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**Lagos, Nigeria: Exploring slums and overpopulation
in the world's fastest growing megacity**



Foto: lurg.org (Lagos urban research group)

Master thesis

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ABSTRACT

The world's population has recently exceeded 7 billion people and more than half of us now live in urban areas. Lagos, Nigeria is the fastest growing megacity in the world and will soon be the largest city in Africa. This thesis is a case-study of Lagos and finds its inspiration from that the city is by many scholars described as experiencing severe social problems due to among other things an overwhelming proportion of slums and overpopulation. Thus, the first part focuses on this subject, and is based on secondary empirical data containing various statistical data.

The theoretical aspect of the thesis is neo-malthusianism. The theory's predecessor, malthusianism, focused on the relation between population growth and food production, but with neo-malthusian, areas such as water, sanitation, diseases, urbanisation, and climate have also been related to the issue of population growth, and further overpopulation. The thesis thus also aims to investigate if the neo-malthusian theory can explain the socio-economic problems in Lagos. The vast expansion of slums and poverty, and an increasingly chaotic situation in Lagos can be at first glimpse be ought to have been caused by population pressure which has caused a strain on the city's social capacities.

However, as the neo-malthusian theory, according to its critics, offers a too simplistic view on reality, the thesis therefore also includes a wider context to explain the empirical circumstances. This includes areas such as Nigeria's political, religious and ethnic fragile situation. The country is struggling with internal fragmentation which threatens to divide the country into a Muslim north and a Christian south. Furthermore, corruption and neo-liberal economic policies have caused political turmoil and economic inequality, and must therefore also be included in the analysis of Lagos megacity.

Although Lagos is estimated to be the economic engine of Nigeria, which in fact should be one of the most affluent countries due to its massive natural resources, the city is today growing too fast, mostly because of an extensive rural-urban migration. Lagos is a paradox due to its economic significance meanwhile containing a slum percentage of up to three-quarters where many of its inhabitants fight an everyday struggle to earn just enough to survive.

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1. INTRODUCTION

1.1 Problem area

By the time you have read this thesis, thousands of babies have been born into our world. Many of them will grow up in the developing world's urban slums, and they will most likely never leave. That is the reality this thesis will focus upon. This first section will present the main areas of the thesis, overpopulation and urbanisation in a global context. Our planet has reached its seventh billion inhabitants in the fall of 2011, and the world's population is increasing like a snowball which is rapidly growing. Though, the world's population growth rate is slowing down. Especially in the developed part of the world such as Europe, Oceania and North America, the fertility rate is too low to sustain the current population numbers. Contrary, in Asia and Africa the populations are increasing with an incredible speed. Africa reached its first billion in the fall of 2009, and has some of the fastest growing populations in the world.

1.1.1 Global overpopulation: An alarming reality?

History has proven that we have become a lot of people over a short amount of time. As Figure 1 shows, the world's population increased from 3 billion in 1960 to 6 billion in 2000. In the fall of 2011, more precisely 31st of October, it is estimated that we reached 7 billion people worldwide (UNFPA, 2011: iii). In approximately 2025 the world population will reach 8 billion people (McLeish, 2009: 11), and the world's population will by average projections peak in 2050 with 9.3 billion people (Berlatsky, 2009: 15; UN ESA, 2012: 1). The main reasons for the rapid population growth during the last century have been agricultural technological improvements and medical scientific advances.

Because of our rapid population growth we put strain on both living standards and the environment: *"...widely publicized concerns have been ex-pressed over whether per capita real income can continue to increase or even be maintained at current levels in the face of rapid population growth and environmental degradation"* (Brander & Taylor, 1998: 119). Today, the world's population would have enough to eat if food was distributed to the ones who need it. In fact there is enough food to feed 9 to 11 billion people thanks to agricultural efficiency, even though it is not preferable to reach this point of limit (Birch & Wachter, 2011: 27). However, if overpopulation is an issue now and in the near future, consider the highest projection by the United Nations which

entails that 14 billion people are expected to live on earth in the year 2100, 21 billion in 2200 and 36 billion in 2300 (UN ESA, 2004: 5).

