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Demographic aspects of urbanization in Africa: a re-assessment of recent patterns

By

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DECLARATION

I declare that ***"Demographic aspects of urbanization in Africa: a re-assessment of recent patterns"*** is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Theopolina Jambeinge

November 2017 **Signed:** _____

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LIST OF ACRONYMS

AfDB	Africa Development Bank
AIDS	Acquired Immune Deficiency Syndrome
CAR	Central Africa Republic
DRC	Democratic Republic of Congo
HDI	Human Development Index
HIV	Human Immune Virus
IMF	International Monetary Fund
ODP	OpenData Platform
SDMX	Statistical Data and Metadata Exchange
SEDA	Socio-economic Data and Application Centre
UN	United Nations
UNECA	United Nations Economic Commission for Africa
UN-Habitat	United Nations Human Settlements Programme
WB	World Bank
WUP	World Urbanisation Prospects

ABSTRACT

The purpose is to compare the levels and patterns of urbanisation among African countries using recent data from population censuses or other secondary sources. Different statistical indicators of measuring the level of urbanisation will be used; these could refer to the static and dynamic measurements. There have been some arguments that urbanisation in Africa is showing marked divergent trends after experiencing high patterns of urbanisation while some countries have gone through a process of decline. Other African countries have reached what is called urban transition, with more than half of the population living in urban areas. In sum, a great deal of uncertainty prevails around the real trends of urbanisation on the continent because data has not been analysed extensively. In theory, as African countries develop or experience economic growth, one can expect to see them urbanising to a great extent. In theory also there is a link between urbanisation and development; and as development takes place one expects to see urbanisation also strengthening and systematically changing.

The expectation is that most countries will experience a high level of urbanisation. The study will contribute to the theoretical debate by bringing in quantitative measurement of urbanisation using recent information. The study will make use of data from existing population censuses taken over the past years. From these data a set of indicators will be calculated according to the availability of data. The indicators will refer to the static and dynamic measurement of urbanisation. The analyses will be comparative across countries. It is expected to see differences or similarities, convergence and divergence. The results will highlight which countries are growing faster, which countries are experiencing slow urban population growth and which countries are in stagnation or not urbanising at all, and recommendations will be made accordingly to guide the policy.

Keywords: Urban population, ruralisation, urban growth rate, demographic projection, settlement, population density, censuses, migration, over-urbanisation.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In recent years, urban growth has been one of the major challenges in Africa. The increasing size and unwieldiness of towns and cities are a result of an on-going rapid urbanisation. The process of this rapid urbanisation in Africa is driven by the pursuit of employment and a better standard of living, which is rarely offered or available in rural areas (Okeke, 2014). Urbanisation brings about better services and livelihoods to millions, but poverty remains high in the rural and urban areas of Africa. Urbanisation is defined as an increase in the percentage of people living in towns and cities, which takes place as people move from rural to urban areas for better living standards. Urbanisation increases as a result of the extent and density of the cities. (Munyoro, Kabangure & Dzapasi, 2014)

The bulk of this paper outlines the consequences, reasons, level, trends and patterns of development of African cities. The trends observed in Africa's urban areas are similar to those observed in developed countries whereby urbanisation is an outcome of a pull from agricultural productivity growth to a pull towards industrial productivity growth, causing the cities to become densely populated (Freire, Lall & Leipziger, 2014). The world's urban population growth rate is four times the rural population growth rate. Other research institutions have forecast that the future of most countries will rely heavily on cities because the urban population will double. This means that by 2025, most of the world's population will then be located in towns and cities. In developing countries alone, the urban growth rate will be around 90 percent, which will lead to more informal settlements because of a large inflow of population form rural areas, small towns or semi-urban areas. (Chirisa, 2008). The demographic change of rural to urban migration and urban population growth are the main drivers of urbanisation. The other direct aspect of urbanisation, which is linked to economic revolution policy, is industrialisation. Generally, Africa is not ready to deal with high rates of urbanisation (Lwasa, 2014).

According to the UN Habitat (2013), rapid urban growth in Africa includes negative factors such as conflict and famine, as well as ethnic, civil and positive factors such as economic growth. Factors such as rural – urban migration; natural population growth; government policies; economic

forces and globalisation cause urban growth. The process of urbanisation in Africa faces weak planning capabilities in administration and institutions. An efficient policy needs to be implemented, and an active government engagement is required for urbanisation to be successful (Collier, 2016). The projection and trends of urbanisation are mostly used by policy makers, economists and demographers.

Africa is said to be urbanising quickly but we don't know the variations across space and time and furthermore, there seem to be some contradictions according to the sources of data. There is some degree of uncertainty when it comes to the data collected and recorded in the past, as a lot of errors have been made with respect to projections and estimation of the population trends of cities. The study analyses whether there are some consistencies, or perhaps differences and similarities. Many arguments are that many parts of Africa's urbanisation is declining. The study will test this argument against the data at hand. The problem is one of force of argument when comparing the trends, because although studies demonstrate that the continent is growing fast as far as urbanisation is concerned, the different view is that urbanisation in many countries has been declining. But this counter argument has not been substantiated in a universal way as far as the continent is concerned. This argument also examines the view of urbanisation, that secondary cities have been growing compared with the major cities, but this too has not been universally established from the continent's perspective; also it has been argued that urbanisation has been over-estimated but the current data is not in argument with regard to these patterns. This is why the study would like to compare whether the major organisations like the World Bank, United Nations, Geo-Hive and AfDB are showing the same patterns of urbanisation growing constantly, or to determine which country has been declining and which country has been growing, because it has not been established whether the patterns are similar or different. The use of these massive data resources from the World Bank provides a comprehensive overview of the phenomenon.

1.2 Professional Background of the Study

Urbanisation has gained importance around the continent because many people (possibly more than 50 percent) could be living in cities. Many countries have experienced urbanisation or what they call urban transition, where you have more people living in urban areas than rural areas. This

study investigates the significance of urbanisation in Africa. Due to rapid urbanisation, local authorities face many challenges and if recognised - local authorities and other organisations need to plan for the future of urban growth and to provide services ahead. When data is released, it will help to have a more recent perspective of the study. There is still a gap when it comes to urbanisation, although a lot of research has been done around the topic. The finding of this study will contribute to the benefit of the policy makers and different organisations by providing additional information on urbanisation for sustainable development and planning for the economic growth of the nations.

The identification of what constitutes an urban area is a major source of confusion in the study of urbanisation since there is no unique guide on how to define an urban area. The definition of an urban area changes over time. The United Nations depends on national statistical agencies for their definition of urban areas which varies from one country to another, and this brings problems when comparisons are made across countries. Some countries define the urban population as those people living within certain administrative centres while others define the urban population using population size or population density as their primary consideration. The absence of reliable and up-to-date demographic data is a general constraint for the analysis of urban growth and trends in city sizes. Angola, Argentina and Ethiopia consider urban areas to be all localities with 2000 dwellers or more, while in Benin, urban areas are classified as localities with 10000 dwellers or more. In Botswana, a cluster of 5000 or more inhabitants where the economic activity of 75 percent is non-agricultural, would be regarded as an urban area (Cohen, 2003).

Some new studies suggest that the links between urbanisation and industrialisation are not universal. African urbanisation may have been brought about by the exports of natural resources instead of improvements in manufacturing productivity (Freire, Lall & Leipziger, 2014). Contrary to the experiences documented in other parts of the world, such as Europe, there is no evidence available to indicate that the percentage of the population residing in African cities is on the decline. (Jelili, 2012) explains that there is an emerging trend of rural urbanisation in Africa which is not new in many African countries.

1.3 The Problem Statement

Previous studies have reported that African countries are experiencing an ongoing urban transition. Some countries are experiencing a slow urban growth and others are experiencing counter urbanisation, meaning they are not growing at all; whereas some countries are experiencing a high urban growth. Previous data shows a strong primacy index, especially in Western Africa and Eastern Africa after the colonial era. Since sufficient data is not available, it is difficult to validate, because a trend in past/old data was to overestimate urbanisation by keeping it high, but the reality (as many studies have suggested) is that urbanisation is declining. The World Bank data for example, shows continuing growth, but if one takes data from each individual country, the determination is that urbanisation is stable or decreasing. The study will question this, looking at the recent data to see if there is a change in the primacy, for instance, which part of Africa shows a higher level of primacy or urbanisation trends. Very little is known about urban growth and primacy in Africa.

Data released by secondary sources and national statistic offices show opposite trends and there is a great deal of misunderstanding of what the data available means, or there is misreporting on how the data should be interpreted. Over-prediction or estimation of urbanisation by reporting it at higher levels than it is in reality is common, and because of many gaps in the data, many of the assumptions no longer hold true. Due to the lack of decent data, it may be difficult to fully demonstrate.

1.3.1 Research Questions

The following research questions were investigated through this study:

- Are there any similarities, differences and variations across African countries in term of urbanisation?
- Do we observe a systematic increase or are some countries still under one million?
- Are there discrepancies in terms of the figures?
- Are there any changes in the primacy index in African countries?
- To what extent are the urban systems in Africa moving toward deconcentration?

- Are there countries where the population living in each urban agglomeration exceeds 50% with total population as reference?
- In comparison to the cities of America, Asia and Europe where does Africa stand in terms of urbanisation?
- What are the trends and patterns of urbanisation in Africa?

1.3.2 Research Hypotheses

The following hypotheses are tested in line with the research questions above:

- The rate of urbanisation differs according to the countries: while for some countries the rate has been growing, for other countries it has stagnated or has declined.
- There are discrepancies in terms of urbanisation indicators derived from the producers of data.
- In some countries, the primacy index has decreased, while it has increased in others.
- For the most part, African countries have experienced urban transition creating a situation where more than 50% of their population live in urban areas.
- Urban concentration still affects the urban systems in most part of Africa.

1.4 The Purpose of the Study

The purpose of the study is to examine the patterns or the trends of urbanisation in Africa from 1995 to 2015 and to compare the levels, trends and patterns across the different African countries. Within that framework, the study will compare the trends as displayed in different secondary sources such as documentations of the United Nations, World Bank, Geo-hive, Africa Development Bank and recent data from national population censuses. From these data, a set of indicators will be calculated according to the availability of data. The study will not only be examining temporal comparisons over time but the analyses will be comparative across the geography and continent, further comparing the change within the country itself at national level, using various data from previous population censuses.

1.5 Objectives of the Study

The study profiles the following objectives:

- To produce an empirical study on urbanisation trends with a broad view of urbanisation on the continent from a historical contemporary perspective.
- To compare the measurements of urbanisation, using statistic indicators, among African countries.
- To compare the trends of urbanisation using recent data taken from the national statistic offices and data from secondary sources, to analyse the gaps in, and the quality of, data.
- To analyse the comparative results across countries highlighting the differences, similarities, variations, convergence and divergence.

1.6 Significance of the Study

The study on demographic aspect of urbanisation in Africa contributes to the exiting body of knowledge in the related field. This study extends the knowledge on urbanisation in Africa and provides an understanding about the challenges associated with the increasing percentage of the urban population. The study is relevant because it gives a broad view of the trends and patterns of urbanisation in Africa and it also provides a baseline to observe the changes in the trends of urbanisation within the continent.

1.7 Delimitation

The study covers the whole of Africa which includes 54 countries. The scope is the period of time from 1995 to 2015 and it analyses the population change in cities within African countries. The data is extracted from national statistics and secondary data is extracted from different data sites. The sample includes cities with a population under 100,000 and also cities with an agglomeration of more than 300,000 or more. The limitation of this study is that a lack of data availability has an effect on the accuracy of comparing data across different data sources. This has led to a misinterpretation of urban population growth rates and of the population size of the cities.

1.8 Definitions

Census: Is an official enumeration of a given population done at a particular point in time; this involves the collection of information, as well as the compiling, analysing, evaluating and publishing of the findings on their social-demographic and economic aspects. It is based on one or two counts: (1) de facto, is when people are counted where they are found, and (2) de jure, is when a person is located at their usual dwelling.

Migration: Is a movement of individuals or groups from an origin of locality who are seeking a change of permanent or temporary residence across a political boundary.

Over-urbanisation: is a condition whereby the human population for a given area or region grow to a point until it exceeds the existing resources of the carrying capacity of available facilities or resources.

Population density: number of people per square kilometre of land area.

Population projection: is a set of calculations which shows the future development of fertility, mortality and migration depending on the scenarios or assumptions used.

Ruralisation: a deterioration in the quality of life of urban residents to a point where their quality of life will be very similar to that which prevails in rural areas, and which in some instances may be substandard relative to rural dwellers.

Settlement: is a permanent area or place where people live.

Urban growth rate: the speed at which the number of residents living in an urban population increase despite of their citizenship or legal status.

Urban Population: an area where individuals live, as categorised according to the national census of each country's standard.

1.9 Thesis Outline

This thesis is subdivided into six chapters. Chapter one, which is the introductory chapter, provides the background to the study and outlines the purpose of the study, the objective of the study, problem statement and also the research questions and hypotheses. The chapter further outlines

the professional background of the study, the delimitation and the definitions of terms. Chapter two explores past related literature on urbanization. In particular, the chapter reviews the literature on the theory and measurements of urbanisation as well as the social and economic aspects of the urbanisation phenomenon. Chapter three describes the research methods and data of the study. Chapter four presents the results of data analysis while chapter five provides the discussion of results. Chapter six concludes the study by providing a synthesis of the main findings and a summarised assessment of the various research hypotheses.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Urbanisation in Africa is rapidly increasing, albeit some arguments that the urbanisation trends among African countries have been fluctuating in recent times after periods of experiencing high urbanisation patterns. Even though some African countries have gone through a process of decline in their urbanisation patterns, it is expected that most countries will experience a high incidence of urbanisation in the future. More than half of the African population live in urban areas, an indication that African countries have reached what is known as urban transition. The realities of urban transformation in Africa have cause different constraints, challenges and threats to urban areas. However, it is said that there is an overestimation of data pertaining to urbanisation in Africa and most of the countries are not urbanising as it is reported. This means that there is a great deal of uncertainty around the real trends of urbanisation in Africa. This chapter discusses existing literature related to urbanisation in Africa and its patterns over the years. The chapter focuses on the trends, theory and measurements, as well as the social and economic aspects of urbanisation.

2.2 Trends of Urbanisation

In 2011, Bocquier and Mukandila (by means of the new model) projected that Africa's urban population would by now be at a standstill at a point below the 40 percent mark, with a slight change expected up to 2050; while 62 percent is predicted by the United Nation (UN). The UN projection is very high and does not match the level of economic and social development in Africa. The United Nation Population Division provides the most complete and widely used urban estimates and projections at the national level. The UN is, however, criticised by the National Research Council and Bocquier for assuming that countries will follow the historical path processes of urbanisation that developed countries have experienced. According to the UN, all countries will follow the urban transition pattern of developed countries, and over time they will reach the same level of urbanisation, but empirical evidence suggests that each country went through a different pattern of urban transition. One of the least urbanised continents in the world is Africa compared to other developing parts of the world. It is, however, predicted that by 2050 the highest percentage of the population living in urban areas will be found in Southern Africa

while the lowest percentage will be found in the Eastern Africa region. The percentage of urban growth in Africa in the future will probably remain at the same level. As observed in Africa, the urban population grows faster than the total population (Bocquier & Mukandila, 2011).

Henderson, Roberts, and Storeygard (2013), state that Africa's urbanisation growth has not been followed by rapid macro-economic growth and industrialisation. Africa's urbanisation is rather directed by the allocation of agriculture resource income towards consumption in cities instead of investing the income on manufacturing. The growth of efficient technology and national population growth affect urbanisation in a positive way. It is believed that when institutions are weak, it discourages development. Countries with weak institutions find it difficult to advance from the informal institutions to more formal and structured institutions which are associated with urban setting. It is therefore less likely for such countries to urbanise. Urbanisation occurs faster in instances where institutions are strong and effective. Henderson et al. (2013) emphasise that urbanisation in Africa does differ from other continents but not in the ways that have been previously understood.

According to Collier (2016) urbanisation in Africa is happening at a fast rate regardless of government policies, and it is anticipated that Africa's urban population will increase by 2050. For urbanisation to be successful, an active and prudent government is required. The overall population of Africa has been growing rapidly, yet Africa's process of urbanisation - until now - has not been successful as the cities are not developing in such a way as to provide enough productive jobs. A successful city provides physical conditions in which workers can be productive every day, and where families can live in better environments. It is not easy to build cities that meet all these conditions, because building cities in this way requires investment but no African city has been successful in this regard. The growing rate of Africa's population forces the poor to migrate to cities even though there are limited possibilities of finding productive jobs. Population growth has driven poor people to flood into cities because of rural stagnation which is quite aside from the dynamism of urban economics.

Africa's urban population is likely to triple in the next 50 years. The trends observed in Africa's urbanisation are similar to those observed in developed countries where the income gap between

urban and rural settings is anticipated to decline and possibly fade away in the future but it will take time for this to occur. In Sub-Saharan Africa, the patterns of urbanisation of cities demonstrate differentiation within countries. Africa's urbanisation is increasing at a fast rate but the economic structures of most of its countries are changing at a lower rate. The percentages of national urbanisation may not be greater than the population growth, but there is an increase in the numbers of slums in primate cities with higher concentrations of city-dwellers. (Freire, Lall & Leipziger, 2014).

Cohen (2006) claims that the world's population growth is very much expected to increase in urban areas in developing countries. Half of the world's total population already lives in urban areas and the rapid urban growth is exceeding the capacity of services that most cities can provide to their citizens. Each year migrants are attracted to cities adding to the native population. This increases the number of squatter settlements and shanty towns, and worsens the problems of urban sprawl and congestion, which then forces local authorities to try to improve basic infrastructures and services. Rural-urban migration is the basic reason why urbanisation is increasing. By 2017, it is expected that developing countries will become less rural than urban, but the biggest cause for concern is the great increase in the number of the urban poor. In Africa, 72 percent of the urban population live in slums. Modern living is centred in the cities where the female labour force is substantial, and the indicators of the status of women - for example, social mobility, literacy, general health and wellbeing, are mostly at their highest. The definition of what makes an urban area differs from country to country, and sometimes it differs over time. Within a single country, the definition can be based on population density, population size, administrative or political boundaries, and economic functions.

Jelili (2012) outlines the reasons, trends, patterns and the consequences of the development of cities in Africa to uncover the circumstances surrounding urbanisation. Jelili (2012) concludes that the future of cities in Africa may not be as bleak as envisioned by a certain school of thought, if the management and planning of the physical environment is effective in reducing urban slums, building a good system of moderate-sized urban centres and urban villages with the variability of rural semi-urban economies; and if Africa's urban economy is less marginalised in the global economy. The next population of 3 billion people that will be added to the planet are mostly going

to live in cities in poor countries that do not have the ability to deal with or the resources for such a large influx of people. This will result in a situation where people live in slum areas with limited services, poor housing and infrastructure. Jelili (2012) also projects the future of the development of cities in Africa, and identifies the necessary measures to firstly, prevent the unwanted effects of urbanisation and secondly, to improve the development of cities. Although Africa is the least urbanised continent, the growth rates of its cities are the fastest in the world. While new cities are being developed in every part of the continent, the old ones have expanded drastically to become mega-cities. Just like other regions of the developing world, the expansion of cities in Africa is caused by factors such as: (1) uncontrolled rural-urban migration; (2) decrease in death rates and increase in birth rates; (3) attitude in favour of urbanism; and (4) the creation of more industrial towns, local government headquarters and state capitals to absorb the increasing urban population.

Chirisa (2008) explores the population growth challenges in Africa using the case studies of Ethiopia (Addis Ababa), South Africa (Johannesburg), Rwanda (Kigali), Zimbabwe (Harare), Egypt (Cairo), Nigeria (Lagos) and Kenya (Nairobi). The paper maps out how the rural population is attracted to urban centres, resulting in a continuous growth of population sizes concomitant with the demand for the services. The urban population growth rate is four times that of the rural population. As a result, most governments face a lot of challenges in developing appropriate infrastructure and preventing the declining trends in living standards, which are associated with overpopulation, pollution and lack of basic services. The increasing urban population in developing nations is characterised by informal settlements which are widely located on the outskirts of the cities or near business centres where there is no access to basic public services (such as schools, hospitals, security, etc.). It is explained that the rapid urbanisation trend in Africa is an outcome of continually decreasing rural populations.

Africa's urbanisation is reported to be the fastest growing in the world, increasing steadily over the past three decades. The Central African Republic, Chad, Guinea-Bissau, Angola and Sudan are the sub-Saharan African countries with the largest percentages of their urban population (about 80 to 90 percent) living in slums. It has been observed that urbanisation in African countries is linked to economic growth as noticed in the last 20 years. There are on-going challenges that African countries face, such as investing in urban infrastructure, managing the urban environment, urban

government transformation by means of providing social services and dealing with adapting to climate change; as well as managing urban development and limited financial resources. While there is a steady population increase among the African megacities of Kinshasa, Cairo and Lagos, other smaller and medium-sized cities are also growing at a faster rate. This is an indication that urbanisation is creating a move away from the megacities and guiding the population to rural lands. Africa's urbanisation has developed with no concurrent proportional change in social transformation. (Lwasa, 2014).

Urbanisation in Africa is advancing at a higher rate than previously and is catching up quickly with the rest of the world. By 2025, it is estimated that more than 52 percent of the population in Africa will live in cities and towns. It is understood that sub-Saharan African countries are undergoing an unprecedented rate of urbanisation (Njoh, 2003). In the early 1990's, the percentage of Africans living in urban areas increased from 24 to 27 percent. The population growth rates in most cities are higher than the national average. For example in Nigeria, the population of Lagos grew at an average rate of 5.6 percent per year while the national annual growth rate was 3 percent between 1975 and 2000 (Njoh, 2003).

The on-going movement to cities is one of the challenges faced by city management. In the past, South African urbanisation was formed by policies that controlled the movement and settlement of black people. However, there has been a decline in the rate of urbanisation in recent times compared to the era of apartheid. Most people move to cities which are experiencing economic growth, especially the Gauteng metropolitan area and the fast-growing secondary cities. There has been a net out-migration rate in small town or rural municipalities while most individuals have been drawn to metros, cities and large towns (Todes, Kok, Wentzel, Van Zyl & Cross, 2010).

Turok (2012) claims that South Africa is one of the most urbanised and industrialised economies in Africa with 62 percent of the country's total population of 50 million living in urban areas. Since 1994, when the democratic government came to power there has been no clear urban policy plan or strategy to manage urbanisation. There has been a continuous movement of people toward the cities in search of better livelihoods or improved public services. There is a lack of services such

as electricity, water, sanitation and refuse removal in many places and most places are overcrowded (Turok, 2012).

Cohen (2003) examines urban growth in developing countries to clarify the available evidence on the trends, patterns and the uncertainty of existing urban forecasts. In the 21st century, one of the most important challenges is the management of urban growth which has increased in both scope and complexity.

More than 15 percent of the population of nine African countries are in large cities, and in the case of Congo and Libya, over 30 percent of the population are in the large cities. The current percentage of urban residents in middle and low-income developing countries living in megacities is about 21 percent of the national population. The restructuring of economies worldwide and the increased interconnection between countries and regions all over the world has also contributed to the evolution of the new urban hierarchy. Rapid urbanisation is not always driven by urban migration but also by the growth of cities through natural increases such as the excess in the number of births over the number of deaths, and the high percentage of women of reproductive age who reside in cities rather than rural areas.

Within 20 to 30 years, developing nations in Africa and Asia will experience a great number of urban residents joining Latin America. The United Nations (UN) Population Division has projected that by 2030, developing countries will have more urban areas than rural areas. About 60 percent of the developing nation's urban growth rate is caused by natural growth while the other 40 percent is attributed to migration and spatial expansion (Montgomery, 2008).

Potts (2006) posits that in the 1960s the urban areas of Southern and Western Africa went through a profound change that influenced their nature as well as their role in national development. This change has caused a decline in the level of economic development which has led to the provision of inadequate services and urban poverty. Urban population growth in the many cities and towns in Africa is not as fast as it was in the 1960s and 1970s. Potts (2009) highlighted that urbanisation in some sub-Saharan African countries is very slow - based on the latest census data. It is rare to find a decline in the level of urbanisation but that has been the case for countries such as Zambia,

Cote d'Ivoire and Mali. Other countries such as Benin, Mozambique, Senegal, Zimbabwe, Mauritania, Burkina Faso and Nigeria have experienced either a very slow growth or stagnated levels of urbanisation. The situation in East African countries is mixed since the recent census data figures show that the growth of many urban areas has been only a little above and in some cases, has been either below or the same as, the growth rate of the national population.

It is reported that in 2008, more than half of the world's population (that is, 3.3 billion people) lived in urban settlements. In some countries, the transition to urban settlements took place decades ago. Regions such as Europe, North America and Latin America have more than 70 percent of their population in urban areas while Asia and Africa remain mostly rural with their urban population comprising of only 40 percent and 30 percent respectively. However, if the current trends of Africa's population growth continue, half of the continent will be urban by 2050. For Asia, there will be an early urban transition owing to the high rate of China's urban growth which is likely to be more than 70 per cent by 2050. The total urban population in developed countries increased by 500,000 per month while that of developing countries increased by 5 million. The growth of cities in the developing world, in absolute numbers, is ten times that of cities in developed countries. In the 1990s, cities in the developing world grew at a rate of 2.5 percent, compared to only 0.30 percent recorded by the developed world. The urban growth of developed nations is at a snail's pace, at almost 1 percent annually. In fact, 40 percent of the cities in the developing world experienced negative growth, and in the 1990s they experienced a population loss. European cities and the commonwealth of independent states are generally not growing anymore (UN Habitat, 3013).

According to UN Habitat (2013), the urban population of developing nations in the last two decades has grown per week by an average of 3 million people. The total urban population of developing countries will double in the 21st century from 2.3 billion in 2005 to 5.3 billion in 2050. This urban growth causes an enormous difference in the employment structures and economic activities from agriculture to industry and services. Even though there is a slowdown of city growth in most developing countries, it is believed that the level of urbanisation within countries will rise before 2050. The urban population of 218 cities (which includes Beijing, Shanghai, Addis Ababa, Nairobi, Lagos, and Khartoum) is growing at a higher rate than others. The urban population of

these cities grew at a rate of 4 percent. The rate of change of Africa's urban population is the highest in the world although it is currently on a declining trend. The possibility of increasing urbanisation is still enormous.

Africa went through a rapid urbanisation in the past three decades, primarily caused by the implementation of strategies to maintain urban growth at the cost of rural and agricultural development. This caused the rate of the non-agricultural segment to increase in size and non-agricultural employment opportunities to rise resulting in over-urbanisation. Africa's fast urbanisation can be traced back to the period of colonialism where centres were established by the colonisers to give them access to ports. Many problems caused by political and social factors in Africa are highly rooted in the colonial era (Hope, 1998).

Since 1950, the percentage of urban growth in the world has increased rapidly and this rising trend is expected to continue in the future. As projected, the percentage of people living in urban areas in Africa is expected to rise from approximately 34 percent in 1990 to about 57 percent by 2025. In 1990, almost 33 percent of the West African population resided in urban areas compared to 22, 38, 45, and 55 percent for Eastern, Middle, Northern and Southern Africa respectively. This order of rank is projected to last until 2025, even if is at a higher level. In Eastern and Southern Africa, it is projected that the urban per cent will vary between 47 and 74 per cent (Hope, 1998). According to Hope (1998), the shift in the balance between the urban and rural economies in Africa is the result of rapid economic growth in the region. This shift is connected to economic factors and the changing employment patterns and trends. Better income opportunities and employment cause people to migrate to cities, and because of the rapid pace of urban growth, most African countries are unable to meet the increase in demand for houses and urban services. The natural increase in population, which occurs when fertility rates are higher than mortality rates, is another factor that contributes to the rapid rate of urbanisation in Africa.

Over the past 100 years, the urban population globally has grown by more than ten times and about half of the world's population resides in urban areas. The increase in urbanisation has brought a lot of problems to the environment and has also resulted in a rise in urban poverty. However, urban

growth can also be a sign of a strong positive economy, especially in lower-income countries (Satterthwaite, 2007).

Over the past fifty years, the fastest growing cities in the world are found in Africa although economic growth has not been impressive. The restrictions that were imposed by the European colonial powers 50 years ago, ensured that the movement of people to urban centres was very slight. These restrictive laws hindered the right of people to work, live or attend school in urban centres. However, the removal of the colonial restrictions and controls was a turning point in the growth of the urban population. Over the last 40 years, the dynamic urban growth in Namibia, Zimbabwe and South Africa is understood by taking into account the removal of controls on movement imposed by white governments. Political independence is also one of the reasons for high urban population growth. The development of higher education systems and the building of new institutions by successive governments have increased the growth of the cities where the main administrative and political centres are located. Few of the world's largest cities are located in sub-Saharan Africa. For many countries in Africa that have not had any civil conflict, their urban population grew because of immigrants who ran away from civil strife elsewhere. In many countries, the level of urbanisation is determined by economic performance. On the other hand, a decline in fertility rates and a rise in mortality rates are some of the factors that cause a decrease in urbanisation in many nations (Satterthwaite, 2007).

Faraji, Qingping, Valinoori and Komijani (2016) state that there is an explosion of urban population growth in developing countries across Africa, Asia and Latin America. Currently in developing countries, the population congestion in urban areas no longer exists. One of the characteristics of urbanisation in less developed countries is the increasing trend toward high urban concentration and consequently urban primacy. Urban primacy gives an indication of the concentration of a country's urban population. Some less developed nations, such as India and China, do not exhibit urban primacy or do not have primate cities. Although these countries are big and have large cities, there is no real dominant city.

Rob and Talukder (2013) stipulate that Asia is urbanising at a fast pace, and this is driven by the remarkably rapid economic growth rates across the continent. In most Asian countries, a rapid urban growth is a common demographic phenomenon. The process of urbanisation is, however,

mixed in Asia, while some parts of the region are still undergoing urban transition, others are already stabilised. Most Asian countries, such as India and Pakistan, are undergoing urban transition and moving from low-income to lower-middle income countries. The national income of these countries is increasing rapidly and about 80% of it is generated by cities. The industrial areas that are located within the large cities as well as population growth are the main catalysts of urbanisation. It is anticipated that in the future, the growth of most cities will occur in small and medium-sized cities.

Although the region is still mainly rural and depends on agriculture, its urban areas have experienced an enormous growth with a concomitant decline in the rural population between 1950 and 2000. Rob and Talukder (2013) emphasise that in the next 20 years, another one billion people will make Asian cities their home and more than 60% of the increase in the world's urban population will take place in Asia. It is estimated that by 2030, the urban population of Asia will be more than 2.6 billion.

Rob and Talukder (2013) also posit that half of the world's megacities, with more than 10 million inhabitants, are located in Asia. China has four mega cities with 10 million or more inhabitants, while India has three mega cities. These two countries will still experience an increase in the number of megacities over the next 20 years. It is expected that China will have seven megacities by 2030, and among them is shanghai which will have a population of more than 20 million inhabitants. India is also expected to have 6 mega-cities within the same period, and among them will be Mumbai and Delhi which will have more than 20 million inhabitants. China has a low urban primacy, which means that there is a balanced growth of cities size within the country, while Indian's urbanisation is more concentrated in developed areas. In the future, Asian cities with a population of 500 000 to 2 million will experience the highest rate of urbanisation with a slow growth rate in large cities.

Wolff and Wiechmann (2017) argue that several European cities begun to shrink in size at the beginning of the 21st century. Most countries across Europe have experienced an internal migration from developing countries thus making the region's ageing population to increase. Between 2001 and 2011, nearly one-third of the large cities in Europe experience population loss. Wolff and Wiechmann (2017) postulate that mainly all states in Europe experienced a population loss with shrinking cities by more than 0.15% after 1990. It must be emphasised that the time span

and the extent of the population loss differ among cities. Natural and economic factors, such as low fertility and fast out-migration, have caused 543 European cities to shrink.

Piña (2014) examines urbanisation in three Latin America cites, namely, Buenos Aires, Santiago de Chile and Mexico City. Latin America is regarded as the most urbanised region in the world with close to 80% of its population residing in cities, although the continent is also one of the least populated in terms of its territory. The population in Latin America has experienced a rapid expansion. Natural population growth and rural-urban migration, which has resulted in a physical expansion rather than demographic growth, are the main drivers of the rapid increase in Latin America's population. The cities in Latin America have increased over the past forty years. The region's population was 40% urban in 1940 and 70% in 1990. The rising level of urbanisation has increased the demand on infrastructure and public services. Urbanisation if Latin America has brought some negative side effects such as violence, metropolitan segregation, and the generation of environment and social precariousness.

2.3 Theory and Measurements

The mobility transition theory states that each country follows a pattern of urban transition at its own pace to achieve its own level of urbanisation. Some western countries took centuries to reach their current level of urbanisation while others experienced the same transition in less than 50 years (Bocquier & Mukandila, 2011). The Bocquier model explores urban transition in Africa in comparison to the whole world; in addition, the UN urbanisation series is also one of the models they rely on. Bocquier and Mukandila (2011) used the UN urban and rural population data, published in the World Urbanisation Prospects (WUP 2010). This data is obtained from censuses, registers of population, country estimates, and UN estimates or sample surveys. The study focuses on two variables, namely, the urban population and the national population of each individual country. To model urban population growth of each country over time, a variable called excess urban increase is created (Bocquier & Mukandila, 2011). There is a criticism pertaining to the national data sources from which the UN database is derived, mainly because of the inconsistencies observed in developing countries, and due to the variations in the definition of an urban area. The UN World Urbanisation Prospects provide data that has useful and comprehensive resources on

urban population change, and there is a lack of accuracy in the past urban projections (Bocquier & Mukandila, 2011).

There is an improvement in the information on African urbanisation in the new population censuses. However, many countries have not conducted censuses since 2000 (Freire, Lall & Leipziger, 2014). Cohen (2006) on the other hand, emphasises that there are many challenges in accessing reliable data on the urban population. In the past, a lot of errors have been made with regards to projecting some of the world's largest cities. We need to enlarge our understanding of demography and of current urban transition. The UN publication is not a very reliable source because the data is deceptive in its apparent completeness and there is some degree of uncertainty about what this data means and how it should be reported (Cohen, 2006).

Njoh (2003) analyses the causes as well as the effects of urbanisation and identifies modernisation, urban bias and dependence as the three theoretical perspectives of urbanisation. Modernisation theorists regard urbanisation processes as natural. They claim that traditional or agricultural societies pass through this process to develop into modern or industrialised nations. Urban bias theorists do not believe in the assumption made by modernisation theorists that urbanisation is a natural process. Instead, they regard urbanisation as a product of government policies that are responsible for allocating most valuable national resources to cities and towns. The metropolitan areas increase in size because of pulling rural residents to urban areas. The resultant rural to urban migration brings sustainable development in the long-term and economic growth in the short-term when investing in urban areas.

Dependency theorists believe that urbanisation is a change of the availability of land for farmers and other vital resources and rural-based institutions. They argue that urbanisation has the tendency to deprive rural inhabitants of their land and cause them to migrate to cities. This theory also states that when urbanisation develops at a fast rate, it causes severe distortions in urban labour markets (Njoh, 2003). The data of the study is mainly extracted from the Human Development Report 2000, and the World Development Indicators 2000. The Human Development Index (HDI) is used as an indicator to measure the development of a country via three dimensions, namely, health, knowledge and decent standard of living. The sample is only made up of Sub-Saharan

African countries. The study uses two variables, which are the HDI as the dependent variable and the level of urbanisation. The ordinary least square (OLS) method is used to test the hypothesised relationship (Njoh, 2003).

