2	1.6	6
eThekweni	0.4	0.0	1.4	0.9	1.2	1.1	1.5	1.0	0.8	0.9	5
Ekurhuleni	0.2	0.2	1.4	0.9	1.1	1.0	1.3	1.0	1.0	0.9	6
City of Johannesburg	0.1	0.1	1.0	0.9	1.0	0.9	1.0	1.5	1.0	0.9	5
City of Tshwane	0.2	0.1	1.0	0.8	0.9	0.8	1.1	1.1	1.7	0.9	4

Source: Quantec (2017)

8.3.7 A single area for which integrated development is desirable

Integrated development can be defined as the administration of the areas whereby the various related parts are combined, linked or included to work as one entity (South Africa, 1996; Development Facilitation Act 67 of 1995).

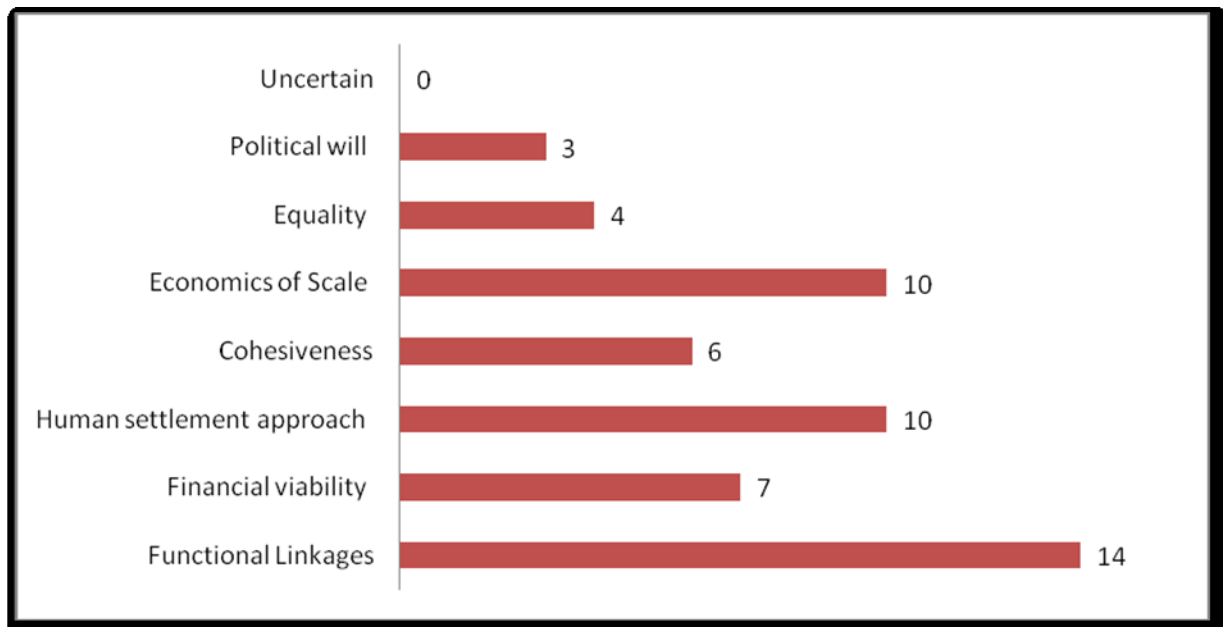
Section 5 of the Municipal Structures Act (117 of 1998) defines that an integrated development plan should assist the municipality in achieving the objectives of Sections 152 and 153 of the Constitution (South Africa, 1996) as well as the progressive rights set out in Sections 24 to 27 and 29 of the Constitution (South Africa, 1996). That is, the area should have a structure that can assist its administration and management in meeting the basic needs of all its citizens while promoting the social and economic development of the region (South Africa, 1996). These are also stated in the Development Facilitation Act (67 of 1995). However, integrated development is also a function of local and district municipalities and is not restricted to metropolitans only. Nonetheless, the advantage of metropolitan municipalities lies in their jurisdictions, while district municipalities (category C) have executive powers over the development of local municipalities (category B).

8.3.7.1 Interpretation of the criterion: a single area for which integrated development is desirable

Considering the effects of the previous regime on the spatial landscape, all municipalities display a fragmented but functionally integrated urban structure with the African, Indian, and coloured residential areas located on the outskirts of the city, with large buffer zones separating them and inhabitants travelling to the former white suburbs and CBDs to earn a living (see Chapter 4). Hence, the local governments proposed that municipalities with all their racially segregated suburbs be integrated as a whole to allow more efficient use of resources (South Africa, 1998).

The White Paper on Local Government (South Africa, 1998) suggests that municipalities be delimited on the basis of socio-geographic settlement patterns, while Section 24(c) and Section 25(a) of the Municipal Demarcation Act (27 of 1998) and the White Paper on Local Government (South Africa, 1998) require settlements with functional relationships to be demarcated under one municipality. However, in recent years the Minister of Human Settlements and the Chairperson of the MDB proposed that, based on the same acts, financially nonviable municipalities be integrated with financially viable municipalities to create one amalgamated municipality (MDB, 2014), leaving uncertainty about the bases on which municipal boundaries should be demarcated.

Subsequently, all 15 professional urban planning respondents were asked in the structured online interviews about how they thought municipalities in South Africa should be integrated to create a municipal entity. Their responses are recorded in Graph 8-19 below.



Graph 8-19: Approach to demarcation of municipalities

Source: (Own construction)

The structured questionnaire responses of professionals reveal that a shared understanding on how integrated development is determined is lacking. All respondents (100%) felt that settlements should be functionally linked for them to be integrated as an entity. However, these functional linkages must evolve with time and cannot be forced. The second largest response supported both the economies of scale (71.4%) and the human settlement approach (71.4%), while seven (50%) respondents felt that the financial viability of the settlements also played an important role in determining integration. Of the respondents, only six (42.9%) out of 14 (100%) felt that cohesiveness between entities is a strong measure for determining integration, while only three (21.4%) of the respondents felt that integration occurs based on political will. This shows that there is no real shared understanding under these professionals on how exactly integration within municipalities is determined.

8.3.7.2 Implementation of the criterion: a single area for which integrated development is desirable

During the semi-structured interview with the Chairperson of the demarcation board, she was asked about how the boundaries of all municipalities were demarcated in 2000. The response was that it was “not an objective or technical exercise – rather boundaries were drawn in a subjective manner” by using the “nearest neighbourhood principle” (Thupana, 2017). Areas that were related were given boundaries according to what was thought would be correct. “Remember the exercise was extremely rushed and had to be conducted in 12 months to make it in time for the first local government election. At that stage everyone was excited about the new government and very few people asked questions about how boundaries were demarcated and how municipalities were categorised. It was all about the local government revolution and creating a sense of nationhood” (Thupana, 2017). Furthermore, Section 6.4 of this thesis reported that the initial demarcation was conducted at a time when the MDB did not have much capacity and hence depended on various consultants to assist in the demarcation exercises. Cameron (2005) reported that many of these consultants did not understand the criteria by which boundaries needed to be demarcated (Sections 24 and 25 of the Municipal Demarcation Act 27 of 1998), resulting in boundaries being demarcated inconsistently.

Literature is not available to clarify how the boundaries of the six metropolitan municipalities were delimited in 2000 or how the previous six metropolitans met the requirements of this particular criterion (See Section 1.10). Chapter 3 and 6 of this thesis, under the sections discussing the delimitation of boundaries and the Municipal Demarcation Act (27 of 1998), respectively acknowledged that it was difficult to determine which areas should be included and which should be excluded. Thus, the MDB employees from the semi-structured interviews felt that this theme was used as a political tool to reach a particular outcome (i.e. gerrymandering).

One of the requirements during the process of restructuring, re-categorisation, or re-demarcation is that it should allow public participation in its process (see Chapter 6). Hence, this thesis sought to investigate the public opinion regarding the re-categorisation of the municipalities. The MDB employee respondents assert that public participation can easily be manipulated to support political agendas. The semi-structured questionnaires revealed that during the re-categorisation process, public participation meetings with municipal employees would only allow certain individuals who supported their agenda and ignored the rest. Furthermore, meetings become violent – citizens threatened the MDB employees and yelled insults and curses during public meetings that did not proceed according to how they wanted them to proceed. To gain a better understanding of the public meetings, the researcher

attended a Vaal River metropolitan public participation meeting in Vereeniging. This meeting was scheduled to inform the citizens of Sedibeng and Emfuleni municipalities of the possible merger with the Midvaal municipality and the re-categorisation of the entire region as a category A metropolitan municipality. The venue was booked, breakfast served, pamphlets were handed out, but no officials arrived at the meeting to inform the citizens concerned, while on paper the meeting had been recorded to have taken place.

Upon reviewing the public participation reports of the Mangaung Municipality, the MDB (2008) report revealed that there were no submissions that opposed Mangaung municipality becoming a metropolitan, stating that the public stood in favour of Mangaung becoming a metropolitan. The report supplied reasons in support of the re-categorisation that included: "Mangaung enjoys financial viability"; "Mangaung already provides a variety of district functions"; "Mangaung is fast growing and strategic to the development of the province". From the above it can be noted that none of the reasons provided indicate that the area was already integrated or at the time functioned as an entity.

According to the MDB (2008:28) report, the Mangaung municipality (category B) was earmarked to become a category A metropolitan municipality because there was concern that it would "lose power and functions to the category C district municipality within which it was located". The report motivated that the reclassification of the municipality into category A would remove ambiguity concerning the responsibilities of each municipality (motivated by the Regional Industrial Development Strategy (RIDS) policy and reduce administrative problems between the municipalities (see Section 4.5). It can be deduced from the above statement that the categorisation was driven by political will and not because the municipality functioned as an integrated entity or because it had strong functional linkages between its settlements or that it adhered to the Section 2 criteria.

Furthermore, the report is silent on how the integrated development of Buffalo City municipality had been determined. A study of the public participation responses in Buffalo City to either support the municipality becoming a metropolitan or not revealed that those in support of the categorisation felt that "there have been a number of developments in the municipality since 2000 with a total investment of two million rand" and those who opposed it stated that there was "no objective change in the socio-economic landscape of the municipality since 2000", "it did not have a complex or diverse economy", and "it is not ready to go on its own" [sic] (MDB, 2008:78). This meant that the public of Buffalo City did not feel that the municipality had the administrative capacity to be run on its own and that it required support from the district municipality. From the statements above it can further be noted that no mention was made of Buffalo City municipality

operating as an entity or having strong functional or socio-economic linkages between its settlements. To understand whether or not the region was actually integrated, randomly selected municipal employees from Town Planning Departments at both of these municipalities were telephonically interviewed. The interviews revealed the following: one employee from Buffalo City mentioned that they felt that “the Buffalo City metropolitan municipalities were given metropolitan status prematurely” and motivated this statement by saying that “the municipality does not have any feeling or culture of being a metropolitan” and “that it does not offer many higher order services, nor can it offer employment to many of the rural migrants”. They compared the municipality with eThekweni and found “the municipality is not even [come] close to it in terms of development”. They added that “King Williams Town and Bhisho still operate as separate settlements to East London [...] even though we are together”. This employee agreed that the area was “not integrated to be a unitary municipality”.

One employee from the Mangaung municipality responded by stating that they “did not feel like the municipality functions as an entity”, because the travelling distance between “Bloemfontein and Botshabelo is approximately 60 km and Thaba ‘Nchu is even further away and both have rural and traditional character”. “There is development along the corridors but it’s not extensive”, and “there is more open space that makes the areas feel rural before you can reach Botshabelo”. Further was said “in the morning there is not much traffic coming from Botshabelo to Bloemfontein [...] since the transport cost will be high”. From this employee’s perspective the municipality is “not integrated” and says that “maybe in another 40 to 50 years it could be since there is some development happening now”. It appears that the towns are “operating separately, urban as urban municipalities and the former homelands are still excluded and operate as separate rural municipalities”.

This criterion calls for a consistent definition with which municipalities will be consistent and coordinated in their application and which should be a basis on which metropolitan municipalities should be categorised. Currently, legislation states that municipalities should be formed where functional linkages or socio-geographic relationships between settlements exist. It, however, does not provide a maximum distance for viable integration – this enables political manipulation of boundaries to attain personal and political gain.

8.3.8 Strong interdependent social and economic linkages between its constituent units

This criterion states that the various settlements within the municipality should have an interdependent or polycentric structure to ensure socio-economic linkages (see section 2.4 and

2.5). This overlaps with the socio-geographic approach of integrating municipalities (see section 3.3 and 3.3.1.2).

8.3.8.1 Interpretation of the criterion: strong interdependent social and economic linkages between its constituent units

Municipal regions in South Africa were initially formed with the view to addressing the inequalities of the past by implementing a one-city-one-tax base. They considered tools that could be used to stimulate economic growth within the regions while decreasing inequality, eliminating poverty, and ending the dualistic nature of the South African economy between the urban and rural areas (South Africa, 2005; South Africa, 1998). This was to be achieved by coordinating public investment and infrastructure within the regions in such a way that it would promote the balanced economic and social development of inhabitants while enhancing economic competitiveness and wellbeing of the municipality as a whole (South Africa, 1998). However, this was a general requirement for all municipalities and not specifically for metropolitan municipalities, with the only difference being that the metropolitan areas had to function as a single unitary entity over a larger area while district and local municipalities shared responsibilities in the region.

The interpretation of this criteria was not tested since the pilot study found that respondents thought it to be “integrated development” as found in the previous point. This is aligned with the CoGTA proposed amendment, who also found that both these points required the same information (see Chapter 6).

8.3.8.2 Implementation of the criterion: strong interdependent social and economic linkages between its constituent units

The MDB mission clearly states that they seek to facilitate socio-economic transformation in municipalities that will deepen democracy. Theory revealed that previously, the urban areas were racially fragmented and commercial activities located in the white urban CBDs. This resulted in blacks, coloured and Indians travelling to the white areas for employment. On the macroscale was a similar occurrence where the former Bantustans did not house many economic activities but the white urban areas at their boundaries did. Thus, their inhabitants would travel to the white urban towns to earn a living in the day and return to the Bantustans or their respective racial suburbs at night (see section 4.2 and 4.3). In addition, the taxes that were imposed in these suburbs or Bantustans were much higher and the services rendered were of a much lower standard than the white-owned areas (Lemon, 1991).

What this theme of the Section 2 criteria seeks to achieve is to ensure that the areas where people reside and work are integrated as one administrative entity. Furthermore, the Constitution (South Africa, 1996) supported this integrated development by imposing a “one-city-one-tax basis” policy. This would then allow for economic integration while facilitating agglomeration advantages and more equitable distribution of resources. In addition, this form of integration would allow for socio-economic transformation through the creation of more compact and densely developed municipalities (extensive development with high-density). This was promoted in the Development Facilitation Act (1995), the Urban Development Framework (South Africa, 1997), Accelerated and Shared Growth Initiative for South Africa (South Africa, 2006), the Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA), the New Growth Path (South Africa, 2012), and the more recent Integrated Urban Development Framework (South Africa, 2016). However, according to the Municipal Demarcation Act (27 of 1998), this is a requirement across all municipalities and not just metropolitan municipalities.