Figure 1: World Population and Urbanization, 1950–90, with Projections to 2050. Statistics are from the United Nations and Worldwatch.

| Year | World Population (billions) | World Urban Population (billions) | Share of World Population That Is Urban (per cent) |
|------|-----------------------------|-----------------------------------|--|
| 1950 | 2.6 | 0.8 | 30 |
| 1960 | 3.0 | 1.0 | 34 |
| 1970 | 3.7 | 1.4 | 37 |
| 1980 | 4.5 | 1.8 | 39 |
| 1990 | 5.3 | 2.3 | 43 |
| 2000 | 6.1 | 2.9 | 47 |
| 2010 | 6.8 | 3.5 | 52 |
| 2020 | 7.5 | 4.3 | 57 |
| 2030 | 8.1 | 5.0 | 61 |
| 2040 | 8.6 | 5.6 | 65 |
| 2050 | 8.9 | 6.2 | 69 |

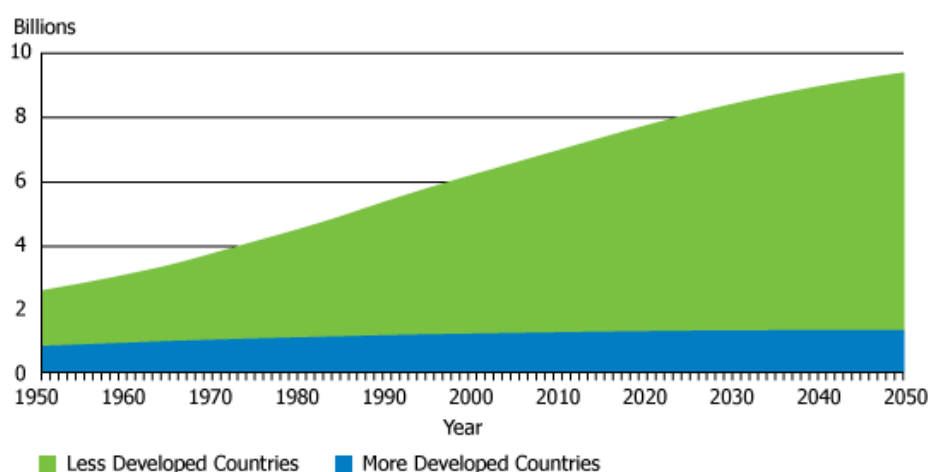
Source: Brown et al., 1999: 82

Despite the incredible population growth in Africa and Asia the world's population will not increase as fast as before. Worldwide the average number of children born per woman (fertility rate) is at approximately 2.5 today compared to around 5.0 in the 1950's (McLeish, 2009: 32). The annual global population growth in 1970 was around 2 per cent while in the year 2000 this had fallen to 1.1 per cent. In fact many places such as Japan, Europe and North America experience a very little increase or even a decrease in indigenous population numbers. This means that there will be many elderly people in the Western part of the world who rely on a significantly smaller working force.

Furthermore, global population growth does not occur equally worldwide. Of the approximately 75-77 million people that are added to the world's population each year, 95 per cent of these are born in the less developed part of the world if China is included as an underdeveloped country, as illustrated in figure 2 (Berlatsky, 2009: 40; McLeish, 2009: 10). Traditions of large families and poor access to contraception are causing a still high fertility rate in less developed countries. More than 137 million women in the developing part of the world have no means of contraception available (Berlatsky, 2009: 24).

Rapid population growth can be considered a serious problem in countries like Nigeria, the most populous country in Africa, where population growth in general supersedes economic expansion (Rosenthal, 2012). This can for example be problematic as: *”Increases in population numbers and densities will make the threat of infectious disease ever more acute”* (Brown et al., 1999: 60). Together with the area of overpopulation, urbanisation is another important area in this thesis and is introduced next.

Figure 2: World population growth development.



Source: <http://www.prb.org/Articles/2011/world-population-7billion.aspx?p=1>

1.1.2 Urbanisation: Old tendency, new global majority

As the earth is becoming increasingly populated, we are getting more crowded as many people are moving to the cities in search of a better life. Urbanisation was until recently viewed as a positive tendency, however, scholars have become aware of the implications of the increasing urbanisation. Combined, high fertility rates and immigration, the population of our cities are growing at an amazing speed. In 1970 the world only had 2 cities with more than 10 million people (Tokyo and London). In 2011 the number was 23, most of them in the developing part of the world, including Lagos in Nigeria, which is the empirical case of this thesis, and is currently the fastest growing megacity in the world (UN ESA, 2012: 7).