Satterthwaite (2010) states that the national urbanisation level of any nation is the percentage of the population living in urban cities and this is influenced by the definition of urban centres by the national government. Practically, the definition of urban population of any nation includes any settlement with 20 000 or more dwellers. This happens when one city's statistics is for its central area while that of the other city is for an enlarged metropolitan area. When a nation generally has the best economic performance, urbanisation increases at a higher level. Hence, urbanisation in sub-Saharan Africa is not rapid because of low economic growth. Africa's level of urbanisation is on the way to the European level, although without the economic base to assist it. However, Satterthwaite (2010) states that urbanisation in Africa is certainly not mimicking the European level.

Satterthwaite (2010) also claims that for national urban population statistics to be accurate, it is dependent on an accurate census having been conducted. However, in most countries, censuses are conducted at ten-year intervals while other countries have no census data available for the last 15 years. The UN Population Division depends on estimates and projections when census data is not available for the rural and urban population of nations. The statistics for the city population and urban areas of most countries for 2000, 2005 and 2010 are based on projections calculated from data on censuses taken 10 to 20 years ago. There is a lack of recent census data in sub-Saharan Africa, which can be attributed to the lack of funding from international donors. When a high percentage of the population that live in an urban area is proportionate to the income per capita of the nation, it indicates a manifestation of urban bias as well as a confirmation that a high percentage of the urban population resides in the largest city. Due to the lack of census data, the urbanisation levels of many nations are uncertain. The criteria used by governments to define urban population are different across countries (Satterthwaite, 2010).

The research on urbanisation in South Africa during the post-apartheid era has been unevenly conducted. Since 2001, the data on urbanisation patterns has been highly problematic. Moreover,

no new census has been attempted (Todes, Kok, Wentzel, Van Zyl & Cross, 2010). According to Cohen (2003), the *UN World Urbanization Prospects* is the only complete source of international urban data available. Some of the data found in the UN report is deceptive and incomplete. There is also a great deal of misunderstanding and misreporting of the interpretation thereof by non-specialists. Based on the UN data, many authors have interpreted that a majority of the world's population will live in megacities but this is not the real picture. In reality, the urban population will be distributed among urban areas of all sizes that include small market towns or administrative centres with less than a few thousand citizens.

Meshkini and Rahimi (2011) posit that the related theories of change in urban systems is possibly divided in two main parts: (1) the behavioural theories, for example the primate city which explains the current trends of settlements in an area; and (2) normative theories, for example the central place and rank-rule theory which explain the ideal systems of settlement. Meshkini and Rahimi (2011) also make four suggestions as to why primacy exists in developing nations:

1) It is related to colonialism which is derived from the controlling of empires through key cities.
2) Through the collapse of the rural economy.
3) The high dependence on export economies for major products.
4) Can be an economical result of social transformation from subsistence to capitalist production.

Different theories on internal migration have generated a huge amount of empirical activity. Even through there are many reasons why people migrate, available empirical evidence clearly suggests that the desire for economic improvement is the main factor that influences migration. People move to cities mostly in search of better income and employment opportunities (Hope, 1998).

The last censuses done in 2000 or 2001 portray a world that is less dominated by big cities, and where urbanisation is on a decline. In 2000, there were fewer inhabitants in larger cities than estimated and in many of these, a lot of people were moving out rather than in. The decentralisation of city development in many countries is minimising the influence and power of megacities (Satterthwaite, 2010).

Faraji, Qingping, Valinoori and Komijani (2016) emphasise that development schools of thinking such as dependency theory, the modernisation school of thought and global system theory help to explain urban systems in developing nations. The modernisation school of thought not only considers developing countries' imbalance in urban systems to be undesirable but also to be unavoidable. This is because, according to the doctrine of modernisation, developing nations have to go through the same urbanisation path that the developed nations have gone through. Frank explains that development and less development are two sides of the same coin. The global capitalist system is imagined by Frank as a hierarchical structure where the location of its base is in rural surroundings. Frank's key point about dependency theory is the pattern of a metropolitan satellite where a global urban system begins from the main metropolitan city and ends at the points of the rural and urban areas surrounding it (Faraji, Qingping, Valinoori & Komijani, 2016).

Faraji, Qingping, Valinoori and Komijani (2016) mention that there is no one-sided factor that can explain the cause of urban primacy. The phenomenon of urban primacy is created by the internal and external factors which are outlined as follows:

Social dimension: Urban primacy is the leading population and social issue. The main factor that is responsible for increased urbanisation is not really the natural growth of the urban population but the shift from rural areas and towns into metropolitan cities.

Economic dimension: Economic variables such as production, import, export and distribution are the main influential factors of urban primacy. The countries that lack these four dimensions of capability have serious problems.

Political dimension: In most cases, urban dominance is associated with a high level of political instability.

Historical Background: The colonial background of cities enabled urban formation in these countries. Colonisation which lasted for more than 100 years in some countries, created big cities that have control and power both materialistically and symbolically.

2.4 Social and Economic Aspects

In the future, one of the ways to control urban growth will be through reproductive health programmes. The inequalities between rural and urban areas also needs to be reduced (Bocquier & Mukandila, 2011). Governments need to be effective to achieve urbanisation which is still at the initial stages in most African countries. Productivity cannot happen without good support from government authorities. There are five types of government action that are required. These are: the provision of public infrastructure and services for transport; the provision of public services for decent quality of life; the administration of those private behaviours which are socially helpful but not individually beneficial; coordination of those private decisions which are interdependent; and revenue generation through taxation and debt to finance these activities.

Slum conditions spawn street gangs and this reduces the quality of life of residents and increases business costs of firms. According to Collier (2016), one key aspects of urbanisation is that there is a lack of proper controls when it come to the ownership of urban land. The land occupied by shanty settlements must be put to appropriate use. For example, it can be transformed into transportation infrastructure, clusters of businesses and houses for dwelling purposes (Collier, 2016). Moreover, revenue systems need to be built by public authorities in order to increase opportunities for the provision of high-quality public services (Collier, 2016). The public authority need to issue bonds to finance both the capital costs of public urban infrastructure and the running cost of public services. Also, there must be an enforcement of private and public rights by public authorities.

Freire, Lall and Leipziger (2014), state that the challenges which affect Africa's urbanisation include: a weak planning capacity in administration and institutions; and weak infrastructure services (such as water, energy and sanitation). Moreover, the level of economic activity is low because of poor physical and human capital coupled with a high rate of population growth. These challenges can be overcome by proper economic planning, adequate delivery of services to the poor, the achievement of economic growth and the creation of jobs. One of the important policy instruments for urbanisation is the effective planning of urban development and providing for infrastructure needs. The main focus of planning should be the reduction of slums. There should also be an efficient policy that strengthens property rights, records market agreements and ensures

an efficient market for land. Poverty can be eradicated by providing shelter for the poor and making sure that there is a provision of basic services such as health, education and allocation of land. It is worth noting that urbanisation can either pose a threat or present an opportunity. There are serious challenges that Africa's urbanisation will face especially when there is a slow adjustment of policy structures (Freire, Lall & Leipziger, 2014).

According to Cohen (2006) an accurate projection of future urban growth is required and it must be based on both a solid foundation and high-quality statistics. Also, the patterns and trends of urban changes must be well understood. Rapid urban growth is determined by rural urban migration and the transformation of rural settlements into cities and towns. The advanced changes in telecommunication and transportation have also caused distance and time between urban and rural areas to collapse. The UN predicts that the growth of the world's population will occur in urban areas in the developing world. By 2030, about 60 percent of the population in the developing world will be living in urban areas. The rapid urban growth and the worsening living conditions of the urban poor in small and medium cities need to be addressed by available developmental programmes. The ability of local authorities to effectively react to these threats will shape the patterns of national and regional development, as well as the social and political stability of the urban poor. One of the worries of most analysts is that urban changes will occur in the world's poorest countries and in secondary cities and towns where poverty rates are high and public services are inadequate (Cohen, 2006).

The respective governments must have the ability to implement policies and programmes to prevent cities from becoming uncontrolled urban slums. They must also support the renewal of the rural economy. African governments should be effective in establishing and maintaining urban centres where the needs of residents are met. The future of African cities is in their ability to attain equilibrium between the negative consequences of urbanisation and development as well as economic growth. The future of African cities rests on the shoulders of all stakeholders involved in the planning, management and implementation of policies and programmes which affect city development on the continent (Jelili, 2012).

Chirisa (2008) postulates that the problem of urban development in Africa is not necessarily due to a rise in the urban population but because of bad policies. Good urban policies are required to address the different types of issues of Africa's urban areas. The prescription of appropriate policy is necessary to prevent complications caused by urbanisation. The following are important contents of urban policy components for Africa in the 21st century:

Urban stewardship policy (urban citizenship): Local authorities with their respective central governments should ensure that citizens of the urban areas become more responsible.

Balance settlement systems policy: The development of urban areas should be predictable using urban modelling projections and forecasting.

Research policy and adaptation: Cities are sustained, developed and managed through knowledge bases. Urban policy points out the need for consistent urban research and modelling so that unforeseen problems cannot arise.

Land taxation reforms and policy: Land tax reforms are needed if urban areas are to have a positive effect on their jurisdictions. There should be a balance between efficiency and citizens' ability to pay.

Social grouping as collateral policy and decentralised co-operation: The local authority should have the responsibility to work out its own modalities.

Operations and management of facilities and utilities policy: The municipal government should operate with clear databases on how different infrastructures are to be run, managed or to be replaced. There should be a clear picture on how the population is either increasing or decreasing.

Effective decentralisation policy (Good governance): Good government should be achieved. To be able to have an effective management of resources, the central governments should learn to submit power to subsidiary units.

Lwasa (2014) states that the highest priority on the African continent should be the continuous maintenance of urban development and effective management. The challenges that urbanisation in Africa faces can be dealt with through urban planning, innovation and improved urban communities. Policymakers should provide a platform for building ideas, knowledge and skills on

how to achieve sustainable urban development, taking into account the social cost of institutional transformation and unsustainable urban development. Social and environmental sustainability of cities, however, appears to be a doubtful reality due to problems associated with development deficit. African urbanisation is estimated to reach a level of 50 percent in the next 3 decades. However, it seems that the continent is not prepared to handle the enormous challenges it faces. These challenges emanate from urban poverty and slow economic growth of cities and nations. Policy actors, communities, researchers and governments need to unite in order to address the challenges in Africa.

Africa's urban population growth is influenced by both negative and positive factors. The negative factors include disasters and conflicts while the positive factors include economic growth. Drought, conflicts, famine, ethnic and civil strife, and wars have affected the urban growth in countries such as Angola, Sudan, Liberia, the Democratic Republic of Congo and Somalia (UN Habitat, 2013). Urban growth is also an outcome of many factors, including rural to urban migration, geographical location, natural population growth, government policies, and development of infrastructure, economic forces, corporate strategies and globalisation. Rural to urban migration is a major determinant of urban growth in developing countries. In most Asian countries, including China, national economic policies play a big part in determining the growth of the cities in size and importance. According to United Nations estimates, 60 percent of urban growth is caused by natural increase. The demographic patterns of a country are the most important element of urban growth. Nevertheless, nations with identical demographic characteristics have different urban growth patterns. It is known that the stage of a country's development and its level of urbanisation can influence demographic factors. Another important factor is that in countries where the population is youthful, natural increase contributes more to urban growth (UN Habitat, 2013).

UN-Habitat (2013) has analysed three significant factors that drive urban growth in Asia, Africa and Latin America. These are: (1) the development of the standard of life in cities, by means of such facilities as transportation, public amenities, basic services, etc; (2) industrial and economic policies such as industrialisation, export promotion and economic zones; (3) how administrative

or legal status can change the urban area. In Africa, especially in North Africa, a key factor of city growth is the improvement in the quality of life.

Todes, Kok, Wentzel, Van Zyl and Cross (2010) mention that although large urban centres attract and provide employment to migrants, employment only slightly influences the motive for choosing a particular location. One of the key sources of urban growth is international migration. However, migration is not the predominant factor that puts pressure on cities. The main source of urban growth is still natural population increase.

The poor can be assisted to promote their cause through the creation of constitutional rights, especially if backed by political will. For urban development to be more effective, it is important to determine city-level leadership and investment plans to increase employment, improve living standards and provide essential services. Policy implementation should be planned in advanced so that the land and shelter needs arising from the imminent future population growth can be effectively handled. A new urban settlement development fund has been created by the governments to provide capital to municipalities to achieve efficient service delivery and provide land for low-income housing (Turok, 2012).

Cohen (2003) states that African countries have the worse baseline data while developed countries have the best. Studies on urban population dynamics are hindered by the tendency of censuses to undercount the urban population. A great deal of attention is needed when making projections, especially when one is interested in focussing on a country or even a city level. The nature and the speed of urban economic growth have been dramatically increased by the mobility of capital, the telecommunication revolution and political changes. The social and political stability of many of the poorest countries reflect urban change, where most of the growth will occur in primary cities and towns where the rate of poverty is higher and there is a lack of basic public services. There is an uncertainty surrounding the scale and pace of future urban growth. Apart from the problems of error and inaccuracy that have not been dealt with, the world is still in the midst of a profound urban transformation that is changing the face of the planet due to the fact that there is greater global integration than ever before.

It is very important that policymakers and donors identify the current urban-rural and rural-urban trends of migration from sub-Saharan Africa. These are the indicators of the urban poverty crisis in many large urban areas and the importance of solving these issues must be identified (Potts, 2009). UN-Habitat (2013) identifies three main types of policy actions that are needed to increase urban success. These policies are:

The success of urban planning and design: Successful cities must be planned and different methods must be implemented, functionality improved, and sustainable urban systems must be accomplished.

Innovations to support the transition to the city of the 21st Century: To create and innovate a variety of areas must be included, areas that range from technology to organisations, knowledge, modes of operation, finance, information and human development. Innovation causes many areas to flourish, such as social institutions, developing urban life, knowledge development and improved urban policies.

Law empowerment and success of urban institutions: Most cities are successful because of the combination of regulations, laws, institutions and processes. The academic world, businesses, non-governmental organisations, civil society, and political parties need to commit to the enforcement of laws and regulations to ensure that cities are successfully managed.

Hope (1998) states that Africa is facing a huge problem of rapid urbanisation with a lot of negative consequences. Without doubt, there is an existence of urban bias in Africa because the biggest shares of government expenditure and capital investment are allocated in greater part to the urban sector. Residents in urban areas are better off than their rural counterparts in terms of public services.

Most of the problems caused by urban growth need the intervention of local institutions. The effectiveness of local government in urban areas is more important than global governance. Most environmental problems can only be overcome through the involvement and the actions of the local government. In most countries, the local government has little recognition when it comes to sustainable development in relation to meeting the targets contained in the Millennium Development Goals. Concerns such as the greater achievement of democracy, justice, poverty

reduction and protection of resources are, most of the time, discussed without the involvement of local institutions (Satterthwaite, 2007).

CHAPTER THREE: METHODS AND DATA

3.1 Introduction

This chapter provides information on the scope of the study as well as the sources of data which includes the United Nations, the World Bank, the African Development Bank, Geo-Hive and also the national statistics offices of the respective countries. Geo-Hive is a global data platform which provides population census data and estimates for most of the countries in the world. Data displayed on the platform are those derived from the past population census. African countries are well represented. The chapter also outlines the indicators that are used to assess urbanisation trends as well as the unit of analysis. This means that the study will analyse the countries, which form part of this study, in terms of the level of urbanisation and the systems of cities. Within each country, the studier will look at the regional level or sub-levels, thus the study will not only be at a country or macro-level. Where data is available for a specific country, urbanisation or the urban dynamic will be analysed at the sub-national level, which could be regions, districts or provinces depending on the sub-division at the country level.

The study focuses on how urbanisation is defined and the variations in available definitions. It must however be emphasised that there are problems of defining what a city means in Africa. There are many definitions of what an urban area means. According to Hove, Ngwerume and Muchemwa (2013:1), the characteristics of urbanisation are: (1) demographic processes (2); the basic aspects of economic and industrial development (3); the influence behind social change and (4) universal aspects. The phenomenon of urbanisation is an outcome of a compound process of articulated bilateral and often incompatible political, legal, economic, and cultural forces. As a result, many developing countries' urban and rural areas have been redefined through the process of the changing nature of capitalism and lately by the change of economic globalisation. The definition of an urban area depends on the way in which the national census of a country usually captures its data.

Due to national differences, there is no single definition of an urban area which is relevant to all countries. Therefore, individual countries agree on which areas are to be categorised as urban areas according to their own circumstances. When defining urbanisation, the terms that are considered

are locality, town and cities. The criteria which countries use to define an urban area consist of population size, type of economic activity, physical characteristics, the socio-economic composition of the population structure in the localities, indices of population density, the proportion of the economically active population that is engaged in agriculture, the availability of medical care, electricity and pipe water, school, leisure facilities and administrative status. In Africa, different terminologies such as provincial or regional, state and district are used to describe a city. The definition differs according to each country and according to the data collection. According to the United Nations, urban agglomeration refers to the de facto population found within the contours of a contiguous area, occupied at urban density levels without regard for administrative boundaries. It includes the population of a city or town and also the population in the sub-urban areas which are next to the boundaries of the city (United Nations, 2014).

3.2 The Scope

This study mainly covers 54 African countries for the period 1995 to 2015. It analyses the population change in cities within these countries. The sample include cities with an agglomeration of 300,000 or more. Cities that have a population under 100,000 are also part of the analysis. The study will look at both past and future trends using secondary data from GeoHive, United Nations, World Bank, Africa Development Bank (AfDB) and the national statistical offices of the 54 African countries.

These limitations affect the accuracy of comparing indicators across the different data sources which leads to a misinterpretation of urban population growth rates and of the population size of the city. Moreover, available data sometimes tends to overestimate urbanisation but in reality, there is a possibility that urbanisation is declining as many studies have suggested. Little is known about the problem of measurement. However, there are disputes around some measures that the rates could be high or low. It is also worth noting that the increase and decrease in the level of urbanisation growth rate are hard to specify, albeit they are known to be high because of many gaps in the data.

This study therefore aims to question the argument around urbanisation. The changing structure of urbanisation will also be assessed by analysing the primacy index which shows the largest city in a specific country using population census data. The method of analysis will follow a temporal framework while the focus will be on changes at the national level and within the urban structure of the country. The study explores possible movements, looking at how things are changing, using the projections and previous levels of indicators.

The study compares the indicators calculated by the other institutions (UN, World Bank, Geo-hive and African Development Bank) with those that are calculated by the author. The following indicators (UNECA, 2017) will be used to answer specific questions that arise at the beginning of the study. The indicators to be analysed are:

Table 1: Selected Indicators for Analysis

Research Questions	Indicators Used	Sources of Data
What are the trends and patterns of urbanisation in Africa?	The per cent of urban population (1995-2015) Average annual rate of change of the urban per cent Average annual rate of change of the urban population	United Nation, World Bank, Geo-hive and African Development Bank. United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision.
Are there any similarities, differences and variations across African countries in term of urbanisation?	The per cent of urban population (1995-2015)	United Nation, World Bank, Geo-hive and African Development Bank.
What does the primacy index suggest?	Primacy Index (1995-2015)	United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision.
Are there any changes in the primacy index among African countries?	Primacy Index (1995-2015)	United Nations, Department of Economic and Social Affairs, Population Division

		(2014). World Urbanization Prospects: The 2014 Revision.
In comparison to the cities of America, Asia and Europe where does Africa stand in terms of urbanisation?	Average annual rate of change of the urban per cent Average annual rate of change of the urban population	United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision.
Are there discrepancies in terms of the figures?	The per cent of urban population (1995-2015)	United Nation, World Bank, Geo-hive and African Development Bank.
Do we observe a systematic increase in the sizes of cities or are some cities still under one million?	Annual urban population at mid-year (thousands) Annual urban population (thousands).	United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision World Bank Staff estimates based on United Nations, World Urbanization Prospects.
Are there countries where the population living in each urban agglomeration exceeds 50% with the total population as a reference?	Per cent of the Total Population Residing in each Urban Agglomeration with 300,000 inhabitants or more	United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision.

3.3 The Sources of Urban Data

This study uses projections and estimates of the indicators produced by the four data sources, namely, the United Nations, World Bank, Geo-Hive and Africa Development Bank and also direct data from population censuses of the respective countries. The data made available by these four sources are produced from international sources that are officially recognised. They provide global data figures which are mostly current and accurate. These include projections and estimates at the national, regional and global levels.

For any research, data is very important when it comes to analysing and interpreting the findings. The information used for statistical analysis in this study is developed from data collected from censuses, population variables and demographic statistics. Population censuses face some difficulties when collecting data on urbanisation. Such problems includes the fact that it is expensive to conduct a census and it also takes a lot of time to define a problem, analyse and develop a sampling frame. Beside the challenges, a census is one of the best tools that can used to measure urbanisation. Population censuses provide information to the government on the total number of people in rural-urban areas. The development and planning with regards to the economic growth of a county can be carried out effectively when using population census data. The data provided by a census helps to analyse the change in rural-urban patterns, the movement concentration and how urbanised areas are developing. A census is appropriate because it provides information on the place of residence, whether it is urban or rural. It is also useful because it indicates the population according to place or cities, shows the variation overtime in terms of the population size, and has a national coverage.

3.3.1 Estimation by United Nation

Since 1948, the United Nations (UN) has been collecting data each year through questionnaires that are sent to over 230 national statistics offices around the world. Data on official national demographic and social statistics are being collected and compiled by the United Nations Statistics Division and issued in the demographic yearbook. Statistics distributed in the demographic yearbook are on population size and structure, marriage, divorce, births and deaths. The different areas which are covered in the demographic yearbook's dataset are topics such as economic activity, household characteristics, educational attainment, ethnicity, languages, foreign population and foreign-born members of the population. The United Nations Statistics Division gives technical guidance to national statistical offices on how to improve demographic statistics. The UN data also provides information on Population and Housing censuses worldwide since 1995.

The estimates and projection of urban and rural population and related indicators produced by the United Nations Population Division covers the period of 1950-2050. The Population Division has been publishing since 1988. The projections of total population sizes are compiled in the latest

edition of the World Urbanisation Prospects (WUP) for all countries and their major urban clusters. Data on population density and urbanisation is used by the population division as input for estimating urbanisation. This data is widely used by international organisations, research centres and academic researchers. The data is mainly collected from censuses, household and demographic surveys from each respective country's national statistical office and other different sources of data. The data available for a particular country is both urban and rural-specific; population information is available by age and sex; and the distribution of a city's population is categorised by sex, city, and city type.

The World Urbanisation Prospects which is presented by the United Nations provides a wide range (and quasi-accurate set) of urban and rural population data for all the countries in the world and for clusters with more than 300 000 dwellers in 2014. The period covering the data on urban and rural areas is from 1950 to 2050 and data covering urban agglomerations covers the period 1950-2030. The figures for 1950 to 2014 are estimates while those for the years after 2014 are projections. The estimates and projections of the official United Nations population figures are at the national level. The social indicators which are reported on the United Nations's website are population growth rate by age and sex (average annual %), urban-rural population (%), urban-rural population growth rate (average annual %), population of capital cities (thousands), fertility rate total (live births per woman), life expectancy at birth (females/males, years), total dependency ratio (pop. aged 0-14 and 65+ per 100 pop. 15-64), refugees and others of concern to UNHCR, infant mortality rate (per 1000 live births), health: total expenditure (% of GDP), health: physicians (per 1000 pop.), education: government expenditure (% of GDP), education: primary gross enrolment ratio, education: secondary gross enrolment ratio, education: tertiary gross enrolment ratio; intentional homicide rate (per 100 000 pop.), seats held by women in national parliaments (%).

The United Nations provide quality updated data on urbanisation for all the countries around the world and their urban agglomeration. This data is updated after every two years. They mainly take their urban-rural data produced by national sources. The data give information on major cities, urban population at mid-year, and also the percentage of urban dwellers residing in each city; thus

it is possible to compute the primacy index. You can see how urbanisation is taking place at the national level.

The United Nations Human Settlements Programme (UN-HABITAT) is another organisation that deals with the population size and structure. The UN-Habitat keeps a continuous record of human settlement conditions and trends through collection, combining, analysing and reporting data on national, urban/rural and city levels. Data on urban population and living conditions in cities is also found in the UN-Habitat which is collected through censuses and household surveys conducted by the national statistics authorities and produced by the United Nations Department of Economic and Social Affairs. There is a possibility for every country worldwide to obtain at city level, a per cent of the total population indicator in each of the following aspects: slum dwellers, population, resilience, city prosperity, streets, transport, health, education, crime and also land area.

The UN-Habitat provide free and open access to data about countries and cities around the globe on their Urban Data Portal. Data is available for about 220 countries, 741 cities and 103 indicators. The UN-Habitat Portal provides data from a number of countries, regions and cities around the world. The portal gives information on indicators such as the percentage of an urban population living in a slum area; city prosperity; urban slum population; estimates of urban population agglomeration; the population of major cities; rural-urban population figures; HIV prevalence among population of 15-49 years of age; and the percentage of people with access to an improved water source. The portal also gives information on poverty and urban poverty. Census data does not give direct data measurements of slum populations. The data collected by the portal is mainly from the national statistic authorities through the census and household surveys. Countries and cities can be compared with one another using this data set.

The mission of the UN-Habitat is "to promote socially and environmentally sustainable human settlements development and the achievement of adequate shelter for all". The UN-Habitat promote an improved urban future through addressing the issues of urban growth. For many years, the UN-Habitat worked in human settlements throughout the world with the intention of constructing a brighter future for villages, towns and cities of all sizes. The UN-Habitat ensures

that cities become inclusive and are able to have affordable economic growth and social development such as the development of infrastructure, city planning and upgrading of slums. Urban legislation, risk management, gender and youth as well as the building capacity which are involved in the urbanisation process are some of the areas of interest for UN-Habitat.

In a nutshell, the study will make use of estimates by the United Nations, especially data from the Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 revision. This data is used to analyse the annual urban population, the per cent of urban population, average annual rate of change of the urban per cent, annual urban population, average annual rate of change of the urban population, and primacy index.

3.3.2 Estimation by GeoHive

GeoHive is a global website that has different kinds of population statistics. Urban and rural population by regions and countries' timeframes are from 1950 to 2050 which are given in percentages while data is given in millions. Tabulated population statistics are the main component which consist of estimates, projections, cities, agglomerations, etc. On this website, one can also find the geopolitical data of all nations of the world, such as data on administrative divisions of countries, including their regions, cities, provinces and other areas. A list of national statistics agencies along with other interesting resources can be found in the resources section.

GeoHive publishes the population pyramids of each country of the world from 1950 onwards with intervals of 25 years within the total population of the world, showing the age groups distribution of 5 years each, except the 80+ group that extends to the oldest. The pyramid is arranged in such a way that males are to the left, while women are to the right. When more people are represented, the horizontal bar become wider. The pyramid of 1950 is broad at the base and tiny at the top while the one for 2100 has a base that is less broad compared to most of the higher age groups and it also has a very broad base at the 80+ category because this age group includes people that are over 100 years old.

GeoHive also provide micro-level data from population censuses. The data provided is useful because it gives information on the major cities. It is therefore possible to compute the ratio of

major cities to the total population to estimate the degree of urbanisation. Within the sub-division, there is information on important cities at the sub-national level. One can see how urbanisation is taking place at the micro-level. Although GeoHive publishes useful data, the area of data updates to reflect current census information needs improvement, because sometimes the site does not include updates, meaning a country can produce census results, but the website still gives estimates. The website is not systematic because some countries have all the censuses listed while others list just a few. It does not provide data on the indicators and the data comes as population by age groups for continents and sub-regions.

3.3.3 Estimation by the World Bank

Established in 1944, with its headquarters in Washington DC, the World Bank is made up of 189 member countries around the world. It provides developing countries all over the globe with vital sources of financial and technical support. In the area of urban development, the World Bank's aim is to work towards building sustainable communities with institutional goals in order to eradicate poverty and increase prosperity fairly through urbanisation strategies that are comprehensive, competitive, that leave a low carbon footprint, and are strong and liveable. Through this, the World Bank seeks to improve the quality of life in urban areas that are growing in number and also ensures the development of underdeveloped regions or cities. They also provide basic services such as sanitation, water, and disposal of solid waste that are closely associated to climate, health and safety. The operational support and technical assistance provided by the World Bank augments the objectives of the proposed Sustainable Development Goal No. 11, which is to create safe, sustainable and resilient cities and human settlements.

The estimated population by the World Bank on a sub-national population database is presented at the first administrative level below the national level. Data is made available by the countries' national statistical offices as well as the NASA Socio-economic Data and Application Centre (SEDAC). This database is the first World Bank Group's subnational population database which operates at a national level. Therefore, there is a limit to the amount of data at a national level. The methodology and the assumptions made are included in the metadata. The World Bank Group's website publishes urban indicators related to urban development for each five year period from 1981 to 2015. These indicators are: urban land area where elevation is below 5 meters (sq. km),

access to urban electricity (% of urban population), access to non-solid fuel (% of urban population), PM2.5 air pollution mean annual exposure (micrograms per cubic meter), PM2.5 air pollution where population is exposed to levels exceeding WHO guideline value (% of total population), population density (people per sq. km of land area), population living in slums, (% of urban population), population in urban agglomeration of more than 1 million (% of total population), pump price of diesel fuel (US$ per litre), pump price of gasoline (US$ per litre), improved urban water source (% of urban population with access), improved sanitation facilities - urban (% of urban population with access), mortality caused by road traffic injury (per 100 000 people), urban poverty gap at national poverty lines (%), urban poverty headcount at national poverty line (% of urban population), urban population growth (annual%), urban population, urban population (% of total).

The World Bank's open data provides access to statistics users to download more than 3000 series of indicators from its databases. The series include information such as doing business, African development indicators, global development finance, education statistics, enterprise finance, enterprise surveys, gender statistics, health nutrition, population statistics, worldwide government indicators, international development association, world development indicators and worldwide government indicators. More than 256 countries' and regions' information is included in these indicators since 1960.

The World Bank database currently supports three possible options of downloads. These are: (1) countries – all indicators of a single country for all years; (2) topic – all indicators for all countries and all years within a specific topic and (3) indicator – all countries for all years for a single indicator. The World Bank's open data provides accurate global development data at national, regional and global estimates. Generally, data is only provided on a macro-level and the data rely on the official sources of the respective countries who do not have data at the sub-level. The censuses of some countries do not provide indicators such as the percentage of total population and population in the largest city, etc. Moreover, the data comes as absolute values.

There appears to be disparities between the data from the census of a particular African country and estimates by the World Bank when comparing the urban population per cent. As illustrated in

the table below, the urban population per cent of Botswana calculated from its census is bigger than that of the World Bank's estimate in 2001, while for 1981, the census figure is relatively smaller.

Table 2: Selected Data from Census for African counties

Country	Calculation made by census	World bank estimation
Botswana		
2001	54.2	54.1
2011	64.1	56.0
1991	45.7	45.3
1981	17.7	22.9
Ghana		
1960	23.1	23.3
1970	28.9	29.0
1984	32.0	32.2
2000	43.8	43.9
2010	50.9	50.7

Source: Data from the main cities for census calculation in UNECA, 2017

3.3.4 Estimation by African Development Bank

The AfDB Statistics data portal provides access to different indicators over a period of time. The indicators are based on price, production, public finance, infrastructure, ICT, energy, balance of payments, social, etc. These indicators are made available via graphic presentation and complete analysis on regional and country levels. AfDB is one of the most primary sources of data on the development process in Africa and its data is presented by topic. The African Development Bank's social indicators that are reported on its website annually from 2000 to 2014 are improved sanitation facilities (% of population with access), maternal mortality ratio (national estimate, per 100 000 live births), population total, literacy rate for youth - female (% females ages 15-24), household headed by women, rural and urban (%), mortality rates for children under 5 (per 1000) improved water source (% of total population with access), adults (age 15+) and children (0-4 year) living with HIV, net migration, improved sanitation facilities (% of population with access), birth rate crude (per 1000 people), death rate crude (per 1000 people), population male and female (% total), urban population (% of total), rural population (% of total), urban population growth

(annual %), rural population growth (annual %), population growth (annual %), etc. The data on population is structured according to age group and sex.

OpenData Platform (ODP) is a statistical capacity building program which is under the African Development Bank and is intended for African countries to submit and disseminate their data. This platform presents rich data. Countries and regional organisations have a great chance to publish their data through a simple set of tools where one can access, download, and visualise data in the form of charts, reports, dashboards and queries. Users can also access data in statistical data and metadata exchange (SDMX). AfDB is working together with the IMF in order to regulate and update quantities of data that are submitted to the ODP across different agencies such as Central Banks, National Statistical offices, the Ministry of Finance, etc.

The ODP dataset is published on topics such as urban population and the proportion of urban population living in slum areas across countries and regions for the period 1960-2020. The data can be viewed in units, thousands, millions and billions. For some countries, an example being Tunisia, the demographics that fall under the World Bank's Data Catalog have related indicators like total population by sex, population share in municipality environment by sex, and structure of the population by age group and sex for the period between 2004 and 2014. It must however be emphasised that data is missing for some countries.

3.3.5 Estimation by National Statistics Offices

The national statistics offices of African countries collect data through the process of deployment of large numbers of enumerators who cover the entire country or specific areas under study. Both de facto and de jure standards are used for the whole population coverage. These surveys are conducted mostly every ten years in most countries. The national statistics offices websites for most African countries have missing data on urbanisation. It is challenging to get reliable data on urbanisation at the national, state, district and sub-nation levels for most countries since most of these countries do not provide data on indicators. The data is available on national and sub-national levels and the information is captured as urban distribution by age structure and sex. The period covering the data for urban and rural areas is from 2000 to 2012. The demographic and social economic indicators reported on some websites are population size, growth and distribution, age

and sex profile, household composition, marital status, citizenship and birth registration, survival of parents, diaspora, literacy and education, economic activities, disability, housing condition, household assets and amenities, agriculture and livestock, population growth, rural population (% of total population), urban population (% of total population), unemployment (% of total labour force), ratio of economically active male to female population in agriculture, percentage of urban growth rate and change in the percentage of urban population.

Table 3: Similarities and differences of defining an urban area

Similarities	**Differences**	
Non- agricultural economic activity / more than 50% of the population are involved in non-agricultural activity Economic Socio- economic Degree of infrastructure Repaid population growth Labour force	<u>Terminologies</u> Locality Principal centre Administrative centres Agglomerations District centre Settlements Capital Regions Sectors Town councils Municipalities Townships Town planning areas Centres Gazetted Cities Town Villages	<u>Population size</u> 3,000 peoples or more 2,500 peoples or more 10,000 peoples or more 2,000 peoples or more 4,000 peoples or more 5,000 peoples or more 1,500 peoples or more

This study will make use of data from individual countries' statistical offices.

The national statistical offices produce data on rural and urban populations and they also sometimes produce data at the micro- or lower level. Based on data from the national statistical offices, it is possible to extract the degree of urbanisation, which is the percentage of people living in an urban area (major cities with the total population); the annual percentage change of urban

dwellers between two data-gathering censuses; and the primacy index (calculated by taking the largest city and then which is divided by the next three large cities). There are variations in defining what an urban area is across countries; the table below shows the differences and similarities in the definition of urban areas across African countries.

3.4 Indicators to Assess Urbanisation Trends

This section provides a review of indicators to be used to assess urbanisation trends across the 54 African countries. It must be noted that there is a lack of information at the city level so data that might provide more information on urbanisation across countries is not available. Also the criteria used by different countries across the continent to define urbanisation differs. With regards to the measurements of degree of urbanisation, there are no specific indices that can be used (UNECA, 2017).