The only difference in this regard would be, according to the Municipal Structures Act (117 of 1998), where socio-economic relationship in the metropolitan municipalities would be larger than that of the category B municipalities and more independent than category C municipalities.

During the observational study the researcher noted that the patterns of commute still display the one-way linkages of the apartheid era, where inhabitants from the remote racial suburbs still commute to the previous white areas to earn an income. An observational study of Mangaung metropolitan municipality revealed that the socio-economic linkages were stronger from Botshabelo and Thaba 'Nchu coming to Bloemfontein than the opposite direction. That is, most economic and social activities are still found in Bloemfontein and inhabitants still travel 60 to 80 kilometres one-way to access them. However, those living in Bloemfontein do not go to Botshabelo or Thaba 'Nchu, as one Mangaung municipality employee described, “there is nothing there that we need” or “its far to travel”.

In Buffalo City more traffic was coming to East London from Bisho and King Williams Town, since most economic opportunities were still located there. However, in the cases of the City of Johannesburg, Tshwane, Ekurhuleni, eThekweni, and the City of Cape Town, the freeways, highways, and main roads were bustling with activity at 8am with high traffic volumes between suburbs and settlements – this indicated high levels of socio-economic linkages between the various units in these municipalities. However, when travelling further away from the CBD or main economic centre, traffic volumes declined. In many cases these municipalities have more than one CBD, which has assisted in de-concentrating traffic volumes (see Table 8-2 for commuting data).

In 2016, CoGTA proposed that this criterion be combined with the previous criterion in Section 2(c) of the Municipal Structures Act (117 of 1998) for being “a single area for which integrated development is desirable” (see section 8.3.6) since both measured the same thing from different perspectives. In this point the emphasis is on socio-economic linkages which, in theory, is aligned with the human settlement approach and the functional approach, both of which are used to determine the integration of an administrative region as required by point (c) in the Act (see section 8.3.6 above).

The discussion above has revealed that interpretation of the Section 2 criteria is not as simple as had initially been anticipated and implementing the Municipal Structures Act (117 of 1998) is complex and challenging because its mere application is influenced by many independent factors of equal importance. These factors might have resulted in its inconsistent application. According to the words of the MDB personnel, the concept as rooted in the Municipal Structures Act (117 of 1998) is different on paper than in practice, since the legislation as it currently stands has many loopholes, the largest of which being its subjective nature.

8.4 Conclusion to Chapter 8

According to the MDB, municipalities were initially categorised by the MDB in 1999 according to the requirements as set out in the Constitution (South Africa, 1996) and the criteria set out in Section 2 of the Municipal Structures Act (117 of 1998) namely:

- a conurbation featuring:
 - areas of high population densities;
 - intense movement of people, goods, and services;
 - extensive development; and
 - multiple business districts and industrial areas.
- a centre of economic activity with a complex and diverse economy;
- a single area for which integrated development planning is desirable;
- a municipality with strong, interdependent social and economic linkages between its constituent units.

According to the Municipal Structures Act (117 of 1998), if a municipality adhered to its criteria it would be categorised as a category A metropolitan municipality, and municipalities that did not have these characteristics would be categorised as either category B or category C municipalities. Earlier chapters revealed that the criteria were subjective and there was no shared understanding of what they were or what they required.

Subsequently, this chapter has explored the interpretation and the implementation of the Municipal Structures Act (117 of 1998) by the MDB. Hence, the approach undertaken in this chapter was to firstly define or interpret the themes of Section 2 of the Municipal Structures Act (117 of 1998) individually by comparing the interpretations of the Section 2 themes from theoretical, professional planning, and MDB perspectives. Consequently, it has found that the themes in the Section 2 criteria are vague and can be interpreted in more than one way, which might have resulted in the inconsistencies in its implementation. As a result, this chapter has undertaken a comparative quantitative analysis and an observational study of the eight metropolitan municipalities to determine their implementation processes. The findings were triangulated and captured under the heading *Implementation*.

Considering that the Section 2 criteria are both subjective and vague, all respondents in the study were asked about their experiences, qualifications, and familiarity with the categorisation of municipalities. Only those who claimed to be familiar with the processes were included in the study (see 8.2 above). The researcher personally collected all the qualitative and quantitative data for the same year across all eight metropolitan municipalities to ensure consistency, reliability and transferability of findings. In addition, the researcher verified each step of this study with the MDB to ensure that the study reflected on and measured what was required and intended. This further ensured creditability, dependability and conformability of the research. Once all the primary and secondary data had been collected, it was triangulated to ensure further reliability and conformability of findings. Table 8-8 below summarises the key findings from this chapter.

Table 8-8: Summary of main findings from Chapter 8

Criteria	Definition	Interpretation	Implementation
Conurbation	Large area made up of various settlements that operates as an entity	Should comprise: 53% only urban areas; 33.3% most urban with rural settlements; 13.3% most rural settlements with a few urban areas.	70% urban and 30% rural.

Criteria	Definition	Interpretation	Implementation
High-density	Differs between countries	Should be: 46.7% responded over 1 000 people per square kilometre; 13.3% responded between 600 and 899 people per square kilometre; 6.7% were uncertain how to respond; 6.7% responded 301 to 599 people per square kilometre; 6.7% responded over 2 000 people per square kilometre; 6.7% responded 600 to 700 people	Not defined. Implementation varying between over 2 000 people to under 200 people per square kilometre.
Intensive movement of goods and services	Functional linkages	Commuting data from: GPS data; SARS data, Origin and destination mapping, Traffic counts, average travel time, Public transport movement and established infrastructure statistics DWA census data	Modes of transport, income earned and spending patterns.
Extensive development	Large areas that are economically advanced	Compact development.	% of GVA contribution but no threshold defined.
Multiple business districts and industrial areas	Polycentric structure	Complex because it does not say which sort of business or industrial areas are required.	Looks at the number of settlements in the municipality. Application ranges from between four and 11 settlements.
An economic centre with a complex and diverse economy	Higher-order settlement	Centre that offers employment and has many different economic sectors.	GVA contribution and employment data with no threshold defined.
Integrated development	Operating as an interdependent	Measured as: 14 favoured functional	Subjective application motivated by political will.

Criteria	Definition	Interpretation	Implementation
Socio-economic linkages	entity	linkages; 10 favoured human settlement approach; 10 favoured economies of scale; Six favoured cohesiveness; Seven favoured financial viability; Three favoured political will.	
	One-city-one-tax base	Area to include majority of individuals who live and work in the municipality.	Subjective implementation.

Source: (Own construction)

This chapter has revealed that respondents were uncertain about how to measure high-density as a concept. However, the majority (46.7%) felt that the municipality should have an average density of 1 000 people per square kilometre. Further investigation has revealed that the MDB was not consistent in their interpretation or implementation of the concept high-density. Of the eight municipalities only five municipalities had a population density of over a 1 000 people per square kilometre, and Nelson Mandela Bay was granted metropolitan status with a density of over 500 people per square kilometre and Tshwane was granted metropolitan status with a density of just over 300 people per square kilometre. In addition, Buffalo City and Mangaung were granted metropolitan status with a population density of below 300 people per square kilometre, fuelling the inconsistent practice. These findings reiterate the limited academic classification available where no objective criteria have been offered to define what high-density entails in South Africa (see Chapter 5).

According to a majority (85.7%) of the planning professionals from the questionnaires, extensive development would appear where there was not much open space between settlements. That is, a compact spatial form is required and most of the land should contribute to the economy. According to the MDB this can be measured by determining a municipality's percentage GVA contribution to the national economy. The comparative analysis has revealed that the metropolitan municipalities with the highest densities are also the most extensively developed and contribute most to the national economy. Of the eight metropolitans, only Nelson Mandela Bay (3.3%), Buffalo City (1.5%), and Mangaung (1.7%) contributed less than 8% to the National GVA, while The City of Johannesburg had the highest contribution to the national GVA at 13%.

These results from the quantitative analysis also reveal inconsistent application of the Section 2 criteria by the MDB, since no clear criteria have been set on minimum or maximum GVA contributions for a municipality to qualify as a metropolitan.

Furthermore, one of the requirements of the Section 2 criteria for metropolitan status was that a municipality should already be an economic centre of activity with a complex and diverse economy. This chapter interpreted “centre of economic activity” as a centre of employment – for a centre to be economically active it would need to employ labour. Comparing employment data of the eight metropolitan municipalities revealed that Mangaung, Buffalo City, and Nelson Mandela Bay had the lowest employment figures. Furthermore, none of the professionally employed urban planners from the semi-structured questionnaires could define what a complex or diverse economy is or should be. In the quantitative comparative analysis, six of South Africa’s eight metropolitan municipalities were found not to have complex and diverse economies upon having measured the location quotient. This demonstrates a lack of understanding on the part of the MDB on what these criteria require.

Lastly, the methods and processes for integrating municipalities have also been ambiguous. Respondents were asked on what bases they felt metropolitan municipalities should be integrated to form an entity. All (100%) the respondents replied that functionality should be the basis of integration. Respondents also seemed to prefer the human settlements (71.4%) or the socio-geographic approach and the economies of scale approach (71.4%). According to Cameron (2005), the economies of scale, socio-geographic, and functionality approaches based on commuting patterns were also preferred as measures of integration and supported and promoted by the White Paper on Local Government (South Africa, 1998). However, in the interview the Chairperson of the MDB acknowledged that areas were integrated on subjective bases in 1999 resulting because of the limited time the MDB was given to demarcate municipalities in time for the 2000 elections. Moreover, the 2008 MDB report revealed that both Mangaung and Buffalo City were integrated and amalgamated based on political will and not on the integrated structure. This highlights the subjectivity of the criteria and its susceptibility to manipulation and gerrymandering. This is a cause for concern that threatens the very democracy of the country.

Hence, the quantitative and qualitative analyses of the eight category A metropolitan municipalities against the themes of the Section 2 criteria of the Municipal Structures Act (117 of 1998) revealed that the interpretation and implementation of the Section 2 criteria between 1999 and 2011 was inconsistent. However, this finding in itself is also subjective since there is no

standard definition on how any of the themes should be interpreted or measured, this being the very issue that makes the implementation of the criteria challenging according to the MDB.

In conclusion and in agreement with this thesis, the empirical research in this study confirms and supports the grounds on which the SACN has questioned the categorisation processes of metropolitan municipalities in South Africa, since the Section 2 criteria had been implemented inconsistently over the 11-year period between 1999 and 2011. The empirical research further found that the inconsistent application was largely a result of a lack of shared understanding and interpretation of the themes in the Section 2 criteria by the MDB.

Chapter 9 will discuss the main findings of this thesis, the link between the literature review and empirical investigation, the implications for the planning profession, and conclusions about the formation of metropolitan regions in South Africa.

CHAPTER 9: CONCLUSIONS

9.1 Introduction

For decades the question underlying many spatial and economic policies globally has been whether to develop larger settlements at the cost of smaller settlements or to develop smaller settlements at the cost of larger settlements (Hall, 1966; Turok, 2013; World Bank, 2014; Harrison & Todes, 2015). Spawning from this question and keeping it alive has been the conflicting perspectives on what makes for good development (Marais *et al.*, 2016). The question further initiates enquiries into whether urban development is the result of independent forces (i.e. demographics) or of effective policy interventions (administrative restructuring) (see Section 1.2 and 2.3).

Regardless of the stance taken, urbanisation presents both opportunities and challenges for socio-economic development (UN, 2015; Henderson, 2005). If implemented prematurely, either development approach can steer resources away from one entity or the other and reduce national efficiency in the interim, for which the rewards are few (Hardoy & Satterwaite, 1986; John & Mahlangu, 2011; MCA Planners & Oranje, 2005; RSA, 2009). Strictly speaking, demarcation and categorisation should not be about choosing between either of the development approaches, but about developing the entire system of human settlements to benefit its people (World Bank, 2009a; Cadwallader, 1985) – it goes without saying that a well-functioning urban system could help a country develop jobs, stimulate economic growth, reduce poverty, and create more enjoyable, sustainable and liveable settlements (World Bank, 2009b; OECD, 2012).

South Africa's new administrative entities (category A, B and C municipalities) were intended to address the structural weaknesses of the racially segregated administrations from apartheid and reposition them so that all citizens would benefit through integrated socio-economic and spatial development (see section 1.2, 4.2 and 4.3) (Sutcliffe, 1999; Cameron, 1999; Cameron, 2005). To achieve this, the democratic governments shifted the country's spatial development approach from being unbalanced (apartheid planning) (Hirschmann, 1958; Singer, 1958) to being more balanced (see section 4.3) (Nurkse, 1953; Rosenstein-Rodan, 1957). Accordingly, all human settlements (urban and rural) in the country were administratively amalgamated to form either category A (metropolitan), category B (local), or category C (district) municipalities. However, just over two decades later the level of socio-economic and spatial integration still appears to be lacking, with social unrest, a lack of administrative capacity, and internal

corruption leaving many of the country's municipalities more vulnerable now than they had been 22 years ago (Cameron & Melingara, 2010).

In 2012 the SACN conducted a study that questioned the practices of formation and categorisation of the category A metropolitan municipalities. The SACN study found that the municipalities that the MDB had categorised as metropolitan municipalities differed vastly. It called for further research to be conducted on how these municipalities were categorised as category A metropolitan municipalities in South Africa. This thesis sought to answer this call by evaluating the implementation processes followed by the MDB to categorise the eight category A metropolitan municipalities in South Africa over the 11-year period from 1999 to 2011. This was achieved by analysing the different ways in which Section 2 of the Municipal Structures Act (117 of 1998) can be interpreted and how it had ultimately been interpreted and implemented by the MDB to categorise metropolitan municipalities in South Africa.

Research Question	Primary Data	Secondary Data
Difference between a metropolitan settlement and a metropolitan administrative region		Captured in chapter 2
The theoretically delineated of administrative entities		Captured in chapter 3
The restructuring, delineation and categorisation of administrative entities in South Africa.		Captured in chapter 4 and 6
Categorisation of human settlements in South Africa.		Captured in chapter 5
Reflection on the formation of metropolitan regions in South Africa by evaluation the Section 2 of the Municipal Structures Act (117 of 1998).	 Compare and contrast strategy to evaluate findings on each of the Section 2 criteria can be interpreted and how they were implement since 2000. Findings captured in Chapter 9	
Capture implication on how future administrative categorisation processes should be approached in South Africa.	 Findings from both primary and secondary data are triangulated and their implications are discussed in chapter 10 and 11.	