Urbanisation is not a matter of whether or not a country decides to strive towards a more urbanised future – it is simply the path the whole world has turned on to. Everywhere urbanisation

is occurring, and it happens faster than ever before (Todaro & Smith, 2011: 312). It is estimated that more than one million people each week are added to the global urban population. The growth includes both the natural increase of the urban inhabitants and the migrants from the rural areas (Brown, Gardner, & Halweil, 1999: 82). Furthermore, population growth has become largely an urban phenomenon concentrated in the poorer part of the world (UN ESA, 2012: 1). In fact 90 per cent of all the people that have been added to the global population since 1970 reside in cities in the poorer parts of the world (Knox & McCarthy, 2011: 122). Moreover, 75 per cent of the current global urban population live in low-and middle income countries (Todaro & Smith, 2011: 312-313).

In the year 1900 the percentage of people living in urban areas was 13-15 per cent (Buckley, Annez, & Spence, 2008: 2; UN ESA, 2005). In 2010, the global urban population was estimated to be 3.5 billion people with a world population just fewer than 7 billion people as Figure 1 shows. We now therefore inhabit a world where more than half of the global population live in urban areas rather than in rural areas (Birch & Wachter, 2011: 3; James, 2008: 4; Knox & McCarthy, 2011: 118). The urban proportion of the world's population will nearly be 60 per cent by the year 2020 as shown in Figure 1, and projections show that two-thirds of the global population will be urban in 2030 (Kuvaja, 2007: 11; Liotta & Miskel, 2012: 4).

Furthermore, the developing part of the world is estimated to account for 90-95 per cent of the urban population growth during the next two decades (James, 2008: 4; Liotta & Miskel, 2012: 4). In the future, the population growth of our planet will therefore be dominated by the global South's urban population (Kuvaja, 2007: 11). It is estimated that the 2.7 billion who lived in the urban South in 2011 will increase to approximately 5.1 in 2050. Interestingly, the urban population in the developed world will only slightly increase from one billion in 2011 to 1.1 billion in 2050. It is likely that during the next half century the world's urban population will grow from 3 to 6 billion people, and the world's rural population will be more or less unchanged with 3 billion people (Birch & Wachter, 2011: 30; Todaro & Smith, 2011: 313; UN ESA, 2012: 3).

Today, it is in general perceived that the urban areas worldwide have less poverty than the world's rural areas. However, with the rapid expansion of urbanisation and increasingly more poverty in the cities, the UN-Habitat estimates that urban areas could be poorer than the rural areas (UN-Habitat Kenya, 2007: 3). Poor urban areas, generally referred to as slums, are large and growing challenges for the urban way of living. In Africa more than 70 per cent of urban inhabitants live in slum areas (Kuvaja, 2007: 38). However, cities and urbanisation, especially in the global South, are very important for the global future and impacts many different areas:

“This vast urban expansion in developing countries has global implications. Cities are already the locus of nearly all major economic, social, demographic and environmental transformations. What happens in cities of the less developed world in coming years will shape prospects for global economic growth poverty alleviation, population stabilization, environmental sustainability and, ultimately, the exercise of human rights” (UNFPA, 2007: 6).

1.2 Problem definition

In perspective of population growth and urbanisation presented in the introduction, the empirical case in this thesis is Lagos megacity located in Nigeria. Nigeria is the most populated country in Africa, and Lagos is by some estimates the most populated city in Africa and rapidly climbing up the ladder of the largest cities on earth. Keeping this perspective in mind, the purpose of this thesis is three-folded. One, to investigate the gloomy image of Lagos as an overpopulated megacity experiencing deep social problems such as lack of basic sanitation, low life expectancy, high maternal mortality, and a vast slum proportion. Two, to test if neo-malthusianism can explain the situation, and three, to otherwise localise the factors causing the social situation in Lagos.

Thus, the problem definition is:

Considering the overwhelming population pressure in Lagos, what is the relation between overpopulation and the social problems in Lagos? What other explanatory factors can help understand the dire situation in Lagos?

2. METHOD

When conducting research it is always important to make clear what the author wants with the knowledge produced (Andersen, 2009: 21), while arguing thoroughly for his or her choices (Rienecker & Jørgensen, 2005: 50). This section presents how and why the theoretical and empirical areas have been chosen as subjects. With an already profound interest in Africa, the subject of the thesis was sparked while watching a documentary about Lagos and a question was asked during an interview and discussion of the gloomy socio-economic situation in contemporary Lagos: “*Will Lagos survive?*” (Koolhaas, 2003: 26min). It is an interesting question, though not considered literally to the fingertips, if a city can become so overcrowded, slum-infected, poor and without hope that it would at some point become on the verge of social collapse. And what is further interesting is what this will entail, and perhaps more importantly why had it become relevant to even ask such a question.