3.4.1 The Degree of Urbanisation

This indicators produce an absolute or relative statistical measure of the number of people living in urban communities. The degree of urbanisation categorises the local administration as cities, towns, suburbs or rural areas. Across the African continent, there is a multiplicity of criteria used in the national definition of what is regarded as an urban area, and there is a different range on how to measure the demographic aspect of urbanisation. The indicators to assess urbanisation trends are a percentage of an urban population, the ratio of rural-urban population, the size of locality of residence of the median urban inhabitant, the mean city population size and urban population growth rate. The degree of urbanisation tends to focus on the proportion of the population of people living in urban areas as defined in the countries that are being studied, this is usually shown in percentage. It is worth noting that not all these indicators can be used internationally due to the different definitions of an urban area across countries. The degree of urbanisation is calculated by finding the ratio of the population living in a locality to the total population of the municipality. The proportion is calculated at the given date of the census while the degree of urbanisation is calculated per annum.

The degree of urbanisation is calculated as follows:

Degree of urbanisation = $\frac{\boldsymbol{U(t)}}{\boldsymbol{P(t)}} \times \mathbf{10}$

Where **U(t), P(t)** and **d** is obtained form

$$\mathbf{U(t)} = \frac{\boldsymbol{U_{(t_0)}}}{\boldsymbol{P_{(t_0)}}} [\boldsymbol{P(t) + R(t_0)d}]$$

$$\mathbf{P(t) = U(t) + R(t)}$$

$$\mathbf{d = a - b \ \& \ a = d + b}$$

Where:

P(t) = the size of the total population at the instant t

U(t) = the size of the urban population at the instant t

R (t) = the size of the rural population at the instant t

3.4.2 Per cent of Population in Urban Areas

One of the frequently used indices for measuring the degree of urbanisation trends in Africa is the per cent of urban population, which is made available by the official statistical offices around the globe. This is the number of people living in urban places as a percentage of the total population. It can be easily estimated using the official population census of each country. If there is only an estimate for the past period, the urban percentage is extrapolated to the base year and the results are expressed as a percentage. In calculating this index, it becomes difficult when taking into account the definition of an urban area because it differs across countries. There are also uncertainties surrounding the terminologies used to describe an urban area and whether to consider rural and sub-urban population near the city as part of the metropolitan area since metropolitan areas are larger than urban areas.

The per cent of population in urban areas is calculated as follows:

$$\mathbf{PU} = \frac{\boldsymbol{U}}{\boldsymbol{P}} \times \mathbf{100}$$

Where:

PU= per cent of urban population

U= urban population

P= total population

3.4.3 The Ratio of Urban-Rural Population

The ratio of rural-urban population is also one of the indicators of urbanisation which is derived from available population censuses. The index is not often used globally and not all African countries have the data to ascertain this measurement. This index is simple to use and ensures easy comparison. When using it as a measure of the tempo of urbanisation, it is confirmed to be a good measure. A variety of criteria, such as population density and administrative boarders, are measured using this index. Just like the percentage of population living in urban areas, the ratio of urban-rural population also faces the problem associated with the variations in the definition of what an urban area signifies across nations. Due to the discrepancies in the characteristics that determine the difference between urban and rural areas, the definition is not agreeable or applicable to all nations. For this reason, there is no related standard around the globe for calculating an urban-rural area; however, the World Bank for example has its own extrapolation. This affects the result when being compared internationally or across time and it also affects the demographic measures.

To calculate the urban-rural ratio is the same as determining the urban percentage of a total population. This study adopts the data from localities classified as city or town to calculate the ratio of urban-rural population.

The Ratio of Urban-Rural Population is calculated as follows:

$$\mathbf{UR} = \frac{U}{R}$$

Where:

UR= urban-rural ratio

U= Urban population

R= Rural population

3.4.4 Size of Locality of Residence of the Median Urban Inhabitant

This index is calculated from census data which again is not available for some countries. Information as to the size of a city is needed in order to carry out this calculation. The index's assumption is that when the size of the city's median inhabitant is higher, the degree of urbanisation will be greater. However, the stage of the urbanisation process in a country can compromise how the index is calculated. The measure follows the same principles as the concept of median age. The median age points out the central value of age when the total population is listed from the oldest to the youngest or the other way around. This divides the population into two halves according to age and causes one half of the population to fall below and the other half to rise above it. The index is calculated only when there is more than 50 percent of the total population in the urban population of a country.

The size of locality of residence of the median urban inhabitant is calculated as follows:

$$\mathbf{MI} = \boldsymbol{Q_1} + (\boldsymbol{Q_{1\times 1}} - \boldsymbol{Q_1})\frac{\mathbf{50} - \boldsymbol{PP_1}}{\boldsymbol{PP_{1+1}} - \boldsymbol{PP_1}}$$

Where:

MI = Median inhabitant

PP_1 = Cumulative per cent of the next locality size

Q_1 = Upper limit of the locality size i

Q_{1+1} = Lower limit of locality size i+1

The bigger the city size of the median inhabitant, the greater the degree of urbanisation.

3.4.5 The Mean City Population Size

This index is a measure of the degree of urbanisation and is the expected value of the city size. It is easy to interpret and it is in probability terms. The mean city population size is mainly the size of the metropolis where people are expected to live. Since it relates to the previous index of the ratio of urban-rural population, the mean city population size index is also not available for all the countries. One of the interesting applications is that it calculates the expected value of the

population size of the sub-area. This index is not affected by the definition of what is regarded as an urban area in a specific country nor by the changes of the population distribution of a city. The index of the mean city population size is mainly affected by the delimitation of the boundaries of the city, which may produce different results when measuring the metropolitan areas.

3.4.6 The Urban Population Growth Rate

The urban population growth rate which is usually calculated as a percentage, is the rate at which the population size of a specific country or city changes during a given period of time. The urban growth rate is used as another measurement of urbanisation by some countries and it is calculated from past census data. The urban population growth rate emanates from four main components, namely: natural increase, area reclassification, net migration and expansion in urban growth. For most developing countries, the data that is needed to decompose the residual into the components are not obtained easily and they are also not available due to net migration and reclassification.

The formula of the urban growth rate is calculated as follows:

$$\mathbf{(UG) = \frac{u(t) - u(t_0)}{U(t_0)} \times 100}$$

Where:

UG = Urban growth rate

u(t) = the rate of urbanisation at the instant t

$U_{(t_0)}$ = the size of urban population at the instant t

3.5 Indicators on how to Measure the Tempo or Speed of Urbanisation

The speed of urbanisation is an indicator that shows the pace of urbanisation during a specific period. It indicates the rate of change brought about by urbanisation. The indices that are commonly used to obtain the speed of urbanisation are: urban and rural population growth rates, the average annual rate of change of the percentage of urban dwellers, and the change in annual percentage points. These indices all give information to demographers on how urban change is occurring. The following table summarises the nature of the indices mentioned above.

Table 4: Indicators to measure Tempo or Speed of Urbanisation

Indicator	What it measure	Formula	Source of data
Annual change of percentage point	The annual difference in percentage of the urban population between two census data.	$= \frac{\text{final (census)} - \text{Origianl (census)}}{\text{original (census)}} \times 100$	-United Nations -World Bank -African Developing Bank -Population census
Average annual rate of change of the urban per cent	The average annual rate of change in the urban per cent as an average exponential of the growth rate of the urban per cent over a certain period. Calculated from the urban percentage, which is the percentage of the population living in urban areas. Its calculation could be derived from the arithmetic, geometric, exponential growth model.		-United Nations -World Bank -African Developing Bank -Population census base on the urban definition
Difference of urban and rural population growth rates	This is the rate of change in the difference between the populations living in urban areas in relation to those living in rural areas. It is one of the most used methods to project the level of urbanisation.	$\frac{\Delta}{t-t_0}\left(\frac{U_t-U_{t_0}}{U_t}\right)-\frac{\Delta}{t-t_0}\left(\frac{R_t-R_{t_0}}{R_t}\right)$ Where: R(t) = the size of the urban population at the instant t U(t) = the size of the urban population at the instant t	-United Nations -World Bank -African Developing Bank -Population census base on the urban definition
Size of locality of residence of the median inhabitant	Average rate of exponential change in the index of place of	$\mathbf{MI} = Q_i + (Q_{i+1} - Q)\frac{50-PP_1}{PP_{i+1}-PP_1}$ Where:	-United Nations -World Bank -African Developing Bank

	residence of the median inhabitant	MI = median inhabitant PP1 = cumulative percentage of the population for the locality size just under 50 per cent. PPi+1 = Cumulative percentage of the next locality size Q1 = upper limit of the locality size Q i+1= upper limit of the next locality size i+1	-Population census base on the urban definition
Change in the mean city population size	Annual average of exponential change of the mean city population size. It indicates the size of a city where an average person lives.		-United Nations -World Bank -African Developing Bank -Population census

Source: UNECA (2017)

Most African countries do not report on all these listed indexes and as a result most of them are not available. For some indices, the definition of what merits being identified as 'urban' might affect the international comparison of results.

3.6 The Concentration Distribution of Urban Population over the National Territory Space

Many African countries are facing the problem of population growth which leads to an acceleration in urbanisation. However, the concentration of the urban population is different across nations. To find out the increase in the speed of urbanisation at a national level, the annual growth rate and urban population percentage are used to determine the degree at which the urban population has spread over the national or provincial space. This section reviews one index of interest, which is primacy index. The table below lists the indicator.

Table 5: Indicator to measure the speed of urbanisation at national level

Indicator	What it measures	Formula	Source of data
Primacy index	When a city is more than two times the size of the second largest city, it is referred to as the primate city which is the largest city in a county. It is usually measured using four cities (the largest city and the next three large cities) based on the rank-size rule. The larger the index, the more the largest city is concentrated.	**PI = C1/ (C2+C3+C4)*100** Where: C1 = the number of people in the largest city of the nation C2 = the number of people in the second city of the nation C3 = the number of people on the third city of the nation C4 = the number of people in the fourth city of the nation If the PI is greater than or equal to 50, this will be a primate city	-World Bank -United Nation -Population census

In a nutshell, although there is available information on the cities and their sizes, some countries do not calculate the indices listed above.

CHAPTER FOUR: RESULTS OF DATA ANALYSIS

4.1 Introduction

Urbanisation involves a lot of development challenges and it is a complex study around the world. In the past the growth of urbanisation has increased rapidly around the world, but in recent years urban growth has declined; in some countries this can be attributed to natural disasters and the shrinking of the economy, and also to the movement of people from bigger cities to small settlements. According to the WUP (2014), urbanisation around the world is characteristically diverse, and in the past most of the largest urban agglomerations were in developed nations but today the largest cities are found in developing countries mostly in Africa and Asia, in which the fastest growing agglomerations are the medium sized cities.

This chapter involves the analysis of the data collected from the UN, World Bank, Geo-Hive, the African Development Bank and recent data from national statistical offices. The statistical analyses focus on the selected indicators which refer to static and dynamic measurements of urbanisation. The analysis will be compared across African countries. This will highlight the countries that are growing fast and the ones that are declining or stagnating and will examine the differences and similarities across the countries. The research question and hypotheses in Chapter One are answered through examining the trends and patterns of urbanisation for 54 African countries which occurred between 1995 and 2015. The main objective of the study is to answer the research question and the hypothesis found in Chapter One and the objective is to provide an empirical study on urbanisation trends in Africa. A lot of the tables in this chapter are found in the appendices, while the figures and some tables are within the chapter.

4.2 Annual Urban Population Size (World Bank and United Nations)

Appendix 1a and 1b show the variations in an urban population the size of 58 (1a) and 54 (1b) African countries between the period of 1995 and 2015 based on data from the United Nations (UN) and the World Bank collection of world development indicators. According to the UN, urban population is defined as group of individual living in an area where individual lives are categorised

by the level of each country's standard of definition. The World Bank's indicator of people living in the city is calculated using the urban ratios from the United Nations World Urbanisation Prospects and estimates from the World Bank population. The urban population is estimated by applying the United Nation ratio of urban population to the estimate of the World Bank total population. The World Bank's figures lack value because they utilise secondary data from the United Nations. Data from the United Nations is based on statistics from the United Nations Department of Economic and Social Affairs, World Urbanisation Prospects, the 2014 revision. Published by the United Nations Population Division.

As indicated in appendix 1a (UN), Saint Helena is the only country that has a constant urban population of 2,000 and it had the lowest urban population between 1995 and 2015. As projected, the country will experience a slight increase in its urban population from 2000 to 2025. As shown in table 1a (UN) and 1b (World Bank) countries that have a relatively low annual urban population are such as Saint Helena, Seychelles, Sao Tome and Principe, the Comoros, Cape Verde and Mayotte. Saint Helena, Sao Tome and Principe, the Comoros and Cape Verde are remote volcanic rock islands with a total population less than one million, this is one of the reasons why they have a low level of urban population. According to table 1a, (UN) the annual urban population size of Seychelles was 37000 in 1995, 40000 in 2000, 44000 in 2005, and 48000 in 2010, and in 2015, it is reported at 51000. Sao Tome and Principe also had an annual urban population size of 63000 in 1995, 74000 in 2000, 90000 in 2005, and 110000 in 2010, reaching 132000 in 2015. For the Comoros, the size of the annual urban population was 132000 in 1995, 148000 in 2000, 167000 in 2005, 191000 in 2010, and increased to 218,000 in 2015. Cape Verde's urban population was 192000 in 1995, 236000 in 2000, 276000 in 2005, 302,000 in 2010, and 333000 in 2015. Swaziland also reported a low urban population which was less than 300000 between 1995 and 2015. The urban population of these two countries has been growing over the years despite the high levels of unemployment that they are facing. High urbanisation rates cause economic and developmental pressure and increase challenges that the government needs to address. Swaziland was a British colony which was encircled inside South Africa.

There appear to be some disparities between the data retrieved from the UN and that from the World Bank. For instance in table 1b, the World Bank reports that the size of the urban population

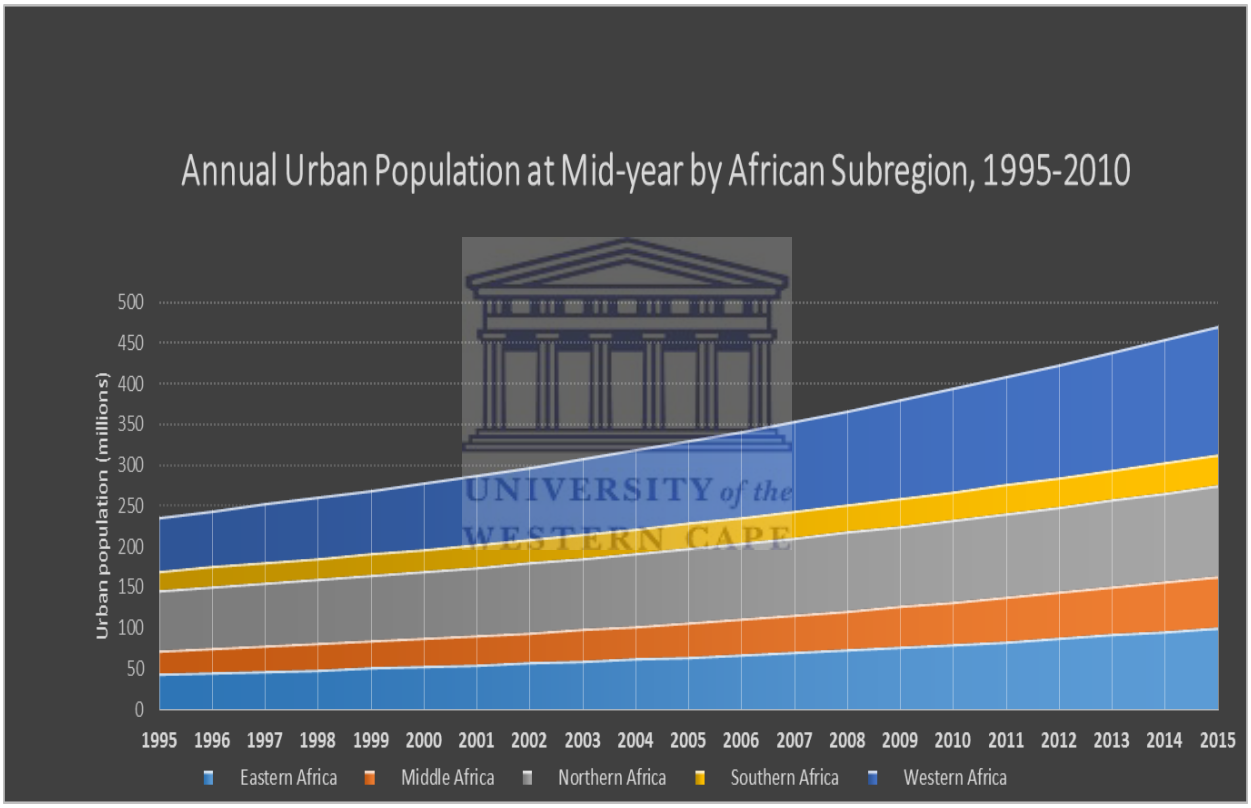
of the Comoros was 132541 in 1995, 152294 in 2000, 170479 in 2005, 192548 in 2010, and 219980 in 2015. The World Bank's estimate of the size of the urban population of the Comoros is bigger than that of the United Nations, which cites a population of 132000 in 1995, 148000 in 2000, 167000 in 2005, 191000 in 2010 and 218000 in 2015.

According to literature, half of the world's population, amounting to 3.3 billion people lives in urban areas. Continents such as Latin America, North America and Europe consist mostly of urban areas. However, in Africa and Asia, half of the population still live in rural areas or small towns, with a rapidly increasing urban population. China is experiencing a relatively high growth in urban population. Referring to appendix 1a (UN) and 1b (World Bank) in Africa, countries such as Nigeria, Egypt, South Africa, the Democratic Republic of Congo and Algeria have a high annual urban population. Nigeria, which has the most highly populated urban areas in Africa, had an annual urban population size of 34919000 in 1995, 42810000 in 2000, 54541000 in 2005, 69441000 in 2010, and 87680000 in 2015 as shown in appendix 1a (UN). Based on the World Bank's estimates in appendix 1b, Nigeria's urban population was 34785092 in 1995, 42627440 in 2000, 54289212 in 2005, 68949828 in 2010, and 86561390 in 2015. When calculating the difference in percentages between the two data sources - the World Bank and the UN – these vary from 10%-55% respectively. Nigeria's urban areas have been experiencing a rapid growth in population. The growth over the years has been remarkable and most of the economically active population in the country is located in the urban areas.

The annual urban population of Egypt is the second highest in Africa and it has also been on a rise as shown in appendix 1a (UN). The size of Egypt's annual urban population, based on the estimates from the UN, increased from 26188000 in 1995 to 36538000 in 2015. The global dynamics of urbanisation have strongly transformed the urban areas of Egypt, which have caused an increase in its urban population. The third highest populated country in Africa is South Africa with two-thirds of its total population living in urban areas. South Africa's annual urban population grew from 22572000 in 1995 to 34663000 in 2015. Among other contributing factors, the freer post-apartheid movement was a significant cause of the increase in the urban population of South Africa. Individuals move to cities in the hope of finding employment opportunities as economic activity is riper in cities than any other areas. More cities in Africa experienced a growth in

population from the 1990s in the face of successful economic growth. For other countries such as Angola and the Democratic Republic of Congo, civil unrest and conflict motivated urbanisation. It can be inferred from the World Bank and the UN estimates that countries like the Comoros, Mozambique, Zambia, Libya and Cape Verde have had a relatively stable urban population over the past years.

Figure 1: Annual Urban Population at Mid-year by African Sub-region, 1995-2015



Source: Own computation using United Nations data, Department of Economic and Social Affairs, Population Division, 2014

According to appendix 1a, (UN) the annual urban population of Northern Africa is the highest compared to the other African sub-regions from 1995 to 2000. Northern Africa's urban population stood at 73737000 in 1995 and 81901000 in 2015 as opposed to the years 2001 to 2015 (figure 1). Western Africa took over as the sub-region with the highest annual urban population with its urban population rising from 84902000 to 157625000 between the periods of 2001 and 2015 (figure 1). Most Northern African countries went through a time of stable urbanisation, which caused their

urban population rates to slow down between the years 2001 and 2015. On the other hand, countries in Western Africa have been experiencing a relatively high urban population. Most of these countries experienced socio-political conflicts, causing people to flock toward urban areas. Eastern Africa had the third highest urban population, which was reported at 43843000 in 1995, 53484000 in 2000, 65109000 in 2005, 80636000 in 2010, and 101034000 in 2015 (figure 1). This region consists of six countries that have an urban population of less than a million and it is known for large-scale agricultural activities.

Africa's core region, Middle Africa, has the second lowest urban population among the sub-regions, as shown in appendix 1a (UN). This region had a total urban population size of 28525000 in 1995, 34515000 in 2000, 42363000 in 2005, 51883000 in 2010, and 63061000 in 2015 (figure 1). Southern Africa is the smallest region in Africa made up of five countries and it has the lowest urban population in the continent. The region's total urban population was estimated as being at 24360000 in 1995; 27666000 in 2000; 31165000 in 2005; 35435000 in 2010, and 37813000 in 2015 (figure 1). In this region, only South Africa reached an urban population of more than a million from 1995 to 2015 and Namibia reached a million in 2013. Almost half of the population in Namibia live in the city.

Africa's overall urban population has been on an increasing trend from 1995 to 2015 according to appendix 1a (UN) and 1b (World Bank). Africa had a total annual urban population of 236904000 in 1995; 278770000 in 2000; 330742000 in 2005; and 394940000 in 2010; reaching 471602000 in 2015 as shown in appendix 1a.

4.3 The Per cent of Urban Population (United Nations, World Bank, Geo-hive and African Development Bank).

Appendix 2 analyses the per cent of urban population across 54 African countries between 1995 and 2015. According to the United Nations, the per cent of population in urban areas refers to the population of people living in urban places as a percentage of the total population. In particular, the section examines the similarities and differences in the trend of urbanisation across the four

main data sources, namely, the United Nations, the World Bank[1], Geo-hive[2] and the African Development Bank. The World Bank indicator of urban population is calculated using the urban ratios from, the United Nations World Urbanisation Prospects and estimates from the World Bank population figures while the urban per cent is calculated by the Statistics Division of the United Nations Department of Economic and Social Affairs. Data from the United Nation is derived from statistics from the United Nations, the Department of Economic and Social Affairs World Urbanisation Prospects: 2014 Revision Published by the United Nations Population Division. The African Development Bank (group) does not retrieve data from the United Nations, it estimates its own indicators. Geo-hive derive data from the United Nations, Department of Economic and Social Affairs, Population Division (2014) World Urbanisation Prospects.

According to appendix 2, it can be observed that there are many similarities across the United Nations, the World Bank and Geo-hive data, all 54 African countries show an identical increase in the percentage of urban population across the three sources of data. Meanwhile, the African Development Bank shows a slight difference in data when compared to United Nations, the World Bank and Geo-hive. This is mainly because of different definitions of what an urban area means and this has resulted in inconsistencies in population values across nations.

There is also an increasing trend in urbanisation for countries like Algeria, Angola, Democratic Republic of Congo, Gambia, Lesotho, Nigeria, the Seychelles and Sierra-Leone as shown in appendix 2. However, while the large figures are similar between the United Nations, the World Bank and Geo-hive, the African Development Bank reported higher percentages. There is a similar observation between Benin and Tanzania but there are high percentages indicated for the African Development Bank recorded in 2005 and 2010, according to table 2.

According to appendix 2, there are contrasting trends in urbanisation from 1995 to 2015 across the four data sources for countries such as the Comoros, Egypt and Equatorial Guinea. The figures are only similar for three data sources namely, the United Nations, the World Bank and Geo-hive. For

[1] The World Bank does not have data for Eritrea in 2015.

[2] Geo-hive does not have data for all countries in 1995 and 2000.

Egypt, the percentage of urban population has been constant form 1995 to 2000 at 42.8% and remained fairly constant in 2005 and 2010 at 43.0%. However, it increased to 43.1% in 2015. The percentage of urban population for Equatorial Guinea has been constant from 1995 to 2000 at 38.8%. From 2005 to 2015 it increased to 38.9% and 39.2% respectively. For the Comoros, the per cent of urban population has been constant from 1995 to 2000 at 28.1% and fairly constant in 2005 and 2010 at 27.9%. Then it increases to 28.3% in 2015.

Furthermore, the percentage of urban population in the Comoros, Madagascar and Zambia decreased from 1995 to 2000 and started increasing from 2005 to 2015, according to the United Nations, the World Bank and Geo-hive. It must also be emphasised that these three sources of data are identical. Based on the data from Africa Development Bank in appendix 2, there is a decline in the percentage of urban population for countries such as the Comoros, Egypt, Equatorial Guinea, Mauritius and Swaziland. Mauritius shows a continuous decline from 1995 to 2015 with 43.28% to 42.67%. Recorded percentages are identical across all four sources of data. However a similar increasing trend of the percentage of urban population is observed across the four sources of data, for countries such as Liberia and Togo.

More than 70% of the population of Gabon and Djibouti are residing in urban areas. Gabon is currently showing the highest per cent of people residing in urban areas, at 75.4% in 1995, 80.1% in 2000; 83.4% in 2005; 85.7% in 2010; and 87.2 % in 2015 as stated by the UN, the World Bank and Geo-hive in appendix 2. The urban population percent for Gabon has increased over the years: 74.9% in 1995; 79.7% in 2000; 83.5% in 2005; 86.49% in 2010 and 88.5% in 2015 as stated by the African Development Bank. According to the Demographic and Health Survey for 2012 conducted in Gabon the fertility rate in urban areas remains high; this is one of the factors contributing to an increase in urban area population. Being the 15th largest country to produce oil in the Africa, Gabon has experienced a strong economic growth over the years; this has been an attraction for individuals to move to Gabon's urban areas. Djibouti is quite a small country, where most of the people are in poverty. The natural disasters of the country have forced people to move to the cities for a better living. Djibouti's urban population per cent is 76.3%, 76.5%, 76.8%, 77.0% and 77.8% in 1995, 2000, 2005, 2010 and 2015 respectively, as recorded by the UN, the World Bank and Geo-hive. Libya also shows a high per cent of people living in urban areas; negative

factors such as political conflict and weak security conditions in the country drove the people to cities. The pace of urban population in the European countries increased in the 19th Century and the early years of 20th Century as a cause of the industrial revolution; and by 2008 most cities in Europe reached an urban population size of more the 50% as declared by the United Nations.

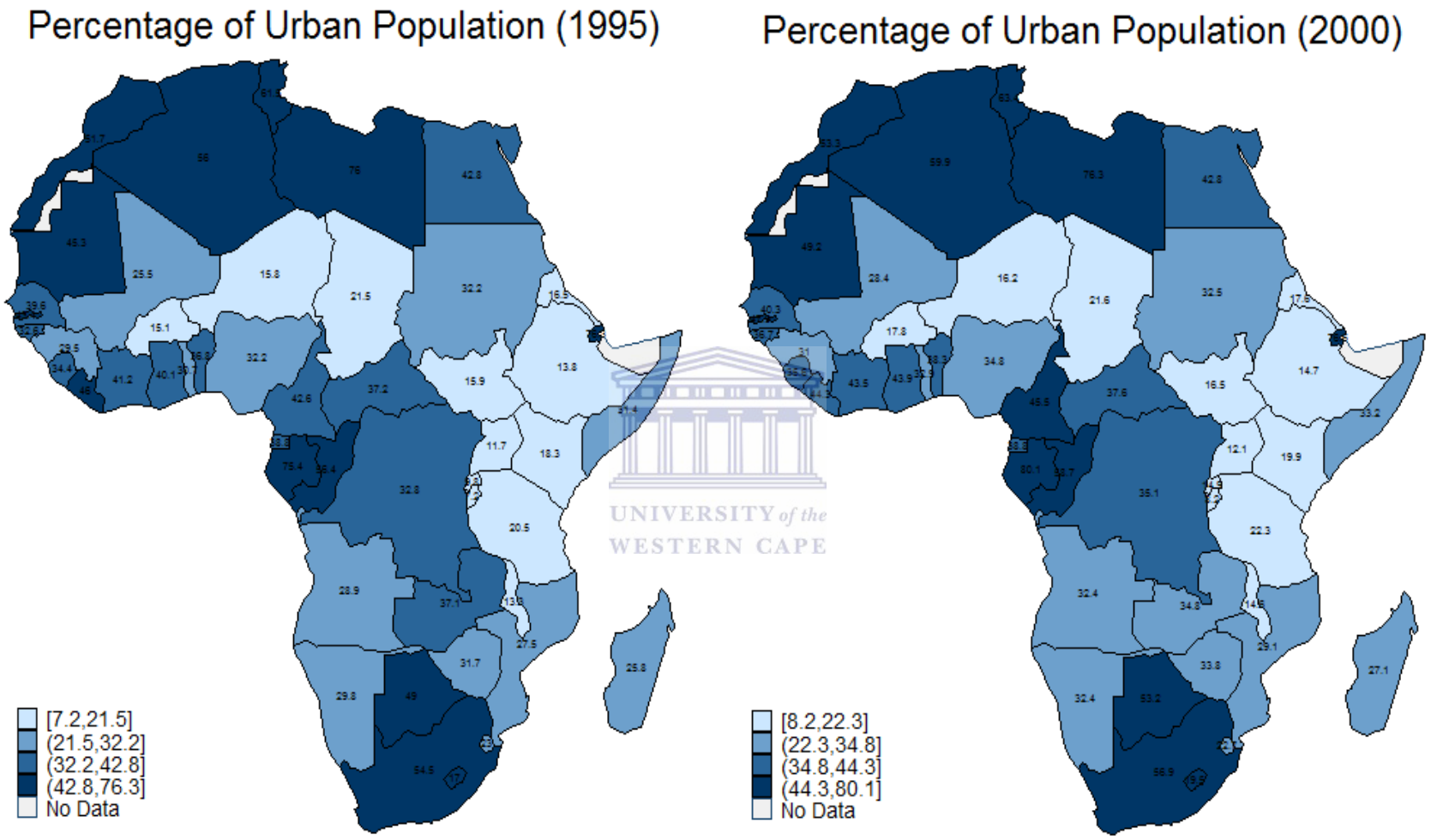
Burundi is a small country with most of the people living in small farms and below the poverty line. This led the country to have the lowest per cent of people living in urban areas in Africa. As reported in appendix 2 the UN, the World Bank and Geo-hive reported the per cent of urban population there to be at 7.2%, 8.2%, 9.4% and 10.6% in 1995, 2000, 2005, 2010 and 2015, respectively. Other countries that show a low urban percentage are Kenya, Lesotho, Malawi and Rwanda and Uganda.

In addition to the information above, figure 2, 3 and 4 below illustrate results of the percentage of urban population. The results for 1995 to 2015 reveal that the percentage of urban population has increased over the years. The maps show that in 1995 Djibouti had the highest urban percentage on the continent followed by Libya. In 2005 to 2015 Gabon showed the highest percentage of urban population at 87.2% in 2015. Inasmuch as the percentage of the urban population has increased over the years, the patterns and trends of the average annual rate of change of the urban percentage has declined over the years. The information shows that most of the countries with the highest percentage of urban dwellers are located in the Northern region followed by the central region. It is illustrated that the Western region has the most countries with the lowest urban population percentage.

The map in figure 5 below presents the findings for the top 20 countries with the highest percentage of urban population in 2015. The map shows that Gabon, which is allocated in the central region of Africa, has the highest urban percentage followed by Libya in the Northern region than Djibouti in the Eastern region. Most countries with the highest percentage of urban population are located in the Northern region. The Stata software I used to compare the maps does not have the co-ordinates of islands such Sao Tome and Principe, Seychelles and Cape Verde. These islands are in the top 20 countries with the highest urban population. Ranked from the highest to the lowest percentage of urban populations, the countries are as follows: Gabon, Libya, Djibouti, Algeria,

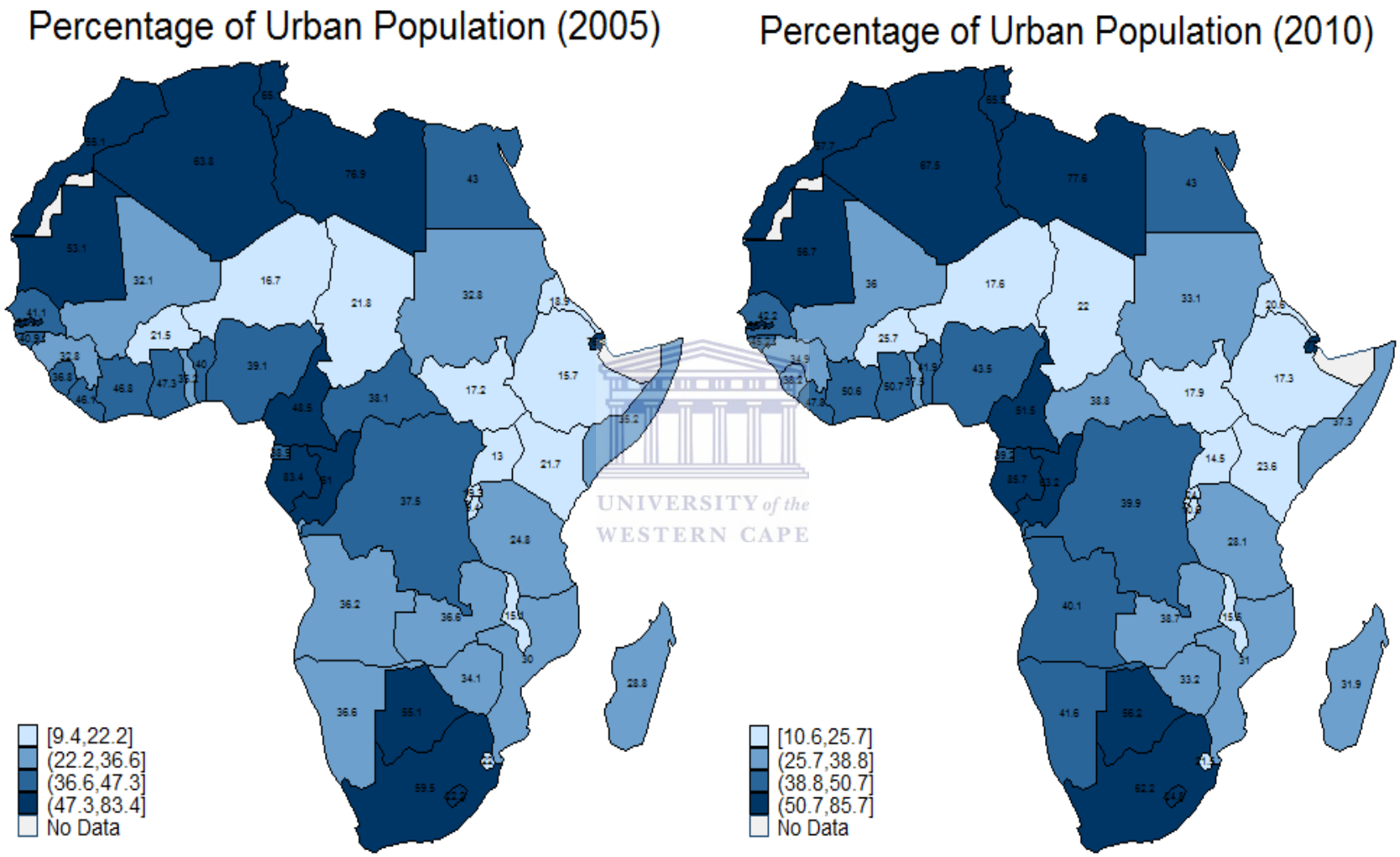
Tunisia, Cape Verde, Congo, São Tomé and Príncipe, South Africa, Morocco, Mauritania, Gambia, Botswana, Cameroon, Ivory Coast, Ghana, Seychelles, Liberia, Guinea, Nigeria.