Figure 9-0: The linking of research question with data collection methods in this study

Source: (Own construction)

To this effect, this chapter addresses the first three objectives of the study (see section 1.4.2) by reviewing and interpreting the answers to the research questions posed in Chapter 1 of this thesis and presents conclusions regarding: 1) how a metropolitan administrative region differs from a metropolitan settlement region, 2) how administrative entities are theoretically delineated, 3) how human settlements are categorised in South Africa, and 4) how the administrative entities have been delineated and categorised in South Africa since 1994 with a view to understanding

the administrative restructuring process.⁵) This chapter will proceed to reflect on the formation of metropolitan regions in South Africa by explaining the findings on how Section 2 of the Municipal Structures Act (117 of 1998) can be interpreted compared to how it had been implemented by the MDB and discusses the findings from the comparative analysis. The last research question which seeks to provide the implication of findings on how future administrative categorisation processes should be approached in South Africa will be discussed in chapter 10, thus addressing the fourth and last objective of this study (See section 1.4.2 and 1.4.3) (See figure 9.0 above).

In this light this chapter contributes to the academic discourse on urban hierarchy and provides insight into the administrative restructuring and categorisation processes of metropolitan municipalities in South Africa. In so doing this research provides planning recommendations to guide future urban planning and municipal categorisation practices in South Africa.

9.2 Main research findings

This study confirms that the criteria for metropolitan municipality formation as prescribed by the National Government in the form of Section 2 of the Municipal Structures Act (117 of 1998) is vague and subjective in how it is interpreted (see entire Chapter 8). As a result, when the criteria is implemented by the MDB in categorising metropolitan municipalities, the outcomes are inconsistent, causing category A municipalities in South Africa to vary in structure, form, and composition (see Chapter 8). This informs the key evaluation question (KEQ) of this study, which sought to reflect on how metropolitan regions are formed in South Africa (see section 1.4.1). Chapter 10 will propose planning recommendations for future categorisation of metropolitan municipalities in South Africa.

Section 9.3 will discuss the interpretation of the research findings, in line with the research aims and objectives captured in Chapter 1.

9.3 Discussion and interpretation of research findings

This section presents the conclusions and interpretations drawn based on the literature review and empirical investigation conducted in this research.

9.3.1 Finding: No theoretical consensus on what distinguishes a metropolitan settlement from a metropolitan administrative municipal region

Humans have an ingrained need to classify and name objects to understand what they are. From a psychological perspective, people's life views differ according to their experiences,

culture, and history, and this influences how people interpret, classify, and categorise the world. Subsequently, the manner in which the different nationalities classify their human settlements also differs, making it near impossible to have a standardised understanding of the various settlements that make up the world as we know it (see section 2.2 and 2.3).

When investigating how settlements are classified globally, the understanding among different people and nations of what distinguishes urban and rural settlements appears to be inconsistent. What one country would categorise as a large town could be a metropolitan settlement in another country (see section 2.1 and 2.2). For example, in South Africa the settlement culture is very sparsely populated with an average population density of 41.4 people per square kilometre (Trading Economics, 2015). Consequently, a settlement with a population of a million and a population density of 2 670 people per square kilometre (City of Johannesburg) in South Africa would be considered high-density. However, a similar settlement in China would not be considered a metropolitan but rather a large town, since inhabitants of China are immune to settlements with an average density of 147 people per square kilometre, with Shanghai having a population density of 3 800 people per square kilometre (World Population Review, 2017). Clearly, global cross-comparisons are not always possible.

For this reason, this thesis has reflected on how the United Nations defines and categorises human settlements because this categorisation method is a globally accepted and because South Africa is a member of the United Nations (see section 2.3).

The UN (2018) defines and categorises human settlements in one of two ways: a) demographically, or b) administratively. From a demographical perspective a settlement starts by being known as a village, and as this settlement grows demographically (population growth or migration) while economically it is categorised firstly as a town and then as a city (see section 2.3 and Figure 2-1). Cities are known to have large populations, high densities, and diverse economies that are not agriculturally based, thus giving this settlement an urban character.

According to the UN (2018) classification, this is the largest that a settlement would grow demographically. Any settlement larger than this would be created either through the convergence of two or more settlements or the administrative amalgamation of various settlements of different sizes.

The alternative form of human settlement categorisation according to the UN (UN, 2018; see also section 2.3 and Figure 2-1) allows for administrative amalgamation. According to this approach, settlements (existing villages, existing towns, and existing cities) are either agglomerated, clustered, annexed or conglomerated to create larger settlements which would

allow for easier and more efficient administrative management of the region. In this form of categorisation, the UN makes allowance for an existing village to be incorporated within an existing town and be reclassified as a *city proper (category B municipality)*. This city proper can then be clustered with an existing city to create what can be referred to as an *urban agglomeration (category C municipality)*.

There is, however, no consistent theoretical understanding of what an agglomeration should comprise. From an ecological perspective it could be understood as a symbiotic form of growth because one city grows into another city to form an agglomeration. From a functional perspective it can be interpreted as two or more settlements that are socially, economically, or culturally interrelated to form an entity. From a statistical perspective a region with a certain population density or economic contribution could also be referred to as an agglomeration. Agglomeration has also been defined either by the minimum population that would be required to make the settlement functional or by the maximum population to make it efficient. On the whole, in 2015 uncertainty remained as to what an urban agglomeration should comprise (see section 2.3). In light of these observations, *agglomeration* is used in its literal sense and defined as a “city within a city”. Only once the operational constructs of *urban agglomeration* have been further developed can it be referred to as a metropolitan administrative structure according to the United Nations.

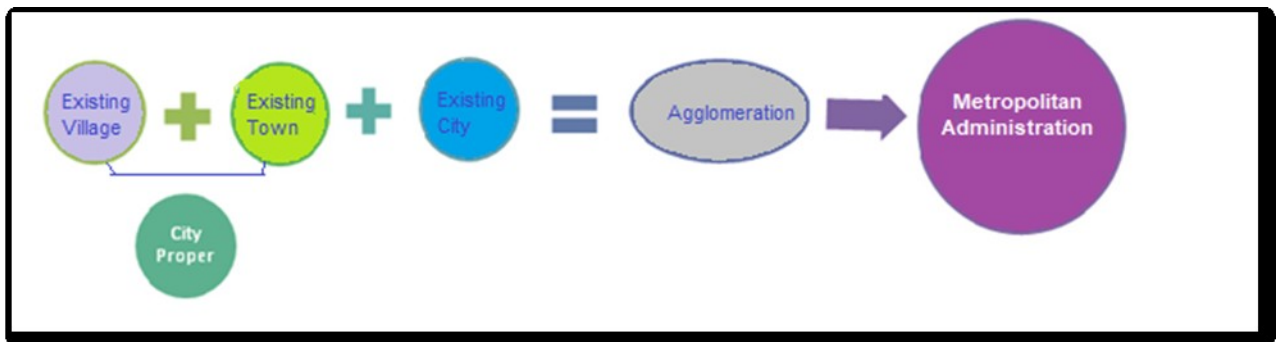


Figure 9-1: Creating the administrative agglomeration

Source: (Own construction)

This study has found that according to the UN, creating a metropolitan settlement demographically is not possible, since a metropolitan settlement actually comprises two or more cities that converge to form a larger settlement. In administrative terms it can be implied that a city and city proper are clustered or amalgamated to form an administrative agglomeration, which is currently undefined but understood to be a large region with extensive development. This “region” is then exposed to further growth after which it is then administratively classified as metropolitan administrative areas (see Figure 9-1 above). A simplified explanation provided by the UN (2012) is that a metropolitan area comprises both high-density and lower-density areas which are connected through functional linkages to form an administrative entity (UNICEF, 2012). According to UNICEF (2012) the metropolitan administrative entity should have at least half a million (500 000) people residing within it (UNICEF, 2012). However, it does not specify the population density of the region.

Furthermore, the wisdom of forming administrative settlements as proposed by the UN is that rural areas are not located too far from urban areas and in many instances individuals who live in rural areas work or shop in urban areas. Hence there are strong socio economic linkages between them. In some instances the spending power is spent in the urban areas and this takes away the investment potential of rural areas - resulting in rural areas being more under developed than urban areas. By separating these two settlements administratively, it would lead to urban areas being more financially viable than rural municipalities. Hence, the amalgamation of rural areas with urban areas would allow for more balanced development and the delinking of integrated rural areas would have a negative impact on the sustainability of rural areas. This is where national policies would have to communicate which approach would be most suited for its overall development.

For the purpose of this study a metropolitan settlement is defined as a single, large region made up of various settlement sizes which have merged or “fused” to form one settlement. This is similar to the conglomerate with a monocentric centre as proposed by Christaller in 1966. An administratively formed metropolitan would be an artificially created region comprising of many settlements of various sizes and which are separate but interdependent, and clustered together to allow for efficient management of that region. This is similar to the polycentric spatial structure of the network model (see section 2.5 and 2.6). However, the delineation of the administrative agglomeration to the administrative metropolitan region is particularly difficult to prove since there would have to be some sort of evidence to be presented as prove that these settlements are more related to each other than they are to other settlements outside the administratively categorised region (see section 3.3). In conclusion, this study has found that there is no theoretical consensus on the difference between metropolitan settlement region and metropolitan administrative region and this research aimed to create such definitions (as part of new knowledge contribution). These recommendations will be further discussed in Chapter 10.

9.3.2 Finding: The criteria for the delimitation of administrative regions are subjective and can be easily manipulated

Initially, local government administrative entities globally were small (villages and towns) and easily manageable (see section 2.3 and 3.2). In these situations, local administrative governments would often use contractors to provide the services that they could not. However, as these settlements continued to grow into cities, managing these individual contractors became challenging and costly. In light of the economic recessions and saving costs in administration, many central governments globally attempted to restructure their administrations to become more cost efficient (see section 3.2).

The South African government has opted for one of two restructuring options: 1) municipal mergers by agglomerating small municipalities to create larger municipalities (in the South African context – category A metropolitan municipalities); 2) municipal cooperation where municipalities are kept small and share resources (in the South African context – category B and category C municipalities) (see Section 4.4). This section seeks to provide a theoretical understanding of how the boundaries around these administrative entities have been demarcated and delineated (see section 3.2 and 3.3 for more detail).

The more modernist, one-size-fits-all approach to delimiting boundaries has failed since no regard was given to the uniqueness of the contexts or the cultures of the areas during its

implementation (see section 3.2). This is probably most clearly noted in the approaches of Burgess (1925), Hoyt (1939), Berry and Ullman (1945), and the South African apartheid model to planning urban settlements (see section 4.2). Towards the late 1980s the approach to administration delimitation started to change once again. This time post-modernist governments would give citizens a say in the demarcation practices that would affect them through public participation. However, this approach also seemed to be unsuccessful because too many opinions caused confusion about what was required to efficiently demarcate boundaries (see section 3.2). In recent years the National Government found a middle ground and structured their administrations accordingly in the form of planning frameworks or policies whereby the government dictated what would be required while allowing public participation, where citizens could be consulted in the decision making processes on how best to implement demarcation practices (see section 3.2 for more details).

Boundary lines are used to separate areas or to claim power over an area. This study has found that there are not many theories that could be referred to on how areas are delineated (see section 3.3). The theory and literature included in this thesis reveals that boundary lines can be drawn either from an economic, political, social, or cultural perspective, depending on who was demarcating it at the time and for what purpose (see Table 9-1).

Table 9-1: Theory on boundary demarcation and their associated shortcomings

Criteria	Motivation	Challenge
Economics of scale	Increase profits through clustering.	No proof to date that larger administrative entities are more profitable than smaller ones.
Socio-geographic approach	Cluster settlements that have socio-geographic or cultural linkages.	Unknown to date where or how boundary lines are to be demarcated.
Functional approach	Minimal threshold required to make the provision of a service profitable.	Unknown what maximum distance between settlements is required to draw a boundary. Internet can offer services without being depended on immediate population.
Financial viability	To decrease administrative cost and assist non-viable municipalities to become viable.	This approach has not proven to be successful since income/services would just need to be extended over a larger area, making it more expensive if all settlements are not already financially

		viable.
Cohesiveness	Combine settlements to form one identity or to separate areas based on unique features.	Subjective and can be easily manipulated.
Gerrymandering	Political motivation of boundaries to gain maximum votes.	Subjective and political criteria that is easily manipulated.

Source: (Own construction)

From an economic perspective, the economies of scale or agglomeration economics theory is often quoted as a reason for providing larger municipalities (Glaeser, 2011; Parr, 2012). The theory in this regard implies that the more settlements within a municipality, the higher the demand would be for the services provided and the more profits could be acquired. However, no evidence is available on this to date (see section 3.3.1.1).

Since 1993 South Africa has used an approach known as the socio-geographic approach or the human settlement approach. This is a geography-based approach that seeks to cluster settlements with socio-economic or cultural linkages. However, this was found challenging to implement, because there was no real certainty on where to draw the boundary lines. The outcome was that the municipalities became too large to administer efficiently, overburdening the administration (see section 3.3.1.2).

The third motivation for combining municipalities is that of functional relationship. This is similar to the concept promoted by Christaller in 1966 where a municipality would require a certain population threshold for it to provide efficient and cost-effective services. The more complex or high-order the services on offer within the municipality, the larger the population would have to be. This concept has been challenging to implement since it is unknown what the maximum distance should be to delineate a boundary to allow for the minimum population. Furthermore, with technology a higher order service can easily be located in a rural town and transportation or the internet can be used to deliver the service in many instances (see section 2.4 and 3.3.1.3). Therefore, the provision of goods and services is no longer restricted to the immediate population. This challenges how and where boundary lines should be delimited functionally.

Cohesiveness is a subjective criterion used by government to motivate boundary changes. The apartheid government used it based it on race and the democratic government uses the same motivation to create a sense of “nationhood”. However, this is subjective and can be easily manipulated to attain political objectives. Furthermore, it does not provide any guidance on how boundaries should be demarcated (see section 3.3.2.1).

From a financial perspective a financial viability argument is used to motivate the clustering of smaller, less viable municipalities with more financially viable municipalities to create one large “financially viable municipality”. However, this approach also has the disadvantage of putting both settlements at risk of financial non-viability (see section 3.3.1.5).

Lastly, from a political science perspective ruling political parties have also been known to use boundaries to gain power over a region through majority votes. This is referred to as gerrymandering (see section 3.3.2.2). This also is a product of subjective demarcation criteria which can be easily manipulated to suit the political stance of the ruling party.

This section has revealed that the demarcation of boundaries is not an exact science but rather an art that has to be adapted to each location and political perspective. A lack of understanding presides over what exactly an agglomeration is and whether a larger or smaller administration would be most beneficial. This was practically demonstrated by observing four countries, with each country having adapted a different demarcation approach, and the extent of their respective successes are still unclear (see section 3.4 and 3.5). Hence, no clear formulae can be implemented to demarcate and delimit regions globally since they are influenced by various independent factors.