Oppositely, it is not a very interesting question if one conduct similar research on for example New York or Tokyo, as these cities are well-functioning. Perhaps most people think of Asia considering population booms, but in fact sub-Saharan cities are superseding Asia in fertility and population growth, and Lagos is an interesting case of urban population growth in Africa. Thus, the social problems related to Lagos’ demography is part of the exploration in this thesis. Furthermore, neo-malthusianism is chosen as the explanatory theoretical frame of analysis, as this theory approach has gained renewed interest since the 7 billion people mark in 2011. Furthermore, it is adjacent to explore the validity of neo-malthusianism in urban areas, as the theory’s premise has been weak in a historical context.

Moreover, it is important for the author that the language and content in the thesis is interesting and for all to read without losing interest despite a vast use of statistics or an over-use of academic terms (Rienecker & Jørgensen, 2005: 52). It has from the start been important to write a thesis that entails a valid academic approach while also being pragmatic to make it interesting for readers who do not know much about Lagos, Nigeria, population growth or overpopulation in advance.

2.1 Research design

The research design of thesis is based on the case-study model, which has Lagos as the main empirical object, is based on quantitative secondary empirical data, and is using neo-malthusianism

as the tool of analysis. Case-studies are broadly used within many academic field areas and are defined as an empirical research, investigating a subject within real life. Furthermore, when conducting research on a case, it is important to make clear what the limitations are related to the subject chosen (Andersen, 2009: 118). For example, when working with neo-malthusianism which is within the academic area of demographics, it is relevant to consider for example population numbers and life expectancy, and also if the case is limited to a country, a city or an even smaller entity. In the case of Lagos it is especially interesting to consider population factors as the city is experiencing the highest population growth rate among the world's megacities. Furthermore, the case-study is in general critical towards theory, assumptions and practice. The purpose of a case-study is to test it in relation to, if an already existing knowledge is valid, and it is essential for a case-study design that the author remains critical towards both theory and practice (Andersen, 2009: 119). In this case, the thesis strives to test if Lagos is the overcrowded urban monstrosity which certain scholars (Gandy, 2005; James, 2008), documentaries (Anderson, 2010; Channel 4 News, 2008; CNN, 2009) and articles (Packer, 2006) claim it to be. Furthermore, it is important that a case-study is not merely reproducing existing knowledge, but instead produce useful original knowledge (Andersen, 2009: 119). The thesis therefore uses empirical data from Lagos with the theoretical explanatory tool of neo-malthusianism to conduct a socio-economic analysis of Lagos as a rapidly growing megacity. Naturally, it is difficult to be absolutely certain if another paper has been exploring this exact phenomenon, but through critically collected data on Lagos, it is unlikely that another academic work is exactly similar to the work of this thesis.

2.2 Theoretical approach

The population theory of neo-malthusianism is chosen as the theoretical approach as it, despite its historical inaccurate predictions, remains relevant in especially overcrowded places in the less developed parts of the world. The theory originates from the late Thomas Malthus, whose ideas have reappeared several times throughout history, and is still popular when debating the population issue, despite its lacking historical empirical validity. Furthermore, validity and contemporary relevance of neo-malthusianism will be discussed throughout the thesis, which makes the theory itself subject of investigation (Rienecker & Jørgensen, 2005: 269, 291). Also, the history and effects of urbanisation are important as the thesis explore slums and poverty in megacities. Neo-malthusianism will throughout the thesis be the theoretical tool which along with the empirical data

will strive to answer the pragmatic question of how it is possible for an increasing number of slum dwellers to live in such dense areas and under such poor living conditions. Furthermore, it is important to make it clear that this thesis will not focus on the world's or Lagos' impact on the climate changes or environmental degradation of the natural resources, which also are subjects of neo-malthusian theory. Contrary, the thesis will instead implement neo-malthusianism in a more local, contemporary and pragmatic approach to address the question of poverty, diseases, sanitation and other social indicators related to current issues of overpopulation which relates to the social situation in Lagos. Though interesting, the thesis would become too extensive if the thesis also would include the climate debate.

2.3 Empirical data

2.3.1 Secondary empirical data

The empirical data in a case-study can be quantitative or qualitative gathered (Andersen, 2009: 120; Rienecker & Jørgensen, 2005: 294). The empirical data in this thesis is secondary quantitative, as it is difficult to gather large amounts of empirical data within the area of demographics for one person with limited resources to collect primary data. The thesis will obtain empirical data from a wide range of sources. There are an infinite number of secondary data and it is therefore important to be critical of which sources are used (Andersen, 2009: 159). Therefore, the thesis will to a wide extend contain statistics from the United Nations in order to strive for empirical objectivity. Other references will be retrieved from published books, academic articles, newspapers, organisations and initiatives focusing on Lagos, Nigeria, urbanisation and overpopulation issues. Also documentaries and lectures about Lagos will be used in the thesis. Furthermore, it is important for the thesis to use literature which is as up-to-date as possible (Rienecker & Jørgensen, 2005: 51).