Figure 2: Percentage of Urban population (1995 and 2000)



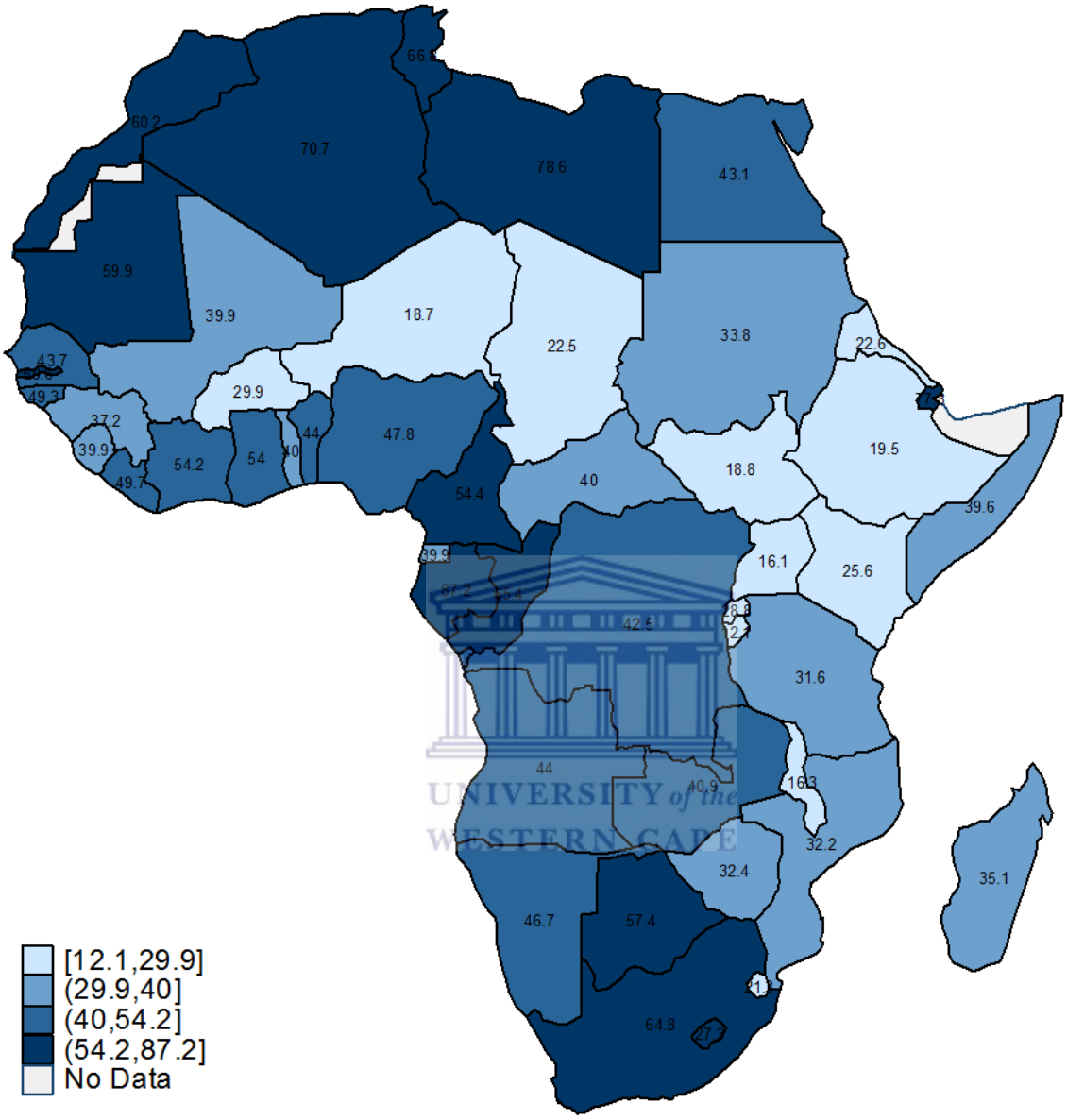
Source: *Own computation using United Nations data*

Figure 3: Percentage of Urban population (2005 and 2010)



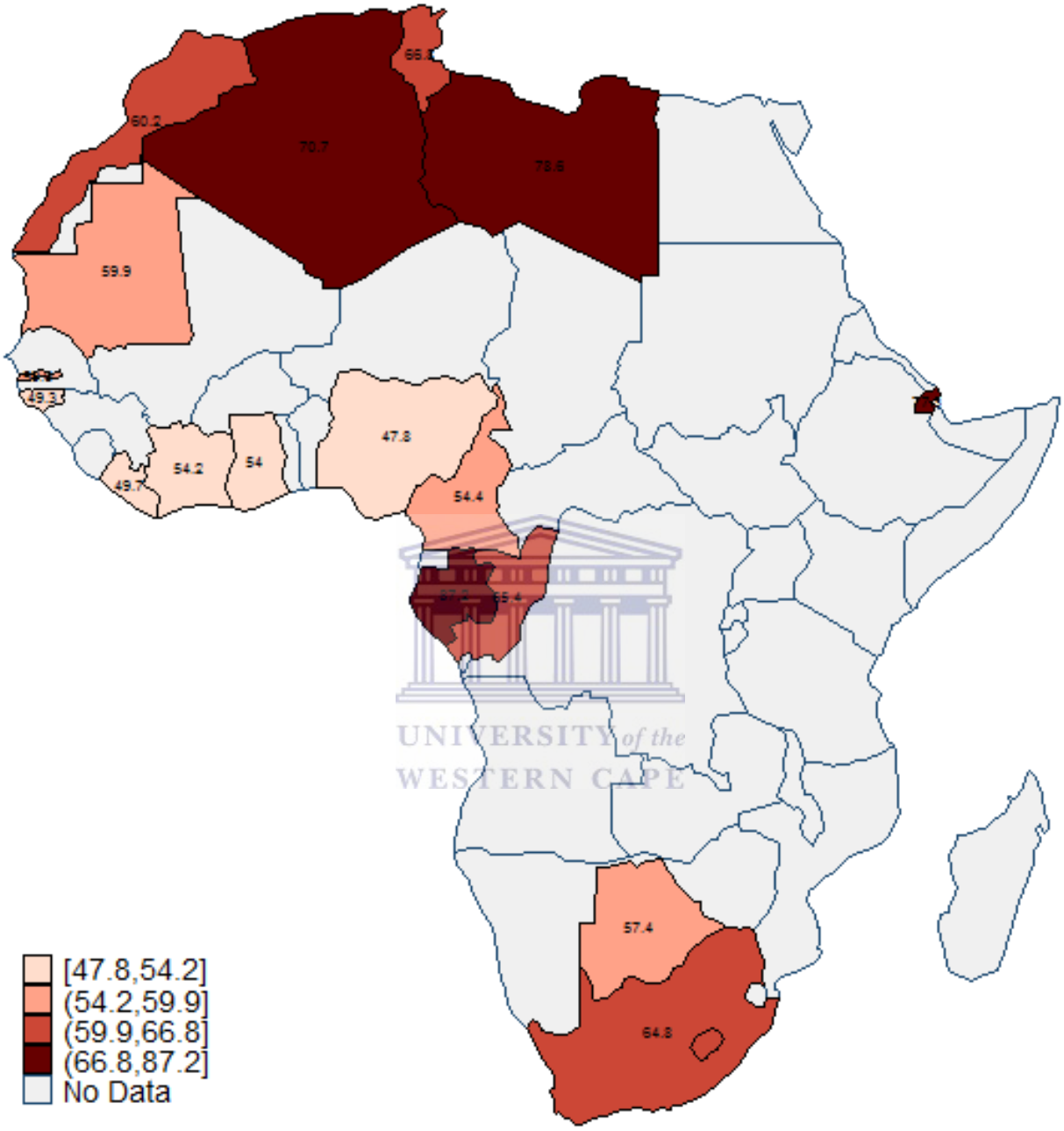
Source: *Own computation using United Nations data*

Figure 4: Percentage of Urban population (2015)



Source: *Own computation using United Nations data*

Figure 5: Percentage of urban population for Top 20 countries in 2015



Source: *Own computation using United Nations data*

4.4 Average Annual Rate of Change of the Urban Per Cent, the Temporary Change (United Nations)

Appendix 3 depicts the Average Annual Rate of Change of the Urban Per cent for 58 African countries between 1990-1995 and 2010-2015. The average annual rate of change of the urban per cent is an average exponential growth rate of the urban per cent over a certain period. Calculated from the percentage of the population living in an urban area, it's an indicator showing temporary change. It indicates a static measurement, for example the percentage to date and how this percentage is changing. The temporary change is measured using the annual rate of change of the urban per cent. The data used for this analysis was based on statistics from the United Nations, Department of Economic and Social Affairs, World Urbanisation Prospects, the 2014 revision. Published by the United Nations Population Division.

Currently, Africa is one of the world regions undergoing urban transformation that is very rapid, although Asia must be considered separately. These are the early stages of African urban transformation. However, with urbanisation transitioning at a higher speed, some countries are experiencing a continuous decreasing trend in the average annual rate of change of the urban per cent between 1995-200 and 2010-2015. According to data extracted from the United Nations in table 3, these countries are Burundi, Angola, Réunion, Rwanda, Cameroon, Congo, Democratic Republic of the Congo, Gabon, Sao Tome and Principle, Algeria, Lesotho, Gambia, Ghana, Guinea-Bissau, Mauritania and Togo. The Sub-Saharan Africa where most African countries are located is known for its HIV/AIDS epidemic, which has had an impact on the average annual rate of change of the urban per cent in different countries. The epidemic causes the life expectancy of a nation to decline. Diseases are mostly one of the reasons for a rapid decline in the average annual rate of change of the urban per cent for these countries.

Globally, the patterns and trends of the average annual rate of change of the urban percent were higher in the past years compared to the present years as stated by the United Nations, the 2014 revision. Referring to appendix 3, between 1995-2000 and 2010-2015 the countries that are recorded in Africa as having experienced a continuous increase in the average annual rate of change of the urban per cent are Eritrea, Libya, Guinea, Niger, Saint Helena and Central African Republic.

According to appendix 3, between 1995-2000 and 2010-2015 the average annual rate of change of the urban per cent for countries such as the Comoros, Djibouti, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mayotte, Mozambique, Seychelles, Somalia. In addition, Western Sahara, South Sudan, Uganda, Tanzania, Zambia, Chad, Congo, Equatorial, Guinea, Egypt, Morocco, Sudan, Tunisia, Botswana, South Africa, Swaziland, Benin, Burkina Faso, Cabo Verde, Ivory Coast, Liberia, Mali, Nigeria, Senegal and Sierra Leone have fluctuated over a period of years and this can be caused by economic stagnation.

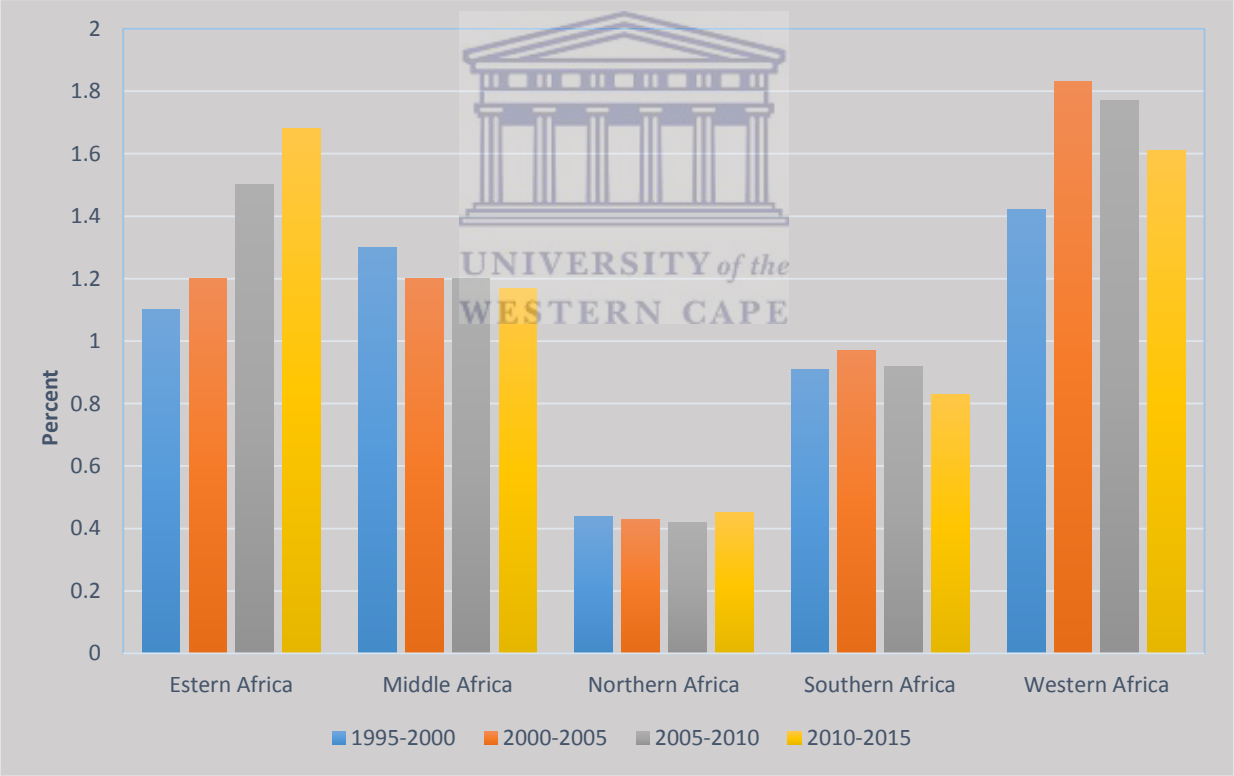
The United Nations, Department of Economic and Social Affairs data, in appendix 3 shows that for the average annual rate of change of the urban per cent, at least ten African countries are in a negative growth pattern. This does not mean that the counties are not experiencing growth, it means there is growth but at a snail's pace. Countries such as Mauritius and Saint Helena's average annual rate of change of the urban per cent between 1995-2000 and 2010-2015 have been constantly negative mainly because they are islands, with a small population and a relatively small land mass. In appendix 3 it shows that, Mauritius was -0.29%, -0.50%, -0.51% and -0.45 in 1995-2000, 2000-2005, 2005-2010 and 2010-2015 respectively. While Saint Helena was -0.44%, 0.23%, -0.21% and -0.02% in 1995-2000, 2000-2005, 2005-2010 and 2010-2015.

According to literature, there is an assumption that over the years, urbanisation has been going down, but Potts has argued that on the contrary urbanisation is increasing. In appendix 3 we see a decline in the average annual rate of change of the urban per cent for many countries, such as Burundi, Kenya, Angola, Lesotho, Democratic Republic of the Congo, Cameroon, Cape Verde, Gambia, Ghana, Guinea-Bissau, Nigeria, Togo and Mauritania, and Rwanda which might be attributed to the success in controlling fertility and other factors. Gabon's urban per cent has been decreasing; meanwhile, the average annual rate of change of urban per cent has been relatively high for countries like Ethiopia, Uganda, Tanzania, Namibia, Somalia, Burkina Faso, and Guinea which corroborates with Potts's thesis. Economic opportunities, better education, healthcare, housing and the best available jobs cause people to move to urban areas. The average annual rate of change of urban per cent for South Africa is relatively stable - this can be a cause of rapid growth in small areas due to growth in economic activities and low concentrations of people. Countries like Djibouti, Congo, and Sierra Leone also experience a stable average annual rate of change of

urban per cent between 1995-2000 and 2010-2015, as stated by the United Nation, 2014 Revision in appendix 3.

According to the Average annual rate of change of the urban per cent in appendix 3, Egypt has one of the slowest pace in term of its average annual rate of change of the urban per cent. This is collaborating with the writings, which highlights that region with urbanisation level that are relatively high are urbanising at a low speed. On the other hand Zimbabwe has dropped drastically over the years this is caused by the drop of the country's economic activity, people are migrating to countries like South Africa, Namibia and other neighbouring countries for economic survival.

Figure 6: Average Annual Rate of Change of the Urban Per cent by Sub region, 1995-2015



Source: Own computation using United Nations data, Department of Economic and Social Affairs, Population Division, 2014

By far the highest rate of urbanisation is calculated as the average annual rate of change of the urban per cent is in Western Africa at 1.42% in 1995-2000, 1.83% in 2000-2005, 1.77% in 2005-

2010 and 1.61% in 2010-2015 refer to appendix 3 and illustrated in figure 6. Most of the countries of this region are coastal countries whose economic activity is different from the others and that might have a predominant effect. The second highest region with the most countries is Eastern Africa at 1.10% in 1995-2000, 1.20% in 2000-2005, 1.50% in 2005-2010 and 1.68% in 2010-2015 (figure 4). Most countries in East Africa are located by the warm beautiful Indian Ocean; and for the past years the average annual rate of change of the urban per cent of this region has been increasing, refer to appendix 3. The warm Indian Ocean might be a contributing factor as it attracts a lot of business opportunities to the region. Mayotte, Mozambique, Réunion, Seychelles, Tanzania, Mauritius and Madagascar are popular tourist attractions in Eastern Africa. Middle Africa comes in third place; its average annual rate of change of urban percent is slowing down relative to other areas, from 1.30% in 1995-2000, 1.20% in 2000-2005, 1.20% in 2005-2010 to 1.17% in 2010-2015, refer to appendix 3 and figure 6.

Southern Africa is the smallest region among all regions in terms of population; it is the second last region with its average annual rate of change of urban per cent fluctuating over the years. Appendix 3 shows the Southern Africa average annual rate of change of the urban per cent at 0.91% in 1995-2000, 0.97% in 2000-2005, 0.92% in 2005-2010 and 0.83% in 2010-2015 (figure 4). Northern Africa comes last in terms of its average annual rate of change of urban per cent at 0.44% in 1995-2000, 0.43% in 2000-2005, 0.45% in 2005-2010 and 0.45% in 2010-2014, refer to appendix 3 and figure 4. Northern Africa has large countries in term of land mass and population. Over the years the fertility rate of most countries in this region have dropped, which is one of the factors that contributes to the slowing down of its average annual rate of change of urban per cent.

Overall, Africa's average annual rate of change of the urban per cent is 0.84% in 1995-2000, 1.02% in 2000-2005, 1.08% in 2005-2010 and 1.08% in 2010-2015. The average annual rate of change of the urban per cent for Africa has increased over the years with a constant rate of change of the urban per cent between 2005-2010 and 2010-2015 at 1.08% as refer to appendix 3.

4.5 Average Annual Rate of Change of the Urban Population (per cent)

Appendix 4 depicts the average annual rate of change of the urban population (per cent) for 58 African countries between 1995-2000 and 2010-2015. Previously, the change was calculated in reference to the urban per cent (refer to Appendix 3). In this section, the change is calculated in reference to the absolute figures in terms of the urban population. The average annual rate of change of the urban population refers to the urban population rate of growth within a given period as the total population living in the urban area expressed as a per cent. The data used is extracted from the United Nations, Department of Economic and Social Affairs, Population Division World Urbanisation Prospects, the 2014 Revision.

The average annual rate of change of the urban population (per cent) has declined in most of the developed world; this means that urban populations are growing more slowly than in the past where they have been highly urbanised. In most European countries, urban growth is relatively low because of the countries' low growth rate of natural population and the patterns of decentralisation of urban development. According to appendix 4 there are 10 countries in Africa that are experiencing a continuous decreasing trend in their average annual rate of change of the urban population (per cent) between 1995-2000 and 2010-2015. Countries like Mayotte, Reunion, Rwanda, Cameroon, Gabon, Botswana, South Africa, Ghana, Guinea-Bissau and Mauritania. Rwanda's decline in its rate of urban population is caused by the government's policy to reduce fertility. Literature states that the cause of the decline in Ghana's rate of urban population is economic stagnation. This caused most of the people to migrate to Nigeria, Ivory Coast and other Countries. The Comoros, Zambia, Niger and Senegal experienced a continuous increasing trend of average annual rate of change of urban population (per cent) from 1995-2000 to 2010-2015, as is shown in appendix 4. The constant increase in the urban population is caused by the lack of activity in the agricultural land stock and an increase in the growth of labour force.

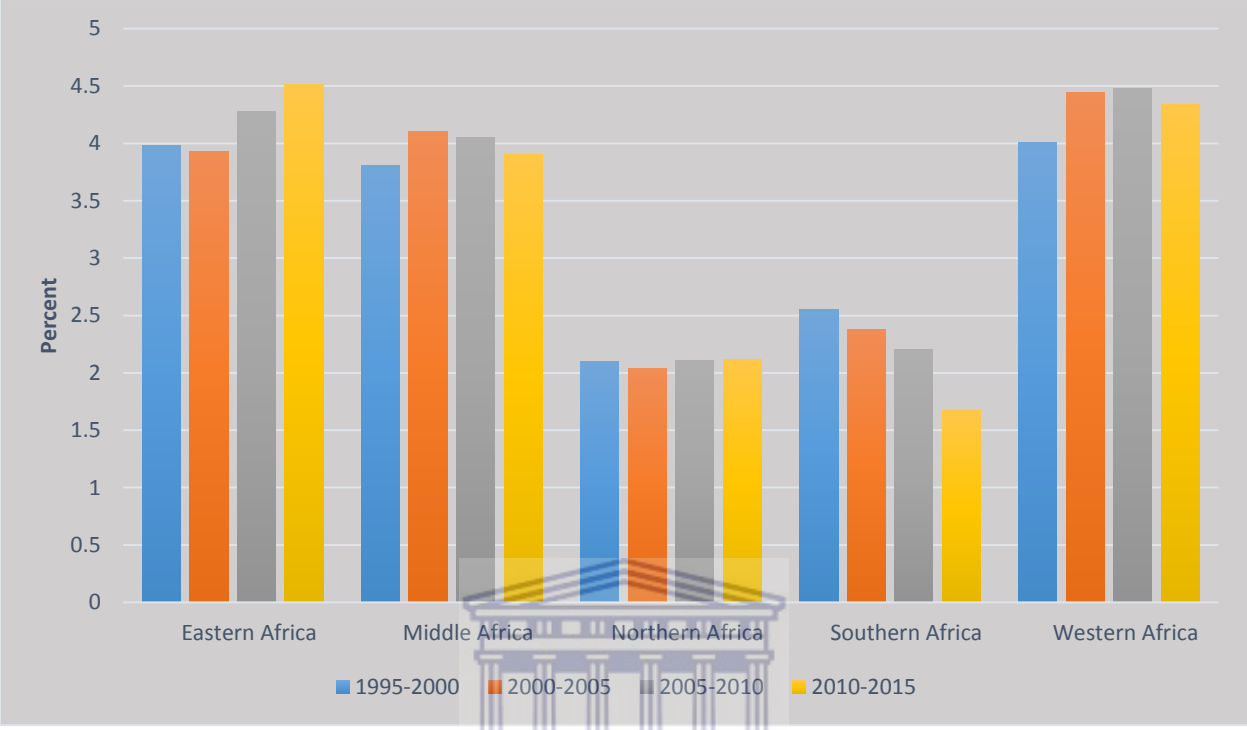
Appendix 4 shows that six countries have experienced a fluctuation rate over the years such as the Seychelles, Uganda, Congo, Algeria, Libya and Liberia. From 1995-2000, the average annual rate of change of the urban population (per cent) for Mauritius was reported at 0.69%. It went into negative figures in 2000-2005, 2005-2010 and 2010-2015 at -0.04, -0.21% and -0.08%. The other country reported with a negative average annual rate of change of the urban population is Saint

Helena at -1.11% in 1995-2000, -1.98% in 2000-2015, -2.18% in 2005-2010 and -0.59 in 2010-2015. These two countries are islands with less than 2 million inhabitants, they show the lowest average annual rate of change of the urban population with Saint Helena being the first, as shown in appendix 4.

Rwanda shows a decline in the average annual rate of change of urban per cent in appendix 3. According to appendix 4 the country remains one of those in Africa with a relatively high urban population growth. Its average annual rate of change of urban population (per cent) in 1995-2000, 2000-2005, 2005-2010 and 2010-2015 is 16.21%, 7.44%, 7.12% and 6.43%, respectively. The highest next country is its neighbouring country Burundi at 4.13%, 5.61%, 5.98% and 5.66% in 1995-2000, 2000-2005, 2005-2010 and 2010-2015, respectively. These countries have a small amount of land space with a high population that is more than 10 million.

Referring to appendix 4 data extracted from the United Nations. South Sudan, Egypt and Tunisia show a constant rate of change between the years 2005-2010 to 2010-2015 at 5.50%, 1.68% and 1.38%, respectively. In the 1990s Tunisia was reported to have a constant fertility rate that might have resulted in a constant urban population between 2005-2010 and 2010-2015. Between 1995-2000 and 2010-2015. Sixteen (16) African countries have been reported to have a relatively stable average annual rate of change of the urban population; these are countries such as Djibouti, Ethiopia, Kenya, Madagascar, Mozambique, Chad, Congo, Equatorial Guinea, Algeria, Libya, Sudan, Gambia, Guinea-Bissau, Nigeria and Togo, as shown in appendix 4.

Figure 7: Average Annual Rate of Change of the Urban Population (per cent) by Sub-region, 1995-2015



Source: Own computation using United Nations data, Department of Economic and Social Affairs, Population Division, 2014

According to appendix 4, Western Africa is experiencing a high level in average annual rate of change of urban population when compared to other African regions at 4.10% in 1995-2000, 4.44% in 2000-2005, 4.48% in 2005-2010 and 4.34% in 2010-2015 (figure 7). Most of the country's average annual rate of change of urban population is more than 3.50 per cent and most countries have seaports, which have been a great form of merchant development in the region. Eastern Africa comes in second place at 3.98%, 3.93%, 4.28% and 4.51% in 1995-2000, 2000-2005, 2005-2010 and 2010-2015, respectively (figure 7). The average annual rate of change of urban population for Middle Africa is 3.18%, 4.10%, 4.05% and 3.90% in 1995-2000, 2000-2005, 2005-2010 and 2010-2015, respectively (figure). This region comes third, it has few countries compared to Western and Eastern Africa and its average annual rate of change of the urban population is at 3.00 per cent. Countries in this region have a high growth rate; most countries are French-speaking and coastal nations. In Southern Africa, as shown in figure 5, the average annual rate of change of urban population (per cent) are 2.55%, 2.38%, 2.20% and 1.67% in 1995-2000,

2000-2005, 2005-2010 and 2010-2015, respectively. Countries in this region have experienced a decline in the average annual rate of change of urban population (per cent).

The lowest reported region is Northern Africa at an average annual rate of change of urban population (per cent), at 2.10% in 1995-2000, 2.04% in 2000-2005, 2.11% in 2005-2010 and 2.12% in 2010-2015 (figure 5). Most of these countries are Arabic nations, which have already experienced a high level of average annual rate of change of urban population (per cent), and the trends for these countries have slowed down.

Africa's overall average annual rate of change of the urban population (per cent) is 3.25% in 1995-2000, 3.42% in 2000-2005, 3.55% in 2005-2010 and 3.55% in 2010-2015 as shown in appendix 4. The average annual rate of change of the urban population for Africa has increased over the years with a constant rate of change of the urban population between 2005-2010 and 2010-2015 at 3.55%.

4.6 Annual Growth Rate of Urban Population (World Bank)

Appendix 5 shows the annual growth rate of the urban population of 54 African countries between the years of 1995 and 2015 based on data taken from the World Bank collection of world development indicators. According to the World Bank, the urban population is defined as an area where individuals live. The speed at which the number of residents living in an urban area increases, despite their nationality or legal status, is known as the urban population growth rate. The annual urban population growth rate is given as a percentage. The annual urban population growth rate is based on the assumption that the growth rate between two points is constant.

According to the World Bank collection of world development indicators in appendix 5, the annual urban population growth rate of Rwanda increased from 13.33% in 1995 to 17.6% in 1996 giving it the highest urban population growth rate in Africa. Between the years of 1997 to 2015 Rwanda's annual urban population growth rate decreased from 15.7% to 5.76%. Even through the pace of urban population growth of Rwanda has declined over the years, Rwanda still reminds one of the country with the highest urban population growth rate in Africa except in 2003 to 2005 where

Burkina Faso was in the lead. The population of Rwanda is young but fast growing; the country is made up of few villages and most families live in self-contained houses. There are factors that contribute to the slowing down of the urban population growth rate in a country - there are many diverse factors, including natural ones. The urban population growth rate cannot be summed up as a single factor. Referring to the data from the World Bank collection of development indicators in table 5, Burkina Faso shows the highest annual urban population growth rate in Africa at 6.65%, 6.67%, 6.67% and 5.73% in 2003, 2004, 2005 and 2015 respectively. Appendix 5 shows that Burundi is among the countries with a high annual urban population growth rate in Africa, from 4.47% in 1995 to 5.78% in 2015. The annual urban population growth rate has been high in Angola from 1995 to 2015 at 5.45% to 5%. The wars, political change and civil conflicts in Angola also brought a great shift in the urban population where many people fled to cities. As shown in appendix 5 other countries with a high urban population growth rate in Africa are Niger, Nigeria, Ethiopia, Mali, Gambia, Guinea-Bissau, Madagascar and Tanzania.

Appendix 5 shows that Liberia has experienced the lowest population growth rate in the continent in 1995 at -3.4% and in 1996 at -1.23%. Having the slowest urban growth in Africa between 1995 and 1996, Liberia's urban growth rate has gradually increased to 8.13% in 1997 to 8.62% in 1998 and then has fallen again to 7.71% in 1999. Within this period, Liberia appeared as the country with the second highest urban population growth rate in Africa, following Rwanda. The data in appendix 5 shows that Sierra Leone has the second lowest annual urban population growth rate in Africa in 1995, 1996 and 1997 at 0.15%, 0.56% and 0.96% respectively.

Mauritius, an inland in the Indian Ocean, whose interior is covered with mountains and which is one of the smallest countries on the continent in terms of the land space, had a total population of 1,262,605.0 in 2015 according to the World Bank collection of development indicators. Referring to appendix 5, Mauritius shows the lowest urban population urban growth rate in Africa in 1998, 1999, 2000, 2001, 2005, 2006, 2007, 2008, 2009, 2010, 2012, 2013, 2014 and 2015 at 0.77%, 0.98%, 0.69%, 0.3%, 0.09%, -0.04%, -0.05%,-0.14%, -0.24%, -0.27%, -0.24%, -0.24%, -0.23% and -0.23%, respectively. In 2002, Swaziland - a small country in the Southern Africa - reported the lowest at 0.11%. Another Island in the Indian Ocean known as the Seychelles and one of the smallest countries in Africa with a population of 93,419.0 in 2015 according to the World Bank

collection of development indicators, experienced the lowest urban population growth rate in 2003, 2004 and 2011 at -0.76%, 0.02% and -2.07%, respectively. According to appendix 5, other countries that experience a low annual urban population growth rate are Zimbabwe, Libya, Djibouti, Egypt and Tunisia.

According to the data compiled by the World Bank collection of development indicators in appendix 5, the following countries show a slow trend of annual urban population growth rate during the years of 1995 to 2015; these countries are Algeria, Angola, Benin, Cameroon and the Comoros. Tunisia and Djibouti show a constant urban population growth rate between 2010 and 2015 at 1.4%. Guinea-Bissau shows a constant population growth rate between 2006 and 2009 at 4.2% and Burundi's annual urban population growth rate has been constant at 6.1% between 2006 and 2008 when its population grew exponentially.

For most countries urban population growth rate is not stable, it either shows an increasing or decreasing variation in its urban population growth rate - this uneven variation in the population size is referred to as fluctuations. According to data extracted from the World Bank of World development indicator in appendix 5, countries that show a fluctuating annual population growth rate between the year of 1995 to 2015 are Cape Verde, Liberia, Seychelles, Libya, Guinea, Swaziland, Eritrea, Zimbabwe, Botswana, Central Africa Republic.

Table 6 below illustrates the trends of urban population growth rate in Africa from 1995 to 2015; as shown by the results more countries show a declining trend, mostly countries located in the central region. Countries like Namibia, Botswana and Tunisia show an increased trend - most countries with an increasing trend are located in the Northern region. Countries in the Eastern region demonstrate a constant trend such as Kenya, Madagascar and Malawi as well as countries that have a fluctuating trend country like Seychelles, Eritrea and South Sudan which are located in the Eastern region. Overall, the annual urban population growth rate of Africa has gradually dropped between the year of 1995 and 2015.

Table 6: Regional variations in the urbanisation patterns, 1995-2015

SUB-REGION D1:H21	URBAN POPULATION GROWTH RATE			
	DECLINED	INCREASED	FLUCTUATED	CONSTANT
North Africa	Libya Algeria	Tunisia Egypt Sudan Morocco		
East Africa	Burundi Ethiopia Rwanda	Zimbabwe Zambia	Eritrea Seychelles South Sudan	Kenya Comoros Djibouti Mauritius Madagascar Malawi Mozambique Somalia Uganda Tanzania
Central Africa	Central Africa Republic Angola Demographic Republic of Congo Equatorial Guinea Sao Tome and Principe			
Southern Africa	Lesotho	Swaziland Namibia Botswana		South Africa

Source: *own computation United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014*

4.7 The per cent of the Total Population Residing in Each Urban Agglomeration with 300000 Inhabitants (United Nations).

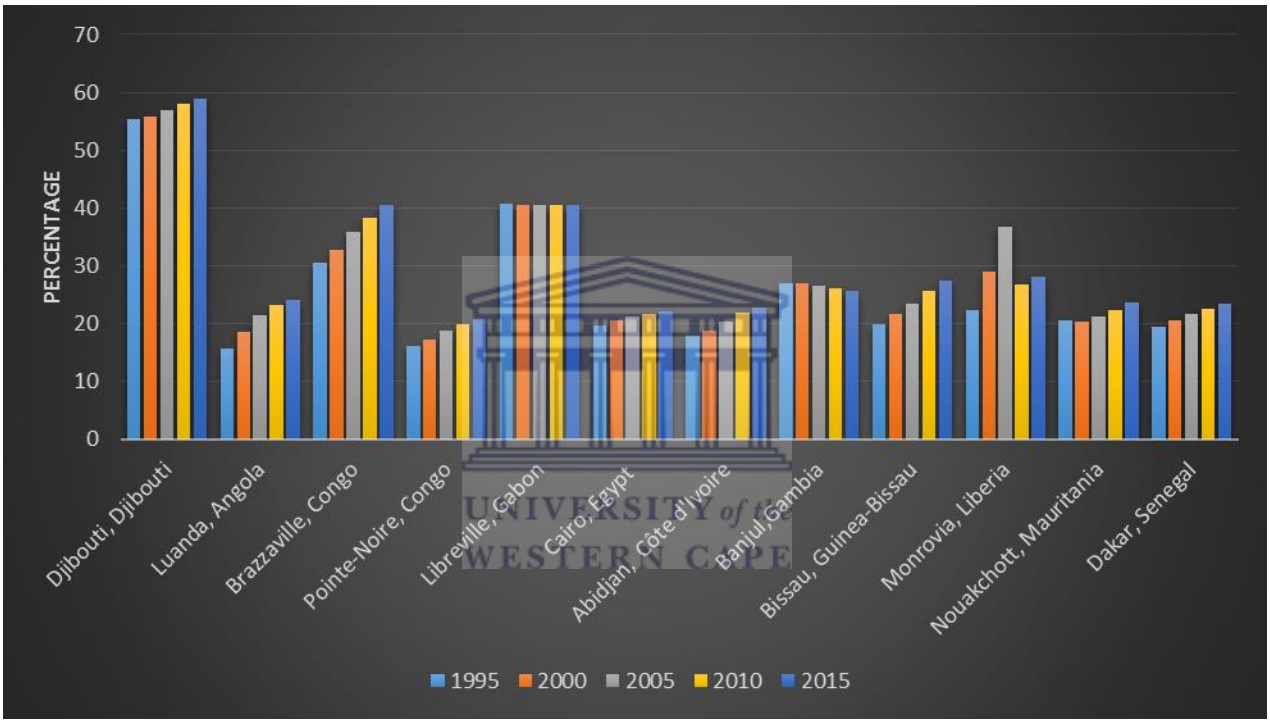
Appendix 8 depicts the percentage of the total population residing in each urban agglomeration with 300000 inhabitants for 58 African countries between 1995 and 2015. The percentage of the total population residing in each urban agglomeration is the population dwelling there as a percentage of the total population. This indicator shows variable information on the share of the total urban population across the cities within a country, the data presents critical information because the figures show the concentration and the weight of each city within the national system. The data used is extracted from the United Nations, Department of Economic and Social Affairs, Population Division World Urbanisation Prospects, the 2014 Revision.