9.3.3 Finding: The South African administrative restructuring approach is complicated

Where previously the apartheid modernist state of South Africa had a dictative approach to development, existing policies of the democratic South African Government take on a more neo-liberalist approach of being more communicative and interactive with National Government in providing frameworks and perspectives on how things should play out in a non-dictative manner (Tshwala, 2014). This current phase of national planning is driven by a growing awareness of resource scarcity and the need to find pragmatic ways of dealing with differences within and between regions while promoting equality, social-spatial justice, and a more balanced territorial development landscape within the country (see section 4.2, 4.3 and 4.4).

Previously, the local administration of the apartheid government had been structured according to racial profiles, with each racial group having its own local administration and tax base. The tax bases within these settlements were inequitable in that the white minority benefited from it most by paying the least taxes and living in the most developed portions of the municipality (see section 4.2). With the rise democracy in 1993, one of the primary objectives of the Local Government Transition Act (209 of 1993) was to establish a wall-to-wall local administration while the Interim Constitution (South Africa, 1993) called for new forms of racially integrated municipalities, which were to be categorised into one of three classes: metropolitan, urban, and

rural (see section 1.2 and 4.3). This was the first time in South African history that provision had been made for creating integrated metropolitan administrative entities (see section 4.3).

The demarcation of these municipalities was left to nine separate provincial demarcation boards who demarcated municipalities based on the nearest neighbourhood principal. The outcome of this exercise was the amalgamation of the 1 262 racially segregated municipalities into 843 racially integrated municipalities (see section 1.2 and 4.3). However, the outcome of this exercise varied in effect because the provincial demarcation boards were uncertain about how to differentiate between urban municipalities and metropolitan municipalities in addition to distinguishing when a small town should be a rural area or an urban area (see section 4.3 and Chapter 5). Furthermore, though the demarcation of municipalities during this period resulted in black, coloured and Indian suburbs being grouped with white urban areas, the rural areas on the periphery were excluded even though its inhabitants travelled to the urban areas (see section 4.3). What is more, cases of gerrymandering by political parties were found to have taken place to gain control of the respective municipalities (Cameron, 1999).

As a result of these challenges, the 1996 final Constitution made provision for only three types of municipalities: category A (metropolitan municipalities); category B (local municipalities); and category C (district municipalities). Furthermore, it called for the appointment of an independent Municipal Demarcation Board (MDB) who would assist in the demarcation of municipalities. In addition, various legislations were passed, including the White Paper on Local Government (South Africa, 1998), the Municipal Structures Act (117 of 1998), Municipal systems Act (32 of 2000), and Municipal Demarcation Act (27 of 1998) to guide the categorisation practices of municipalities and the respective roles and responsibilities (see section 4.4 and 4.5).

After the instatement of the MDB in 1999, few staff members had been appointed which resulted in the board having to hire various consultants across the country to assist with the demarcation process (see section 6.4). The very narrow period (less than 12 months) in which these demarcation practices had been expected to have been realised did not leave much time for ensuring that all the consultants who had been engaged in the process had a shared understanding of the requirements as set out in Sections 24 and 25 of the Municipal Demarcation Act (117 of 1998). This requirement from the Act was politically motivated and based on transformation-thus expected to be a “one-size fits all” approach to which all municipal boundaries needed to adhere before they could be categorised as municipalities (see section 6.2 and 10.3).

Cameron (2005) reports that many of the consultants did not really understand what was required for efficient demarcation. Furthermore, the citizens had to be consulted and boundaries demarcated according to their recommendations, however these recommendations were discovered to not always have been in line with the guidelines set out in Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998). This resulted in the formation of many cross-boundary municipalities and financially nonviable category B municipalities (see section 4.4, 4.5 and 6.4). Still, the process resulted in the reduction from the 843 local municipalities in the interim period of 1996 to 284 local municipalities in 2000 (see section 4.5). Of these municipalities, six were category A metropolitan municipalities, 47 district municipalities, and 231 local municipalities. However, the inconsistencies from the boundary demarcation implementation and the ambiguity of the roles and responsibilities of category B and category C municipalities have resulted in ongoing boundary adjustments and municipal categorisation (see section 4.5).

In 2006 the Regional Integrated Development Strategy (RIDS) revealed that much uncertainty had presided the roles and responsibilities between category B and Category C municipalities. Furthermore, the MDB found that administrating category C municipalities with only two category B municipalities within them was not economically viable, and hence increased the minimum number of municipalities permitted to be in a district municipality from two category B local government municipalities to more than three local government municipalities (SALGA, 2016; MDB, 2007). One of the results, of these ongoing adjustments was the addition of two more metropolitan municipalities namely Mangaung and Buffalo City Metropolitan Municipality in 2011. This left the country with 278 municipalities – eight metropolitan municipalities (category A), 226 local municipalities (category B), and 44 district municipalities (category C) (see section 4.5).

However, the SACN questioned the manner in which these category A municipalities had been categorised in 2012 considering the vast differences between the eight metropolitan municipalities. To answer this question, this thesis has evaluated Section 2 of the Municipal Structures Act (117 of 1998) to determine the criteria that was required for a municipality to be called a category A metropolitan municipality (see section 6.3.1).

The thesis has found that to be declared a category A municipality, the Municipal Structures Act (117 of 1998) requires a municipality to be:

- (a) a conurbation featuring:
 - (i) areas of high population densities;

- (ii) intense movement of people, goods, and services;
 - (iii) extensive development; and
 - (iv) multiple business districts and industrial areas.
- (b) a centre of economic activity with a complex and diverse economy;
 - (c) a single area for which integrated development planning is desirable;
 - (d) a municipality with strong, interdependent social and economic linkages between its constituent units.

However, the abovementioned criteria for category A municipalities in the Municipal Structures Act (117 of 1998) are subjective, vague and static, yet adherence to all the above criteria is required for a municipality to be categorised as a category A metropolitan municipality. To further complicate the matter of categorisation, if a municipality did not adhere to all the above criteria for a category A municipality, it would need to be categorised as either a category B or category C municipality, even though neither of the two have been defined in respect of their structures in any legislation (see section 6.3).

The research has confirmed that the criteria used to classify or demarcate municipalities in South Africa is insufficient because the criteria provided is subjective, thus greatly complicating categorisation practices (see section 6.3). This thesis further explored literature on the classification of human settlements in South Africa to gain a better understanding of the composition of these administrations from a spatial perspective toward proposing future dictations that will guide the categorisation of metropolitan municipalities in South Africa.

9.3.4 Finding: The composition of settlements within the municipalities is largely undetermined

As stated in section 9.3, there is currently no consensus in South Africa on how human settlements should be categorised and on what makes a settlement urban and what makes it rural (see 5.2 and 5.3).

It should be acknowledged that the South African political and historical landscape plays a large role in the existing confusion, with the apartheid government previously structuring its administration on a macro and microscale that was based on racial segregation. On the macro scale the apartheid government implemented homelands to which all Africans without formal employment within the white urban areas were banished. These homelands had little or no

economic bases and were largely dependent on subsistence farming or employment in the white urban areas (see section 4.2). However, contrary to global definitions, these settlements cannot be classified as rural for their having had unusually high population densities (see dense rural settlements in section 5.3).

During apartheid a simple classification, *metropolitaanse gebied*, was used for settlements larger than cities, and it was defined as highly populated areas, central cities, and lower density suburbs; a *stad* was a city with a well-established CBD and medium-density suburbs; a *dorp* which was a town of medium-density settlement with a smaller CBD than a city; and a *gehuggie* referred to a village of low-density settlement without a CBD. Though this had been used to categorise settlements, no numerical values provided any specifics on how high, medium and low-density were measured (see Chapter 5).

In 1998, the democratic government made its first attempt at understanding the country's composition in respect of its settlements. The findings from this investigation were published in the White Paper on Local Government (South Africa, 1998) and proposed that settlements be categorised as being urban cores, urban fringes, small towns, dense rural settlements, betterment settlements, informal settlements, and agri-villages. This displayed a clear shift in the way that settlements were categorised – where previously settlements had been classified as single entities in apartheid under the democratic government, these settlements were now classified in respect of the “regions” that they covered, thereby acknowledging the interdependence between settlements (see section 5.3).

Though it was a start, this categorisation attempt by government was rather basic considering that it only took into account the geographical size and density of the settlements. As a result, ten years later the CSIR (2008) attempted investigate the functions and the GVA contributions these settlements fulfilled and have subsequently classified the South African settlements into the following categories: city regions, free-standing cities, regional service centres, service towns, small towns, and rural areas. However, this attempt was also found to be detached from the administrative classification of settlements as prescribed by the Constitution (South Africa, 1996) (see section 5.4.2). Subsequently, in 2011 the National Treasury categorised the different settlements that could make up administrative classification of the Constitution (South Africa, 1996) by providing categorisation for the different settlements that made up the category B local municipalities respectively as required by the Constitution (South Africa, 1996) (see section 5.4.3). It categorised settlements as follows:

- Category B1 local municipalities: Secondary cities;

- Category B2 local municipalities: Large towns;
- Category B3 local municipalities: Small towns:
- Category B4 local municipalities: Mostly rural areas.

Although this classification is not statutory, it proves useful in understanding the dynamic and diverse composition of the various municipalities within South Africa. Furthermore, this classification provides insight into the differences between category B1 (secondary cities) and category A (metropolitan) municipalities. Upon reviewing the various academic articles and reports on the classification of settlements, consensus appeared to have been discovered between the White Paper on Local Government (South Africa 1998), the CSIR (2008), and the National Treasury (2011) on Buffalo City and Mangaung not being category A, city regions, or urban core settlements, but rather that they were classified as category B1 (secondary cities, urban fringe, or free-standing) settlements. However, a study conducted by Morudu and Du Plessis (2013) found that Mangaung and Buffalo City were in fact the largest settlements next to the six city region settlements (category A municipalities) (see section 5.6).

These observations reveal that there are no consistent terms or understanding for how human settlements have been classified in South Africa. There also appears to be a lack of understanding as to which settlements make up the various administrative entities (category A, B, and C) in South Africa. The complexity of classification is exacerbated when considered that settlements are not static entities but dynamic organisms that are constantly being influenced by migration, natural population growth, economic development and global forces (see section 5.6).

Since no consistent understanding exists of how settlements are categorised there is even less of an understanding of how they should be combined to create the various municipalities. Subsequently, this thesis has sought to reflect on the interpretation and implementation of the Section 2 criteria by the MDB over the 11-year period from 1999 to 2011 in order to understand how these municipalities are categorised.

9.4 Finding: The application of Section 2 of the Municipal Structures Act (117 of 1998) in categorising metropolitan municipalities in South Africa is inconsistent

The criteria set out in Section 2 of the Municipal Structures Act (117 of 1998) for the categorisation of metropolitan municipalities is subjective (see section 6.3.1.1), which is why this thesis sought to evaluate the manner in which the criteria had been interpreted and implemented by the MDB since the first demarcation and categorisation exercise in 2000. The

study found that consistency was lacking in the interpretation and by extent implementation of the various themes that the criteria required (see Chapter 8) (see Table 9-2 below).

Table 9-2: Implementation of the Section 2 criteria by the MDB at time of metropolitan categorisation

	Percentage of urban households in 2001	Population density at the time of categorisation	GVA contribution to national total at the time of categorisation	Number of settlements in municipality at the time of categorisation	Employment in municipality at the time of categorisation
City of Cape Town	99.29	1162	10.37	7	40
Ekurhuleni	98.99	1236	8.52	9	37
City of Johannesburg	98.99	1974	12.64	11	41
Tshwane	89.77	342	8.41	6	38
eThekweni	88.22	1225	9.2	7	32
Nelson Mandela Bay	97.13	548	3.36	6	26
Buffalo City	78.32	296	1.5	4	25
Mangaung	95.22	114	1.7	4	32

Source: (Own construction)

Table 9-2 above reveals the sheer inconsistency in how the Section 2 criteria had been implemented over the 11-year timeframe of 1999 to 2011. In comparing the first requirement of high density, significant discrepancies stand out, with the City of Johannesburg gaining metropolitan status in 2000 with a density of 1974 people per square kilometre while Mangaung, who also received metropolitan status in 2011, only having 114 people per square kilometre. Similarly, when comparing the GVA contribution, which was used to motivate “extensive development”, the City of Johannesburg is found to have contributed 12.64 % of the national GVA in 2000 while Buffalo City had only contributed 1.5% of the national GVA in 2011, yet it too was granted metropolitan status. Likewise, comparing the number of nodes or settlements within these municipalities reveals that the City of Johannesburg had 11 settlements within it in 2000 and according to the MDB (2008) report 98% of which had an “urban” character while Buffalo City only had four settlements within it in 2011 of which only 78% was “urban”. This

illustrates that there is clearly no consistent application of the Section 2 criteria by the MDB in categorising category A metropolitan municipalities in South Africa (see Chapter 8).

Table 9-3 captures this study's main findings on how the theoretical perspective of interpretation differs from the empirical findings on the implementation of the Section 2 criteria

Table 9-3: Section 2 theoretical perspective vs. empirical findings from the study

Criteria	Theoretical perspective	Empirical findings
Conurbation	The MDB interprets a conurbation as a municipality with 70% urban households and 30% rural households	No data available on urban and rural areas.
High-density areas	No standard definition	Four different interpretations of this definition
Intensive movement of goods and services	Functional linkages	Intensity between units is unknown
A single area for which integrated development is desirable	The area should have a structure which can assist it to meet the basic needs of all its citizens while promoting the economic and social development of the region	The implementation of this criterion is complex since integration is a subjective term.
Extensive development	Compact development	Unknown what the GVA contribution should be for a municipality to be extensively developed.
Multiple business districts	Higher-order centre with many business districts	Unspecified what businesses are required or how many business districts.
Centre of economic activity with complex and diverse economy	Higher-order centre with many economic activities.	Undefined: what complex or diverse economy would entail
Integrated development	To allow for effective planning and equitable development.	Integration is subjective. Uncertain how to measure it
Strong linkages between units	Functional linkages	Uncertain what intensity of linkage is required?

Source: (Own construction)

Theoretically, the term conurbation refers to the clustering of urban settlements that are interrelated, although this term is not defined in any South African legislation, with the closest definition being found in the White Paper for Local Government (South Africa, 1998), which requires all municipalities to have both rural and urban areas to form a municipal entity. The MDB interprets a conurbation as a municipality with 70% urban households and 30% rural

households. However, there is currently no shared definition in South Africa on what an urban or rural area is. Consequently, no data available on this level since Statistics South Africa collects data on the municipal level and not the settlement type. Subsequently, the term conurbation is vague and found to be lacking in requirements (see section 8.2.1).

High-density is another requirement that is not defined in the Municipal Structures Act (117 of 1998), White Paper on Local Government (South Africa, 1998), or the Municipal Demarcation Act (27 of 1998). This definition and measurement were also found to be a challenge to the classification of settlements under apartheid and remains a challenge, with the MDB having no objective criteria on what is required, leading to the inconsistency in the application thereof (see Table 10-2 above and section 8.3.2.). A comparative case study analysis for the eight metropolitan municipalities found that there were four different classes of interpretations for this criterion (see table 8.8) and revealed discrepancies in the manner in which this criterion was being applied, bringing into question the metropolitan status of many of these municipalities (see section 8.3.2).