Furthermore, the thesis aims at researching upon Lagos' massive slum problems, where most of the city's citizens reside, from a statistical point of view, only rarely zooming in to the street-perspective of narrative storytelling. Moreover, it is often the case that demographic statistics are related to countries, whole regions or the entire world. Population literature or statistics are rarely concerned specifically with one city. This is most clearly when researching upon population statistics from the UN, the World Bank or other databases where countries are included rather than the cities. Two reasons come to mind in this relation. First, most countries conduct population

censuses every year only for the whole country, and second, it is often difficult to know exactly how many people live in a city as the term *city* is not unambiguous. As there is naturally statistically uncertainty embedded in a nation's population statistics such as Nigeria, there is likewise uncertainty regarding the population number of Lagos.

Thus, there are several layers or dimensions of research constructed by statistics throughout the empirical data and analysis. This can be demonstrated as a digital map when zooming in on specific areas of the world. The outer layer consists of statistics from the world such as in the problem area in section 1.1. The next layer of research is the contextual frame constructed by statistics from Africa and sub-Saharan Africa. Zooming further in is Nigeria and the main interest of research is naturally Lagos and its slum areas.

Many statistics have been disregarded in this process due to insecure sources. Also, there exists massive statistical data on the population number of Lagos, and some of these differ widely, which has caused the author to include a vast number of references to each social indicator researched throughout the thesis. Also, the results in the thesis are primarily reserved to the contextual reality within Nigeria and Lagos which makes the generalisation level limited to these geographical entities.

2.3.2 Lagos and Nigeria

It is important for any research to make clear for both the author himself and the reader what empirical limitations the research is conducted within (Andersen, 2009: 47). Nigeria is subject of analysis throughout the thesis as Nigeria and Lagos are two interconnected entities and share aspects of history, culture, politics, economy and demography. However, it is important to state that Lagos is the fastest growing megacity in the world and is the main empirical case. What makes Lagos interesting is that the city can be considered as the future of the global urbanity (Koolhaas, 2003), which thus gives a glimpse of our global future as we as humans are becoming increasingly an urban species. Furthermore, it is interesting to note that "*Cities, not countries, are the constituent elements of a developing economy and have been so from the dawn of civilization*" (Peterson & Annez, 2007). Thus, the subjects of overpopulation, urbanisation, slums, and Lagos megacity are chosen as:

- We have recently become 7 billion inhabitants on earth.
- The percentage of people in the world who lives in cities recently reached more than 50 per cent.
- Lagos urban area has in the last decade become one of the world's megacities, and is today the fastest growing of all megacities in the world.
- Lagos is estimated to be covered by up to three quarters of slums, and is struggling with alarmingly poor living conditions.

There are several factors that need to be considered when conducting research on population issues. Social and economic indicators, political and cultural variables are all very important factors when dealing with this issue. The empirical foundation of the thesis is the many statistics that will be presented to document the situation of Lagos, which are preferred to narrative storytelling which can be misleading if solely deduced to be regarded as general statistics or opinions. Also the empirical approach could be the grassroot level where many non-governmental organisations operate (Kuvaja, 2007). However as the thesis empirically draws from demographic statistics a grassroot perspective would make little sense to answer the problems formulated in the introduction.

The author's reason of choosing Lagos as case is that this exact city is one of the strongest examples urban overpopulation and where social indicators seem to most alarming compared to other megacities. There are other cities that are more congested of slums and in general have worse living conditions such as Kinshasa in the Democratic Republic of Congo. However, since the DRC is in a deep stage of instability caused by civil war and conflict, it is more logical to choose a city such as Lagos which is not only important for the development of Nigeria but also the entire sub-Saharan continent (Liotta & Miskel, 2012: 99).