Djibouti, located on the horn of Africa in the eastern region of the continent has the highest percentage of the total population residing in the urban agglomeration at 55.4%, 55.8%, 57.0%, 58.1% and 58.8% in 1995, 2000, 2005, 2010 and 2015 respectively, as show in appendix 7 and in figure 8. More than half of the population live in the capital city Djibouti and it is the only country in Africa with more than 50% of the total population residing in the urban agglomeration. This is because Djibouti is just a city in a small country with a rapid population made up of young people according to the World Bank. Libreville is the largest concentrated urban centre of Gabon and the second highest in Africa at 40.7%, 40.4%, 40.5%, 40.5% and 40.4% in 1995, 2000, 2005, 2010 and 2015 respectively (figure 8). Nearly half of the population of Gabon reside in Libreville, this is a sign of an unbalanced urban system which is a cause of unequal distribution of economic functions across the country.

Congo is one of the most urbanised countries in Africa, the population of the people living in the cities or towns is more than two thirds of the total population. Congo Brazzaville is also getting closer to 50% of the total population staying in Brazzaville; appendix 6 shows that the percentage of the total population residing in the urban agglomeration of Brazzaville has increased to 40.4% in 2015, from 30.5% in 1995. Congo Brazzaville is the political and administrative capital and the highest concentrated urban area in that country. This growth is mainly driven by a high concentration of activities, public services and economic opportunities in the city. High growth provides different opportunities in urban areas but also cause many problems. Monrovia, Bissau,

Luanda, Nouakchott, Dakar, Abidjan and Cairo show their concentration of the total population in each city. The total population living in one city was between 20 and 30% in 2015 as shown in appendix 6. Muqdisho also shows a high concentration of the total population living in the city, because that is where people find refuge, due to the war and many troubles in that country.

Figure 8: Percentage of the Total Population Residing in Each Urban Agglomeration with 300000 Inhabitants in Selected Cities (highest), 1995-2015



Source: Own computation using United Nations data, Department of Economic and Social Affairs, Population Division, 2014

Over the years, Nigerian urban population grew taking the position of being one of the top urbanised countries in Africa. With multiple cities in the country, the patterns or trends of the percentage of the total population residing in each urban agglomeration with 300000 inhabitants has been stable with most of the share of the total population living in each city, as shown in appendix 6. The cities that show a share of the total population living in the city are more than one but less than eight in 2015. Namely Abuja, lbadan, Kano, Port Harcourt and with Lagos being the highest concentrated city at 7.2% as depicted in appendix 6. Kinshasa - the largest city of the Democratic Republic of Congo – is situated along the Congo River. In 2015 it had 16.3% of the

total population living in the Democratic Republic of Congo. The city has a very high population concentration when compared to other cities. In this city people find safety and refuge and the population consists mostly of young people and most of them are born and raised in the city.

The percentage of the total population residing in each urban agglomeration with 300000 inhabitants has slightly increased for many cities between the period of 1995 and 2015. Cities in Egypt have experienced a constant growth except the great cities of Cairo and Alexandria which are the most concentrated cities. In the past, the cities of Egypt have experienced a huge transformation of urbanisation which has increased its urban population. This is no more the case as it has been indicated by recent studies. Cities like Nakuru, Likasi, Matadi, Mbandaka, Batna, Al Gadarif and some cities in Nigeria also show a constant growth of the percentage of the total population residing in each urban area, as refer to in appendix 6.

As shown in appendix 3, the capital city of Mozambique, Maputo, has the highest share of the total population living in the city followed by Beira. The percentage of the total population residing in each city has slightly declined between 1995 and 2015. According to the UNPF, Maputo has a high infant and adult mortality rate, which is caused by the AIDS epidemic that reached the city late after the war, when most women were diagnosed with the virus. This is one of the causes of the decline over the years. Cities that also show a decline are Arusha, Ndola, Kolwezi, Annaba, Algiers, Qacentina, Wahran, Agadire, Casablanca, Safi, Kassala, Port Sudan, Tunis, Cotonou, Banjul, Accra and Niamey. Bulawayo, Chitungwiza and Harare, the capital city and the most concentrated city in Zimbabwe has suffered from a decline; the drop is mainly a response to the decline in the birth rate and also many people migrate to neighbouring countries due to the challenges caused by a drop in the economy over the past years.

Having mentioned all the above, the percentage of the total population in each agglomeration with 300000 has slightly increased for most countries and some show a constant trend. Only few countries show a slight decline.

4.8 Primacy Index (1980 – 2010) Geo-Hive

Appendix 7 displays the urban primacy index across the African Countries between 1980 and 2015. The data used for this analysis is extracted from Geo-Hive. The data is based on each country's national statistical office collected from censuses. For some countries, the index is not calculated because of the availability of information on the size of the city. In reference to the urban primacy, the rank size rule is the ideal standard for the distribution of the urban population. When a city is more than two times the size of the second largest city, it is referred to as a primate city, which is the largest city in a county. The urban primacy index is measured using four cities (the largest city and the next three largest cities). Based on the rank-size rule the larger the index the more the largest city is concentrated.

The primacy index gives guidance on the predominance of the largest city in the urban hierarchy. This means that when you rank the cities in a country this is the extent to which the largest city is predominant in the area of concentration, in terms of urban population. Urban primacy consists of the national cities that have obtained a higher level of dominance, which is measured by population density and different functions such as structural functions, economic functions, education functions and political functions. When the urban primacy index is not controlled, it can cause the growth of the economy to increase rapidly for the worse because of the striking difference between the rich city and the poor outer areas caused by a high level of political instability.

The unavailability of data on the size of some cities made it impossible to calculate the urban primacy index for countries such Angola, Burundi, Eritrea, Guinea Bissau, Lesotho, Liberia, Madagascar, Mauritius, Morocco, Niger, Seychelles, Somalia, South Sudan and Togo. This section analyses the urban primacy index of 41 countries. In terms of the predominance, some countries have a very high index, which indicates a prominent position of the largest city. This is generally the national capital city (political capital) because many functions are concentrated in the cities. Uganda is among one of the countries with the highest urban primacy index in Africa, as its large population lives in the capital city of Kampala and its second highest concentrated city is Gulu. According to appendix 7, the ratio was roughly 5:1 in favour of Kampala meaning if you take an individual in the rest of the three next cities in terms of size you have 5 against 1. Kampala has 5 times the population size of the three neighbouring cities. The primacy has been decreasing,

especially in the last decade. In 2010 the figure stood at 156.02%. This suggests structural changes in the urban system because Kampala has been losing some of its prominence, meaning cities which have been marked smaller in size compared to Kampala, have been increasing in population. This indicates some kind of de-concentration. Uganda is one of the countries experiencing the lowest birth rates in the world and suffering from the results of high HIV/AIDS infection rates. This epidemic could be among one of the causes in the drop of the urban primacy index over the decades.

Referring to table 7, Ghana also shows a decline in the urban primacy index, the greater Accra metropolitan area is the largest agglomeration in the country with a population of 2070463 followed by Kumasi metropolitan agglomeration with 2035064 population in 2010 according to Geo-Hive data. In 2015, according to the United Nations, 54.0% of the population in Ghana is urban, the country is predominantly urban but not as much as Egypt and the Democratic Republic of Congo but the country is on average urbanised even if the percentage remains close to 50%. As far as Ghana's urban primacy index is concerned, in the last decade in 2010 the percentage is at 76.19% which shows that the primacy has declined, meaning the majority of the population is possibly migrating to the smaller cities; an indication of a recession. Other countries that show a decreasing trend in its urban primacy index are Benin, Cameroon, Central African Republic, Congo, Kenya, Mozambique, Namibia, Senegal and Sierra Leone. A decline in the index is a sign of many things, possibly the urban system has gone through structural changes, and smaller cities have become more attractive. Migration could have been directed to those cities and it could be a sign of different options to people where to settle so it generally shows a positive trend when the index is declining.

There is variation in the index across the countries, some countries have experienced an increase while some countries experience a decline. A growing urban index is a sign of polarisation which is a sign of an unbalanced urban system with a dominant urban area. This comes with many problems in managing pollution, traffic and crime. As observed in index 7, Tanzania is one of the countries that experienced an increase in its urban primacy index over the years. The country has around twenty-five cities in total. According to Geo-hive, Dar es Salaam, the major city and Tanzania's commercial port is the most concentrated area, and its urban primacy index has been

high over the past years. In the last decade, Dar es Salaam has consisted of three times the population of the next three cities after its population size. Possibly the growth could be caused by the increase in the mining sector as well as an increase in tourism, which is one of the biggest sources of foreign exchange income in the country. Mauritania urban primacy index has also increased over the years, Nouakchott is the highest concentrated city followed by Nouadhibou. The ratio was 4:1 in favour of Nouakchott in 2010, there is no reason as to why the trend has increased over the years; the economic functions, political functions, social functions and education functions are the functions that contributed to the change of the urban primacy.

South Africa, one of the largest countries in Africa in terms of land mass, has growing industrialisation; it has export, import and manufacturing industries and this has increased its primacy index. Johannesburg is the most concentrated city in South Africa followed by its Legislative capital, which is Cape Town. Its urban primacy index was 38.05%, 38.12% and 42.80% in 1990s, 2000s and 2010s, respectively. For a country as large as South Africa, the primacy index is relatively low; this suggests that there is no predominance of one city over the rest of the system. This is a sign of a balanced urban system. All the cities are on par in terms of size; no city is distancing itself from the rest. When the index is smaller, this indicates a balanced system. Other countries that show a balanced urban system are Cameroon, Chad, Ghana, Malawi, Mozambique and Senegal.

Egypt is one of the countries with the highest urban primacy indices in Africa with more than 50% of the population living in the biggest city which is Cairo, while the second largest concentrated city, Alexandria, consists of not more than 13% of the population. In the 1990s, Egypt's urban primacy index was 105.77 % to 108.30 % in the 2000s, as shown in appendix 7. In Abidjan, Ivory Coast the most concentrated city had an urban population concentration of 42.1% in 2015 which was very much larger than the two next large cities. The urban primacy index for Ivory Coast was 364.05% and 417.15% in 1990s and 2010s, respectively; this shows a very high predominant position of the major city, which is not a good sign for the economy. Other countries that are experiencing an increased trend in the urban primacy index are Algeria, Botswana, Ivory Coast, Burkina Faso, Cape Verde, Comoros, Mali, South Africa, Swaziland, and Zimbabwe, according to appendix 7.

According to appendix 7, between the 1980s and 2010s, the urban primacy of Equatorial Guinea, Ethiopia, Gabon and Malawi has fluctuated, meaning the index has been unstable, decreasing or increasing sometimes which probably may be caused by structural changes in the urban system. When the urban primacy index is growing, it means although there has been some structural changes the position of the largest city has not changed; it has been attracting more and more people. There is a trend of consolidation at such a point. Addis Ababa, the capital city of Ethiopia, the country's commercial centre, is the most populated city with a population of 3,168,000 in 2014 according to the United Nations. The urban population is very much larger than the next cities such as Mekele, Adama and Dire Dawa to mention a few. The urban primacy index has been fluctuating over the years - in the 1990s it was 541.79% rising to 567.70% in the 2000s, when it dipped to 376.31% in 2010s. There is a dominance of one city in Ethiopia and it may be caused by different dimensions of political, cultural, historical and economic influences.

Looking at appendix 7, the following countries show only one year in which the census was collected, therefore the urban primacy index was only calculated in that particular year. These include countries such as Chad, Democratic Republic of Congo, Djibouti, Gambia, Libya, Nigeria, Rwanda, São Tomé and Principe, Sudan, Tunisia and Zambia. The urban primacy index which is the gap between the most populated city and the next three populated cities in the urban hierarchy has decreased in most of the countries in Africa.

CHAPTER FIVE: DISCUSSION OF RESULTS

5.1 Introduction

This chapter compares the trends and patterns of urbanisation across 54 African countries from 1995 to 2015. The analysis in this chapter is based on different data sources and the different indicators which were discussed in Chapter Three. The chapter is divided into three sub-sections. First, it outlines the research design of this study and then discusses the main facts and findings which are intended to contribute to the improvement of knowledge on the investigated areas of interest. Last but not the least, the chapter presents some policy recommendations and suggests areas that can be the focus of future studies.

5.2 Research Design Procedures

The study on the demographic aspect of urbanisation in Africa is a cross-sectional quantitative research based on a data analytical approach. The study makes use of estimates and projections of various indicators obtained from the United Nations, the World Bank, Geo-Hive and the African Development Bank. Moreover, secondary data from population censuses across all 54 countries are also used to access the demographic and socioeconomic characteristics of urbanisation in Africa. The main aim of this study is to examine the urbanisation trends across the African continent to determine whether Africa's urban settlements have been growing, declining or remaining stagnant. The study contributes to the discussion on urbanisation by investigating whether there are any differences, similarities, cases of divergence or convergence across the 54 African countries. The study also analyses the variations in urbanisation trends across countries. The indicators used are annual urban population size, the per cent of urban population, the average annual rate of change of the urban per cent, the average annual rate of change of the urban population, the annual growth rate of urban population and the primacy index.

The primacy index indicator provides information on the predominance of the largest city in the urban hierarchy. It is calculated using a statistical formula with the help of the data extracted from Geo-hive. This data is obtained from the censuses conducted by each country's national statistical office. For some countries, it is not possible to calculate the primacy index because of the lack of

data. In Africa, there are different definitions when it comes to the classification of cities and this inability to have the same definition, contributes to a limitation of the accuracy of data collection. Consequently, urbanisation is sometimes either overestimated or underestimated.

The findings in Chapter Four are analysed in order to answer the research questions and to test the hypothesis of this study. The discussion in the next section captures the structural changes in urbanisation from 1995 to 2015 and it also highlights which sub-regions and countries are experiencing high, low or stagnated urbanisation trends.

5.3 Discussion of Results

Many countries in Africa are going through the first phase of urbanisation, which is caused by the social and economic opportunities which pull people to the cities. Compared to other regions of the world, a majority of Africa's urban population is concentrated in its largest city; this is known as urban primacy. However, for some countries, urban growth is not particularly in the largest city but in small or medium cities (United Nations Economic Commission for Africa, 2017). There are differences in the spatial patterns and the trends of urban growth among African countries. To ascertain the trends and patterns of urbanisation in Africa, the following research question was formulated; '*What are the trends and patterns of urbanisation in Africa?'* The aim of this question was to track the changes in the patterns of urbanisation among the 54 African countries between 1995 and 2015. The hypothesis that is being tested is that the rate of urbanisation differs according to the countries, thus for some countries the rate has been growing while for other countries it has stagnated, or has declined.

There is no international standard on how an urban area should be defined. Each country, therefore, has its own definition of an urban area and collects data accordingly. What one country might define as a city may be regarded as a town or village by another country. While the definition of what constitutes an urban is well-suited to each own country's context, the differences in the definition present a problem when comparing urbanisation across countries. For instance, one cannot compare the definition of an urban area of Botswana to that of Nigeria. Moreover, when

urbanisation data is analysed across space and time, there are problems of differences in the stage of development between cities. While some countries are highly developed, others are not highly developed.

Using different sets of data and the lack of a common definition of an urban area can create some problem of comparison. The data of the World Bank, UN, AfDB and GeoHive may have some comparability issues because each dataset may have been produce using different methods, and the researcher did not have access to the metadata to determine how the data was produce. Caution should therefore be taken when interpreting the findings of this study based on the above-mention limitation. Although the researcher believes that the different datasets are quite comparable, one still needs to be cautious because the discrepancy in the definition of an urban area could distort the conclusions reached.

Research shows that Africa is experiencing a higher rate of urban growth than any other part of the world. According to the findings in the previous chapter, the percentage of urban population for all African countries, expect Swaziland, increased between 1995 and 2015 as shown in appendix 2. In Southern Africa, South Africa's urban growth stood at 64.8% in 2015 and this observed increase was experienced as a rebound action after the end of apartheid in 1994. Most countries in Western Africa, on the other hand, had 30% urban population in 2015. It is believed that Nigeria is the most urbanised country in the Western region of Africa (Bocquier and Mukandila, 2011) but appendix 2 shows that Mauritania is leading in this regard having a 59.9% urban population in 2015, followed by the Gambia which registered a 59.6% urban population in 2015.

It can be stated that Eastern Africa has some of the least urbanised countries on the continent with countries like Burundi, Eritrea, Ethiopia, Kenya, Malawi, Rwanda, South Sudan and Uganda having a low urban population. The urban population of countries such as Rwanda, Malawi and Burundi has a growth rate of under 20%. As it happens, the most urbanised Eastern African countries are Djibouti, the Seychelles and Madagascar since the per cent of urban population in

these countries has ranged between 35% and 77% in 2015. Among these three countries, Djibouti had the highest per cent of urban population of 76.3% and 77.3% in 1995 and 2015 respectively.

In the middle part of Africa, Gabon is the most urbanised country with an 87.2% urban population in 2015 while Angola, Cameroon, Congo, the Democratic Republic of the Congo, and more particularly, Sao Tome and Principle, are fairly urbanised with their urban population ranging from 40% to 65% in 2015. Tropical countries and those with rainforests and large ports seem to be urbanising faster than others. In North Africa, the most urbanised countries in 2015 were Algeria, Libya, Tunisia and Morocco with their urban population ranging between 60% and 70% as opposed 33% and 43% in Egypt and Sudan.

In recent times, the economic fortunes of many African countries have been improving relative to the situation in the past where most countries on the continent had disappointing economic performances. The region is on the verge of improvement in its economic development. As countries develop, they urbanise by restructuring their economies from the agriculture sector to the manufacturing sector or services sector. This structural transformation causes people to seek better paid work in urban areas, which has resulted in rapid agglomeration in megacities. The population in many large cities, mostly the capital cities, is growing a little faster than the national population. However, there are some cities that have relatively slower growth in population compared to the national population. The urban population growth rates of many countries have fallen, even though the continent is the fastest urbanising region in the world.

The results in appendix 5 depict that the level of urbanisation in many African countries has been declining between 1995 and 2015, albeit a few countries that experienced a small rise in urbanisation. The results indicate that Rwanda had the highest urban population growth rate of 13.33% in 1995 and 17.6% in 1996. The country, however, experienced a decline in its urban population growth in 1997 (15.7%) and by 2015, it had fallen to 5.90%. There has been a large population shift to the cities in the past- more so than in recent times. The cities in Africa have a high rate of population growth and the population is relatively youthful. The result of a very youthful population is a large labour force which can bring about economic development. The urban population growth in Africa is driven by natural population growth which is the result of a

decline in mortality rates in urban areas. There are some social benefits associated with urbanisation. For example, there is a positive correlation between urbanisation and higher scores in the Human Development index in Africa. Typically, there is improved water and sanitation and access to higher education in urban areas than in rural areas.

Most African countries experienced a decline in their urban population growth between 1995-2000 and 2010-2015 as appendix 4 illustrates. As pointed out by previous studies, urbanisation has really declined in Africa, the notable countries being Guinea-Bissau, Ghana, Gabon, Botswana and Cameroon. There is a huge disparity between the past and present trends in urban growth rates. This can be largely attributed to overestimation, caused by use of poor projections and estimates, which gives a wrong picture of a country's urbanisation. The counterbalance between net in-migration and net out-migration in the region plays a huge role in slowing down urbanisation. It must be emphasised that urbanisation trends vary across countries and despite the general decline in urbanisation on the continent, some countries are still experiencing high instances of urbanisation.

It is expected that urbanisation in Africa will experience an upswing and this rising trend will be driven by the growth of towns and small cities. Studies show that Africa's middle class are mostly resident in cities because people with more or high incomes pursue entrepreneurial activities in the cities which create employment opportunities for the ones, especially the youth, looking for labour work. Most African countries were colonised by European countries and a number of them gained independence in the 1960s. The elimination of the colonial borders and controls was a turning point in the growth of the urban population. This propelled many African countries to be in the midst of a massive movement of people from the rural areas to urban areas.

To examine whether there are similarities or differences in Africa's urbanisation, the following research question was posed: *"Are there any similarities, differences and variations across African countries in term of urbanisation?"* This research question was formulated to find out if urbanisation among African countries differ or are similar. The results in appendix 2 of Chapter Four show that the urban population per cent of African countries has grown and there are a lot of similarities with regards to the data from the UN, World Bank and Geo-Hive since they show the

same pattern of growth. The African Development Bank, on the other hand, has slightly different data compared to the other three sources. As shown in appendix 2, the data from AfDB shows a slight increase in the per cent of urban population for countries like Congo, Sierra-Leon, Seychelles and Nigeria relative to what the data from the UN, World Bank and Geo-Hive depicts. This could be due to the differences in the terminologies used to describe an urban area. The similarities between the UN, World Bank and Geo-Hive data exist because they all retrieve their data from the UN database.

Most social systems in Africa are generally functional in cities and this has caused the degree of urban concentration to be high in such cities. This is based on the rank-size rule, where the larger the index, the larger the concentration in the biggest city. Therefore, to understand the African primacy index, the following research question was posed; *"What does the primacy index suggest?"* The formulated hypothesis is that the primacy index indicates the change in the structure of the urban system. The primacy index gives guidance on the predominance of the largest city in the urban hierarchy. It also shows the structural changes in the urban system. In relation to urban primacy, one city dominates, and the dominant city is much larger than the next city. The results in appendix 7 in the preceding chapter indicate that there is a balanced urban system in South Africa since all the major cities are on the same level in terms of size. This means that there is no city which is dominant. The country had a primacy index of 42.8% in 2010-2015, which makes it the lowest primacy index in Africa. However, many other countries have a high primacy index, although there is a sign of a declining index, which is indicative of good urban structural changes.

How a city's primacy emerges is determined by different conditions which vary among countries. These conditions include population density, country size and the stage of a country's urbanisation process. In large countries, more than half of the total population is in primate cities. Previous studies have found that city primacy can create a biased development process and an imbalance in the urban hierarchy (World Urbanization Prospects 2014). The differences in wages between urban and rural areas drive migration. Therefore, the attractiveness of high urban wages, even with high urban unemployment, leads to rural-urban migration (United Nations Economic Commission for Africa 2017).

In order to assess the primacy index in Africa, the following research question was formulated: "*Are there any changes in the primacy index among African countries*?" The formulated hypothesis for this research question is that in some countries, the primacy index has decreased while in others, it has increased. The primacy index for countries such as Benin, Congo, Ghana, Kenya and Senegal have declined as depicted in appendix 7. Some large cities are growing slowly with a lot of people moving to smaller cities. This implies that as a country's level of urbanisation increases, it tends to experience urban system diversification because of the growth of smaller urban areas and medium sized cities. The growth of small and medium sized cities can indicate that there is a change in the structure of the urban system as well as a preference for such cities because they have become more attractive. A decline in the primacy index is a positive sign because a high index is indicative of an imbalanced urban system with one dominant city which comes with many problems such as pollution and traffic congestion.

The results in appendix 7 show that there is a high degree of urban primacy in many African countries. This means that the larger cities are too big while the smaller ones are too small and there are a few other average size cities (United Nations Economic Commission for Africa, 2017). A high degree of urban primacy can be attributed to international migration, natural growth (reflecting the rate of mortality and fertility), net rural-urban migration and reclassification of rural towns to urban areas. Some of the countries that have a very high primacy index include Uganda (Kampala), Egypt (Cairo), Ivory Coast (Abidjan), Namibia (Windhoek), Tanzania (Dar es Salaam) and Mauritania (Nouakchott). The dominant cities are usually the national capital and the likely reason for this is the fact that the political, economic and educational functions are mostly concentrated in such cities. Generally, the largest city, which is the most attractive city in a country, has educational structures like the universities and colleges which attract a lot of people, mostly the youth. Medium-sized agglomerations are the fastest growing cities in the world, with less than one million population. Depending on the data used, the primacy index might either be increasing or decreasing, which is a signal that there is a great deal of uncertainty around the data.

According to the World Urbanization Prospects (2014), 40 percent of Africans live in urban areas. The continent has been experiencing unprecedented demographic changes over the years, an example being the huge increase in human population, which has caused the expansion of cities.

It is understood that cities have become homes to a lot of people and they are also the centres of commerce, government, health facilities and transportation infrastructure. In this regard, the following research question was constructed: "*Are there countries in Africa that have more than 50% of their total population living in one urban agglomeration*?" The results in appendix 6 reveal that Djibouti is the only city in Africa which has a population that exceeds 50% of the total population. As per the data for 2015, the city of Djibouti's population constituted 58.8% of the national population. This was followed by Libreville and Brazzaville whose population both represented 40.4% of their respective national population. The share of urban population in most African countries is on the rise as shown in appendix 6. As a result, several cities are expected have an increase in the size of their population in the near future.

For the first time in history, half of the world's population lives in urban areas. Regions like America and Europe had their urban transitions decades ago and more 70 percent of their national population are urban. On the contrary, the population of Africa and Asia are mainly rural, but the urban population is expected to rise in the near future. To help compare urbanisation in Africa with that of other continents, the following research question was framed: "*In comparison to the cities of America, Asia and Europe where does Africa stand in terms of urbanisation?"* The formulated hypothesis for this question is in their majority, African countries have experienced urban transition marking a situation where more than 50% of their population live in urban area. The total urban population in developed nations is relatively high when compared to developing nations. However, the urban growth rates for African and Asian countries is increasing much faster than in European and American countries.

In years to come, the total urban population of European and American countries is accepted to remain unchanged and for most countries, their cities will shrink instead of growing. There is a decline in city sizes and patterns of growth among developed countries. Among developed nations, the cities that registered the largest growth rates are either intermediate cities or small cities while the large ones had a relatively low rate of urban growth, especially in Europe. The cities in North America are the only fast-growing cities among all the cities in developed regions. Within the past years, the urban systems of European countries have become increasingly balanced. This is caused by the decrease in the size of the population living in large cities. As a result, most European cities

are experiencing counter urbanisation while developing nations are experiencing the highest rate of urban growth in the world.

In the past 20 years, the urban population of developing countries grew by an average of 3 million people every week. Although, the city growth is slowing down in most countries, the level of urbanisation is expected to rise and the rate of urban differ across cities not just countries. There is large magnitude of urban growth in developing countries than in developed countries. There is a link between urbanisation and economic growth through the transformation of industries and services. Some studies suggest that there is a disconnection between urbanisation and industrial development in Africa which leads to the absence of a stable economic growth. African cities are unable to create enough jobs and improves the well-being of the people, and as a result, they are unable to meet the increasing demands associated with urbanisation. However, in recent years economic development on the continent shows an encouraging trend.

There is a problem in getting the accurate figures and indicators because of the huge differences in the criteria used in the national definition of a town, urban and rural areas across African countries. Likewise, there is lack of clarity on what constitute the boundaries of a city, which makes it difficult to collect and tabulate data on urban areas. The following research question was formulated to address the issue of differences in figures: "Are *there discrepancies in terms of the figures?"* The formulated hypothesis for this question is that there are discrepancies in terms of urbanisation indicators derived from the producers of data. The question is asked to find out if the figures used in urban data analysis are without errors. The inconsistencies associated with the definition of what an urban area cause serious limitations and implications when making comparisons among different countries.

There is a lack of clarity on whether the figures presented as urban data from the national censuses take into consideration the inhabitants in the periphery of nearby settlements or the wider region that have administrative functions. The censuses carried out by many countries on urban areas are not disaggregated at smaller levels and there is missing data with regards to the number of people within clusters and localities. There must be a consensus on the static and dynamic measurements of urbanisation so that there will be similarities in the methods of measuring indices, and a metrics

should be developed to observe the process of qualification across space and overtime. The main idea is to consider urban area and urbanisation as a multidimensional phenomenon because the level of urbanisation is a continuum. The data provided by various sources are incomplete and sometimes deceptive. As a result, there appears to be a great deal of misunderstanding across the literature on urbanisation, and the data is usually misreported by non-specialists. The phenomenon of urbanisations remains largely undocumented, properly measured and a lot of effort is still required.

Furthermore, the last research question of this study is stated as follows: "*Do we observe a systematic increase in the sizes of cities or are some cities still under one million?"* The purpose of this question is to find out if there are countries in Africa with an urban population under one million and if the cities in Africa are experiencing an increase in their population. There is a rapid population growth in many African cities, yet there are some countries with a total urban population of less than one million. The results in appendix 1 (a) and (b) show that between 1995 and 2015, ten countries had an urban population of less than one million inhabitants. These countries are Comoros, Djibouti, Mauritius, Seychelles, Equatorial Guinea, Sao Tome and Principe, Lesotho, Swaziland, Cabo Verde and Guinea-Bissau. Nevertheless, the countries with an urban population that is under one million may be experiencing fast growth compare to others. Generally, the fastest growing urban agglomerations are small cities, mostly cities with an agglomeration of less than one million inhabitants. The small cities will keep growing and will be home to many people in the near future.

Since 1988, the population division of the Department of Economic and Social Affair of the United Nations has systematically tracks the world's urbanisation by looking at its trends and levels, and every second year they estimate and project the population of major urban areas. However, little research has been done on the political, social economic and the cultural changes taking place in towns and cities in Africa. Urbanisation brings about economic and social development to a country. However, it must be recognised that unplanned rapid urbanisation can lead to great risks such as, water crises, social instability, poor infrastructure and spreading of diseases. These risks can be well addressed when cities are effectively governed. Cities that are well managed are

efficient and effective in a sense that their urban models can create employment which will result in economies of scale.

Even though the urban population has grown in general, there are differences across countries in terms of the magnitude. This means that the population growth rate is not the same across countries. For example, while countries like Rwanda, Burkina Faso, and Burundi experienced a higher growth rate of urban population, others like Liberia, Mauritius, Swaziland and Seychelles encountered a low urban population growth rate. Moreover, the urban population growth rate was slightly constant in countries like Algeria, Benin and Comoros as shown in appendix 5 of the previous chapter. It is expected that urbanisation process will continue for a while and Africa will remain the fast urbanising continent even if the levels remain low. This is because the drivers of urbanisation are still in place and as such one cannot expect urbanisation to decline in the near future. Therefore, urbanisation is here to stay and policies should be put in place accordingly.

As African countries continues to urbanise, there will be an increasing challenge in terms of sustainable development in major cities. Therefore, governments must ensure that policies are implemented, to avoid primacy cities which is the excessive concentration of all functions in one large city within a country. These policies must ensure that the distribution of urban growth is more balanced cross the entire nation. The national government and lower level governments, such as regional and national urban planning, should work together to create a system of cities and regulate cities' growth and prosperity. In order to improve Africa's urban growth, the relevant trade and investment policies must be put in place.

Urban dwellers in Africa are mostly poor, and many of them live in informal settlements because of high living cost to urban residents. Most of them are suffer from environmental degradation and other risks. The structure and quality of urban development must be dealt with at an early stage to avoid the inhabitants in towns and cities from facing great disasters of economic loss which brings about great hardships and dreadful conditions, such as poverty, hunger, unemployment and lack of opportunities. Policymakers must put in place successful strategies to reduce risk and identify the importance of informal sectors in African cities. Moreover, the economic potential of cities should be recognised by policymakers for structural transformation.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter outlines the overall empirical outcome of the study and how it was carried out. The objective of the study was to conduct an empirical examination of urbanisation trends on the African continent from a historical contemporary perspective. The study also sought to compare the measurement of urbanisation across countries using recent data obtained from the national statistic offices of the countries concerned as well as data from the secondary sources. Different statistical indicators, such as the static and dynamic measurements, were used to measure the level of urbanisation.

6.2 Confirmation of Hypotheses

The various hypotheses of the study all of them were confirmed but one number 4 hypothesis is not confirmed by analysing the statistical data from the national statistic offices as well as data from secondary sources such as the UN, Geo-hive, the World Bank and AfDB using the static and dynamic measurements. Chapter One of the study lists the indicators that are adopted to address the research questions and hypotheses of the study.

The first hypothesis: 'The rate of urbanisation differs according to the countries, while for some countries the rate has been growing and for other countries it has stagnated or has declined,' was confirmed to be true by using the indicator of the per cent of urban population, the average annual rate of change of the urban percent and average annual rate of change of the urban population. The results which confirmed this hypothesis are shown in Chapter Four.

The second hypothesis: 'there are discrepancies in terms of urbanisation indicators derived from the producers of data,' was answered using the per cent of urban population indicator. The results in Chapter Four confirm the validity of this hypothesis.

The third hypothesis: 'In some countries, the primacy index has decreased, while in others, it has increased' was assessed using the primacy index indicator. The results show that for most countries the primacy index has declined where large cities are growing slowly with a lot of people moving to smaller cities. This change implies that there is a change in the structure of the urban system. The outcome of this hypothesis is shown in Chapter Four and appendix 7.

African populations are mainly rural, but the urban population is increasing and it is expected to rise in the near future. The fourth hypothesis: 'For the most part, African countries have experienced urban transition, marking a situation where more than 50% of their population live in urban areas,' was answered using the indicator of the per cent of the total population residing in each urban agglomeration with 300000 inhabitants or more. The result in chapter four and Appendix 6 confirms that this hypothesis is not confirmed.

6.3 General Conclusion

Based on the analysis of the statistical data on levels of urbanisation, it can be concluded that from 1995 to 2015 there have been variations in the urban population size of African countries. The results in Chapter Four show that countries that have a relatively lower annual urban population are mostly islands such as the Seychelles and Sao Tome and Principe with a total population of less than one million. Nigeria is the highest urban populated country in Africa with an annual urban population of 87680000 in 2015 while Egypt is the second highest country with an urban population of 36538000 in 2015 according to the UN. The results point to the fact that Angola, Algeria, Lesotho, Nigeria, the Seychelles and Sierra-Leone have an increasing trend in urbanisation while more than 70% of the population of Gabon and Djibouti are residing in urban areas. The results also reveal that North Africa is the most highly populated urban region on the continent. Although the urban population has increased over the years, more than half of the population in Africa still live in rural areas and small towns. The outcome in Chapter Four indicate that the data obtained from the UN, the World Bank and Geo-hive have many similarities and all show an identical increasing urbanisation trend. This is because the World Bank and Geo-hive indicators of the urban population are calculated using the urban ratios from the UN. On the contrary, the AfDB is slightly different.