In this thesis, the intensive movement of goods and services criteria was theoretically defined in an attempt to measure accessibility and functional linkages within municipality. The MDB approach describes that this can be measured by using Google Earth (Cameron & Melingara, 2010). However, a 2008 MDB report that investigated Mangaung and Buffalo City against this criterion in 2008 stated that there was no data for measuring this and it did not motivate their adherence to this criterion further. Metropolitan municipalities were found to have higher densities and slower moving times between settlements while municipalities with lower densities had faster moving times between settlements. From the perspectives of accessibility, financial cost, and time, the higher density settlements are not as accessible as the lower density municipalities, possibly indicating that agglomeration diseconomies are already at play in some of these municipalities (i.e. City of Johannesburg, City of Cape Town, and eThekweni). This raises the question: would the intensive movement of goods and services require more compact municipalities or larger polycentric structures lower density municipalities with connected entities (see section 8.3.3 and 6.3.1)?

Extensive development is another criterion that requires adherence by the conurbation to qualify as a metropolitan municipality. Theoretically, a conurbation can be defined from an economic perspective as a large area that has been economically developed to provide maximum returns. The MDB interprets this theme from an economic perspective and has used the municipalities' contributions to the national GVA in classifying them. This study found a significant difference between the GVA contributions of the various metropolitans – in fact, their different contributions

fall under four classes (see Table 9-2 above and table 8.8). The inconsistency in meeting the criteria is clear in the close to 10% difference between the highest and lowest GVA contribution (see section 8.3.4).

The requirement that the metropolitan municipality should have multiple business districts and industries appeared to be a straightforward requirement, although evaluating the requirement has found the contrary. Theoretically, business districts can be defined according to the size and the products they offer. For example, one could have a regional centre that is similar to a mall offering higher-order goods and services, or a neighbourhood business centre, which is a smaller centre offering only the necessities. Two regional centres were found to be bigger than three neighbourhood centres, steering the research in the direction of investigating how this criterion can be measured. Analysing the 2008 MDB report revealed that the MDB has interpreted the criteria by the number of settlements that make up the municipality (see Table 9-2., Table 8.8, chapters 5 and chapter 8) seeing as each settlement could have more than one business district or industrial area of various sizes within it. The researcher observed that the MDB interpretation of this criterion is ineffective. Regardless, even when considering the number of settlements within the municipalities, both Mangaung and Buffalo City municipalities had the lowest number of settlements (see Table 9-2 above), which again brings into question the MDB's implementation of these criteria. It could therefore be concluded that the criterion of "multiple business districts and industries" is rather vague. This criterion has been recommended for amendment by CoGTA in 2016 (see section 8.3.5).

Theoretically, the criterion of "a centre of economic activity with a complex and diverse economy" can be interpreted by using Christaller's (1996) central place theory, which states that high-order metropolitan centres should offer high and low-order goods and services to smaller centres. However, in recent years the network urban model has allowed for smaller centres to house higher-order services which could be offered either physically or online (see section 2.4 and 2.5). Evidently, smaller centres also display complex and diverse economies. This research has found that this criterion is similar to the previous criteria, namely "multiple business districts and industrial areas" and "extensively developed", since both the previous points address economic development in the region. However, the MDB interprets the centre of economic activity as "a centre of employment" and investigates the levels of job creation in each centre (MDB, 2008). This is also subjective since South African cities are known to have dual economies with both formal and informal forms of employment. Analysing the data reveals that only formal employment statistics are available. A comparative case study analysis of the employment data for the eight metropolitan municipalities from 1999 to 2011 revealed three categories of employment in metropolitans (see table 8.8). It is unknown what percentage of

employment should be adhered to before a municipality can be granted metropolitan status. Consequently, this thesis has found that employment data does not give any indication of “complexity or diversity of the economy”, since the municipality could have high employment in one sector (i.e. agriculture) and this would not stand true that the economy is “complex or diverse”. A comparative quantitative analysis of the eight metropolitan municipalities with the location quotient revealed that the metropolitan municipalities all specialised in different economic activities (see section 8.3.6). This illustrates diversity in the economic activities between the various metropolitan municipalities.

Interestingly, Buffalo City and Mangaung were found to have diverse economies together with eThekweni and the City of Johannesburg in 1999. Yet both municipalities were excluded from being regarded as metropolitans because MDB found that they did not have complex economies (see section 1.2. and 8.3.6). This indicator shows that Mangaung and Buffalo City have lower rates of employment while both have more complex and diverse economies than Nelson Mandela Bay and Tshwane, who had previously been demarcated metropolitans in the 2000s. In consideration of this the employment opportunities possibly bear more weight in the MDB’s interpretation than complexity and diversity of the economy. This area requires further research, and the MDB is recommended to review the manner in which they interpret and implement these criteria to be more objective (see section 8.3.6).

Section 2 of the Municipal Structures Act requires a category A municipality should be “a single area for which integrated development is desirable”, meaning that the area should have a structure that can assist in its administration and management to meet the basic needs of all its citizens while promoting the economic and social development of the region (South Africa, 1996). However, the question that came forth is how the area would be delimited and demarcated as a municipality. The White Paper on Local Government (South Africa, 1998) and the Municipal Demarcation Act (27 of 1998) support a combination of the socio-geographic/human settlement, cohesiveness, and the economies of scale approach toward demarcating municipalities in South Africa. These documents state that the basis of demarcating the municipalities is that there should be interconnections and interdependent relationships between these settlements. However, implementing this criterion is all but easy because of the prevailing uncertainty around how functional linkages should be calculated or measured (see section 8.3.7 and table 8.8). Observing of the metropolitan municipalities reveals how the integration concept is subjective and how, in view of the findings in this research, it had not been applied consistently by the MDB or the municipalities in their IDPs, seeing as some of the municipalities like the City of Johannesburg, City of Cape Town, eThekweni, and Ekurhuleni

appear to be more integrated and connected than the remaining metropolitan municipalities (see Chapter 8). It is unknown by what means these municipalities have adhered to the criteria.

Having strong interdependent social and economic linkages between its constituent units is a requirement that overlaps the previous criterion namely “a single area for which integrated development is desirable” in that these areas have to display some measures of socio-economic linkages in order to be classified as functionally integrated entities. However, in this regard an observation from the previous theme is applicable that the patterns of commute still demonstrate the one-way linkages from the apartheid era – inhabitants from the remote racial suburbs still commute to the white areas to earn an income. Stronger linkages or more integrated development appeared to have been present where municipalities had more than one economic centre (see section 8.3.8). In 2016 CoGTA proposed that this criterion be combined with the point (c) of Section 2 of the Municipal Structures Act (117 of 1998): “a single area for which integrated development is desirable”, since both measure the same thing from different perspectives.

The same 2008 MDB report that motivated making the Buffalo City and the Mangaung municipalities metropolitans, acknowledged that both these district municipalities “did not conform to all the themes as required by the Municipal Structures Act (117 of 1998), but that they only “partially conformed” (MDB, 2008: 51), which is supported by the observations and findings in this thesis. Hence, these municipalities should in essence not have become metropolitan municipalities but should instead have been categorised as category B1 local municipalities, as determined by the CSIR in 2008 and the National Treasury in 2011 (See chapter 5).

However, the same MDB report goes on to explain that by the Section 2 requirements, the difference between Buffalo City, Mangaung, and Nelson Mandela Bay was insubstantial. Moreover, to minimize the cost of administration between the various local municipalities, it recommends that they be re-categorised as metropolitans and be administered unitarily. In light of this, the grounds for exclusion become a matter in question since, considering its rather low ranking when compared with the rest of the category A metropolitan municipalities, the Nelson Mandela Bay municipality should also not have been categorised as a metropolitan municipality.

Furthermore, this study was not able to establish with certainty that Mangaung, Buffalo City, and Nelson Mandela Bay should not have been made metropolitans because there are no objective criteria by which their application can be rejected. This was reiterated in the semi-structured

interviews that were conducted by three employees from the Demarcation and Delimitation Department and the Chairperson of the Municipal Demarcation Board.

The discussion in this section leads this study to deduce that the Municipal Structures Act (117 of 1998) differs vastly on paper than in practice, judging from the unresolved issues with the Section 2 criteria, which makes interpreting and implementing these criteria challenging. Under these circumstances exist eight different category A metropolitan municipalities in the country with vastly differing characters, structures and compositions. The criteria's obscurity further also complicates what category B or category C municipalities should comprise considering that they are categorised based on what a metropolitan municipality is not.

9.5 Conclusion to Chapter 9

This chapter has provided a coherent understanding of metropolitan municipalities and the complexity of structuring such in South Africa. Chapter 10 will build on these conclusions and offer planning recommendations on improving the criteria for metropolitan formation, after which it will suggest the scope for further research.

CHAPTER 10: IMPLICATIONS OF FINDINGS

10.1 Introduction

This chapter presents recommendations to the urban planning profession based on the literature review and empirical findings of this study on how administrative restructuring in South Africa can be improved. These planning recommendations are aligned with the fourth objectives and the last research question of this research.

10.2 Implication of finding: structuring the country on the microscale

The categorisation of human settlements in South Africa is complex overall because no classification or definition exists of what urban areas and rural areas really are and what they should comprise, though this is also a global problem. Furthermore, there is no objective understanding of what is referred to as “an area of low-density, medium-density or even high-density” (see Chapter 5), a state that has continued to preside over a democratic South Africa since apartheid. Literature has revealed that density is interpreted differently across countries according to their respective cultures and demographics. Therefore, no standard definition is available globally for high, medium or low-density.

Moreover, though various forms of literature exist on the topic of settlement classification in South Africa, there appears to be no consensus among academics and politicians on what criteria to use to classify them or what they should be called (see Chapter 5). For example, terms such as city region, urban core, high-density area, or category A municipality have been used interchangeably to refer to the largest human settlements in the country. These inconsistencies make defining settlements difficult since many settlements with the same properties are labelled differently in South Africa’s urban planning literature (see Table 10-1 below).

Table 10-1: Recommended revision of settlement types in South Africa

White Paper on Local Government (1998)	CSIR/SACN (2008)	IUDF (2009)	Treasury (2011)
Urban core	City regions	High-density core	Category A
Urban fringe	Free-standing cities	Low-density core	Category B1
Small towns	Regional service centres	High-density periphery	Category B2
Dense rural settlements	Service towns and small towns	Low-density periphery	Category B3
Villages	Rural areas	Arid, protected and mountainous areas	Category B4

Source: Adapted from IUDF (2016)

In view of the ambiguities described around categorising and defining settlements, this study recommends that National Government review how human settlements are classified in South Africa and provide objective, clear requirements for adherence with standardised terms toward achieving this objective.

This thesis has revealed that traditionally, in South Africa and globally, population density numbers and economic activities (GVA) have been used to classify settlements. However, in recent years population density has been found to have become less sufficient as a criterion, particularly in countries such as South Africa with large localities still characterised by truly rural living standards that feature high population densities but low economic contribution (i.e. dense rural settlements, high-density periphery).

Settlements are no longer seen as isolated entities that follow a hierarchal order in terms of economic functions. Rather, they are dynamic entities with functional linkages between settlements or suburbs (see section 2.4 and 2.5– polycentric development and network model). To this effect this study recommends that the criteria by which settlements are classified be revised to be more region-based and dynamic. This recommendation is both aligned with the administrative settlement classification approach of the UN (2018) (see section 2.3) and adherent to the settlement categorisation requirements of the South African Constitution (see section 4.4) (see Table 10-3 below for details).

Therefore, this study recommends that the criteria by which South African settlements should be categorised include:

- Comparing the percentage of the economically active population employed in primary economic sectors with that of other economic sectors (see Chapter 8 and section 8.3.6) by using the location quotient as an indicator. The agricultural sector is recommended for settlement categorisation since, it is still found to be true that more rural areas has a larger agricultural base and the location quotient would reveal the importance of this sector in the economy.
- Housing census data, which provides information on the general availability of electricity and water supply to residential dwellings, will reveal more about the level of development in settlements.
- Measuring the ease of access to basic amenities such as medical care, schools, and recreation facilities will grant insight on the quality of life in these settlements. This is an

important indicator since better-developed settlements should offer better living standards than less developed areas.

- The human development index (HDI) and the Gini-coefficient can also be used as a measure for categorising settlements – larger settlements should have lower levels of inequality and higher levels of development amongst its citizens.

That being considered, care should be taken to ensure that the definition used to classify regional entities according to the abovementioned criteria is not too complex for users to understand and objectively apply (see Table 10-3 on how this can be practically implemented).

Admittedly, it is difficult to define boundaries around these settlements and identifying the data that would have to be collected to delimit the boundaries around these entities is not an easy task, since each settlement is unique in respect of its urban form, structure, and functional areas. In this regard, images obtained by remote sensing can be used in the demarcation of boundaries in these regions when development density is a criterion (UN, 2017).

Alternatively, the government can adapt the UN measurement criteria referred to as the city prosperity initiative (CPI) to categorise its settlements. The CPI works by producing six sub-indices of prosperity which is based on human rights, namely:

- Productivity (GVA),
- Infrastructure development (access to basic services),
- Quality of life (access to amenities),
- Equity and social inclusion (Gini-coefficient),
- Environmental sustainability and urban governance, and
- Legislation.

The UN uses the aggregate of these six sub-indices to generate a consolidated value that represents the CPI, which is then used to rank settlements according to their levels of prosperity or levels of development. This UN initiative has already been implemented in 400 cities across the world in view of quantifying, evaluating, monitoring and reporting on progress made by settlements in a more structured manner (UN, 2017). This is a practice that South African urban planners/the MDB could consider for measuring and categorising the country's settlements, based on its respective challenges and progress. Using this platform to categorise settlements

would also make comparing South African settlements with similar settlements locally and internationally easier.

10.3 Implication of findings: revising the demarcation process in South Africa

South Africa formerly had a system of separate racial administrations within settlements. This meant that regardless of how small a settlement was, it had separate administrative boundaries for whites, blacks, coloureds and Indians. The inequitable tax bases that applied to the respective groups within these settlements left some areas underdeveloped. The new democratic government aspired to create an integrated and equal society by forming one administrative body in place of the previously separate yet interdependent administrations.

Restructuring an entire country that not only had been racially segregated and spatially fragmented on a microscale but also on a national scale in 10 years is an ambitious and daunting task, yet this is what the democratic government sought to achieve between 1993 and 2000. The effects and repercussions of the Government's time-pressed decisions are still in effect 24 years later. That being said, no clear understanding of population density or knowledge of the population numbers in the various settlements existed at the time (see Chapter 5), since the blacks who lived in urban areas had previously been excluded from being counted under the urban population. Moreover, the population within these settlements had previously been controlled artificially through various legislations (like influx control) (see Chapter 4). The subsequent abolishment of previous legislation resulted in the influx of migrants to settlements (administrative areas) that previously denied non-white residents. This resulted in the expansion of urban settlements in size and rural areas losing their population in large numbers (see Chapter 5).

