Containing the Human "Tree" in South Africa- what is the perfect size?

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Abstract:

Effective governance is dependent on the structure and composition of the municipality. On the 19th of May 2022, the South African Minister of Finance, Enoch Godongwana openly acknowledged that a large number of municipalities in South Africa are dysfunctional and consequently many local economies were struggling. In light of this statement, the paper questions the formation of municipalities in South Africa and seeks to determine if the areas delimited are manageable. The paper analyses the 88 municipalities listed as dysfunctional in terms of their delimited areas in 2016 and their related population. It found that many of the municipalities listed as dysfunctional are very large and have low population densities. At least 81% of the 88 municipalities had a population density below 100 people/ KM. This sparse development makes the management and development difficult and hinders economic investments. As a result, the paper suggests that smaller municipalities might provide a solution to creating more functional municipalities with stronger economies. The paper provides insight into delimitation challenges.

Key Words: Municipalities, Delimitation, Population density, Dysfunctional, South Africa.

1. Introduction

Historically, South African administrative areas were delineated based on racial profiles, with nonwhite administrative areas being located on the periphery of white administrative urban areas (Lemon, 1991). However, these peripheral administrations were not allowed to be economically developed, which forced inhabitants to commute to white owned city centers for commercial and employment purposes. Nevertheless, in 1994, the newly elected democratic government intended to correct this spatial injustice, by delimiting more integrated and cohesive administrative areas (RSA, 1998). As a result, they legislated that non-white administrative areas were to be integrated **Commented [ZJ1]:** This entire section addresses RV 2 concerns on the how the topic relates to Town Planning. Although, it might seem administrative it is actually spatial. It looks at the issue of dysfunctional from a size and population density perspective. with the white urban areas to form unified local municipalities that were to be governed by a one city- one tax base principal (RSA, 1996) (See figure 1).

However, upon the initial delimitation in 1994, it was found that there was no clear definition for urban areas or rural areas. It was further noted that due to the unnatural linkages enforced by the apartheid government, urban and rural areas were functionally related and economically dependent and as result it was necessary to combine them to promote equitable, integrated development. It was believed that the inclusion would allow for more efficient, effective and sustainable management of the regions (See figure1) (RSA, 1998).

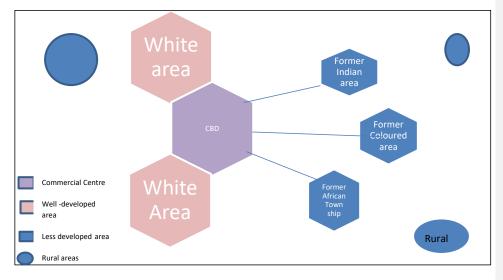


Figure 1: Economic and Social state of Municipalities (Authors own).

In 1998, an independent Municipal Demarcation Board (MDB) was employed to determine local administrative boundaries according to the criteria listed in Municipal Demarcation Act (27 of 1998) and other appropriate legislation enacted in terms of Chapter 7 of the Constitution. This resulted in the reduction of the 1253 racial administrations to the establishment of 287 integrated municipalities.

What sets South African administrative regions apart from other global administrative regions is that although regions were delimited based on functional interaction, cohesiveness and geographic location (RSA, 1998). In the South African case, administrative regions were delimited around unnaturally large areas with a mono-centric structure. Furthermore, there was limited data with which decisions could be made and most boundaries were delimited in a subjective manner based on input from the community (Cameron, 2005). Resultantly, municipal boundaries have shifted five times over the last 22 years, for various reasons. The current product being 257 municipalities, which are larger than previously.

Accordingly, in 2022, the Minister of Finance. found that least one third (88) of South Africa's municipalities are totally dysfunctional (SA News, 2022).

In light of this, the paper analyses the territorial size of the 88 dysfunctional municipalities and the related population densities, in order to determine if there is a relationship between the two factors and if it could be influencing spatial dysfunctionality. The topic provides important and necessary insight into delimitation debate of creating optimal size administrations. The section below discusses the methodology, findings, discussion and conclusions.

2. Methodology:

The paper evaluates secondary data related to the 88 municipalities listed as dysfunctional in South Africa. Data found on the Municipal Websites was evaluated in terms of Arithmetic density – the number of people/ km within each municipality in 2016. Findings were captured and illustrated through graphs and analysed. The size and population density is essential for urban planning, since without knowing how many people are located in vicinity, governments and policymakers can't improve the provision of basic services. There is currently no objective or prescribe size of municipalities in S.A and the findings contribute to a deeper understanding on why these regions are dysfunctional from a spatial planning perspective.

3. . Literature review :

Population density is one of the most important aspects in urban planning and directly affects the functioning of a city and the provision of services to the inhabitants (Howard, 1902). Research has shown that if the settlement area is too sparsely populated the cost of management is too high and service delivery is inefficient (Howard, 1902). As a result, many modern urban planners have advocated for administrations with higher population densities to allow for more efficient administration and management (Garland, 2016). However, if the population density is too high, there are fewer amenities per person, the cost of housing and services goes up, liveability becomes uncomfortable and as a result inhabitants start moving out. Furthermore, when cities are allowed to expand from the centre without the benefits of smart planning, they can become unsustainable, since it becomes costly providing services to a larger and more sparsely populated region, without a strong economic centre (Buljan, Svaljek and Deskar-Škrbić, 2021). Currently, there is no consensus from an economic, demographic or social perspective on what is an optimal size for an administrative should be for it to be sustainable (OECD, 2018). The study investigates the current size of municipalities in S.A, to determine what size and population density could be contributing to dysfunctionality.