In terms of the average annual rate of change of the urban per cent, the outcomes from the analysis indicate that some countries experienced a continuous decreasing trend in the average annual rate of change of the urban per cent between 1995-2000 and 2010-2015. This is mainly because of the HIV/AIDS epidemic in African countries which has a negative impact on the average annual rate of change of the urban per cent. This epidemic causes the life expectancy of a nation to decline. Diseases are mostly the reason for the rapid decline in the average annual rate of change of the urban per cent in these countries. Ten countries in Africa, namely, Mayotte, Reunion, Rwanda, Cameroon, Gabon, Botswana, South Africa, Ghana, Guinea-Bissau and Mauritania have been experiencing a continuous decreasing trend in their average annual rate of change of the urban population (per cent) between 1995-2000 and 2010-2015.

The data available indicates that Rwanda has the highest urban population growth rate in Africa, followed by Burundi and Angola. Furthermore, the results also show that Djibouti, located in the eastern region of the continent, has the highest percentage of the total population residing in the urban agglomeration. More than half of the country's population live in the capital city of Djibouti and it is the only country in Africa with more than 50% of the total population residing in the urban agglomeration. This is due to the fact that Djibouti is a city in a small country with a rapid population made up of young people. The study reveals that the percentage of the total population residing in each urban agglomeration with 300000 inhabitants have slightly increased for many cities between the period of 1995 and 2015.

With regards to the primacy index, it was found to vary across countries. While some countries have been experiencing a rising index, others have had a declining index. Some African countries have very high indices, which illustrates the prominent position of the largest cities in these countries. An increasing urban index is a sign of an unbalanced urban system which causes many problems such as pollution, traffic, crime and a lack of availability of housing. The largest cities in most African countries are usually the capital cities. Uganda is among one of the countries with one of the highest urban primacy indices in Africa but the primacy index has been declining. Likewise, Ghana's urban primacy index has also been on the decline. A decreasing index can be attributed to many factors, possibly because the urban system has gone through structural changes or smaller cities have become more attractive.

In summary, the annual urban population size depicts a varying picture across countries. In terms of the overall magnitude, the annual urban population has been increasing for most countries while for a few others, it remains are relatively low. Likewise, the per cent of urban population shows an increasing trend across most African countries, although the trend is constant for some countries. Also, the average annual rate of change of the urban per cent indicates a very high trend despite the continent being in the early stages of its urban transformation. However, in spite of the urban transformation being at fast pace, some countries on the continent are still experiencing a decrease in their average annual rate of change of the urban per cent. A few other countries are also experiencing an ongoing decreasing trend in their average annual rate of change of the urban population. Nevertheless, the overall picture shows that most countries are experiencing continues increase, albeit, others with fluctuating rates. Ten countries, on the other hand, reported to have a stable average annual rate of change of the urban population.

With regards to the annual growth rate of urban population, most countries have had a declining trend but some others reported a constant rate. Other countries also experienced an increase in the annual growth rate of their urban population. As a result, they have moved from the high rate of rural population to an urban population growth rate. The data shows that only one country in Africa has a total population of more than 50% residing in its urban area, but a few countries are getting closer to 50% of the total population residing in the urban agglomeration. Overall, the available data shows that the percentage of the total population residing in urban agglomeration with 300 000 inhabitants has slightly increase for many cities while for others it has remained constant. Only a few countries experienced a slight decline in the percentage of their total population residing in urban agglomeration with 300 000 inhabitants.

There are variations in the primacy indexes across the 54 countries. While some countries have very high indexes, which is a sign of the prominent positions of the largest cities, others have experienced a decline in their urban primacy, which is an indication that most people have moved to smaller towns which have become more attractive. Some other countries have a balanced urban system because their primacy indexes are relatively low.

6.4 Policy Recommendations

Some recommendation have been given substance on the results of the areas of interest discussed in the previous chapters. The study in the area of urbanisation needs to be further researched. While conducting this study, the limitation with regards to data discrepancies which affects the accuracy of comparing indicators across different data sources was noted. This limitation made it difficult to analysis some trends, and for this reason some years were not analysed in the study.

In order to prevent the complications and negative effects associated with urbanisation, relevant policy interventions should be formulated and implemented across the African continent. Possible policy interventions include the following:

1. Cities need to be sustained, developed and managed.
2. Local authorities should point out the needs for the cities to prevent unforeseen issues.
3. Policymakers need to address the barriers of urbanisation through urban development policies and planning.
4. To improve urban investment and infrastructure, communication and transportation. Urban planning and management should go beyond urban boundaries.
5. For more a sustainable and better quality of life, the cities' planners should place more resources on education and supporting creative and innovative people. This will change the way individuals in the society think and interact.
6. Boosting production by creating structural transformation.
7. Inequality can be solved by creating employment opportunities especially for the youth.
8. One of the most important decisions is to connect the rural and urban markets.

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APPENDIX

Appendix 1a: Annual Urban Population at Mid-Year (thousands)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Africa	236 904	244 855	253 027	261 343	269 908	278 770	288 342	298 302	308 662	319 441	330 742	342 528	354 797	367 684	381 061	394 940	409 305	424 176	439 529	455 345	471 602
Eastern Africa	43 843	45 667	47 572	49 500	51 468	53 484	55 608	57 815	60 117	62 526	65 109	67 818	70 671	73 814	77 130	80 636	84 341	88 249	92 344	96 610	101 034
Burundi	448	467	485	505	526	550	579	611	647	686	728	773	822	873	926	982	1 041	1 102	1 166	1 233	1 304
Comoros	132	135	138	141	145	148	152	156	159	163	167	172	176	181	186	191	196	201	207	212	218
Djibouti	507	516	526	535	544	553	562	570	579	587	596	605	614	623	632	642	652	663	674	685	696
Eritrea	564	581	602	628	658	692	730	773	819	868	917	967	1 017	1 069	1 123	1 181	1 243	1 309	1 378	1 451	1 525
Ethiopia	7 885	8 238	8 595	8 959	9 337	9 732	10 144	10 575	11 022	11 483	11 958	12 447	12 964	13 641	14 346	15 084	15 854	16 658	17 494	18 363	19 266
Kenya	5 007	5 237	5 470	5 709	5 959	6 223	6 502	6 795	7 102	7 423	7 757	8 103	8 464	8 840	9 233	9 643	10 073	10 522	10 991	11 476	11 978
Madagascar	3 470	3 618	3 772	3 932	4 098	4 270	4 447	4 630	4 818	5 011	5 270	5 540	5 820	6 112	6 415	6 730	7 059	7 401	7 756	8 125	8 508
Malawi	1 322	1 384	1 457	1 539	1 599	1 654	1 708	1 764	1 821	1 881	1 946	2 015	2 089	2 167	2 248	2 333	2 421	2 513	2 609	2 710	2 816
Mauritius	489	493	497	500	503	506	506	507	506	506	505	504	503	502	500	499	499	498	497	497	497
Mayotte	51	55	59	63	67	71	75	80	83	85	88	91	93	96	98	100	102	104	106	108	110
Mozambique	4 394	4 612	4 827	4 987	5 147	5 318	5 500	5 691	5 890	6 094	6 303	6 515	6 732	6 954	7 182	7 419	7 664	7 918	8 181	8 454	8 737
Réunion	580	597	614	630	646	662	676	691	704	718	731	744	757	769	782	794	806	817	829	840	850
Rwanda	557	674	807	950	1 104	1 253	1 387	1 508	1 606	1 705	1 818	1 948	2 093	2 252	2 421	2 596	2 777	2 967	3 164	3 369	3 581
Seychelles	37	38	38	39	39	40	41	42	43	44	44	45	46	47	47	48	48	49	49	50	51
Somalia	1 994	2 060	2 145	2 245	2 350	2 455	2 558	2 660	2 763	2 868	2 977	3 089	3 206	3 327	3 454	3 590	3 736	3 890	4 053	4 223	4 399
South Sudan	863	890	932	985	1 042	1 098	1 152	1 205	1 258	1 316	1 379	1 448	1 522	1 601	1 685	1 775	1 871	1 972	2 077	2 182	2 285
Uganda	2 419	2 515	2 612	2 714	2 820	2 933	3 052	3 179	3 350	3 542	3 743	3 956	4 179	4 415	4 663	4 925	5 202	5 494	5 801	6 124	6 463
Tanzania	6 152	6 430	6 708	6 990	7 283	7 590	7 912	8 251	8 680	9 148	9 646	10 176	10 741	11 341	11 974	12 644	13 349	14 093	14 872	15 685	16 528
Zambia	3 281	3 324	3 372	3 421	3 469	3 515	3 622	3 758	3 898	4 045	4 199	4 363	4 535	4 718	4 912	5 118	5 338	5 572	5 819	6 079	6 351
Zimbabwe	3 693	3 806	3 919	4 028	4 130	4 221	4 301	4 372	4 370	4 353	4 336	4 317	4 299	4 290	4 302	4 341	4 410	4 506	4 620	4 745	4 871
Middle Africa	28 525	29 699	30 850	32 007	33 216	34 515	35 915	37 411	38 995	40 650	42 363	44 137	45 976	47 880	49 848	51 883	53 984	56 150	58 382	60 685	63 061
Angola	3 496	3 682	3 872	4 069	4 282	4 514	4 769	5 046	5 343	5 656	5 984	6 325	6 682	7 053	7 438	7 839	8 254	8 682	9 123	9 580	10 052
Cameroon	5 930	6 180	6 436	6 700	6 972	7 254	7 544	7 844	8 153	8 473	8 804	9 146	9 499	9 863	10 239	10 625	11 022	11 431	11 850	12 281	12 721
Central African Rep.	1 220	1 250	1 281	1 311	1 341	1 369	1 397	1 424	1 451	1 478	1 508	1 540	1 574	1 610	1 648	1 689	1 732	1 777	1 823	1 872	1 923
Chad	1 499	1 552	1 607	1 666	1 729	1 796	1 868	1 945	2 024	2 104	2 183	2 261	2 339	2 416	2 494	2 577	2 663	2 755	2 851	2 951	3 057
Congo	1 535	1 590	1 649	1 711	1 773	1 835	1 896	1 958	2 021	2 088	2 161	2 241	2 326	2 417	2 508	2 600	2 690	2 780	2 870	2 961	3 054
Congo Dem. Rep.	13 796	14 355	14 873	15 376	15 905	16 490	17 141	17 853	18 618	19 420	20 248	21 103	21 988	22 904	23 854	24 838	25 855	26 906	27 992	29 115	30 275
Equatorial Guinea	172	177	183	189	195	201	207	214	221	227	235	242	249	257	265	273	282	291	300	309	319
Gabon	814	847	881	914	948	981	1 015	1 048	1 082	1 116	1 151	1 186	1 222	1 259	1 296	1 334	1 372	1 410	1 449	1 487	1 526
Sao Tome & Principe	63	66	68	70	72	74	77	80	83	86	90	93	97	102	106	110	115	119	123	128	132
Northern Africa	73 732	75 329	76 949	78 586	80 234	81 901	83 590	85 303	87 049	88 836	90 706	92 644	94 610	96 615	98 671	100 776	102 929	105 145	107 416	109 727	112 069
Algeria	16 416	16 944	17 462	17 972	18 490	19 006	19 519	20 033	20 556	21 101	21 677	22 289	22 935	23 613	24 312	25 027	25 758	26 502	27 254	28 002	28 739
Egypt	26 188	26 515	26 915	27 367	27 830	28 304	28 792	29 294	29 811	30 341	30 884	31 439	31 976	32 505	33 043	33 588	34 139	34 712	35 305	35 914	36 538
Libya	3 608	3 679	3 748	3 816	3 884	3 952	4 020	4 088	4 157	4 228	4 302	4 381	4 462	4 544	4 621	4 690	4 749	4 800	4 848	4 900	4 962
Morocco	13 871	14 169	14 465	14 757	15 040	15 313	15 573	15 825	16 071	16 314	16 607	16 912	17 221	17 541	17 882	18 253	18 656	19 089	19 541	19 995	20 439
Sudan	7 906	8 156	8 376	8 580	8 787	9 011	9 255	9 515	9 788	10 067	10 347	10 631	10 917	11 206	11 498	11 794	12 091	12 391	12 703	13 034	13 391
Tunisia	5 522	5 640	5 751	5 857	5 959	6 060	6 160	6 259	6 360	6 459	6 543	6 631	6 723	6 817	6 913	7 010	7 108	7 207	7 308	7 409	7 510
Western Sahara	221	226	231	237	245	256	271	289	308	326	345	361	376	389	402	415	429	444	458	474	489

Southern Africa	24 360	25 063	25 730	26 375	27 016	27 666	28 327	29 018	29 725	30 442	31 165	31 898	32 637	33 374	34 091	34 780	35 435	36 060	36 657	37 238	37 813
Botswana	776	808	840	872	903	934	964	984	1 001	1 017	1 033	1 049	1 064	1 078	1 093	1 107	1 122	1 136	1 151	1 166	1 181
Lesotho	297	313	325	338	350	363	376	388	401	415	428	443	456	469	483	497	513	528	545	562	579
Namibia	493	517	542	567	592	614	635	661	688	715	743	772	803	836	870	907	946	987	1 029	1 073	1 116
South Africa	22 572	23 198	23 791	24 362	24 931	25 513	26 110	26 742	27 393	28 053	28 717	29 389	30 067	30 740	31 392	32 012	32 596	33 145	33 665	34 168	34 663
Swaziland	222	227	232	236	239	241	242	243	243	243	243	245	247	250	253	256	260	263	267	270	274
Western Africa	66 445	69 097	71 926	74 875	77 974	81 203	84 902	88 754	92 775	96 987	101 399	106 031	110 902	116 001	121 320	126 864	132 615	138 572	144 731	151 084	157 625
Benin	2 200	2 290	2 378	2 468	2 562	2 664	2 773	2 889	3 012	3 140	3 271	3 406	3 544	3 686	3 831	3 980	4 133	4 288	4 448	4 612	4 782
Burkina Faso	1 527	1 598	1 693	1 811	1 937	2 071	2 215	2 368	2 531	2 706	2 891	3 088	3 297	3 517	3 748	3 988	4 240	4 501	4 773	5 056	5 349
Cabo Verde	195	203	211	220	228	236	245	253	261	269	276	282	287	292	296	302	307	313	320	327	333
Côte d'Ivoire	5 859	6 085	6 312	6 536	6 777	7 024	7 257	7 479	7 696	7 916	8 147	8 390	8 663	8 954	9 263	9 594	9 948	10 325	10 720	11 126	11 538
Gambia	462	485	509	534	560	588	618	649	682	717	752	788	826	865	905	946	989	1 034	1 079	1 127	1 175
Ghana	6 728	7 021	7 318	7 622	7 939	8 270	8 605	8 958	9 329	9 716	10 116	10 532	10 963	11 405	11 853	12 304	12 756	13 208	13 661	14 118	14 583
Guinea	2 310	2 410	2 494	2 569	2 640	2 713	2 789	2 868	2 951	3 042	3 142	3 253	3 375	3 508	3 647	3 791	3 940	4 094	4 253	4 418	4 589
Guinea-Bissau	372	390	408	427	446	467	488	510	533	556	581	606	632	659	688	717	748	781	814	848	882
Liberia	956	944	1 024	1 116	1 206	1 282	1 340	1 382	1 417	1 456	1 506	1 570	1 646	1 729	1 813	1 892	1 965	2 034	2 101	2 168	2 238
Mali	2 294	2 395	2 501	2 617	2 758	2 910	3 071	3 244	3 427	3 622	3 828	4 047	4 277	4 520	4 773	5 034	5 304	5 582	5 870	6 172	6 490
Mauritania	1 056	1 107	1 160	1 215	1 273	1 334	1 397	1 463	1 531	1 600	1 671	1 744	1 818	1 893	1 969	2 046	2 123	2 202	2 281	2 361	2 442
Niger	1 446	1 506	1 570	1 637	1 706	1 779	1 854	1 934	2 018	2 108	2 204	2 307	2 416	2 533	2 657	2 791	2 933	3 086	3 249	3 423	3 609
Nigeria	34 919	36 379	37 894	39 470	41 108	42 810	44 945	47 178	49 515	51 968	54 541	57 245	60 081	63 057	66 174	69 441	72 840	76 370	80 026	83 799	87 680
Saint Helena	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Senegal	3 452	3 555	3 657	3 760	3 867	3 979	4 097	4 222	4 353	4 490	4 634	4 785	4 943	5 108	5 284	5 469	5 665	5 872	6 088	6 313	6 544
Sierra Leone	1 352	1 359	1 371	1 392	1 426	1 475	1 541	1 622	1 713	1 804	1 886	1 959	2 024	2 083	2 140	2 200	2 262	2 325	2 390	2 456	2 524
Togo	1 316	1 368	1 422	1 479	1 539	1 601	1 665	1 732	1 802	1 874	1 949	2 027	2 107	2 191	2 277	2 367	2 460	2 557	2 657	2 760	2 866

Source: *United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, custom data acquired via website. (Data extracted on 07/07/2017)*

Appendix 1b: Annual Urban population (thousands)

Country Name	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Algeria	16185540	16698037	17198083	17689675	18188015	18684937	19180228	19677273	20182205	20703617	21248009	21818169	22414414	23041887	23698930	24388796	25114252	25871599	26649134	27429775	28199936
Angola	4120885	4341551	4567133	4802463	5054800	5329983	5630292	5956249	6306557	6679407	7071959	7485335	7920747	8379335	8861746	9370320	9905393	10464844	11046695	11649562	12272024
Benin	2170765	2259203	2348391	2439225	2533357	2631925	2735157	2842942	2955352	3071714	3191453	3314532	3441354	3572519	3708565	3850258	3997756	4151141	4310518	4476160	4648131
Botswana	768558	799303	829904	860274	890252	919805	948753	967832	985295	1003223	1022073	1042097	1063246	1085519	1108813	1133060	1158330	1184621	1211929	1240142	1269051
Burkina Faso	1526699	1598129	1693155	1810936	1936788	2071321	2214526	2367405	2530418	2704755	2890681	3089300	3301196	3524506	3759232	4005079	4262509	4531565	4812118	5104154	5407651
Burundi	429924	447767	465620	484391	504576	527802	554689	585303	619383	656404	695933	738137	783159	830917	880822	932889	986828	1042782	1101333	1163373	1229726
Cabo Verde	189769	198206	206688	215222	223821	232484	240898	249318	257669	265848	273773	281405	288764	295988	303227	310639	318172	325806	333528	341342	349197
Cameroon	5730749	5962015	6198081	6440913	6693011	6956192	7230870	7517754	7817313	8130183	8456228	8796382	9150050	9517221	9896604	10288000	10690948	11105567	11531668	11969294	12417641
Central African Rep.	1248269	1281974	1315263	1348120	1380786	1413339	1445507	1477155	1508414	1539535	1571330	1604357	1638401	1671670	1701794	1727273	1747222	1762848	1777363	1795275	1820122
Chad	1503265	1557278	1613896	1673750	1737360	1805079	1877275	1953547	2032918	2113682	2194709	2275451	2356432	2438427	2523021	2613164	2709402	2811519	2919203	3031548	3148055
Comoros	134541	138071	141616	145174	148733	152294	155849	159409	162990	166645	170479	174491	178698	183104	187716	192548	197599	202893	208391	214093	219980
Congo, Dem. Rep.	13659210	14237886	14789168	15335013	15908019	16534169	17222093	17968282	18770723	19622660	20519758	21464292	22460384	23510087	24612409	25768656	26980313	28246770	29568340	30945908	32378991
Congo, Rep.	1579144	1636319	1697466	1760969	1826324	1893340	1961498	2031259	2104173	2182480	2267682	2360787	2461018	2565603	2670736	2773618	2873075	2969986	3066121	3164121	3266155
Cote d'Ivoire	5992272	6236074	6481754	6725837	6990518	7265496	7530895	7789404	8046405	8310456	8587991	8882232	9212020	9560642	9928310	10314301	10720339	11146455	11590744	12049541	12520170
Djibouti	480986	491432	504922	520253	535471	549181	561095	571784	581630	591290	601234	611543	622050	632828	643898	655348	667230	679543	692118	704756	717290
Egypt, Arab Rep.	27278677	27714248	28218743	28773125	29337899	29917666	30515758	31133176	31764147	32399894	33035334	33665447	34263058	34857122	35492121	36182251	36935951	37761457	38639648	39542754	40451214
Equatorial Guinea	196062	203464	211444	219965	228961	238394	248228	258526	269523	281388	294263	308196	323131	339004	355671	373052	391124	409860	429196	449014	469251
Eritrea	510989	520965	534521	551729	572216	595606	622348	652406	684663	717511	749706	780634	810647	840348	870946	903284	937627	..	..	..	..
Ethiopia	7924237	8285270	8650119	9022892	9407067	9807603	10223839	10657765	11106662	11569768	12046152	12536471	13054026	13733826	14443888	15189225	15969792	16787864	17639628	18526950	19447277
Gabon	818491	851437	884581	917994	951733	985907	1020536	1055785	1092134	1130203	1170502	1212975	1257519	1304351	1353707	1405611	1460304	1517310	1574811	1630370	1682263
Gambia, The	462336	485381	509425	534696	561381	589659	619684	651518	685114	719971	755925	792955	831076	870363	910858	952629	995671	1039934	1085343	1131820	1179276
Ghana	6727651	7028226	7334775	7650720	7979372	8319609	8662230	9020827	9395501	9786022	10191094	10611790	11047966	11498112	11959326	12430823	12911096	13398941	13893695	14395852	14906308
Guinea	2320028	2421061	2506983	2582791	2655842	2732147	2812901	2896721	2984737	3077491	3175634	3280239	3392096	3510384	3634189	3762416	3895084	4032900	4177293	4330261	4493335
Guinea-Bissau	371077	387358	403644	420198	437435	455693	475089	495652	517409	540314	564307	589493	615920	643692	672867	703584	735524	768680	802863	837849	873436
Kenya	4994283	5229567	5471748	5722352	5982378	6256130	6541545	6839097	7149731	7474468	7813466	8168124	8538861	8925839	9328191	9746644	10182821	10636683	11108093	11596730	12102874
Lesotho	298638	314042	326769	339486	352303	365293	378455	391819	405428	419406	433754	448564	461734	475463	489840	505098	521264	538365	556252	574834	593939
Liberia	952972	941418	1021311	1113437	1202860	1278737	1336228	1378809	1413554	1451812	1501829	1566254	1642015	1724830	1808227	1887243	1960518	2029772	2096896	2164985	2236357
Libya	3760790	3829689	3894753	3957985	4022024	4088902	4158823	4230981	4304908	4379772	4454577	4530705	4607627	4680482	4742531	4789844	4819287	4833897	4843390	4861477	4897807
Madagascar	3476114	3622762	3776499	3937065	4103815	4276115	4454032	4637734	4827101	5022403	5283544	5555519	5838413	6132917	6437723	6753507	7080265	7418168	7768215	8130933	8507377
Malawi	1314242	1377863	1453668	1539770	1603861	1662059	1719058	1776347	1835082	1896842	1962998	2033727	2108672	2187209	2270022	2356967	2447754	2543052	2643060	2748424	2859577
Mali	2450960	2560306	2673560	2797427	2948093	3109998	3283515	3469099	3667206	3878667	4103283	4342710	4596645	4863970	5141522	5426428	5717374	6015147	6321385	6639767	6972489
Mauritania	1053095	1103907	1157820	1214526	1273445	1334197	1396565	1460519	1526168	1593679	1663258	1734837	1808450	1884472	1963521	2045961	2132011	2221539	2313876	2408076	2503507
Mauritius	485844	489444	494198	498006	502932	506439	507943	508952	510101	510746	511212	511022	510765	510027	508789	507400	505621	504412	503197	502028	500888
Morocco	13995729	14285555	14566859	14842165	15114839	15386945	15659555	15933727	16210331	16491168	16825045	17175704	17534269	17904358	18290224	18695176	19120878	19565934	20024263	20487552	20949860
Mozambique	4332973	4551617	4765731	4925453	5085544	5257336	5442231	5637969	5843408	6056842	6276712	6503455	6737282	6979228	7232473	7497736	7775732	8066819	8371501	8690002	9023364
Namibia	493512	517339	542175	567341	591805	614846	636114	662539	689506	716611	744434	773162	802806	834061	867660	904386	944674	988569	1034998	1083022	1131767
Niger	1494860	1556955	1622396	1691159	1762929	1837592	1915300	1997512	2084713	2177771	2277005	2383090	2496258	2617022	2746244	2884167	3031703	3189212	3357285	3536485	3727099
Nigeria	34785092	36237343	37742894	39306959	40933959	42627440	44751552	46973642	49299659	51736609	54289212	56964348	59765965	62697869	65756801	68949828	72255528	75675253	79202999	82834089	86561390

Rwanda	583145	695539	813080	935002	1067913	1197916	1318462	1432119	1527567	1624885	1733786	1856783	1991985	2139001	2293615	2454324	2620815	2793666	2973095	3158661	3350591
Sao Tome & Princip	61496	63885	66275	68722	71295	74049	77010	80163	83459	86841	90281	93760	97298	100872	104512	108199	111929	115705	119525	123388	127289
Senegal	3465405	3568542	3670334	3772537	3877675	3987721	4103458	4224868	4351843	4485692	4626408	4774214	4929663	5093932	5268498	5454524	5652488	5862500	6082893	6311994	6548092
Seychelles	37291	37913	38443	39297	40183	40663	40828	42242	41921	41931	42303	43385	43811	45021	45431	46967	46004	46726	47881	48931	50341
Sierra Leone	1471777	1484562	1502819	1530045	1570272	1626076	1699790	1790001	1890140	1990711	2084547	2169631	2247600	2320954	2393923	2469879	2549270	2630999	2715255	2801791	2890613
Somalia	2421263	2508596	2615954	2738197	2867038	2996046	3123296	3250860	3380868	3516401	3659713	3811541	3971025	4137734	4311233	4490910	4676829	4869763	5070663	5280659	5500804
South Africa	22571812	23201689	23799546	24376548	24952689	25542270	25995126	26549407	27129578	27727713	28343107	28977423	29631431	30306438	31001303	31718383	32458095	33221922	34006630	34815268	35648311
South Sudan	866589	894411	937392	991176	1049024	1105876	1159989	1213040	1267102	1325693	1390997	1463889	1542855	1626144	1711611	1797497	1883093	1968923	2055540	2143723	2234317
Sudan	7768874	8001974	8216978	8422547	8631857	8855061	9095540	9349825	9612013	9873047	10126743	10371226	10609975	10848620	11101339	11374877	11671328	11990132	12329983	12688618	13065276
Switzerland	5180397	5199719	5208645	5220447	5241761	5267636	5301074	5344095	5386680	5426645	5464346	5501590	5553847	5627771	5701396	5764063	5831516	5896805	5968886	6046826	6121685
Tanzania	6154842	6435980	6718378	7006325	7306494	7624779	7962433	8320222	8771267	9265294	9791550	10352972	10950894	11586014	12255418	12960158	13699468	14476048	15290226	16141097	17030377
Togo	1312339	1369567	1431830	1498036	1566424	1635599	1705082	1775470	1847364	1921834	1999658	2081114	2166016	2254416	2345946	2440753	2538795	2640420	2745271	2853180	2964051
Tunisia	5602725	5726710	5842761	5951656	6054487	6152395	6245039	6333095	6419541	6504328	6576514	6654610	6738347	6827316	6919895	7015332	7113330	7215030	7319835	7426857	7535540
Uganda	2396780	2490401	2586521	2686595	2792061	2904425	3024095	3151232	3323576	3516354	3719561	3934080	4160306	4398748	4650004	4914981	5193860	5487772	5797169	6122464	6463726
Zambia	3390221	3441885	3496981	3553822	3610318	3665076	3783898	3933177	4086900	4246423	4412535	4585714	4766132	4955003	5153673	5363425	5585080	5819264	6065375	6322121	6588682
Zimbabwe	3592172	3701048	3809730	3917525	4023161	4125987	4225519	4323307	4356041	4381920	4413845	4452539	4497911	4550222	4609702	4676094	4749752	4830153	4915898	5008948	5108108

Source: *World Bank Staff estimates based on United Nations, World Urbanization Prospects. (Data extracted on 07/07/2017)*

Appendix 2: The per cent of urban population (1995-2015)

Country	United Nations					World Bank					African Development Bank					Geo-Hive				
	1995	2000	2005	2010	2015	1995	2000	2005	2010	2015	1995	2000	2005	2010	2015	1995	2000	2005	2010	2015
Algeria	56.0	59.9	63.8	67.5	70.7	56	59.9	63.8	67.5	70.7	56.79	60.95	65.16	69.45	72.45	-	59.9	-	67.53	70.7
Angola	28.9	32.4	36.2	40.1	44.0	28.9	32.4	36.2	40.1	44.1	26.80	29.98	33.41	36.94	40.17	-	32.42	-	40.10	44.1
Benin	36.8	38.3	40.0	41.9	44.0	36.8	38.3	40.0	41.9	44.0	36.76	38.33	39.98	41.85	43.95	-	38.33	-	41.85	44.0
Botswana	49.0	53.2	55.1	56.2	57.4	48.1	53.2	55.1	56.2	57.4	49.20	53.79	55.42	54.08	52.21	-	53.22	-	56.24	57.4
Burkina Faso	15.1	17.8	21.5	25.7	29.9	15.1	17.8	21.5	25.7	29.9	15.13	17.84	21.54	25.51	29.54	-	17.84	-	25.67	29.9
Burundi	7.2	8.2	9.4	10.6	12.1	7.2	8.2	9.4	10.6	12.1	7.18	8.13	9.18	10.38	11.66	-	8.25	-	10.64	12.1
Cameroon	42.6	45.5	48.5	51.5	54.4	42.6	45.5	48.5	51.5	54.4	42.57	45.54	48.57	51.60	54.50	-	45.54	-	51.52	54.4
Cape Verde	48.8	53.4	57.7	61.8	65.5	48.8	53.4	57.7	61.8	65.5	50.06	53.88	58.23	61.48	63.99	-	53.44	-	61.83	65.5
Central Africa Republic	37.2	37.6	38.1	38.8	40.0	37.2	37.6	38.1	38.8	40.0	36.56	36.75	37.18	38.00	39.24	-	37.64	-	38.83	40.0
Chad	21.5	21.6	21.8	22.0	22.5	21.5	21.6	21.8	22.0	22.5	21.41	21.69	21.66	21.66	21.78	-	21.64	-	21.98	22.5
Comoros	28.3	28.1	27.9	27.9	28.3	28.3	28.1	27.9	27.9	28.3	27.49	27.09	27.07	27.29	27.63	-	28.08	-	27.92	28.3
Congo	56.4	58.7	61.0	63.2	65.4	56.4	58.7	61.0	63.2	65.4	56.40	59.01	61.68	63.94	66.10	-	58.70	-	63.23	65.4
Congo, Democratic Republic	32.8	35.1	37.5	39.9	42.5	32.8	35.1	37.5	39.9	42.5	32.32	34.32	36.10	37.67	39.18	-	35.12	-	39.94	42.5
Côte d'Ivoire	41.2	43.5	46.8	50.6	54.2	41.2	43.5	46.8	50.6	54.2	40.68	42.52	44.93	47.66	50.82	-	43.54	-	50.56	54.2
Djibouti	76.3	76.5	76.8	77.0	77.3	76.3	76.5	76.8	77.0	77.3	76.64	76.57	76.58	77.30	78.37	-	76.53	-	77.00	77.3
Egypt	42.8	42.8	43.0	43.0	43.1	42.8	42.8	43.0	43.0	43.1	41.95	41.42	41.21	40.94	39.93	-	42.80	-	43.02	43.1
Equatorial Guinea	38.8	38.8	38.9	39.2	39.9	38.8	38.8	38.9	39.2	39.9	38.27	37.88	37.48	37.47	37.76	-	38.81	-	39.22	39.9
Eritrea	16.5	17.6	18.9	20.6	22.6	16.5	17.6	18.9	20.6	-	17.81	19.56	21.88	25.18	29.17	-	17.56	-	20.57	22.6
Ethiopia	13.8	14.7	15.7	17.3	19.5	13.8	14.7	15.7	17.3	19.5	13.78	14.65	15.61	17.23	19.38	-	14.74	-	17.32	19.5
Gabon	75.4	80.1	83.4	85.7	87.2	75.4	80.1	83.4	85.7	87.2	74.94	79.69	83.52	86.49	88.46	-	80.08	-	85.70	87.2
Gambia	43.4	47.9	52.3	56.3	59.6	43.4	47.9	52.3	56.3	59.6	43.36	47.87	52.20	55.89	59.01	-	47.87	-	56.30	59.6
Ghana	40.1	43.9	47.3	50.7	54.0	40.1	43.9	47.3	50.7	54.0	40.14	43.93	47.30	50.60	53.20	-	43.93	-	50.71	54.0
Guinea	29.5	31.0	32.8	34.9	37.2	29.5	31.0	32.8	34.9	37.2	29.38	30.83	32.49	34.42	36.39	-	31.02	-	34.86	37.2
Guinea Bissau	32.6	36.7	40.9	45.2	49.3	32.6	36.7	40.9	45.2	49.3	31.49	35.48	39.71	43.90	47.82	-	36.65	-	45.22	49.3
Kenya	18.3	19.9	21.7	23.6	25.6	18.3	19.9	21.7	23.6	25.6	18.29	20.03	21.94	23.91	26.01	-	19.89	-	23.57	25.6