In 1998 the National Government conducted a study to determine the state of the settlements within the country and decided afterward to combine rural areas with urban areas to make their management more efficient, effective, and integrated. However, the fragmented urban structure and the far-lying rural areas made the formation of an integrated administrative entity challenging. Consequently, the democratic government tabled a legislation called the Municipal Demarcation Act (27 of 1998) to assist in the demarcation of administrative areas. Sections 24 and 25 of the Municipal Demarcation Act (27 of 1998) provide a subjective framework on how all municipalities (category A, B, and C) are demarcated. The criteria for demarcation of administrative boundaries include the following (see section 6.2 and Table 10-2 for details):

Table 10-2: Requirements for municipal boundary demarcation

Section 24 criteria	Support from Section 25
(a) enable the municipality of that area to fulfil its constitutional obligations, including: (i) the provision of democratic and accountable government for the local communities; (ii) the provision of services to the communities in an equitable and sustainable manner; (iii) the promotion of social and economic development; and (iv) the promotion of a safe and healthy environment.	
(b) enable effective local governance;	(k) the administrative outcomes of its boundary determination on: (i) municipal creditworthiness; (ii) existing municipalities, their council members and staff; and (iii) any other relevant matter. (l) the need to rationalise the total number of municipalities within different categories and of different types to achieve the objectives of effective and sustainable service delivery, financial viability, and macro-economic stability.
(c) enable integrated development;	(a) the interdependence of people, communities and economies as indicated by: (i) existing and expected patterns of human settlement and migration; (ii) employment; (iii) commuting and dominant transport movements; (iv) spending; (v) the use of amenities, recreational facilities, and infrastructure; and (vi) commercial and industrial linkages. (b) the need for cohesive, integrated and un-fragmented areas, including metropolitan areas; (e) provincial and municipal boundaries; (f) areas of traditional rural communities; (g) existing and proposed functional boundaries, including magisterial districts, voting districts, health, transport, police, and census enumerator boundaries; (h) existing and expected land use, social, economic, and transport planning; (i) the need for coordinated municipal, provincial and national programmes and services, including the needs for the administration of justice and health care; (j) topographical, environmental and physical characteristics of the area.
(d) have a tax base as inclusive as possible for users of municipal services in municipalities.	(d) the need to share and redistribute financial and administrative resources.

Source: (Own construction)

The abovementioned criteria is a one-size-fits-all approach whereby the boundaries of all three administrations are demarcated in the same way and should meet the same requirements.

Section 24 contains the requirements that the municipality should already be fulfilling, while Section 25 stipulates the responsibilities that it should be able to fulfil in future – according to the MDB the latter can only be realised after demarcation.

At the time the demarcation legislation was being tabled, the government's primary objective was to reverse the effect of apartheid and create an integrated society based on equality. The Demarcation legislation tabled (as in Table 10-1) appears to be long, tedious, politically motivated, and subjective. Furthermore, even though the legislation required integrated development – there was no definition to draw from at that time to inform legislation. Hence no shared understanding existed of what this entailed and there still is no understanding of how it should be achieved (see section 8.3).

The Municipal Demarcation Act (27 of 1998) alludes to the application of a mixture between the functional, socio-geographic, economies of scale, financial viability, and the cohesive demarcation approaches as measures that could motivate the demarcation of boundaries in South Africa (see section 3.3 and 6.2), although it does not explicitly express any policy preference (Cameron, 1999b). This lack of specific guidelines has created confusion about how the municipality boundaries need to be demarcated and how they should be integrated. This problem presented in 2000 upon the initial demarcation – the data available on these processes is confounding and, according to Cameron (2005), a lack of specific guidelines is the reason for so many cross-boundary municipalities having been demarcated in 2000 and for the constant revision of municipal boundaries in recent years.

Furthermore, this demarcation criterion has not been revised in over 20 years.

Chapter 6 revealed that in 2005 the MDB attempted to quantify how the administrative entities should be demarcated. They proposed that the local government (category B) boundaries be demarcated mainly on the bases of commute and socio-economic links between settlements of various sizes (albeit that, as mentioned previously, settlements are not defined) to assume a manageable size of 3 500 square kilometres with between 20 000 and 80 000 persons residing in them. Furthermore, they propose that district municipalities that were delimited as umbrella boundaries over local government municipalities not be larger than 50 to 100 square kilometres with a base population of 100 000 per district (see Table 10-3 below).

Table 10-3: Categorisation criteria for municipalities in South Africa as recommended by the MDB

Criteria	Category A	Category B	Category C
Governance	Single-tier	Two-tier	Two-tier
Categorisation criteria	A conurbation featuring: Area of high population density; Intense movement of people, goods, and services; Extensive development; Multiple business districts and industrial areas; Centre of economic activity with a complex and diverse economy; A single area for which integrated development planning is desirable; Strong interdependent social and economic linkages between its constituent units.	Demarcation should follow the nearest neighbour principle; The areas should have a number of settlements (towns, cities or villages). Functional linkages between areas that are of a manageable size; Where possible, municipalities should house 80 000 persons and no less than 20 000 The area of the municipality should be approximately 3 500 square kilometres; For geographical Coherence and local identity, areas greater than 10 000 km² are can also be desirable.	Must have functional linkages between the rural and urban areas; The district should be no larger than 50 to 100 kilometres; Should have a base population of 100 000 per district. The area should comprise two or more local municipalities

Source: Adapted from South Africa (1998); Sutcliffe & Zitha (2000) and Cameron (2005)

Despite these recommendations, a study conducted by Statistics South Africa in 2011 found that the average population of category B municipalities is 221 242 inhabitants (Statistics South Africa, 2011) while most districts currently have populations ranging between 500 000 and 850 000 (Statistics South Africa, 2015) – these figures are much higher than what the MDB had initially anticipated in 2000 (Cameron, 2005). Subsequently, municipalities have complained that their areas are too sparsely populated to tap into the economies of scale, allow for public participation or effective governance, or the efficient and equitable delivery of services (Huyssteen *et al.*, 2010; Naude & Krugell, 2003; Khumelo & Ncube, 2016) as the Municipal Demarcation Act (27 of 1998) and the Constitution (South Africa, 1996) had initially required. Resultantly, 128 of the 243 local administrations was overburdened administratively and financially non-viable (Omarjee, 2018).

This is a cause for concern and requires that the manner in which boundaries are demarcated be revisited to ensure smaller but stronger municipalities that can contribute to the country's

growth and development. This study recommends that the criteria for demarcating boundaries be made more objective and the requirements reduced. One way to achieve this is to implement criteria for demarcating boundaries from a purely functional perspective - this approach is a more objective approach that provides clear criteria on how the boundaries need to be demarcated (see section 3.3.1.3), though the MDB would have to specify the maximum permissible distance between settlements for them to be demarcated. This study found that a distance of over 50 kilometres between settlements in the same municipality is not administratively efficient or economically viable (i.e. Buffalo City and Mangaung municipality).

The MDB has the power to revise municipal boundaries and ward boundaries every five years based on the request from either a) Minister, b) the MDB, or c) the MEC. Considering all the present and past challenges associated with boundary demarcation, this timeframe is considered ineffective in allowing the administrative entity to reach its potential. It is therefore recommended that the timeframe for municipal boundary revision be extended to between 10 and 15 years, which will provide the region with enough time to settle and realise its potential.

10.4 Implication of findings: Reconsider the location of metropolitan municipalities in South Africa

Metropolitan municipalities were introduced to the South African spatial landscape in 1993. However, the legislative requirements laid out by the Local Government Transition Act 209 of 1993 and the Municipal Structures Act 117 of 1998 to which settlements had to adhere for this title have always been subjective.

The research concluded that the criteria of Section 2 of the Municipal Structures Act is outdated when considering the many changes in technology and development that have occurred over a 20-year period. To illustrate, in 1998 internet use was much less frequently used, let alone online shopping (Writer, 2014; Content, 2017). In the same year were modernist land usage zones for businesses in CBDs or commercial centres, whereas today businesses are found in residential suburbs run from homes while being connected globally. What is more, some of the themes in the Section 2 criteria are duplicates and are vague in stating their requirements – consider how “multiple business areas and industrial districts” require the same information as “an economic centre with a complex and diverse economy”. To address this, in 2016 CoGTA recommended amending the Act, which this study supports.

This study has further revealed that the ambiguity of the Section 2 criteria allows applicants to use any data that they find suitable to motivate their municipality’s applications for metropolitan status, while a different dataset could just as easily be used to reject the same application.

Thus, the outcome would depend on which dataset was submitted and how it was being analysed. A recommendation to counter this effect is to clearly formulate and define the criteria and requirements and the data that should be used (see Chapter 8 for a recommendation on how this can be achieved).

Mangaung and Buffalo City's managing to gain metropolitan status with such a low population density and GVA contribution raises uncertainties around the motivations for some other municipalities with higher population densities (Msunduzi and Emfuleni) and larger GVA contributions not also attaining category A municipality status. This is posed as a topic for further research.

The National Development Plan does not state where it would like to form metropolitan municipalities within the country so that the positive spill-over could benefit the entire country. Currently, three metropolitan municipalities are clustered in the Gauteng province, which is the smallest province, two in the Eastern Cape province, followed by KwaZulu-Natal, the Western Cape, and the Free State, each having one metropolitan municipality. There are no metropolitan municipalities in four of the nine provinces (Northern Cape, North-West, Limpopo, and Mpumalanga), resulting in a severely unbalanced spatial economic landscape that could be detrimental to the country's spatial economic development. Hence, it is recommended that the National Government together with the MDB identify potential locations or metropolitans within the provinces currently lacking and start investing in these regions to ensure that they adhere to the metropolitan criteria. This measure would benefit the entire country.

In conclusion, it is recommended that the Municipal Structures Act (117 of 1998) legislation be revised to make it more objective and measurable (see Chapter 8 for a method on how this can be achieved), because it is currently too subjective and provides little guidance for categorising or demarcating metropolitan municipalities in the country (see section 10.5 below for full recommendations). This study calls for further research into the cost and benefits that the country experiences by housing so many metropolitan municipalities in a limited number of provinces.

10.5 Implication of finding: The criteria for administrative categorisation should be more objective and measurable

The primary objective of categorisation is to recognise, understand and differentiate between objects, similar to how people differentiate flowers from trees or fish from land animals. Distinct things set objects apart and allow individuals to comprehend those differences and process

their environments. Categorisation can influence people's abilities to make decisions (Branan, 2010).

Similarly, defining and categorising a settlement would require some sort of distinction to be made that will set it apart from others. This research has confirmed that the current administrative classification of settlements in South Africa is lacking. Providing a subjective classification of one municipal entity (i.e. metropolitans) and leaving the other categorisations open to interpretation is not an efficient structuring practice – when done this way, how are people able to come to understand what differentiates these structures? A middle ground must be found between classical categorisation techniques which are rigid and have clearly defined classification rules, and the unrefined theory which allows for objects to assume a best-fit position under a particular category. In this regard the MDB would benefit from using “conceptual clustering”, which classifies settlements according to rules or clear criteria while allowing for a different range (maximum) and threshold (minimum) between each class. The bases of this sort of clustering would be to group together settlements with similar features under one category and in so doing, create a hierarchal cluster of settlements (Boubacar & Niu, 2014).

Another observation from this research is that the categorisation of administrative entities as stated in the Constitution is too broad. From the analysis it would seem that the municipality really only has one of two choices: it is either a category A metropolitan municipality or a category B local municipality and only by amalgamating more than two category B local municipalities can a metropolitan municipality be created (MDB, 2008). Thus, a single category B municipality cannot really be classified as a category C municipality if it becomes larger. Accordingly, implementing an additional category is recommended to allow for the growth and transition of category B municipalities into metropolitans.

Putting an interim step in place is further recommended in which a municipality is neither a secondary city nor a metropolitan municipality, such as a category A2 municipality, but an aspirant metropolitan municipality or ‘micropolitan’ municipality. This interim status would need set criteria (for example x% of the national GVA contribution, a lower level of unemployment, higher Human Development Index (HDI), a lower Gini-coefficient and a higher location quotient) for the area to qualify for metropolitan status, since urbanisation is not just about having a larger settlement but also about offering a better quality of life. To this effect a structured process is recommended that will motivate settlements to become more efficient, effective, and sustainable while contributing to national growth and development. Table 10-4 below captures the proposed clustering:

Table 10-4: Recommended categorisation criteria for municipalities

Municipal Category	Population density (per square kilometre)	Percentage contribution national GVA	Location Quotient over 1	Unemployment	Gini-coefficient	HDI
Category A1 (metropolitan)	Between 3 000 and 2 000 people	Over 10% of GVA	At least eight economic sectors	Less than 30%	Lower than 0.6	At least 0.80 – 0.85
Category A2 (micropolitan)	Between 1 999 and 1 000 people	Between 8% and 10% of GVA	At least seven economic sectors	Less than 35%	0.60–0.61	At least 0.84 – 0.80
Category B1 (secondary city)	Between 999 and 800 people	Between 6% and 7.9% of GVA	At least six economic sectors	Less than 40%	0.62–0.63	At least 0.79 – 0.75
Category B2 (larger towns)	Between 799 and 600 people	Between 4% and 5.9% of GVA	At least five economic sectors	Less than 45%	0.64–0.65	At least 0.74 – 0.65
Category B3 (Smaller towns)	Between 599 and 400 people	Between 3% and 4.9% of GVA	At least four economic sectors	Less than 50%	0.66–0.67	At least 0.6–0.55
Category B4 (villages, hamlets)	Between 300 and 100 people	Between 1% and 3% of GVA	At least three economic sectors over 1	Less than 50%	0.68–0.69	At least 0.54

Source: (Own construction)

Only quantifiable indicators are recommended as use (refer to above Table 10-3) for categorising municipalities in South Africa. In this manner the categorisation process would be structured, understandable, measurable, and transparent.

Table 10-3 above serves as a recommendation on how the MDB could implement a standard operating procedure in categorising municipalities in South Africa and reveals that there is still need for further research into which indicators would be most suited. This table recommends in particular that a numerical value be assigned to the population density for each municipal category and their expected GVA contributions to the national economy before being allowed to move up the settlement hierarchy. It is also important for the larger centres to have lower unemployment rates than the lower-order centres, hence this research recommends that the

criteria be used as an indicator to qualify for a higher categorisation status. Finally, it is imperative that development comes with growth and an overall improvement in the quality of life of inhabitants, which is why this study suggests that the HDI indicator be used as a requirement to attain a higher municipal status.