Findings:

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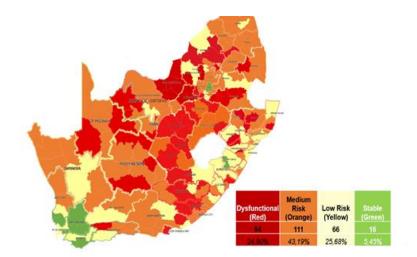
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Commented [ZJ5]: RV 2 comments on relevance. It is an important study for town planning because we work between administrative boundaries and we are responsible for the sustainable development of the region. It is a transdisciplinary responsibility and very relevant to town planning.

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Commented [ZJ7]: Unfortunately I cannot answer RV1 Comment (3-5) on optimal size city in such a short paper – It will be addressed in the Presentation. South Africa has no standard method of delimiting municipal regions. Resultantly, over the past 22 years (2000-2022), municipalities have reduced from 287 to 257. The MDB motivated the reduction and the delimitation of larger municipalities stating that it allows for easier administration and financial viability (Thupane, 2015). However, municipalities have complained that their regions are too large and sparsely populated to allow for agglomeration advantages, public participation and the efficient delivery of services (Khumelo & Ncube, 2016:11; Omarjee, 2018:1). Subsequently, in 2021, Cooperative Governance and Traditional Affairs (COGTA) found that 163 of South Africa's municipalities were in dire financial straits and 88 were totally dysfunctional (COGTA, 2018) (see map 1 below)**Map 1: Dysfunctional Municipalities in South Africa 2021 (Adapted from the Portfolio Committee, 2016)**

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According to Brand (2018) dysfunctional municipalities displayed very poor or no service delivery, had low debt collection and financial mismanagement and deteriorating infrastructure. These factors together have negatively affected economic growth and social development (Brand, 2018). Minster Mkihze (2018) further explained that the dysfunctionality in municipalities was due to: the size and structure of municipalities as well as the administrative mismanagement due to "political instability or interference, corruption and incompetence" (Brand, 2018).

In light of the first aspect, the paper found that this is indeed true. The paper found that majority (70) of the dysfunctional municipalities are sized below 15 000/ KM with an average size of the

dysfunctional municipalities being 8466, 42/ KM. This is much larger than the average size municipalities in OECD countries (See figure 2 below).

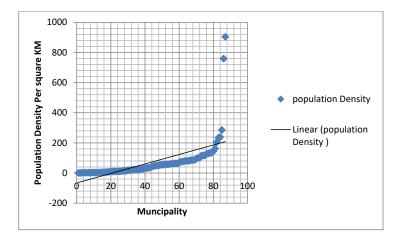
50000 40000 30000 Size of Muncipality Areas/km² 20000 Linear (Areas/km²) 10000 0 100 40 60 80 2h -10000 Number of dysfuctional Muncipalities

Figure 2: Size of dysfunctional municipalities (Authors own).

For instance, the average municipal area in Austria is 39.3 KM and the country has 2107 municipalities. Finland average size of municipalities is 977 KM and it has 312 municipalities. Romania municipalities are an average size of 75 Km and the country has 3223 municipalities (OECD, 2018). These are smaller municipalities, but larger in numbers - contrary to the South African case.

The average population in each of South Africa's dysfunctional municipalities is, 267 983.7 people. With, 81% (72) municipalities have a density of less than 100 people/KM. (See Figure3 below). In terms of global comparison the density in these municipalities is rather low. In 2012, Paris had 21,616 people/km, London West had 10,374 persons/ KM (EU, 2012), while India had an average density of 382 people/km (Goel and Mohan, 2020) The United Nations considers municipalities are rural in nature

Figure 3: Population Density in Dysfunctional Municipalities (Authors own: Data adapted from Municipalities of South Africa, 2016)



The concern of having such large areas with such low population densities is that there are not enough funds being generated within the municipality to pay for services that will be used by only a smaller number of people. Furthermore, due to the lack of services inhabitants migrate out and the area suffers from brain drain. This increases poverty and inequality and poses a risk to overall urban resilience.

Nonetheless, South African legislation does not make provision for municipalities to be redelimited into smaller unit's for fear that this would promote exclusion and fragmentation. Though, this concern could be the deterrent that leads to continuous development of non-financially viable and dysfunctional municipalities in South Africa. The study recommends that the MDB revisit the delimitation of these 88 municipalities and suggest that smaller municipalities with higher densities might offer better development opportunities then larger municipalities with lower densities.

5.4. Conclusions:

Previously, South African administrative areas were not designed with an inclusive or sustainable mind-set. The challenge of the present is to redress the historical imbalances and spatial inequalities, while trying to keep up with population dynamics and promoting socio-economic development. In light of this, the democratic government believed that creating larger and more integrated administrative areas might offer a solution to these challenges. However, there is no set formula on how these should be delimited and 22 years later one third of the municipalities are dysfunctional. The study recommends that the criterion by which municipalities are delimited be revisited and provision should be made for the reduction in municipal size to allow for equity in development and easy management.

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It other words, this paper is an academic conversation starter.

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