Lesotho	17.0	19.5	22.2	24.8	27.3	17	19.5	22.2	24.8	27.3	16.96	19.55	22.25	24.73	27.12	-	19.55	-	24.75	27.3
Liberia	46.0	44.3	46.1	47.8	49.7	46	44.3	46.1	47.8	49.7	45.96	44.33	46.05	47.80	49.70	-	44.33	-	47.80	49.7
Libya	76.0	76.3	76.9	77.6	78.6	76	76.3	76.9	77.6	78.6	73.96	74.04	74.15	74.85	79.04	-	76.35	-	77.64	78.6
Madagascar	25.8	27.1	28.8	31.9	35.1	25.8	27.1	28.8	31.9	35.1	25.80	27.12	28.81	31.93	35.10	-	27.12	-	31.93	35.1
Malawi	13.3	14.6	15.1	15.5	16.3	13.3	14.6	15.1	15.5	16.3	13.45	14.78	15.26	15.80	16.36	-	14.61	-	15.54	16.3
Mali	25.5	28.4	32.1	36.0	39.9	25.5	28.4	32.1	36.0	39.9	23.79	26.34	29.72	33.19	36.87	-	28.36	-	36.00	39.9
Mauritania	45.3	49.2	53.1	56.7	59.9	45.3	49.2	53.1	56.7	59.9	45.26	49.18	52.99	56.97	60.06	-	49.24	-	56.68	59.9
Mauritius	43.3	42.7	41.6	40.6	39.7	43.3	42.7	41.6	40.6	39.7	43.28	42.67	41.31	40.02	39.06	-	42.67	-	40.58	39.7
Morocco	51.7	53.3	55.1	57.7	60.2	51.7	53.3	55.1	57.7	60.2	51.07	52.89	54.65	56.85	59.46	-	53.34	-	57.68	60.6
Mozambique	27.5	29.1	30.0	31.0	32.2	27.5	29.1	30.0	31.0	32.2	27.61	29.12	29.83	30.50	31.23	-	29.10	-	30.96	32.2
Namibia	29.8	32.4	36.6	41.6	46.7	29.8	32.4	36.6	41.6	46.7	29.81	32.37	36.63	41.34	45.40	-	32.37	-	41.62	46.7
Niger	15.8	16.2	16.7	17.6	18.7	15.8	16.2	16.7	17.6	18.7	15.44	15.85	16.35	17.13	18.14	-	16.19	-	17.56	18.7
Nigeria	32.2	34.8	39.1	43.5	47.8	32.2	34.8	39.1	43.5	47.8	31.21	34.07	39.07	43.56	48.12	-	34.84	-	43.48	47.8
Rwanda	9.8	14.9	19.3	24.0	28.8	9.8	14.9	19.3	24.0	28.8	9.42	15.62	20.18	25.22	30.84	-	14.93	-	23.95	28.8
São Tomé and Principe	48.6	53.4	58.0	61.9	65.1	48.6	53.4	58.0	61.9	65.1	50.44	54.31	58.57	64.57	69.35	-	53.42	-	61.91	65.1
Senegal	39.6	40.3	41.1	42.2	43.7	39.6	40.3	41.1	42.2	43.7	39.62	40.35	41.13	42.21	43.25	-	40.35	-	42.23	43.7
Seychelles	49.5	50.1	51.1	52.3	53.9	49.5	50.1	51.1	52.3	53.9	48.70	49.27	50.10	51.27	52.37	-	50.12	-	52.32	53.9
Sierra Leone	34.4	35.6	36.8	38.2	39.9	34.4	35.6	36.8	38.2	39.9	35.23	36.32	37.19	38.08	39.11	-	35.63	-	38.24	39.9
Somalia	31.4	33.2	35.2	37.3	39.6	31.4	33.2	35.2	37.3	39.6	31.42	33.25	35.16	37.29	39.16	-	33.25	-	37.26	39.6
South Africa	54.5	56.9	59.5	62.2	64.8	54.5	56.9	59.5	62.2	64.8	54.49	56.83	59.39	62.01	63.61	-	56.89	-	62.22	64.8
South Sudan	15.9	16.5	17.2	17.9	18.8	15.9	16.5	17.2	17.9	18.8	15.82	16.40	17.03	17.65	18.52	-	16.50	-	17.86	18.8
Sudan	32.2	32.5	32.8	33.1	33.8	32.2	32.5	32.8	33.1	33.8	32.02	32.50	32.76	33.08	33.65	-	32.50	-	33.08	33.8
Swaziland	23.0	22.7	22.0	21.5	21.3	23	22.7	22.0	21.5	21.3	23.05	22.69	22.04	21.49	21.28	-	22.69	-	21.49	21.3
Tanzania	20.5	22.3	24.8	28.1	31.6	20.2	22.3	24.8	28.1	31.6	20.57	22.31	24.19	26.28	28.11	-	22.31	-	28.11	31.6
Togo	30.7	32.9	35.2	37.5	40.0	30.7	32.9	35.2	37.5	40.0	30.71	32.91	35.18	37.53	39.23	-	32.91	-	37.53	40.0
Tunisia	61.5	63.4	65.1	65.9	66.8	61.5	63.4	65.1	65.9	66.8	60.59	62.47	64.77	65.89	66.73	-	63.43	-	65.93	66.8
Uganda	11.7	12.1	13.0	14.5	16.1	11.7	12.1	13.0	14.5	16.1	11.85	12.08	13.25	15.16	16.83	-	12.08	-	14.49	16.1
Zambia	37.1	34.8	36.6	38.7	40.9	37.1	34.8	36.6	38.7	40.9	35.45	33.21	34.87	36.78	39.18	-	34.80	-	38.73	40.9
Zimbabwe	31.7	33.8	34.1	33.2	32.4	31.7	33.8	34.1	33.2	32.4	31.61	33.77	33.39	31.07	31.22	-	33.76	-	33.20	32.4

Source: *United Nation, World Bank and African Development Bank (Data extracted on the 24 March 2017)*

Appendix 3: Average Annual Rate of Change of the Urban Per cent

Location	1995 - 2000	2000 - 2005	2005 - 2010	2010 – 2015
World				
Africa	0.84	1.02	1.08	1.08
Eastern Africa	**1.10**	**1.20**	**1.50**	**1.68**
Burundi	2.68	2.57	2.53	2.50
Comoros	-0.16	-0.15	0.03	0.27
Djibouti	0.06	0.06	0.06	0.09
Eritrea	1.20	1.46	1.71	1.91
Ethiopia	1.28	1.26	1.96	2.34
Kenya	1.71	1.72	1.68	1.67
Madagascar	1.00	1.21	2.05	1.90
Malawi	1.93	0.60	0.64	0.92
Mauritius	-0.29	-0.50	-0.51	-0.45
Mayotte	2.82	1.02	-0.52	-0.82
Mozambique	1.13	0.61	0.63	0.80
Réunion	0.85	0.55	0.34	0.21
Rwanda	8.34	5.12	4.34	3.69
Seychelles	0.24	0.37	0.49	0.59
Somalia	1.13	1.12	1.16	1.19
South Sudan	0.78	0.77	0.80	1.04
Uganda	0.71	1.51	2.13	2.11
United Republic of Tanzania	1.65	2.15	2.47	2.34
Zambia	-1.28	1.01	1.12	1.10
Zimbabwe	1.24	0.21	-0.54	-0.50
Middle Africa	**1.30**	**1.20**	**1.20**	**1.17**
Angola	2.31	2.19	2.06	1.88
Cameroon	1.35	1.28	1.19	1.08
Central African Republic	0.22	0.23	0.40	0.61
Chad	0.15	0.15	0.17	0.44
Congo	0.79	0.77	0.72	0.67
Democratic Republic of the Congo	1.34	1.30	1.27	1.24
Equatorial Guinea	-0.01	0.03	0.19	0.35
Gabon	1.22	0.82	0.54	0.34
Sao Tome and Principe	1.88	1.65	1.30	1.00
Northern Africa	**0.44**	**0.43**	**0.42**	**0.45**
Algeria	1.35	1.26	1.13	0.93
Egypt	-0.01	0.11	0.00	0.05
Libya	0.09	0.14	0.19	0.23
Morocco	0.63	0.66	0.91	0.85
Sudan	0.16	0.16	0.19	0.43
Tunisia	0.63	0.52	0.26	0.27
Western Sahara	-0.77	-0.79	0.02	0.06
Southern Africa	**0.91**	**0.97**	**0.92**	**0.83**

Botswana	1.66	0.68	0.42	0.43
Lesotho	2.85	2.59	2.13	1.97
Namibia	1.65	2.47	2.55	2.29
South Africa	0.86	0.91	0.88	0.81
Swaziland	-0.32	-0.58	-0.50	-0.17
Western Africa	**1.42**	**1.83**	**1.77**	**1.61**
Benin	0.84	0.84	0.92	0.98
Burkina Faso	3.30	3.76	3.51	3.03
Cabo Verde	1.83	1.53	1.39	1.16
Côte d'Ivoire	1.10	1.46	1.53	1.38
Gambia	1.98	1.79	1.46	1.15
Ghana	1.80	1.48	1.39	1.27
Guinea	1.02	1.12	1.21	1.28
Guinea-Bissau	2.32	2.18	2.02	1.74
Liberia	-0.72	0.76	0.75	0.78
Mali	2.11	2.46	2.32	2.07
Mauritania	1.69	1.52	1.30	1.09
Niger	0.52	0.65	0.98	1.29
Nigeria	1.57	2.29	2.14	1.88
Saint Helena	-0.44	-0.23	-0.21	-0.02
Senegal	0.36	0.38	0.53	0.69
Sierra Leone	0.68	0.67	0.75	0.87
Togo	1.39	1.34	1.29	1.26

Source: *United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, custom data acquired via website. (Data extracted on the 25/02/2017)*

Appendix 4: Average Annual Rate of Change of the Urban Population (per cent)

Location	1995 - 2000	2000 – 2005	2005 - 2010	2010 - 2015
World				
Africa	3.25	3.42	3.55	3.55
Eastern Africa	3.98	3.93	4.28	4.51
Burundi	4.13	5.61	5.98	5.66
Comoros	2.36	2.42	2.60	2.67
Djibouti	1.76	1.49	1.49	1.60
Eritrea	4.09	5.64	5.06	5.11
Ethiopia	4.21	4.12	4.64	4.89
Kenya	4.35	4.40	4.35	4.34
Madagascar	4.15	4.21	4.89	4.69
Malawi	4.49	3.25	3.63	3.77
Mauritius	0.69	-0.04	-0.21	-0.08
Mayotte	6.80	4.25	2.59	1.88
Mozambique	3.82	3.40	3.26	3.27
Réunion	2.63	1.99	1.66	1.38
Rwanda	16.21	7.44	7.12	6.43
Seychelles	1.36	2.13	1.41	1.14
Somalia	4.16	3.85	3.75	4.06
South Sudan	4.83	4.56	5.05	5.05
Uganda	3.85	4.88	5.49	5.43
United Republic of Tanzania	4.20	4.80	5.41	5.36
Zambia	1.38	3.56	3.96	4.32
Zimbabwe	2.67	0.54	0.03	2.30
Middle Africa	3.81	4.10	4.05	3.90
Angola	5.11	5.64	5.40	4.97
Cameroon	4.03	3.87	3.76	3.60
Central African Republic	2.32	1.92	2.27	2.59
Chad	3.62	3.90	3.31	3.42
Congo	3.57	3.27	3.70	3.22
Democratic Republic of the Congo	3.57	4.11	4.09	3.96
Equatorial Guinea	3.17	3.08	3.04	3.12
Gabon	3.74	3.18	2.95	2.70
Sao Tome and Principe	3.22	3.71	4.14	3.58
Northern Africa	2.10	2.04	2.11	2.12
Algeria	2.93	2.63	2.87	2.77
Egypt	1.55	1.74	1.68	1.68
Libya	1.82	1.70	1.73	1.13
Morocco	1.98	1.62	1.89	2.26
Sudan	2.62	2.77	2.62	2.54
Tunisia	1.86	1.54	1.38	1.38
Western Sahara	2.98	5.94	3.71	3.27
Southern Africa	2.55	2.38	2.20	1.67

Botswana	3.72	2.01	1.39	1.29
Lesotho	3.98	3.32	2.98	3.05
Namibia	4.40	3.79	4.00	4.16
South Africa	2.45	2.37	2.17	1.59
Swaziland	1.66	0.18	1.04	1.32
Western Africa	4.01	4.44	4.48	4.34
Benin	3.82	4.11	3.92	3.67
Burkina Faso	6.10	6.67	6.44	5.87
Cabo Verde	3.87	3.11	1.76	1.99
Côte d'Ivoire	3.63	2.97	3.27	3.69
Gambia	4.83	4.91	4.60	4.33
Ghana	4.13	4.03	3.92	3.40
Guinea	3.21	2.94	3.76	3.82
Guinea-Bissau	4.54	4.38	4.22	4.13
Liberia	5.87	3.22	4.57	3.36
Mali	4.76	5.49	5.48	5.08
Mauritania	4.66	4.52	4.04	3.54
Niger	4.14	4.29	4.72	5.14
Nigeria	4.08	4.84	4.83	4.66
Saint Helena	-1.11	-1.98	-2.18	-0.59
Senegal	2.84	3.05	3.31	3.59
Sierra Leone	1.74	4.92	3.07	2.75
Togo	3.93	3.94	3.88	3.83

Source: *United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision. (Data extracted on the 25/02/2017)*

Appendix 5: Annual Urban population growth rate

Country Name	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Algeria	3.29	3.12	2.95	2.82	2.78	2.69	2.61	2.55	2.52	2.54	2.58	2.63	2.67	2.73	2.77	2.82	2.88	2.91	2.9	2.83	2.71
Angola	5.45	5.25	5.1	5.07	5.17	5.35	5.53	5.67	5.74	5.73	5.64	5.56	5.5	5.44	5.39	5.36	5.33	5.27	5.19	5.1	5
Benin	4.23	3.98	3.79	3.71	3.76	3.88	4.02	4.11	4.17	4.16	4.1	4.03	3.98	3.92	3.87	3.81	3.75	3.7	3.65	3.63	3.62
Botswana	4.13	3.95	3.77	3.6	3.42	3.24	3.06	1.936	1.75	1.82	1.95	2.11	2.24	2.34	2.39	2.42	2.44	2.45	2.45	2.41	2.35
Burkina Faso	4.55	4.57	5.78	6.73	6.72	6.71	6.68	6.665	6.65	6.67	6.67	6.68	6.68	6.59	6.48	6.34	6.21	6.08	5.96	5.84	5.73
Burundi	4.47	4.25	4.11	4.16	4.3	4.72	5.19	5.601	5.88	6.02	6.05	6.06	6.08	6.09	6.04	6	5.93	5.87	5.81	5.79	5.78
Cabo Verde	4.64	4.53	4.4	4.26	4.07	3.87	3.54	3.344	3.12	2.86	2.58	2.29	2.04	1.92	1.94	2.09	2.24	2.36	2.42	2.41	2.33
Cameroon	4.18	4.12	4.07	4.02	3.98	3.95	3.92	3.886	3.86	3.84	3.81	3.79	3.76	3.74	3.71	3.69	3.66	3.63	3.6	3.56	3.52
Central African Republic	2.71	2.63	2.55	2.45	2.33	2.19	2.04	1.918	1.85	1.85	1.95	2.05	2.15	2.24	2.32	2.38	2.44	2.51	2.57	2.62	2.67
Chad	3.47	3.53	3.57	3.64	3.73	3.82	3.92	3.98	3.98	3.9	3.77	3.62	3.51	3.44	3.42	3.52	3.62	3.7	3.77	3.81	3.84
Comoros	2.65	2.6	2.56	2.5	2.45	2.39	2.34	2.289	2.26	2.25	2.31	2.36	2.42	2.47	2.52	2.57	2.61	2.67	2.7	2.72	2.74
Congo, Dem. Rep.	4.7	4.26	3.93	3.76	3.8	3.99	4.19	4.339	4.45	4.49	4.5	4.5	4.52	4.52	4.51	4.49	4.46	4.43	4.41	4.39	4.37
Congo, Rep.	3.4	3.45	3.56	3.54	3.44	3.31	3.15	3.043	3.03	3.16	3.37	3.6	3.77	3.82	3.74	3.58	3.39	3.25	3.16	3.14	3.18
Cote d'Ivoire	4.09	3.97	3.85	3.68	3.85	3.84	3.57	3.358	3.23	3.21	3.26	3.34	3.61	3.67	3.72	3.75	3.79	3.81	3.82	3.78	3.73
Djibouti	1.77	1.88	1.89	1.88	1.82	1.72	1.64	1.597	1.55	1.5	1.45	1.4	1.37	1.34	1.34	1.36	1.39	1.41	1.43	1.43	1.43
Egypt, Arab Rep.	1.57	1.53	1.75	1.9	1.9	1.91	1.94	1.97	1.98	1.96	1.92	1.87	1.74	1.7	1.8	1.92	2.06	2.22	2.31	2.32	2.28
Equatorial Guinea	3.44	3.39	3.37	3.36	3.36	3.35	3.34	3.326	3.33	3.31	3.28	3.24	3.22	3.21	3.22	3.26	3.29	3.31	3.33	3.33	3.32
Eritrea	1.54	2.3	2.93	3.52	3.99	4.33	4.7	5	5.09	4.93	4.63	4.28	4	3.83	3.8	3.87	3.95	..	..	..	..
Ethiopia	4.78	4.45	4.31	4.22	4.17	4.17	4.15	4.151	4.12	4.08	4.04	4	4.06	5.08	5.03	5	4.96	4.93	4.88	4.84	4.78
Gabon	4.12	4	3.87	3.74	3.58	3.43	3.27	3.136	3.03	2.96	2.91	2.87	2.83	2.79	2.75	2.71	2.68	2.64	2.6	2.54	2.48
Gambia, The	4.84	4.83	4.79	4.8	4.83	4.88	4.94	4.996	5.02	4.97	4.89	4.82	4.74	4.68	4.62	4.57	4.53	4.47	4.4	4.33	4.24
Ghana	4.43	4.27	4.14	4.07	4.08	4.08	3.98	4.03	4.06	4.07	4.04	4.02	4	3.97	3.92	3.87	3.81	3.75	3.67	3.59	3.51
Guinea	5.24	4.27	3.5	2.99	2.78	2.8	2.85	2.855	2.94	3.1	3.3	3.52	3.73	3.88	3.96	3.97	3.98	3.99	4	3.99	3.98
Guinea-Bissau	4.61	4.57	4.52	4.48	4.44	4.4	4.35	4.321	4.29	4.27	4.25	4.24	4.22	4.22	4.24	4.28	4.26	4.24	4.19	4.11	4
Lesotho	5.47	5.01	3.94	3.77	3.64	3.54	3.44	3.352	3.29	3.27	3.27	3.28	2.84	2.89	2.94	3.02	3.11	3.18	3.21	3.2	3.15
Liberia	-3.4	-1.23	8.13	8.62	7.71	6.11	4.4	3.137	2.49	2.67	3.39	4.2	4.73	4.92	4.72	4.27	3.79	3.45	3.22	3.16	3.2
Libya	1.99	1.94	1.91	1.89	1.87	1.85	1.82	1.78	1.78	1.82	1.87	1.98	2.04	1.93	1.59	1.12	0.58	0.14	-0.04	0.13	0.56
Madagascar	4.13	4.16	4.17	4.17	4.14	4.1	4.06	4.023	3.98	3.94	5.04	4.99	4.93	4.89	4.84	4.8	4.77	4.73	4.69	4.65	4.61
Malawi	3.72	4.58	5.2	5.6	3.93	3.42	3.23	3.148	3.13	3.19	3.3	3.42	3.5	3.56	3.66	3.76	3.84	3.92	3.99	4.06	4.12
Malaysia	4.87	4.83	4.74	4.63	4.46	4.27	3.63	3.464	3.33	3.24	3.18	3.12	3.06	2.99	2.91	2.83	2.75	2.66	2.56	2.46	2.36
Mali	4.48	4.44	4.41	4.61	5.31	5.39	5.44	5.487	5.53	5.58	5.61	5.65	5.67	5.64	5.55	5.4	5.24	5.11	5	4.95	4.92
Mauritania	4.69	4.69	4.68	4.68	4.69	4.7	4.7	4.669	4.59	4.46	4.29	4.12	3.97	3.85	3.78	3.73	3.69	3.65	3.59	3.52	3.45
Mauritius	0.58	0.74	0.97	0.77	0.98	0.69	0.3	0.198	0.23	0.13	0.09	-0.04	-0.05	-0.14	-0.24	-0.27	-0.35	-0.24	-0.24	-0.23	-0.23
Morocco	2.31	2.08	1.99	1.9	1.81	1.73	1.64	1.578	1.54	1.54	1.85	1.93	1.95	2	2.05	2.12	2.19	2.25	2.26	2.23	2.16
Mozambique	5.39	4.95	4.62	3.32	3.22	3.34	3.46	3.531	3.56	3.55	3.5	3.46	3.42	3.41	3.44	3.49	3.54	3.58	3.61	3.62	3.63
Namibia	4.65	4.72	4.7	4.55	4.22	3.79	3.34	3.98	3.91	3.84	3.88	3.95	4.01	4.1	4.22	4.37	4.52	4.66	4.66	4.58	4.43
Niger	4.03	4.08	4.13	4.17	4.18	4.17	4.17	4.24	4.31	4.4	4.48	4.56	4.65	4.74	4.87	4.98	5.11	5.22	5.31	5.39	5.44

Nigeria	4.1	4.1	4.08	4.07	4.07	4.06	4.87	4.857	4.84	4.84	4.83	4.82	4.81	4.8	4.77	4.75	4.7	4.64	4.57	4.48	4.39
Rwanda	13.3	17.6	15.7	14	13.4	11.5	9.63	8.306	6.49	6.22	6.55	6.94	7.12	7.2	7.02	6.76	6.49	6.27	6.08	5.9	5.76
Sao Tome and Principe	3.9	3.73	3.59	3.54	3.58	3.69	3.82	3.911	3.92	3.86	3.76	3.65	3.56	3.48	3.41	3.35	3.29	3.23	3.16	3.09	3.02
Senegal	3.11	2.96	2.84	2.78	2.79	2.85	2.94	3.007	3.05	3.11	3.15	3.17	3.22	3.29	3.4	3.54	3.67	3.78	3.84	3.85	3.82
Seychelles	1.63	1.65	1.39	2.2	2.23	1.19	0.4	3.405	-0.76	0.02	0.88	2.53	0.98	2.72	0.91	3.33	-2.07	1.56	2.44	2.17	2.84
Sierra Leone	0.15	0.56	0.96	1.59	2.48	3.48	4.53	5.347	5.65	5.35	4.7	4.03	3.5	3.15	3.02	3.05	3.1	3.09	3.09	3.08	3.07
Somalia	2.22	3.24	4.05	4.54	4.6	4.38	4.1	3.917	3.79	3.73	3.72	3.71	3.68	3.64	3.6	3.55	3.5	3.48	3.51	3.6	3.73
South Africa	3.01	2.75	2.54	2.4	2.34	2.34	1.76	2.11	2.16	2.18	2.2	2.21	2.23	2.25	2.27	2.29	2.31	2.33	2.33	2.35	2.36
South Sudan	1.29	3.16	4.7	5.58	5.67	5.28	4.8	4.511	4.39	4.51	4.74	4.95	5.05	5.13	5.22	5.28	5.34	5.36	5.26	5	4.67
Sudan	3.82	3.25	2.81	2.54	2.49	2.59	2.71	2.783	2.82	2.8	2.74	2.69	2.66	2.6	2.59	2.56	2.53	2.51	2.54	2.63	2.77
Swaziland	2.14	2.29	2.26	1.58	1.3	0.9	0.45	0.111	-0.05	0.04	0.32	0.64	0.9	1.13	1.26	1.28	1.29	1.34	1.35	1.36	1.36
Tanzania	4.63	4.41	4.23	4.12	4.12	4.19	4.26	4.322	5.21	5.42	5.47	5.53	5.58	5.61	5.61	5.6	5.58	5.56	5.53	5.46	5.39
Togo	3.86	3.91	3.95	3.98	4	4.01	4.02	4.033	4.04	4.04	4.04	4.03	4.02	4.02	4	3.99	3.97	3.96	3.93	3.9	3.87
Tunisia	2.39	2.19	2.01	1.85	1.71	1.6	1.49	1.399	1.35	1.31	1.11	1.18	1.25	1.31	1.34	1.36	1.37	1.4	1.41	1.41	1.4
Uganda	3.8	3.74	3.69	3.69	3.74	3.83	3.92	3.996	5.2	5.52	5.5	5.5	5.49	5.48	5.45	5.43	5.4	5.38	5.37	5.36	5.36
Zambia	1.32	1.39	1.44	1.45	1.41	1.34	3.02	3.703	3.69	3.74	3.82	3.91	3.97	4.03	4.07	4.09	4.11	4.14	4.17	4.18	4.18
Zimbabwe	3.04	2.9	2.77	2.61	2.43	2.24	2.04	1.899	0.34	0.19	0.36	0.56	0.74	0.93	1.11	1.28	1.45	1.6	1.71	1.84	1.93

Source: *World Bank staff estimates based on the United Nations Population Division's World Urbanization Prospects. (Data extracted on 07/07/2017)*

Appendix 6: Percentage of the Total Population Residing in Each Agglomeration with 300000 Inhabitant or More

Location	1995	2000	2005	2010	2015
World					
Africa					
Eastern Africa					
Burundi					
Bujumbura	4.5	4.9	5.3	6.0	6.9
Djibouti					
Djibouti	55.4	55.8	57.0	58.1	58.8
Eritrea					
Asmara	11.0	11.4	11.5	11.7	11.9
Ethiopia					
Addis Ababa	3.8	3.6	3.5	3.4	3.3
Mekele	0.2	0.2	0.3	0.3	0.3
Kenya					
Eldoret	0.5	0.6	0.6	0.6	0.7
Mombasa	2.1	2.2	2.2	2.3	2.4
Nairobi	6.4	7.1	7.5	7.9	8.4
Nakuru	0.7	0.7	0.7	0.7	0.7
Madagascar					
Antananarivo	8.7	8.6	8.5	9.6	10.8
Toamasina	1.1	1.1	1.1	1.2	1.3
Malawi					
Blantyre-Limbe	4.5	4.7	4.7	4.7	4.7
Lilongwe	3.6	4.2	4.6	4.9	5.2
Mozambique					
Beira	2.4	2.3	2.0	1.8	1.7
Maputo	5.8	5.6	5.1	4.7	4.4
Matola	2.5	2.7	2.9	3.2	3.5
Nampula	1.8	1.9	2.1	2.2	2.4
Rwanda					
Kigali	5.6	6.9	9.1	9.6	10.1
Somalia					
Berbera	2.3	2.5	2.8	3.2	3.4
Hargeysa	4.5	5.0	5.6	6.3	6.8
Kismaayo	2.3	2.5	2.8	3.1	3.3
Merca	3.0	3.3	3.7	4.2	4.6
Muqdisho (Mogadishu)	18.1	16.3	16.7	14.8	19.2
South Sudan					
Juba	2.3	2.4	2.5	2.6	2.6
Uganda					
Kampala	4.4	4.5	4.6	4.7	4.8
United Republic of Tanzania					
Arusha	0.6	0.8	0.9	0.9	0.8
Dar es Salaam	6.1	6.7	7.5	8.6	9.8
Mbeya	0.6	0.6	0.7	0.8	0.8
Morogoro	0.5	0.6	0.6	0.6	0.7
Mwanza	0.9	1.0	1.2	1.4	1.6
Zanzibar	0.7	0.8	0.9	1.0	1.1

Zambia					
Kitwe	4.0	3.6	3.7	3.8	3.8
Lusaka	10.2	10.6	11.8	13.0	14.0
Ndola	4.0	3.7	3.6	3.4	3.2
Zimbabwe					
Bulawayo	5.5	5.3	5.3	5.0	4.3
Chitungwiza	2.5	2.5	2.6	2.7	2.4
Harare	10.8	11.0	11.4	11.3	10.0
Middle Africa					
Angola					
Huambo	3.7	4.1	4.5	5.0	5.6
Luanda	15.7	18.6	21.4	23.1	24.1
Lubango	1.0	1.2	1.3	1.4	1.6
Cameroon					
Bafoussam	1.1	1.2	1.3	1.4	1.5
Bamenda	1.2	1.3	1.5	1.6	1.8
Douala	8.5	9.4	10.3	11.4	12.6
Loum	0.7	0.8	1.0	1.3	1.5
Mbouda	0.5	0.6	0.8	1.1	1.4
Yaoundé	7.4	8.5	9.8	11.4	13.1
Central African Republic					
Bangui	15.9	15.9	16.3	16.5	16.5
Chad					
N'Djaména	8.3	8.5	8.5	8.9	9.3
Congo					
Brazzaville	30.5	32.7	35.8	38.3	40.4
Pointe-Noire	16.1	17.2	18.7	19.8	20.7
Democratic Republic of the Congo					
Bukavu	0.7	0.8	0.9	1.0	1.2
Bunia	0.3	0.4	0.5	0.6	0.7
Goma	0.4	0.4	0.5	0.6	0.7
Kananga	1.2	1.3	1.4	1.5	1.6
Kikwit	0.5	0.5	0.6	0.6	0.6
Kinshasa	11.5	13.1	14.0	15.1	16.3
Kisangani	1.2	1.2	1.3	1.4	1.5
Kolwezi	1.0	1.0	0.8	0.8	0.7
Likasi	0.7	0.7	0.7	0.7	0.7
Lubumbashi	2.1	2.3	2.5	2.6	2.8
Matadi	0.5	0.5	0.5	0.5	0.5
Mbandaka	0.5	0.5	0.5	0.5	0.5
Mbuji-Mayi	1.9	2.2	2.4	2.6	2.8
Tshikapa	0.5	0.6	0.7	0.8	1.0
Uvira	0.3	0.4	0.5	0.5	0.6
Gabon					
Libreville	40.7	40.4	40.5	40.5	40.4
Northern Africa					
Algeria					
Annaba	1.1	1.1	1.0	0.9	0.9
Batna	0.8	0.8	0.8	0.8	0.8
Blida	0.8	0.8	0.9	1.0	1.0

El Djazaïr (Algiers)	6.7	6.7	6.7	6.6	6.4
El Djelfa	0.5	0.6	0.7	0.8	1.0
Qacentina	1.6	1.5	1.3	1.2	1.1
Wahran (Oran)	2.4	2.4	2.3	2.2	2.1
Egypt					
Al-Fayyum	0.4	0.4	0.4	0.4	0.4
Al-Iskandariyah (Alexandria)	5.3	5.4	5.5	5.5	5.6
Al-Ismailiyah	0.4	0.4	0.4	0.4	0.4
Al-Mahallah al-Kubra	0.6	0.6	0.6	0.6	0.6
Al-Mansurah	0.6	0.6	0.6	0.6	0.6
Al-Qahirah (Cairo)	19.6	20.6	21.1	21.6	22.2
As-Suways	0.7	0.7	0.7	0.7	0.7
Aswan	0.4	0.4	0.4	0.4	0.4
Asyut	0.5	0.5	0.5	0.5	0.5
Az-Zaqazig	0.4	0.4	0.4	0.4	0.4
Bur Sa'id	0.8	0.8	0.8	0.8	0.8
Kafr-ad-Dawwar	0.4	0.4	0.4	0.4	0.4
Tanta	0.6	0.6	0.6	0.6	0.6
Libya					
Banghazi	10.5	10.7	10.9	11.2	11.8
Misratah	4.7	5.7	7.0	8.5	10.6
Tarabulus (Tripoli)	20.7	19.7	18.9	18.1	17.8
Morocco					
Agadir	2.0	2.1	2.2	2.0	1.7
Dar-el-Beida (Casablanca)	11.0	10.9	11.0	10.8	10.4
Fès	2.9	3.0	3.2	3.4	3.5
Kénitra	1.1	1.1	1.2	1.3	1.3
Marrakech	2.5	2.6	2.8	3.1	3.3
Meknès	1.7	1.7	1.8	2.0	2.1
Oujda	1.3	1.3	1.4	1.4	1.5
Rabat	5.1	5.2	5.5	5.7	5.8
Safi	1.0	1.0	1.0	0.9	0.9
Tanger	1.9	2.1	2.3	2.6	2.9
Tétouan	1.0	1.1	1.1	1.3	1.5
Sudan					
Al Gadarif	0.8	0.8	0.8	0.8	0.8
Al Obeid (Al Ubayyid)	1.0	1.0	1.0	1.0	1.1
Al-Khartum (Khartoum)	12.6	12.6	12.6	12.7	12.9
Kassala	1.0	1.0	0.9	0.9	0.8
Nyala	1.0	1.2	1.4	1.5	1.8
Port Sudan (Bur Sudan)	1.3	1.3	1.2	1.1	1.1
Wad Medani	0.9	0.9	0.9	0.8	0.8
Tunisia					
Safaqis	4.9	5.2	5.6	6.0	6.4
Tunis	18.9	18.5	18.3	18.0	17.7
Southern Africa					
Namibia					
Windhoek	10.7	12.0	13.2	14.4	15.4
South Africa					
Bloemfontein	0.8	0.8	0.8	0.9	0.9

Cape Town	5.8	6.1	6.3	6.5	6.8
Durban	5.0	5.3	5.3	5.3	5.4
East London	0.5	0.5	0.5	0.6	0.6
Johannesburg	10.9	12.5	13.9	15.5	17.6
Pietermaritzburg	0.9	0.9	0.9	0.9	0.9
Port Elizabeth	2.2	2.1	2.1	2.1	2.2
Pretoria	2.3	2.4	2.8	3.2	3.8
Rustenburg	0.2	0.3	0.4	0.6	0.7
Soshanguve	1.1	1.3	1.3	1.4	1.4
Vereeniging	1.9	2.0	2.0	2.1	2.2
Witbank	0.4	0.4	0.5	0.6	0.7
Western Africa					
Benin					
Abomey-Calavi	2.9	3.8	4.7	5.7	7.0
Cotonou	9.6	9.2	8.2	7.1	6.3
Burkina Faso					
Bobo-Dioulasso	3.0	3.1	3.4	3.7	4.0
Ouagadougou	6.6	7.9	9.9	12.3	15.3
Côte d'Ivoire					
Abidjan	17.8	18.8	20.4	21.9	22.8
Bouake	3.0	3.0	3.3	3.5	3.6
San Pedro	0.8	0.9	1.1	1.4	1.6
Gambia					
Banjul	27.0	26.9	26.5	26.0	25.6
Ghana					
Accra	8.4	8.9	8.7	8.5	8.4
Kumasi	5.4	6.3	7.2	8.3	9.6
Sekondi Takoradi	1.6	1.6	1.8	2.2	2.6
Tamale	1.1	1.1	1.3	1.5	1.8
Guinea					
Conakry	13.3	14.0	14.9	15.3	15.7
Nzérékoré	1.2	1.5	1.9	2.3	2.8
Guinea-Bissau					
Bissau	19.9	21.6	23.5	25.6	27.5
Liberia					
Monrovia	22.3	28.9	36.8	26.7	28.1
Mali					
Bamako	10.1	11.1	12.4	13.8	15.5
Mauritania					
Nouakchott	20.6	20.4	21.2	22.4	23.7
Niger					
Niamey	6.0	6.3	6.2	5.9	5.7
Zinder	1.6	1.5	1.6	1.8	1.9
Nigeria					
Aba	0.5	0.5	0.5	0.5	0.5
Abakaliki	0.1	0.2	0.2	0.2	0.2
Abeokuta	0.3	0.3	0.3	0.3	0.3
Abuja	0.5	0.7	0.9	1.1	1.3
Ado-Ekiti	0.2	0.2	0.2	0.2	0.2
Akure	0.3	0.3	0.3	0.3	0.3

Bauchi	0.2	0.2	0.2	0.3	0.3
Benin City	0.8	0.8	0.8	0.8	0.8
Calabar	0.2	0.2	0.2	0.2	0.3
Effon Alaiye	0.2	0.2	0.2	0.2	0.2
Enugu	0.4	0.4	0.4	0.4	0.4
Gboko	0.2	0.2	0.2	0.2	0.2
Gombe	0.2	0.2	0.2	0.2	0.2
Ibadan	1.8	1.8	1.8	1.8	1.7
Ife	0.2	0.2	0.2	0.2	0.2
Igbidu	0.2	0.2	0.2	0.2	0.2
Ikorodu	0.2	0.2	0.3	0.3	0.4
Ilorin	0.5	0.5	0.5	0.5	0.5
Jos	0.5	0.5	0.5	0.5	0.4
Kaduna	0.8	0.7	0.7	0.6	0.6
Kano	2.2	2.1	2.1	2.0	2.0
Katsina	0.2	0.2	0.2	0.2	0.2
Lagos	5.5	5.9	6.3	6.8	7.2
Lokoja	0.1	0.1	0.2	0.2	0.3
Maiduguri	0.5	0.5	0.4	0.4	0.4
Makurdi	0.2	0.2	0.2	0.2	0.2
Minna	0.2	0.2	0.2	0.2	0.2
Nnewi	0.2	0.2	0.3	0.4	0.4
Ogbomosho	0.2	0.2	0.2	0.2	0.2
Okene	0.1	0.2	0.2	0.2	0.2
Okpogho	0.1	0.1	0.1	0.2	0.2
Ondo	0.2	0.2	0.2	0.2	0.2
Onitsha	0.4	0.4	0.5	0.5	0.6
Oshogbo	0.4	0.4	0.4	0.4	0.4
Owerri	0.3	0.3	0.3	0.4	0.4
Oyo	0.2	0.2	0.2	0.2	0.2
Port Harcourt	0.8	0.9	1.0	1.1	1.3
Sokoto	0.3	0.3	0.3	0.3	0.3
Umuahia	0.2	0.2	0.2	0.3	0.3
Uyo	0.2	0.3	0.3	0.4	0.5
Warri	0.2	0.2	0.3	0.3	0.4
Zaria	0.6	0.5	0.5	0.4	0.4
Senegal					
Dakar	19.4	20.6	21.6	22.6	23.5
Sierra Leone					
Freetown	15.5	16.7	15.3	15.5	15.9
Togo					
Lomé	12.8	12.9	13.1	13.2	13.3