10.6 Implication of finding: improve the independence of the MDB

The MDB did not have the capacity in 2000 nor does it have the capacity in 2018 to operate independently as they had initially anticipated and must hence rely on input from municipalities and reports from consultants, which are often biased and result in the inconsistent application of the criteria (See Section 6.4). Some consultants for the MDB were found to hold a marketing degree while others came from a political science background, each of whom argued cases from and in favour of their own perspectives. The 2008 MDB report clearly shows that little research or site-visits had been conducted, and instead the data that had been used to motivate criteria did not bare any relation. As an example, the 2008 MDB reports on the use of capital expenditure (CAPEX) and operational expenditure (OPEX) indices as motivations in favour of metropolitan status. However, none of the Section 2 criteria calls for budget allocation to determine metropolitan status. Even though the MDB raised questions as to why their consultants had used this data, further investigation into the matter did not realise due to either unrest, pressure on the ground from citizens, a lack of funding and time, or simply just the lack of capacity (staff) to conduct another review. To change such outcomes, the MDB will have to ensure that the consultants they use have the relevant backgrounds to conduct the studies, or alternatively employ more individuals to ensure consistent application.

10.7 Closing remarks

The chapter advises the National Government to revise its prescriptions for the demarcation and categorisation of administrative entities. Furthermore, the MDB is recommended to establish more objective criteria for categorising municipalities and employ more professionals in-house to assist with these categorisation and demarcation processes to ensure consistent application of the criteria. Figure 10-1 below presents a summary of these recommendations. Chapter 11 will put forward this study's contribution to new knowledge.

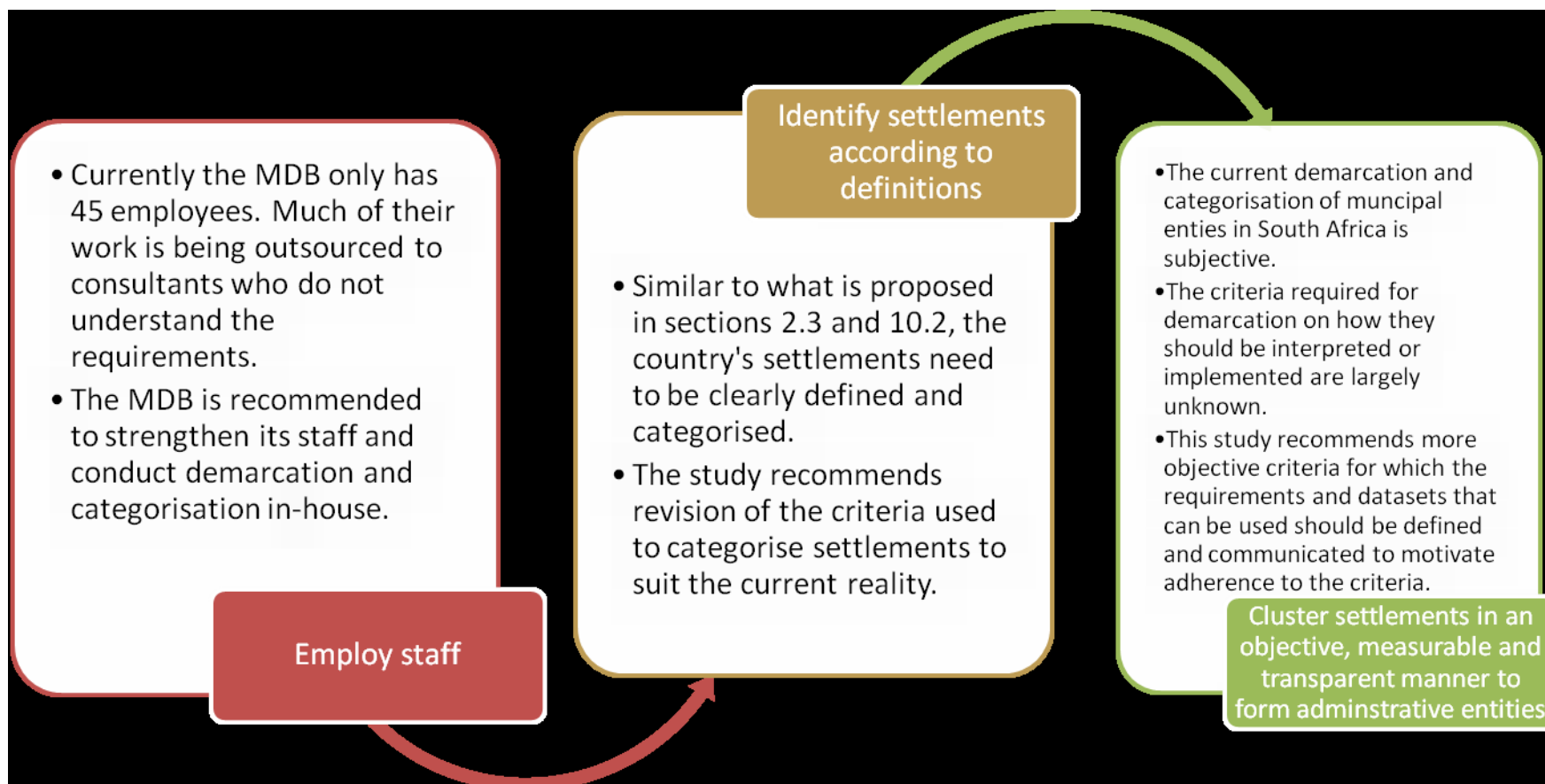


Figure 10-1: Recommendations to make the categorisation and demarcation of municipalities more efficient.

Source: (Own construction)

CHAPTER 11: CONTRIBUTION OF THE STUDY

11.1 Introduction

This chapter captures the study's main contributions to new knowledge generation. Firstly, it will explain the contribution that this research has made toward addressing the knowledge gap in urban hierarchy in South Africa. Secondly, it will explore the study's contribution to the delineation or demarcation practices of municipal boundaries in the country. Lastly, it will present its contributions to the parliamentary debate on the categorisation of metropolitan regions in South Africa since 2000.

11.2 Contribution to the urban hierarchy theory

The classification of human settlements is a complex issue as settlements are not static entities but dynamic organisms. Many settlements develop adhocly, with inhabitants having the freedom of movement, inhabitation, and reproduction. Consequently, no one individual can say with confidence that a settlement categorised as a town today will be a city tomorrow. Settlements can decline economically and ultimately result in its citizens migrating out, leading to the formation of ghost towns. Clearly, unless restricted by policy, settlement development is ultimately a product of many individual choices.

During apartheid, the central government had full control over the structure, size, and composition of its settlements (apartheid model). The apartheid government went one step further by implementing “influx control measures”, which directly influenced the number of individuals that could reside in a settlement within the country, resulting in an almost stable growth. During this period, South African academics had a simplistic understanding of the country's settlements that was limited to metropolitans (*metropolitaanse gebied*), cities (*stede*), towns (*dorpe*), villages (*gehuggies*), and Bantustans. Academics based their classification on the population densities of the settlements, though the concept density was never objectified. What is more, according to Statistics South Africa the data that was collected during apartheid from the urban settlements was not accurate because it did not include all racial groups (blacks were largely excluded from this data). Even though metropolitan settlements had been defined as “high density settlements”, cities as “medium density”, and towns as “lower density”, no one really knew how accurate these measures were or how they were defined, making it difficult to classify settlements under clear categories after 1994.

With the rise of democracy, all structural matters had to be changed. The final Constitution which came into effect in 1996 described the constitutional right to freedom of movement and

called for the more inclusive and equitable development of its human settlements through a one-city-one-tax base and an integrated settlement structure. The previous influx control measure was lifted and for the first time since the 1950s individuals were allowed to choose where they wanted to live and work. This greatly influenced the settlement structure – migrants started moving from rural areas (Bantustans) to urban areas in search of economic opportunities and a better quality of life. Settlements within the country had to be categorised as racially integrated entities that would include previously excluded suburbs which were interrelated and interdependent. Statistics had to be collected for all of these settlements in an integrated and collective manner, regardless of race; this painted a very different picture of the spatial demographics in the country compared to the apartheid years.

These factors combined made it challenging to categorise settlements in democratic South Africa. In response, with a very limited understanding of settlements in the country, the government introduced the White Paper on Local Government in 1998, which defined urban areas as formal cities or towns with medium or high-densities, while settlements with low population density areas were defined as rural (South Africa, 1998). However, no numerical criteria are available on how to measure high-density, medium-density or low-density to date. The apartheid government experienced the same challenge in classifying settlements, which remains a problem for the democratic government to this day. In that regard, this study found that there is still no shared understanding of what an urban area or a rural settlement is in the South African context, and little consensus exists on how to categorise settlements within the country because it is so complicated to define a metropolitan, city, town, or village and really even more complicated to neatly categorise them in practice according to definitions.

The CSIR (2008) and National Treasury (2011) found that classifying settlements according to population density was too simplistic for a country as diverse as South Africa and searched for alternate ways to classify settlements. However, both these institutions still implemented traditional settlement categorisation methods based on density without really objectifying density.

Subsequently in recent years, academics and the central government have begun to categorise settlements as regions instead of considering individual settlements as static entities.

This approach to categorising settlements is aligned with the administrative approach of the United Nations (see section 2.2), with which administrative entities are artificially created through administrative reformation or clustering of settlements.

In this form of urban classification, villages (*gehuggies*) (usually classified as rural settlements) are incorporated with towns (*dorpe*) (urban settlements) to form what the UN (2012) refers to as a city proper. In South African administrative classification terms this would be equivalent to the smallest administrative entity, known as a category B local government municipality. In 2011 the National Treasury emphasised that there is more than one form of category B local government municipality in the country and proceeded to categorise local municipalities according to their respective settlement characters. To illustrate, a B1 municipality would be a secondary city (a combination of two large towns); B2 would be a larger city (a combination of a large and small town); B3 would be a small town (a town and a village); and B4 would have a more rural character (villages that are amalgamated). Although this categorisation does not bear any weight in policy, for academics it provides insight into the different characters and composition of the municipalities or administrative settlement regions in the country.

Furthermore, the UN categorisation goes on to suggest that incorporating an existing town and a city proper would create what the UN (2012) refers to as an agglomeration. This is similar to category C district municipalities in South Africa, since local municipalities make up a district municipality similar to how a city proper makes up an urban agglomeration. In the South African context, the National Treasury makes allowance for two separate classifications of category C municipalities: the one is a form of agglomeration with large settlements (C1) and the second a form of district municipality (C2) with an agglomeration of smaller settlements. However, in the South African scenario a district municipality is made up of two or more Category B local municipalities, that is, two or more city proper would be required to qualify for agglomeration status (in UN terms).

The UN proposes that with further growth of the city proper's (category B local municipalities) within an agglomeration (category C district municipalities), a metropolitan administrative entity (category A metropolitan municipality) could eventually be formed. The National Treasury only has one class for this category of administrative classification because it is a unitary entity that is the country's primary settlement or administrative entity.

Evidently, without a clear understanding of how human settlements are categorised, consistent categorisation of the administrative areas is not possible. Given this circumstance, the contribution of this study is the following: without a basic understanding of what makes a settlement rural or urban, institutions will not be able to define other settlement types either, regardless of what they are called.

Summary of contribution to settlement hierarchy knowledge in South Africa

- The year 2008 saw a shift from categorising individual settlements as single entities to categorising them as regions which were made up of groups of interdependent settlements that operated as entities.
- However, no clear definition exists on how these settlements should be defined, measure or categorised.
- In 2011 the National Treasury tried to align settlement classification with the requirements of the Constitution (South Africa, 1996), but it has no official recognition.
- This study highlights that there is no standard form of category B municipalities (or cities proper), but rather a dynamic set of settlements within these municipalities, unlike the static method prescribed by the UN in 2018.
- This study found that category B local municipalities in South Africa comprise two or more settlements which could be either a village + town + city; a village + village + town; only towns; only cities, or any other combination, considering that there are no real criteria to state what exactly these settlements are classified as.
- A category C municipality is made up of two or more category B municipalities which operate interdependently with the district municipality, while a category A municipality is an independent municipality that comprises two or more category B local municipalities which have amalgamated to form a unified entity. Hence, the only stated difference between a category A and a category C municipality is the manner in which the administrative boundary lines are delimited.
- This study has recommended finding a manner by which the different combination of settlements could create different forms of category B municipalities (see Chapter 10) and proposed a revision of the constitutional requirements.

11.3 Contribution: delineation of administrative structures in South Africa

The apartheid administrative structure in South Africa was vastly different from what it is at present. Where there are now nine integrated provinces with municipalities that span from the east coast of the country to the west coast, there were previously only four nationally recognised provinces (Cape, Natal, Free State, and Transvaal). The remainder of the country comprised 10 ethnically categorised and demarcated homelands or Bantustans (Transkei, Bophuthatswana, Ciskei, Venda, Gazankulu, KaNgwane, KwaNdebele, KwaZulu, Lebowa, and QwaQwa). Moreover, the urban municipalities within the four provinces comprised racially separate administrative entities, with each urban area having had at least four separate administrative areas designated for different races (white, black, coloured and Indian). This fragmented administrative structure left the country with 1 262 administrative entities. In addition, these racially separate administrations within the urban areas were inequitably developed and taxed, resulting in some areas within the settlement having high tax bases even though they remained less developed and had higher densities (non-white suburbs) while other portions of the same settlement had lower taxes, were more developed, and had lower densities (white suburbs). This context resulted in a complicated administrative structure in the country.

The new democratic government was determined to create a new sense of “nationhood” by restructuring its administration. Once the influx control measures of the apartheid government had been lifted, a migration rush resulted from the Bantustans into these fragmented urban areas, where many new migrants occupied open land within these settlements with no access to basic services.

In response, the Local Government Transition Act (209 of 1993) was enacted in 1993 and required the restructuring of the country’s administrative structure to create a cohesive wall-to-wall administrative system that would integrate previously divided areas and implement an equitable tax base to allow for the efficient and equitable management of the administrative area. The Act made provision for only three categories of administrative entities: metropolitan, urban, and rural. Still, this marked the first time in South African history that metropolitan municipalities were allowed to have an administrative form, however no set criteria had been provided on how the municipal boundaries should be demarcated, nor had a single body been formed to oversee the process of boundary demarcation within the country. The result was inconsistency in the demarcation of municipal boundaries during this period. Moreover, the demarcation and categorisation processes of these administrative areas did not acknowledge the functional linkages between urban and rural areas in addition to there being uncertainty as

to which settlements should be urban and which should be rural because there was no shared understanding on what these terms defined (see section 1.2, 5.2, and 11.2.).

To address this, the final Constitution (South Africa, 1996) called for urban and rural settlements to be integrated to form “regions” and thus be categorised as one of the three administrative structures: category A (metropolitan municipalities); category B (local municipalities); and category C (district municipalities). According to the Green Paper on Local Government (South Africa, 1997), this approach was particularly useful in ensuring that sub-urban and peripheral development were not excluded from local municipal boundaries and their tax bases. Furthermore, the Constitution (South Africa, 1996) required all administrative entities to be demarcated by one municipal demarcation board (MDB). The prescribed criteria by which these municipalities were to be delimited were set out in the Municipal Demarcation Act (27 of 1998).