2.3.3 Comparable megacities

It is important for the analysis that there throughout the paper are cases of comparative material from other megacities with similar slum proportions and urban areas as Lagos. For example, if statistics show that the slum of Lagos is struggling with high level of density, how should such numbers be perceived, and more importantly implemented and analysed? Alone, they make little sense, as a number without comparison has no significance. They must be put into a relevant context. If the context is other cities in Nigeria, they could lose their meaning as other cities in

Nigeria are much smaller than Lagos and are possibly not as burdened by for example similar rural-urban migration. Lagos is more populous than the three most populous cities following Lagos in Nigeria, combined. If the context is the entire country of Nigeria, problems can emerge when comparing social indicators and demographics. Nigeria is much more diverse than Lagos, where most people are rural and density is assumingly not a large problem in all of Nigeria. However, these are all assumptions, and it is not possible to validate or disprove all assumptions through research prior to the thesis. Therefore, a decision from an assumption has been made which means that other megacities in developing countries can be viewed as similar to Lagos due to the high level of poverty and slum, and some statistics will make more contextual sense if compared to such. Also, it is noteworthy that megacities like these have more in common cross nation borders due to their economic roles, sizes and centrality, often more than other smaller cities within the same countries (Knox & McCarthy, 2011: 135). Therefore, among others, cities such as Mumbai, India, Karachi, Pakistan and Dhaka, Bangladesh will be used to compare statistics from Lagos. Although, it is not every subject that should be compared to other megacities, as Lagos is located in Nigeria and some social indicators in Lagos may be more valid to compare within a national context. Therefore, there must be a balance of when to use other megacities, and when to use the Nigerian context throughout the thesis.

2.3.4 Timeframe

It is important to consider the timeframe in a research (Andersen, 2009: 110). This thesis is primarily concerned about the current situation in Lagos. The main part of the statistic data gathered is conducted from the late 1990s to the present year of 2013. According to Andersen (2009) the case-study design is by standard ahistorical, however, it can be valid to include a historical perspective (Andersen, 2009: 118). A city like Lagos has been through many changes over history, and it would therefore seem too comprehensive to include statistics and facts from before the end of last century. Nigeria has in addition also been under military rule which ended in 1999 which made it difficult for scholars and researchers to gather significant information about both Lagos and Nigeria (Adejumobi, 2011). Although, most parts of the empirical data are conducted within the last decade, there are occasionally reasons to go back in history to compare single statistics. For example, when Lagos' GDP per capita (Gross Domestic Product) in section 5.1.1 is compared to England's GDP per capita in the 1800s to show the relation between the global North and South.

Furthermore, selected statistical projections will be presented to illustrate how some of the alarming tendencies in Lagos and Nigeria will possibly continue the next many years. However, these statistics remain projections and are not conceived as facts which can be analysed on similar ground as already historical empirical data, and will therefore only be included to a certain extent.

2.4 Key concepts

2.4.1 Overpopulation

One definition of overpopulation stems from Thomas Malthus who this thesis retrieves its theoretical perspective from. He relates the concept of overpopulation to the situation where population growth supersedes food production. More pragmatic and contemporary, the OECD has adapted a definition originally provided from the United Nations, which refers to when resources are insufficient according to the requirements of individuals regarding shelter, nutrition and so forth (OECD, 2001; United Nations, 1997: 55).

2.4.2 Slums

The department working with slums within the United Nations is titled UN-Habitat (United Nations Human Settlements Programme) which defines a household as slum, if it is located in an *urban area* and if it lacks one or more of the points: 1) Durable and permanent housing, 2) Enough space so that a room is not shared by more than three people, 3) Easy access to water to a reasonable price, 4) Access to basic sanitation services including a toilet shared by a reasonable number of people and 5) Tenure security which secure the tenants from forced evictions (UN-Habitat - SOWCR5, 2007: 1).

2.4.3 Malthusianism and neo-malthusianism

The topic of this last sub-section is important for the author to touch upon before continuing to theoretical and empirical data sections. In the research of this paper, it has not always been clear to separate malthusianism and neo-malthusianism. Some contemporary scholars seem to draw a line back to the work of Thomas Malthus himself rather than relate to the works of neo-malthusianism.

Two reasons for this come to mind. One, there can be negative connotations connected to the area of neo-malthusianism. It is well-known within the area, that neo-malthusianism has prior been related to eugenics and extended to the Nazi German ideology, and further Israel's ironically right of return for Jews (Rao, 2004: 109-111). Contemporarily, neo-malthusianism has well-known connotations to China's one-child policy which is subjected to extensive critique of Human Rights violations. Therefore, it is possible that contemporary scholars do not use the term of neo-malthusianism to avoid such negative connotations, but rather relate to the area as merely malthusian. Two, neo-malthusianism has in the last decades been highly related to the climate debate, and that population growth and pressure are contributing to the climate changes. An example of this demonstrated by the Club of Rome publication: *The Limits to Growth* (1972). Therefore, it could be possible that some scholars of the neo-malthusian academic area would rather relate to malthusianism rather than neo-malthusianism. Furthermore, neo-malthusianism can be defined widely and it has possibly become a blurred theoretical term as it is related to an extensive number of socio-economic areas.