Source: *United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision. (Data extracted on the 01/10/2017)*

Appendix 7: Urban Primacy Index

Urban Primacy Index for Burkina Faso

		Census	
	City	1996	2006
Population of 1st ranked city	Ouagadougou	750398	1475223
Population of 2nd ranked city	Bobo Dioulasso	309771	489967
Population of 3rd ranked city	Koudougou	72490	88184
Population of 4th ranked city	Banfora	52193	75917
Primacy Index		**172.72201**	**225.5458**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Benin

		Census	
	City	1992	2002
Population of 1st ranked city	Cotonou	536827	665100
Population of 2nd ranked city	Porto-Novo	179138	223552
Population of 3rd ranked city	Djougou	134099	181895
Population of 4th ranked city	Abomey-Calavi	126507	307745
Primacy Index		**122.0772**	**93.2568**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Botswana

		Census	
	City	2001	2011
Population of 1st ranked city	Gaborone	186007	231592
Population of 2nd ranked city	Francistown	83023	98961
Population of 3rd ranked city	Selebi-Phikwe	49849	49411
Population of 4th ranked city	Lobatse	29689	29007
Primacy Index		**114.4229**	**130.5634**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Congo, Democratic Republic

		Census
	City	1994
Population of 1st ranked city	Kinshasa	4655313
Population of 2nd ranked city	Lubumbashi	851381
Population of 3rd ranked city	Mbuji-Mayi	806475
Population of 4th ranked city	Kolwezi	417810
Primacy Index		**224.2804**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Central African Republic

		Census	
	City	1998	2003
Population of 1st ranked city	Bangui	451690	622771
Population of 2nd ranked city	Berb (1998) & Bimbo (2003)	41891	124176
Population of 3rd ranked city	Bouar (1998) & Berb (2003)	39676	76918
Population of 4th ranked city	Bambari (1998) & Carnot (2003)	38633	45421
Primacy Index		**375.7820**	**252.6301**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Congo

		Census	
	City	2007	2010
Population of 1st ranked city	Brazzaville	1373382	1408150
Population of 2nd ranked city	Pointe-Noire	715334	829134
Population of 3rd ranked city	Dolisie	83798	128032
Population of 4th ranked city			
Primacy Index		**171.8592**	**147.1166**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Ivory Coast

		Census	
	City	1998	2014
Population of 1st ranked city	Abidjan	2877948	4395243
Population of 2nd ranked city	Bouaké	461618	542082
Population of 3rd ranked city	Daloa	173107	266324
Population of 4th ranked city	Yamoussoukro(1998) & Korhogo (2014)	155803	245239
Primacy Index		**364.0539**	**417.1465**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Cameroon

		Census		
	City	1976	1987	2005
Population of 1st ranked city	Douala	458426	809852	1907479
Population of 2nd ranked city	Yaoundé	313706	649252	1817524
Population of 3rd ranked city	Nkongsamba (1976), Garoua (1987) & Bamenda (2005)	70464	141839	269530
Population of 4th ranked city	Maroua (1976, 1987) & Bafoussam (2005)	67187	123296	239287
Primacy Index		**101.5662**	**88.5678**	**81.99482**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Cape Verde

		Census	
	City	2000	2010
Population of 1st ranked city	Praia	98118	131719
Population of 2nd ranked city	Mindelo	67163	76140
Population of 3rd ranked city	Assomeda	40852	43297
Population of 4th ranked city			
Primacy Index		**90.8374**	**110.2832**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Djibouti

		Census
	City	1989
Population of 1st ranked city	Djibouti	450000
Population of 2nd ranked city	Ali Sabieh	4000
Population of 3rd ranked city	Tadjourah	3500
Population of 4th ranked city	Dikhil	3000
Primacy Index		**4285.7143**

Source: *Own computation using GeoHive data*

Primacy Index for Algeria

		Census	
	City	1998	2008
Population of 1st ranked city	El Djazair [Algiers]	2086212	2364230
Population of 2nd ranked city	Oran	735166	803329
Population of 3rd ranked city	Constantine	479122	448028
Population of 4th ranked city	Annaba	331539	342703
Primacy Index		**134.9577**	**148.3150**

Source: *Own computation using GeoHive data*

Primacy Index for Egypt

		Census	
	City	1996	2006
Population of 1st ranked city	Al Qahirah	6801931	8471859
Population of 2nd ranked city	Al Iskandariyah	3339076	4123869
Population of 3rd ranked city	Al Jizah	2221868	2681863
Population of 4th ranked city	Shubra al Khimah	870775	1016722
Primacy Index		**105.7560**	**108.3018**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Ethiopia

		Census		
	City	1994	2007	2012
Population of 1st ranked city	Addis Ababa	2084588	2739551	3040740
Population of 2nd ranked city	Dire Dawa (1994), Gonder (2007) & Mekele (2012)	164851	207044	273601
Population of 3rd ranked city	Adama (Nazret) (1994, 2012) & Bahir Dar (2007)	127842	155428	271562
Population of 4th ranked city	Gonder (1994) Dessie & Dire Dawa (2007)	112249	120095	262884
Primacy Index		**514.7868**	**567.7038**	**376.3073**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Gabon

		Census		
	City	1993	2003	2013
Population of 1st ranked city	Libreville	362386	538195	703904
Population of 2nd ranked city	Port-Gentil	80841	105712	136462
Population of 3rd ranked city	Franceville	30246	103840	110568
Population of 4th ranked city	Oyem (1993) & Owendo (2003,2013)	22669	51661	79300
Primacy Index		**270.9306**	**206.0368**	**215.7031**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Ghana

		Census			
	City	1970	1984	2000	2010
Population of 1st ranked city	Accra (Metropolis)	624091	969195	1658937	2070463
Population of 2nd ranked city	Kumasi (Metropolis)	346336	469628	1170270	2035064
Population of 3rd ranked city	Tamale (Municipality)	83653	135952	202317	371351
Population of 4th ranked city	Takoradi (Sub Metro)	80309	117989	175438	311206
Primacy Index		**122.2993**	**133.9465**	**107.1647**	**76.1866**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Gambia

		Census
	City	1993
Population of 1st ranked city	Banjul	42326
Population of 2nd ranked city	Brikama	41761
Population of 3rd ranked city	Bakau	28882
Population of 4th ranked city	Farafenni	20956
Primacy Index		**46.2079**

Source: *Own computation using GeoHive data*

Primacy Index for Guinea

		Census
	City	2014
Population of 1st ranked city	Conakry	1660973
Population of 2nd ranked city	N'Zérékoré	195330
Population of 3rd ranked city	Kankan	194671
Population of 4th ranked city	Siguiri	183875
Primacy Index		**289.4306**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Equatorial Guinea

		Census		
	City	1983	1994	2003
Population of 1st ranked city	Malabo	30418	60065	92900
Population of 2nd ranked city	Bata	24308	50023	66800
Population of 3rd ranked city	Ebebiyin (1983,1994) & Mbini (2003)	3540	8075	11600
Population of 4th ranked city	Luba			6800
Primacy Index		**109.2287**	**103.3857**	**106.1714**

Source: *Own computation using GeoHive data*

Urban Primacy Index Kenya

		Census	
	City	1999	2009
Population of 1st ranked city	Nairobi	2143254	3133518
Population of 2nd ranked city	Mombasa	665018	938131
Population of 3rd ranked city	Nakuru (1999) & Kisumu (2009)	219366	388311
Population of 4th ranked city	Kisumu (1999) & Nakuru (2009)	194390	307990
Primacy Index		**198.6749**	**191.7191**

Source: *Own computation using GeoHive data*

Primacy Index for Comoros

		Census	
	City	1980	1991
Population of 1st ranked city	Moroni	17267	30365
Population of 2nd ranked city	Mutsamudu	16883	16785
Population of 3rd ranked city	Domoni	7147	10400
Population of 4th ranked city			
Primacy Index		**71.856**	**111.6976**

Source: *Own computation using GeoHive data*

Primacy Index for Lesotho

		Census
	City	2006
Population of 1st ranked city	Maseru	227880
Population of 2nd ranked city	Makeoana	33445
Population of 3rd ranked city	Makaota	31014
Population of 4th ranked city	Lipelaneng	30320
Primacy Index		**240.4330**

Source: *Own computation using GeoHive data*

Primacy Index for Libya

		Census
	City	1990
Population of 1st ranked city	Tripoli	1500000
Population of 2nd ranked city	Benghazi	800000
Population of 3rd ranked city	Misratah	360000
Population of 4th ranked city	Zuwarah	280000
Primacy Index		**104.1667**

Source*:* *Own computation using GeoHive data*

Primacy Index for Mali

		Census	
	City	1998	2009
Population of 1st ranked city	Bamako	1016296	1809106
Population of 2nd ranked city	Sikasso	134774	225753
Population of 3rd ranked city	Ségou (1998) & Koutiala (2009)	105305	137919
Population of 4th ranked city	Mopti (1998) & Ségou (2009)	80472	130690
Primacy Index		**317.0466**	**341.0872**

Source*:* *Own computation using GeoHive data*

Primacy Index for Mauritania

		Census	
	City	2000	2013
Population of 1st ranked city	Nouakchott	558195	958399
Population of 2nd ranked city	Nouadhibou	72337	118167
Population of 3rd ranked city	Rosso (2000) & Vassale (2013)	48922	65927
Population of 4th ranked city	Boghé (2000) & Kiffa (2013)	37531	60005
Primacy Index		**351.5303**	**392.6271**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Malawi

		Census			
	City	1987	1998	2008	2014
Population of 1st ranked city	Lilongwe	223318	440471	674448	978780
Population of 2nd ranked city	Blantyre	333120	502053	661256	849741
Population of 3rd ranked city	Mzuzu	44217	86980	133968	209094
Population of 4th ranked city	Zomba	43250	65915	88314	130377
Primacy Index		**107.1866**	**84.6110**	**76.3349**	**82.3049**

Source: *Own computation using GeoHive data*

Primacy Index for Mozambique

		Census	
	City	1997	2007
Population of 1st ranked city	Maputo City	966837	1094628
Population of 2nd ranked city	Matola	424662	671556
Population of 3rd ranked city	Beira (1997) & Nampula (2007)	397368	471717
Population of 4th ranked city	Nampula (1997) & Beira (2007)	303346	431583
Primacy Index		**85.9124**	**69.5065**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Namibia

		Census		
	City	1991	2001	2011
Population of 1st ranked city	Windhoek	147056	251545	322500
Population of 2nd ranked city	Oshakati	21603	43611	61900
Population of 3rd ranked city	Rehoboth	21439	36964	61300
Population of 4th ranked city	Rundu	19366	28255	44700
Primacy Index		**235.6365**	**231.1357**	**192.0786**

Source: *Own computation using GeoHive data*

Primacy Index for Nigeria

		Census
	City	1991
Population of 1st ranked city	Lagos	5195247
Population of 2nd ranked city	Kano	2166554
Population of 3rd ranked city	Ibadan	1835300
Population of 4th ranked city	Kaduna	993642
Primacy Index		**103.9986**

Source: *Own computation using GeoHive data*

Primacy Index for Rwanda

		Census
	City	2002
Population of 1st ranked city	Kigali City	603049
Population of 2nd ranked city	Gitarama Town	87065
Population of 3rd ranked city	Butare Town	77217
Population of 4th ranked city	Ruhengeri Town	71511
Primacy Index		**255.7536**

Source: *Own computation using GeoHive data*

Primacy Index for Sudan

		Census
	City	1993
Population of 1st ranked city	Omdurman	1271403
Population of 2nd ranked city	Khartoum	947483
Population of 3rd ranked city	Khartoum North	700887
Population of 4th ranked city	Port Sudan	308195
Primacy Index		**64.9814**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Sierra Leone

		Census				
	City	1963	1974	1985	2004	2015
Population of 1st ranked city	Freetown	127917	276247	469776	772873	1050301
Population of 2nd ranked city	Bo (1963,2004) & Koidu (1974,1985) & Kenema (2015)	26613	75846	82474	149957	200354
Population of 3rd ranked city	Kenema (1963,2004) & Bo (1974, 1985, 2015)	13246	39371	59768	128402	173905
Population of 4th ranked city	Makeni (1963,2004) & Kenema (1974,1985)	12304	31458	52473	82840	128074
Primacy Index		**245.2255**	**188.3395**	**241.2634**	**213.9743**	**209.0846**

Source: *Own computation using GeoHive data*

Primacy Index for Senegal

		Census	
	City	2002	2013
Population of 1st ranked city	Dakar	955897	1170791
Population of 2nd ranked city	Pikine	768826	1146053
Population of 3rd ranked city	Guediawaye	258370	329659
Population of 4th ranked city	Thiès	237849	317763
Primacy Index		**75.5623**	**65.2806**

Source: *Own computation using GeoHive data*

Primacy Index for Sao Tome & Principe

		Census
	City	2001
Population of 1st ranked city	Sao Tome	49957
Population of 2nd ranked city	Trindade	19234
Population of 3rd ranked city	Neves	8497
Population of 4th ranked city		
Primacy Index		**180.1486**

Source: *Own computation using GeoHive data*

Primacy Index for Swaziland

			Census
	City	1986	1997
Population of 1st ranked city	Mbabane	38290	57992
Population of 2nd ranked city	Manzini	27974	25571
Population of 3rd ranked city	Nhlangano (1986) & Big-Bend (1997)	4107	9374
Population of 4th ranked city	Mhlume		7661
Primacy Index		**119.3541**	**136.1123**

Source: *Own computation using GeoHive data*

Primacy Index for Chad

		Census
	City	1993
Population of 1st ranked city	N'Djamena	530965
Population of 2nd ranked city	Moundou	282100
Population of 3rd ranked city	Koumra	271200
Population of 4th ranked city	Kéla	218200
Primacy Index		**68.8224**

Source: *Own computation using GeoHive data*

Primacy Index for Tunisia

		Census
	City	2013
Population of 1st ranked city	Tunis	651284
Population of 2nd ranked city	Sfax	299235
Population of 3rd ranked city	Sousse	223844
Population of 4th ranked city	El Mnihla-Ettadhamen	146666
Primacy Index		**97.2436**

Source: *GeoHive Own computation using GeoHive data*

Urban Primacy Index for Tanzania

		Census		
	City	1988	2002	2012
Population of 1st ranked city	Dar es Salaam	1360850	2487288	4364541
Population of 2nd ranked city	Mwanza	221209	474679	706453
Population of 3rd ranked city	Dodoma (1988) & Arusha (2012)	202665	322811	416442
Population of 4th ranked city	Tanga (1988) & Arusha (2002), Dodoma (2012)	186818	281608	410956
Primacy Index		**222.8374**	**230.4970**	**284.5479**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Uganda

		Census		
	City	1991	2002	2014
Population of 1st ranked city	Kampala	774241	1189142	1507114
Population of 2nd ranked city	Jinja (1991) & Gulu (2002), Nansana (2014)	65169	119430	365857
Population of 3rd ranked city	Mbale (1991) & Jinja (2002), Kira (2012)	53987	71213	317428
Population of 4th ranked city	Masaka (1991) & Mbale (2002), Makindye Ssabagabo (2012)	49585	71130	282664
Primacy Index		**458.8340**	**437.9542**	**156.0242**

Source: *Own computation using GeoHive data*

Urban Primacy Index for South Africa

		Census		
	City	1996	2001	2011
Population of 1st ranked city	Durban (1996) & Johannesburg (2001, 2011)	2751193	3225309	4434827
Population of 2nd ranked city	Johannesburg (1996) & Durban (2001), Cape Town (2011)	2639110	3090122	3740026
Population of 3rd ranked city	Cape Town	2563612	2892243	3442361
Population of 4th ranked city	Germiston	2026807	2478631	3178471
Primacy Index		**38.0549**	**38.1197**	**42.8037**

Source: *Own computation using GeoHive data*

Primacy Index for Zambia

		Census
	City	2010
Population of 1st ranked city	Lusaka	1747152
Population of 2nd ranked city	Kitwe	501360
Population of 3rd ranked city	Ndola	451246
Population of 4th ranked city	Kabwe	202360
Primacy Index		**151.2730**

Source: *Own computation using GeoHive data*

Urban Primacy Index for Zimbambwe

		Census		
	City	1992	2002	2012
Population of 1st ranked city	Harare	1184169	1435784	1485231
Population of 2nd ranked city	Bulawayo	620936	676650	653337
Population of 3rd ranked city	Chitungwiza	274035	323260	356840
Population of 4th ranked city	Mutare	131367	170466	187621
Primacy Index		**115.3781**	**122.6772**	**123.9968**

Source: *Own computation using GeoHive data*

Appendix 8: Countries Urban Definition

Country or area	Data	Sources	Definition
Algeria	Urban Population	Censuses of 1954, 1960, 1966, 1977, 1987, 1998 and 2008.	For 1998 and 2008, data refer to agglomerations with a minimum population of 5,000 inhabitants, non-agricultural economic activity, connection to water supply network, connection to the electricity network, connection to network of sanitation and additional conditions.
Angola	Urban Population	Censuses of 1950, 1960 and 1970; Estimate for 2011.	Localities with 2,000 inhabitants or more.
Botswana	Urban Population	Censuses of 1964, 1971, 1981, 1991, 2001 and 2011; UN Estimate for 1950.	Agglomerations of 5,000 inhabitants or more where 75 per cent of the economic activity is non-agricultural.
Burkina Faso	Urban Population	Censuses of 1960, 1975, 1985, 1996 and 2006.	Localities with 10,000 inhabitants or more and with sufficient socio-economic and administrative infrastructures.
Burundi	Urban Population	Censuses of 1965, 1979, 1990 and 2008; Estimate for 1998.	Commune of Bujumbura.
Cabo Verde	Urban Population	Censuses of 1960, 1970, 1980, 1990, 2000 and 2010; Estimate for 1985; UN Estimate for 1950.	As of 1990, municipalities of Praia, Mindelo, Sao Filipe and Espargos/Sal.
Cameroon	Urban Population	Censuses of 1976, 1987 and 2005; Estimates for 1959 and 1970.	Administrative centres of territorial units (district, sub-division, division or province) or/and any locality with more than 5,000 inhabitants and with sufficient socio-economic and administrative infrastructures.
Central African Republic	Urban Population	Censuses of 1975, 1988 and 2003; Estimates for 1960, 1963 and 1967.	Principal centres with 3,000 inhabitants or more.
Chad	Urban Population	Censuses of 1993 and 2009; Estimates for 1972 and 1978; Sample Survey of 1964; UN Estimate for 1950.	Administrative centres of 'prefectures', 'sous-prefectures' and administrative posts.
Comoros	Urban Population	Censuses of 1966, 1980, 1991 and 2003; UN Estimate for 1950.	Administrative centres of 'prefectures' and localities with 5,000 inhabitants or more.

Congo	Urban Population	Censuses of 1960, 1974, 1984 and 1996; Estimate for 2007.	As of 1984, six communes (Brazzaville, Pointe-Noire, Dolisie/Loubomo, Nkayi, Ouesso and Mossendjo).
Côte d'Ivoire	Urban Population	Censuses of 1958, 1975, 1988 and 1998; Estimates for 2006 and 2009; Sample Survey of 1965 and 1978.	Agglomerations with 10,000 inhabitants or more; agglomerations with populations ranging from 4,000 to 10,000 inhabitants with more than 50 per cent of the households engaged in non-agricultural activities; and the administrative centres of Grand Lahoun and Dabakala.
DRC	Urban Population	Census of 1984; Estimates for 1950 and 1960; UN Estimate for 2004.	Places with 2,000 inhabitants or more where the predominant economic activity is non-agricultural; and places with fewer inhabitants which are considered urban because of their type of economic activity (predominantly non-agricultural).
Djibouti	Urban Population	Censuses of 1960, 1983 and 2009; Estimate for 1956; Sample Survey of 1991.	For the 1956 and 1960 censuses, Djibouti (capital). For the 1983 census, the urban population of the districts of Djibouti, Ali-Sabieh, Dikhil, Tadjourah and Obock. For the 1991 census, the following nine towns: Djibouti (capital), Dikhil, Ali-Sabieh, Tadjourah, Obock, Arta, Damerjog, Yoboki and Randa. For the 2009 census, Djibouti ville, and urban and rural sedentary populations of the regions of Ali Sabieh, Dikhil, Tadjourah, Obock and Arta.
Egypt	Urban Population	Censuses of 1960, 1976, 1986, 1996 and 2006; Estimate for 2011.	Governorates of Al-Qahirah (Cairo), Al-Iskandariyah (Alexandria), Bur Sa'id (Port Said), Al-Isma'iliyah (Ismailia) and As-Suways (Suez); frontier governorates; and capitals of other governorates as well as district capitals ('markaz').
Equatorial Guinea	Urban Population	Censuses of 1950, 1960, 1983, 1994 and 2001.	District centres and localities with 300 dwellings or more or with 1,500 inhabitants or more.

Eritrea	Urban Population	Census of 1984; Estimate for 1990; UN Estimates for 1950 and 1967.	Localities with 2,000 inhabitants or more.
Ethiopia	Urban Population	Censuses of 1984, 1994 and 2007; Estimates for 1950, 1967 and 2012.	Localities with 2,000 inhabitants or more.
Gabon	Urban Population	Censuses of 1961 and 1993; Estimates for 1950, 1970, 1981 and 1987.	As of the 1993 census, towns with 3,000 inhabitants or more.
Gambia	Urban Population	Censuses of 1951, 1963, 1973, 1983, 1993 and 2003.	Settlements with 5,000 inhabitants or more. In the 2003 census a settlement is considered urban if it satisfies most of the following criteria: some commercial and institutional importance, non-agricultural occupation for a majority of the population, at least 5,000 or more inhabitants, high density, and some degree of infrastructure should exist. No official definition available up to the 1993 census.
Ghana	Urban Population	Censuses of 1960, 1970, 1984, 2000 and 2010.	Localities with 5,000 inhabitants or more.
Guatemala	Urban Population	Censuses of 1950, 1964, 1973, 1981 and 2002.	The 'municipio' of Guatemala Department and officially recognized centres of other departments and municipalities. The urban population for 1981 is officially adjusted to include the urbanized suburbs bordering the 'municipio' of Guatemala in a way consistent with the previous census.
Guinea	Urban Population	Censuses of 1955, 1983 and 1996.	As of 1983, administrative centres of 'prefectures'.
Guinea-Bissau	Urban Population	Censuses of 1950, 1960, 1979 and 1991; Estimate for 2010.	As of 1991, capitals of regions or sectors and localities with 1,500 inhabitants or more.
Kenya	Urban Population	Censuses of 1962, 1969, 1979, 1989, 1999 and 2009.	Municipalities, town councils, and other urban centres with 2,000 inhabitants or more. Due to substantial changes in the 1999 census delineations of urban areas, only the population for the “urban core”

			is considered to ensure consistency with previous censuses.
Lesotho	Urban Population	Censuses of 1956, 1966, 1976, 1986, 1996 and 2006; Estimates for 1972 and 2012; UN Estimate for 1950.	District headquarters and other settlements with rapid population growth and with facilities that tend to encourage people to engage in non-agricultural economic activities.
Liberia	Urban Population	Censuses of 1962, 1974, 1984 and 2008; UN Estimates for 1991 and 1996.	Localities with 2,000 inhabitants or more.
Libya	Urban Population	Censuses of 1954, 1973, 1984 and 1995; Estimate for 1964.	Municipalities of Tarabulus and Bangazi and urban parts of other municipalities.
Madagascar	Urban Population	Censuses of 1975 and 1993; Estimates for 1950, 1970, 2004 and 2008; Sample Survey of 1966.	Centres with 5,000 inhabitants or more.
Malawi	Urban Population	Censuses of 1966, 1977, 1987, 1998 and 2008; Estimate for 1956.	Townships, town planning areas and district centres.
Mali	Urban Population	Censuses of 1976, 1987, 1998 and 2009; Estimate for 1960.	For censuses up to 1987, localities with 5,000 inhabitants or more and district centres. Due to several historical changes in definition of urban areas, urban is defined in this publication as localities with 30,000 inhabitants or more in 1998 and 2009 censuses.
Mauritania	Urban Population	Censuses of 1964, 1977 and 1988; UN Estimate for 2000.	For censuses up to 1988, localities with 5,000 inhabitants or more. For the purpose of this publication; for 2000, localities with 10,000 inhabitants or more.
Mauritius	Urban Population	Censuses of 1952, 1962, 1972, 1983, 1990, 2000 and 2011.	Towns with proclaimed legal limits.
Morocco	Urban Population	Censuses of 1960, 1971, 1982, 1994 and 2004; Estimates for 1952 and 2013.	Localities officially designated as urban according to administrative divisions, and entities that satisfy the quantitative criteria (minimum population threshold)

			and qualitative criteria (density of equipment, predominance of non-agricultural activities, etc.)
Mozambique	Urban Population	Censuses of 1980, 1997 and 2007; UN Estimates for 1950, 1960, 1970 and 1990.	From 1950 to 1970: Conselho of Maputo and Beira; in the 1980 census: 12 cities (Maputo, nine provincial capitals and the cities of Nacala-Porto and Chokwe); in the 1997 and 2007 censuses: 23 cities and 68 towns/vilas. Estimates prior to 1980 were slightly adjusted to take into account other urban settlements.
Namibia	Urban Population	Censuses of 1991, 2001 and 2011; UN Estimates for 1951, 1960, 1970 and 1981.	The district headquarters and other settlements of rapid population growth with facilities that encourage people to engage in non-agricultural activities.
Niger	Urban Population	Censuses of 1977, 1988 and 2001; Estimates for 1956, 1962 and 1966.	Localities serving as administrative headquarters for departments and "arrondissements", and those with an administrative headquarter with 2,500 inhabitants or more.
Nigeria	Urban Population	Estimates for 1950, 1960, 1970, 1980, 1990, 2000 and 2010.	Towns with 20,000 inhabitants or more.
Rwanda	Urban Population	Censuses of 1970, 1978, 1991 and 2002; Estimate for 2008; UN Estimates for 1960 and 1996.	Kigali (capital), administrative centres of prefectures and important agglomerations with their surroundings.
Sao Tome and Principe	Urban Population	Censuses of 1950, 1960, 1970, 1981, 1991 and 2001.	The district of Água Grande (São Tomé and Pantufo) and 6 other small settlements (as of 1991).
Senegal	Urban Population	Censuses of 1976, 1988 and 2002; Estimates for 1960 and 1970.	Agglomerations of 10,000 inhabitants or more.
Seychelles	Urban Population	Estimates for 1960 and 1971; UN Estimates for 1977 and 1987.	No official definition. In the present publication, prior to 1971, Victoria city proper (capital). From 1971, greater Victoria agglomeration plus districts with population density greater than 1,500 persons per inhabited square kilometre in 2002 (Cascades, Pointe Larue, Anse aux Pins).

Sierra Leone	Urban Population	Censuses of 1963, 1974, 1985 and 2004.	Towns with 2,000 inhabitants or more.
Somalia	Urban Population	Census of 1975; Estimates for 1953 and 1963; Sample Survey of 2002; UN Estimate for 1987.	District capitals and towns or villages with 1,500 inhabitants or more.
South Africa	Urban Population	Censuses of 1951, 1960, 1970, 1996, 2001 and 2011; UN Estimates for 1980, 1985 and 1991.	A classification based on dominant settlement type and land use. Cities, towns, townships, suburbs, etc., are typical urban settlements. Enumeration areas comprising informal settlements, hostels, institutions, industrial and recreational areas, and smallholdings within or adjacent to any formal urban settlement are classified as urban. The 1996 estimate was adjusted to comply with the 2001 census definition. Estimates from 1980, 1985 and 1991 were adjusted to take into account the populations of Transkei, Bophuthatswana, Venda and Ciskei.
South Sudan	Urban Population	Censuses of 1956, 1983, 1993 and 2008.	Localities of administrative and/or commercial importance or with a population of 5,000 inhabitants or more.
Sudan	Urban Population	Censuses of 1956, 1973, 1983, 1993 and 2008.	Localities of administrative and/or commercial importance or with a population of 5,000 inhabitants or more.
Swaziland	Urban Population	Censuses of 1956, 1966, 1976, 1986, 1997 and 2007; UN Estimate for 1950.	Localities officially designated as urban.
Togo	Urban Population	Censuses of 1959, 1970, 1981 and 2010.	For censuses up to 1970, seven urban communes. Since the 1981 census, 21 administrative centres of 'prefectures'.
Tunisia	Urban Population	Censuses of 1956, 1966, 1975, 1984, 1994 and 2004; Estimate for 2011.	Communes with 5,000 inhabitants or more.
Uganda	Urban Population	Censuses of 1959, 1969, 1980, 1991 and 2002; Estimate for 2011.	Since 2002, gazetted cities, municipalities and towns with 2,000 inhabitants or more. For censuses up to

			1991, cities, municipalities, towns, town boards and all trading centres with 1,000 inhabitants or more.
Tanzania	Urban Population	Censuses of 1957, 1967, 1978, 1988, 2002 and 2012.	Since the 1978 census, urban areas are defined using several criteria and include all regional and district headquarters, as well as all wards with urban characteristics (i.e., exceeding certain minimal level of size-density criteria and/or with many of their inhabitants in non-agricultural occupations). No specific numerical values of size and density are identified, and wards are defined as urban based on the decision of the District/Regional Census Committees. For the 1957 and 1967 censuses, 16 gazetted townships.
Western Sahara	Urban Population	Censuses of 1970, 1982, 1994 and 2004; UN Estimates for 1950, 1960 and 2006.	Localities defined as urban by administrative divisions, plus any entity having satisfied the quantitative criteria (minimum population threshold) and qualitative criteria (density of equipment, predominance of non-agricultural activities, etc.)
Zambia	Urban Population	Censuses of 1963, 1969, 1980, 1990, 2000 and 2010; UN Estimate for 1950.	Localities of 5,000 inhabitants or more, with a majority of the labour force not in agricultural activities.
Zimbabwe	Urban Population	Censuses of 1951, 1962, 1969, 1982, 1992, 2002 and 2012; Estimate for 1974.	Places officially designated as urban, as well as places with 2,500 inhabitants or more whose population resides in a compact settlement pattern and where more than 50 per cent of the employed persons are engaged in non-agricultural occupations.

Source: *United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, CD-ROM Edition. (Data extracted on the 27/06/2016)*

Appendix 9: Selected Urban Data in Census

Country	Census data available	Administrative unit	Number of regional capitals with area (sqm)	No. of Main cities	Total Population	Population of same main cities by country available in each census
Algeria	1998 2008	Wilaya	48	39	Yes	Yes
Angola	2014	Provincio Municipio	29	2	Yes	yes
Benin	1992 2002 2010	Department	91	14	Yes	Yes
Botswana	1991 2001 2011	District	10	10	Yes	Yes
Burkina Faso	1996 2006	Region	13	11	Yes	yes
Burundi	1990 2008	Province	18	NA	Yes	yes
Cameroon	1976 1987 2005	Department	58	15	Yes	yes
Cape Verde	1990 2000 2010	Municipality/ Concelho	22	3	Yes	yes
Central Africa Republic	1988 2003	Sous-Pefecture	17	9	Yes	Yes only 2003
Chad	1993 2009	Department	59	20	Yes only for 2009	Yes only for 1993 and capital city for 2009
Comoros	1991 2003	Island	3	3	Yes	Yes only for 1993 and capital city for 2003
Democratic Republic Province	No census taken since the 1990s	Province	11	18	UN estimate	UN estimate
Congo	1984 1995 (nullified) 2007	Department/ commune	12	3	Yes	Yes only for 2017
Ivory Coast	1998 2014	District/ Region	14	10	Yes only for 1998	Yes (preliminary)
Djibouti	2009	Region /ville	6	4	Yes	NA but not published

Egypt	1996 2006	Governorate	29	31	Yes	yes
Equatorial Guinea	1994 2001	Region/ province	7	5	Yes	Only for 1994
Eritrea	1997 (count)	Zoba/region	27	1	Yes (from a count)	Yes (from a count)
Ethiopia	1994 2007r	Astadade/ kilil	11	15	Yes	yes
Gabon	1993 2003	Province	9	5	Yes	Yes
Gambia	1993 2003 2013	LGA/district	8	7	Yes	Yes
Ghana	1984 2000 2010	Region	10	31	Yes	Yes
Guinea	1983 1996 2014	Region/ prefecture	34	8	Yes	Yes (2014 preliminary results)
Guinea-Bissau	1979 1991 2009	Region/ Sector	9	1	Yes	Yes
Kenya	1999 2009	Country	47	33	Yes	Yes
Lesotho	2006	District/Community Council	10	12	Yes	Yes
Liberia	1984 2008	County	15	9	Yes	Yes for 2008 Monrovia 1984
Lybia	2006 (lybians only) 2006 (including non-lybians)	Sha'biya	20	6	Yes	No census data, only estimates dating 1990
Madagascar	1993 2013	Region	22	22	Yes	1993 only
Malawi	1998 2008	Central region	31	4	Yes	Yes
Mali	1998 2009	Region/ Bamako as a district	9	8	Yes	Yes
Mauritania	1988 200 2013	Wilaya	13	10	Yes	Yes for 2000 and 2013
Mauritius	1990 2000 2011	Geographical district and two islands	10	Not indicated	Yes	Not indicated
Mayotte	-	-	-			
Morocco	1994 2004	Region	10	26	Yes	Yes for 1994 and 2004

	2014					
Mozambique	1997 2007 2012	Province	11	21	Yes	Yes for 1997 6 cities missing in 2007
Namibia	1991 2001 2011	Region	13	8	Yes	Yes for 2001 and 2011. Two cities missing in 1991
Niger	2001 2012	Department	63	14	Yes	Yes
Nigeria	1991 2006 2011	State	37	35	Yes	No census data. Only for Abuja 2006
Rwanda	2002 2012	Province (intara) District (akarere)	30	10	Yes	Only for 2002
Saint Helena	2008	Island	3	-	Yes	-
Sao Tome and Principle	1991 2001 2013	Region/district/ subdistrict	7	3	Yes	Only for 2001
Senegal	2002 2013	Department	45	10	Yes	Only estimate for 2009
Seychelles	2002 2010	District	9	-	Yes	-
Somalia	No data census		18	-	Estimate	-
South Africa	1996 2001 2011	Province	9	16	Yes	Yes (6 cities missing for 1996)
Sierra Leone	1985 2004	Province/ district	167	5	Yes	Yes
South Sudan	1983 2008	State/country	22	1	Yes	Only for Jabu form 1993
Sudan	2008	State/Wilayah	15	11	Yes	Yes
Swaziland	1997 2007	Region/ Tikundla	15	6	Yes	Only for 1997. Three cities only 1986
Tanzania	1988 2002 2012	Region	15	25	Yes	Eight cities missing in 1988 and 2002
Togo	1981 2010	Region/ prefecture	35	6	Yes	Only for 2010

Tunisia	2004 2014	Governorate/ Wilaya	24	11	Yes	2013 estimates only
Uganda	1991 2002 2014	Geographical region/ district	113	13	Yes	2014 yes 2002 (1 city missing 1991) (2 cities missing)
Western Sahara	-	-	-	-	-	-
Zambia	1990 2000 2010	Province/ district	9	7	Yes	Only for 1990 and 2000
Zimbabwe	1992 2002 2010	Province/ district	10	13	Yes	Yes but eight cities missing in 1992 census and 2 cities missing in 2002 census.

Source: UNECA (2017)