The exact criteria for the delimitation of boundaries were set out in Section 24 of the Municipal Demarcation Act (27 of 1998) and were further supported by Section 25 of the same Act. The principles or criteria for demarcation of administrative boundaries as found in this section were based on the constitutional obligations that the administrative structures were expected to fulfil (see Chapter 6 for details):

Table 11-1: Requirements for Municipal boundary demarcation

Section 24 criteria	Support from section 25
(a) enable the municipality of that area to fulfil its constitutional obligations, including: (i) the provision of democratic and accountable government for the local communities; (ii) the provision of services to the communities in an equitable and sustainable manner; (iii) the promotion of social and economic development; and (iv) the promotion of a safe and healthy environment. (b) enable effective local governance;	(k) the administrative consequences of its boundary determination on: (i) municipal creditworthiness; (ii) existing municipalities, their council members and staff; and (iii) any other relevant matter. (l) the need to rationalise the total

based on the assumption that eliminating smaller and rural forms of local governments to create larger entities would save costs on local service delivery and maximise profits. However, this study has found that at least 50% of the municipalities demarcated in 2000 are too large to operate efficiently and are currently in financial distress.

At the time of boundary demarcation in 2000, the MDB did not have a strong human resource capacity and the demarcation process was rushed to be completed before the first democratic local government elections in 2000. As a result, the MDB employed consultants, many of whom did not really understand the demarcation criteria as stated in the Municipal Demarcation Act (27 of 1998) (see Table 11-1), leaving many of the boundaries to be demarcated according to the suggestions of the community or the discretion of the consultants. While the MDB has been aware of these inconsistencies and the consequent formation of many cross-boundary municipalities, it did not have the human resources capacity or the time to correct these boundaries.

Consequently, this study has proposed that the criteria as stated in Sections 24 and 25 be revisited to make them more objective, concise and more development-oriented. In this regard the MDB should consider the functional linkage approach in which they set a maximum distance that would be viable for demarcating two settlements one municipality. Judging from the case of East London and King Williams Town (50 kilometres) and Bloemfontein and Thaba Nchu (70 kilometres), the present functional linkages do not seem to be financially viable nor do they promote economies of scale. Therefore, it is recommended that municipalities be demarcated in a way that would allow them to firstly strengthen themselves internally and function as a collective entity (see financial viability delimitation discussion in section 3.3.1.5) before extending their boundaries to include more settlements. The CPI initiative of the UN could assist in this regard.

Summary of contribution to delineation of administrative structures in South Africa

The findings above provided insight into the implementation of the Municipal Demarcation Act (27 of 1998) although they were found to be both complex and confusing.

As a result, demarcation was not easy to implement, leaving the country with many cross-boundary municipalities and financially non-viable municipalities.

Subsequently, this thesis calls for a revision of the demarcation criteria to be more objective and concise.

11.4 Contribution: Categorisation of metropolitan regions in the country

The last two decades have seen many governments attempt to restructure their administrations. This reform has principally been driven by two opposing agendas.

The first agenda is the free market, top-down, neo-liberal agenda, which seeks to reduce the number of municipalities by amalgamation, consolidation, fusion, incorporation, or annexation to create larger administrative entities with the primary aim of saving money, lowering local taxes, providing greater efficiency in service delivery, and making local governments more accountable.

The alternative agenda for structural reform is a more dynamic bottom-up, inclusive, open and spontaneous, “new regionalism” approach, which promotes the development of differently sized administrative entities simultaneously through cooperative governance, thereby offering the benefits of amalgamation without its associated costs.

Upon implementing the final Constitution in South Africa in 1996, the democratic government made allowance for both these types of administrative structures. Category A municipalities were to be categorised as unitary entities according to the criteria set out in Section 2 of the Municipal Structures Act (117 of 1998). The establishment of these amalgamated category A metropolitan municipalities were intended to increase the efficiency of resource allocation, broaden the tax base, and facilitate access to public services while promoting the integration of rural and urban areas in the municipalities. According to the Municipal Structures Act (117 of 1998) if a municipality does not meet the Section 2 criteria of the Municipal Structures Act (117 of 1998) it should be categorised as either category B (local municipality) or category C (district municipality). The Constitution (South Africa, 1996) specified that both these municipalities (category B and category C) should have a cooperative relationship with the district municipality, which would have jurisdictional power over the local municipalities while still being demarcated as separate entities.

In 2006 the Regional Integrated Development Strategy (RIDS) discovered that confusion and uncertainty prevailed under the expected roles and responsibilities between local municipalities and district municipalities – some district municipalities were found to not to have served any function in some of the local municipalities. The MDB was asked to investigate the Mangaung, Buffalo City, and Msunduzi municipalities to be re-categorised as category A metropolitan

municipalities, with the intention of eliminating the struggle for power between the district municipality and the local municipality.

However, according to legislation the region would have to prove that they met the requirements of Section 2 of the Municipal Structures Act (117 of 1998) before being granted category A metropolitan status. This was necessary to ensure consistency in categorisation regardless of the role or the responsibilities that the local municipalities were fulfilling in the region or the power struggles between the district and local municipalities in the region.

In light of the above, the study has found that the Section 2 criteria of the Municipal Structures Act (117 of 1998) used to categorise metropolitan municipalities was vague and subjective, which allowed for the criteria to be interpreted in any manner that would benefit the applicant. This proves that the criteria can be interpreted in various ways and that the MDB has been largely inconsistent in applying the criteria over the 1999–2011 period (see Chapters 8 and 9). This has resulted in there being four different classes of category A metropolitan municipalities in South Africa (see Table 11-2 below for main findings).

Table 11-2: Highlighting the subjective nature of the section 2 criteria

Criteria	Theoretical perspective	Empirical findings
Conurbation	The MDB interprets a conurbation as a municipality that with 70% urban households and 30% rural households.	However, there is no data available on urban and rural areas.
High-density areas	No standard definition	Four different interpretations of this definition
Intensive movement of goods and services	Functional linkages	Intensity between units is unknown since it is uncertain as to how functional linkages should be calculated or measured.
A single area for which integrated development is desirable	The area should have a structure that can assist it in its administration and management to meet the basic needs of all its citizens while promoting the economic and social development of the region	The implementation of this criterion is not that easy since it is uncertain as to how integration should be calculated or measured.
Extensive development	Compact development	Unknown what GVA contribution should be for a

		municipality to adhere to "compactness"
Multiple business districts	Higher-order centre	Unspecified what businesses are required or how many business districts
Centre of economic activity with complex and diverse economy	Higher order centre	Undefined what complex or diverse economy would entail
Integrated development	To allow for effective planning and equitable development.	Integration is subjective. Uncertain how to measure it
Strong linkages between units	Functional linkages	Uncertain what intensity is required

Source: (Own construction)

However, the MDB could not reject the applications of both Mangaung and Buffalo City municipalities to become metropolitan municipalities since there was no objective criterion with which to motivate this decision. The inconsistent understanding and interpretation of the Section 2 criteria open the way to gerrymandering and allow corruption. As a result, the MDB is currently working on finding more objective criteria with which to categorise municipalities in South Africa (this thesis has proposed a manner by which the criteria could be objectified).

In the interim it is found that the country had possibly categorised a few metropolitan municipalities prematurely. Subsequently, it is important to bear in mind that a municipality's success is not solely a result of a single tax base since this does not guarantee the integration and fair distribution of resources. Rather, a municipality's success is more a result of a range of other independent aspects that includes the resources the municipality uses, the state of its basic services, the age and quality of its infrastructure, and the strengths and skills of the administrative municipal staff in ensuring that services are delivered in an efficient and equitable manner. As a result, this study recommends that the criteria to categorise municipalities include indicators such as the HDI, Gini-coefficient, access to basic services, and the level of infrastructure in the municipality, which would provide a more holistic approach to the categorisation of municipalities.

Owing to the lack of statistical data and contemporary research on the effects of municipal categorisation and demarcation, currently no evidence exists that indicates that a larger metropolitan is better at performing services than smaller centres or that smaller centres are more efficient in providing services and contributing to economic development. The demarcation and categorisation of local government administrative entities will always be a contested issue as long as there are individuals who stand to gain from it while others lose power.

Summary of contribution to the categorisation of metropolitan regions in South Africa

Criteria for the categorisation of metropolitan municipalities are largely subjective.

It has been easily manipulated to attain political objectives

A more objective measure is recommended by which both settlements and administrative areas can be categorised in South Africa.

11.5 Contribution: Future Research

This study revealed that there currently is limited research available on the process of categorizing administrative municipalities in South Africa. Nonetheless, in order to understand how municipalities are categorized one would first need to understand the composition and categorization of the settlements? Hence, this study recommends that further research be conducted on how high density and low density should be defined in South Africa? And how would the application of this definition influence the categorization of settlements?

Furthermore, it would also be important to understand what the cost and benefits are to having fewer but large administrative municipalities. What would the advantages and disadvantages be of having so many metropolitan municipalities located within one province? How many metropolitan municipalities should a country like South Africa have before it reaps the economic benefits of balanced development? Lastly, it would be informative to have a research study investigate the success of the South African administrative restructuring process in achieving transformation?

The study further recommends that future research be conducted into finding an objective criteria to classify settlements and to categorized administrative entities in the country.

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ANNEXURE A: NORTH-WEST UNIVERSITY QUESTIONNAIRE

Over the past twenty years South Africans have witnessed eight of their cities gaining metropolitan status. The categorisation of these metropolitans has been based on the criteria as set out in Section 2 of the Municipal Structures Act (117 of 1998). This questionnaire seeks to gain insight into the interpretation of this criterion.

Demographic Data

1. What is your main sector of employment?

Mark only one oval.

- Private Sector
- Public Sector
- Academic
- Other:

2. What is your highest level of spatial planning education?

Mark only one oval.

- Diploma
- Degree
- Honours
- Masters
- PhD
- Other:

3. How many years of professional experience do you have?

Mark only one oval.

- 0 to 5 years
- 6 to 10 years

- 11 to 15 years
- 16 to 20 years
- Over 20 years

4. To what extent are you familiar with the categorisation of metropolitans in South Africa?

Mark only one oval.

1 2 3 4 5

Not familiar

Very familiar

Research Questions

These questions are based on Section 2 of the Municipal Structures Act (117 of 1998). Please note there are no right or wrong answers.

5. Which of the following options defines a conurbation best?

Mark only one oval.

- A large area that has only urban settlements which are interconnected socially, economically, and spatially.
- A large region that has many urban settlements and fewer rural areas which are interconnected socially, economically, and functionally.
- One large amalgamation of mostly rural settlements and fewer urban areas which are interconnected socially, economically, and functionally.
- Other:

6. Which option defines an urban area best in South Africa?

Mark only one oval.

- A human settlement with a medium to high population density and majority of the population employed in a non-agricultural activity.
- A settlement with a population of more than 2 000 people, majority of whom are employed in non-agricultural activities.
- A settlement with a population of more than 50 000 people, majority of whom are employed in non-agricultural activities.

- A human settlement that is continuously built-up and offers employment.
- Other:

7. How would you define extensively developed urban areas?

Mark only one oval.

- The built environment extending over a considerable area without much open spaces between them.
- The built environment covering a big area with large open spaces between them.
- Other:

8. What is the minimum population threshold of a settlement for it to be considered a metropolitan?

Mark only one oval.

- Under 500 000 people
- 500 000 people
- 600 000 people
- 700 000 people
- 800 000 people
- 900 000 people
- 1 000 000 people
- Over 1 000 000 people
- Uncertain

9. Please choose which option defines high population density:

Mark only one oval.

- Between 100 to 300 people per square kilometre.
- Between 301 to 599 people per square kilometre.
- Between 600 and 899 people per square kilometre.

- Between 900 and 1 000 people per square kilometre.
- Over a 1 000 people per square kilometre.
- Uncertain
- Other:

10. Please choose which option defines medium-density best:

Mark only one oval.

- Less than 100 people per square kilometre.
- Between 100 and 300 people per square kilometre.
- Between 301 and 599 people per square kilometre.
- Between 600 and 899 people per square kilometre.
- Between 900 and 1 000 people per square kilometre.
- Over a 1 000 people per square kilometre.
- Uncertain
- Other:

11. How many local economic sectors need to produce more than the national location quotient for the local economy to be defined as complex?

Mark only one oval.

- 2 economic sectors that have a location quotient over 1.
- 3 economic sectors that have a location quotient over 1.
- 4 economic sectors that have a location quotient over 1.
- 5 economic sectors that have a location quotient over 1.
- 6 economic sectors that have a location quotient over 1.
- Over 6 economic sectors that have a location quotient over 1.
- Uncertain

12. What, in your opinion, should the tress index be for a city's economy to be defined as diverse? (0 represents totally diverse and 100 defines a concentrated economy)

Mark only one oval.

- A tress index of 20.
- A tress index between 21 and 30.
- A tress index between 31 and 40.
- A tress index between 41 and 50.
- A tress index between 51 and 60.
- A tress index between 61 and 70.
- A tress index between 71 and 80.
- A tress index between 81 and 90.
- A tress index between 91 and 100.
- Uncertain

13. As a town planner in South Africa, how would you measure intensive movement of people, goods, and services between settlements? (What data would you use?)

14. How would you determine an area where integrated development planning is required?

Tick all that apply.

- Functional linkages
- Financial viability
- Human settlement approach
- Cohesiveness
- Economies of Scale
- Equality

- Political will
- Uncertain

15. Which of the following cities, according to you, best defines a metropolitan region in South Africa?

Tick all that apply.

- City of Johannesburg (Gauteng)
- eThekweni (Kwa-Zulu Natal)
- City of Cape Town (Western Cape)
- Buffalo City (Eastern Cape)
- Manguang (Free State)
- Nelson Mandela Bay (Eastern Cape)
- Msunduzi (Kwa-Zulu Natal)
- Ekurhuleni (Gauteng)
- Tshwane (Gauteng)
- All of the above
- Other:

16. Could you please elaborate on why your choices in question 15 are considered to be metropolitan regions?

17. Could you please provide a reason why you excluded certain options in question 16?

Thank you for your participation

This questionnaire forms part of research conducted for a dissertation for completion of the degree Philosophy of Science (Planning). Thank you for your voluntary participation. Your input is greatly appreciated! For more details or ethics requirements, please contact the study leader Prof E.J. Cilliers at juanee.cilliers@nwu.ac.za or the researcher Zaakirah Jeeva at Zaakirah.jeeva@gmail.com

ANNEXURE B: SUBMISSION CONFIRMATION

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Title EVALUATING THE FORMATION OF CATEGORY A METROPOLITAN MUNICIPALITIES IN SOUTH AFRICA

Authors Jeeva, Zaakirah

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