Thomas Malthus' ideas have been rejected by many due to the technological advances made after his lifetime, and it is rare to locate cases where malthusianism in its purest and original version can be operationalized, as the world's food production could most likely feed billions more people. The author therefore believes that neo-malthusianism in general should be used as the academic term throughout the thesis, rather than malthusianism, as it is in fact a neo-malthusian analysis of Lagos that is being conducted.

3. MALTHUSIANISM, NEO-MALTHUSIANISM & URBANISATION

The second main section first presents the theoretical frame of overpopulation, malthusianism, followed by its contemporary counterpart, neo-malthusianism. Secondly the section presents the area of urbanisation which is of more of empirical character, including rural-urban migration, the informal sector, megacities, and what constitutes the slum phenomenon. Finally, the connection between neo-malthusianism and urbanisation will be presented to sum up this main section.

3.1 Malthusianism

Initially, it is important to address the issue of what defines overpopulation and what impacts this demographic phenomenon can cause and what it can be caused by. A large number of people in a place do not necessarily mean that natural disasters or socio-economic problems occur. That would be a false deduction in itself as there are many places where a large number of people live together without problems related to for example a high level of density. A wide range of factors are important when discussion and using theories concerned with terms such as population pressure, population growth, and overpopulation. Throughout history and today, there are many that worry about too many people on planet put strain on our available resources, and that we should limit both our consumption behaviour and the number of babies born into our world.

Thus, to explore the term of overpopulation this section goes back around two hundred years. In the post-era of the French Revolution, the father of malthusianism, the English reverend Thomas Malthus (1766-1834), published his first edition of his life work known as *An Essay on the Principle of Population* in 1798. Malthus was a pragmatic economic theorist and his essay was a manifestation of his scepticism to the positivist theorists such as William Godwin (1756–1836) and Marquis de Condorcet (1743–1794) who opposite Malthus had a utopian and optimistic view on a prosperous future (Abramitzky & Braggion, 2003: 1). Malthus was not the first to address the issues of overpopulation, however, he was able to present the issue in clear terms which made his work significant as well as in his time, throughout modern history and remains relevant today (Price, 1998). Thomas Malthus can thus be considered the father of modern demographics. Malthus notes that famous philosophers as David Hume and Adam Smith have partly explained the principles of population before him (Malthus, 1798: 3). Also Robert Wallace (1697-1771) and Benjamin Franklin (1706- 1790) are scholars, whose work on early demographics, influenced Malthus greatly

(Rao, 2004: 79). Inspired by the works of Malthus was among others Charles Darwin, who through Malthus' work understood the relation between species' need to breed and its fight for the available limited resources (Abramitzky & Braggion, 2003: 4; Price, 1998; Rao, 2004: 84).

In his work, Malthus presented two natural laws or premises of human existence. One, food is necessary for humans to exist. Two, that passion between the two sexes always will be present and not change significantly (Malthus, 1798: 4). He believed that societies were limited to finite resources, and if humans continued to multiply the population would not be able to support itself due to lack of food (Berlatsky, 2009: 15). He stated that food supply would merely increase arithmetically: 1, 2, 3, 4 and so forth, while population, when unchecked, would grow geometrically: 1, 2, 4, 8 and so forth (Malthus, 1798: 4, 8). Malthus noted: "*Assuming then my postulata as granted, I say, that the power of population is indefinitely greater than the power in the earth to produce subsistence for man*" (Malthus, 1798: 4). Thus, according to Malthus there exists an inequality between population and food production (Malthus, 1798: 5): This, would logically deduced, lead to that the population would outrun the food production vastly, and end in what Malthus referred to as positive checks (Brown et al., 1999: 23; Malthus, 1798: 5).

Thus, as a response to the food shortage problem Malthus put forth two types of controlling or checks of the population, a *preventive* and a *positive*. The preventive checks are methods of lowering birth rates, voluntary and controlled by people themselves. These include late marriage and abstaining from having sex (Malthus, 1798: 38). Followed by the lack of the preventive checks are the positive checks which Malthus described as natural and involuntarily mechanisms that will occur in order to keep the human population in balance, or in "check". These include wars (Malthus, 1798: 13), famines and diseases (Malthus, 1798: 41) which he considered all as natural consequences of overpopulation. The positive checks will occur more often in the lower classes in society which are affected by higher birth rates and unsanitary living conditions (Rao, 2004: 79). Positive checks thus inevitably occur due to the uncontrollable nature of our abilities to control the proportions between food production and population growth. The population should try to avoid major positive checks, and Malthus believed that especially the poor should use the preventive checks and foresee that they simply cannot support a large number of children. Malthus was for this reason, as was David Ricardo, against the English Poor Laws which economically aided poor or unemployed people, which only would lead to that these people would procreate even more (Abramitzky & Braggion, 2003: 2; Malthus, 1798: 24; Rao, 2004: 81).

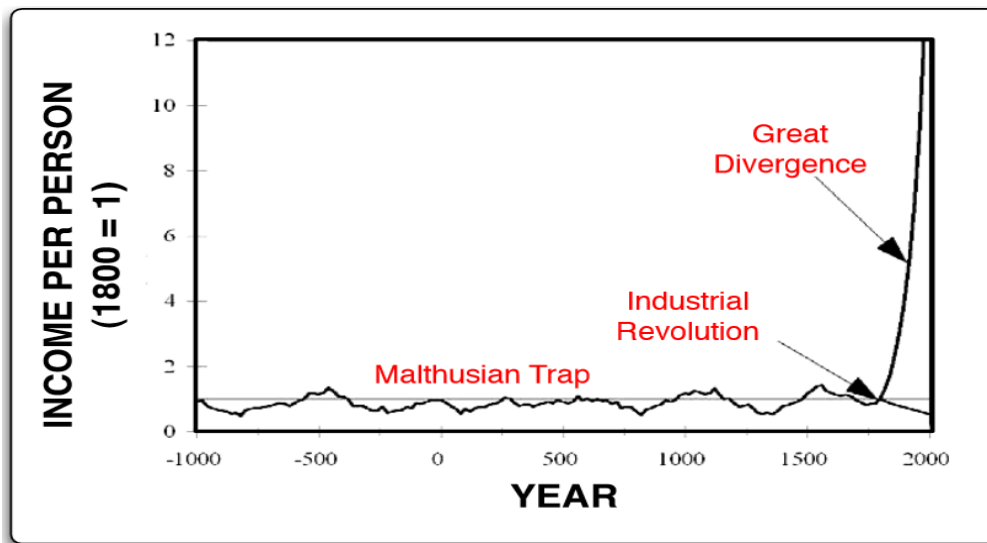
Malthus' theory described, at that time, the past and present society, which entailed that the positive checks and poverty had always been a natural part of human life (opposed today, where poverty and misery could be avoided due to our industrial progress). Malthus therefore put forth his ideas about the preventive checks in order to avoid further positive checks which were disastrous to the people affected. However, the progresses of the Industrial Revolution, which will be explored below, led to an increase in life expectancy, lower fertility rates and lower death rates. Therefore, Malthus' predictions of famines and other positive checks were mainly avoided and thus critics of malthusianism argue that the theory lacks validity considering its historical inaccuracy (Abramitzky & Braggion, 2003: 5; Rao, 2004: 80). This criticism is further elaborated on in sections 3.1.3 and 5.1.3.

3.1.1 The malthusian trap

Occurrences of these malthusian positive checks are also referred or related to terms such as the malthusian population trap (Todaro & Smith, 2011: 281), malthusian squeeze (Møller, 2012: 7), malthusian cycle (Buckley, 2012: 11) or malthusian catastrophes (Brown et al., 1999: 25). The malthusian trap describes the state of which mankind lived more or less with the same level of living conditions without improvements experienced until after the age of enlightening age and forward. Prior to the Industrial Revolution, the society can best be described as predominantly associated with low income, high maternal mortality rate, lack of education, having little prospects, and disease and starvation afflicted (Buckley, 2012: 9).

This malthusian trap is central to the analysis Lagos megacity, as human kind's escape from the trap symbolises when mainly the Western countries significantly improved their living conditions. The escape of the malthusian trap is traditionally accredited the progress of the Industrial Revolution also shown in Figure 3. The Industrial Revolution which began in the late 1700-hundreds meant larger production of food, higher income and an increase in living standards which eventually made societies able to the escape of the malthusian trap (Komlos, 2003: 2; Wade, 2007). However, transformation was slow and cities in the Victorian 1800-hundreds such as London and Dublin were still affected by high rates of diseases and poverty (Davis, 2007: 16; Liotta & Miskel, 2012: 20).

Figure 3: Breaking the malthusian trap



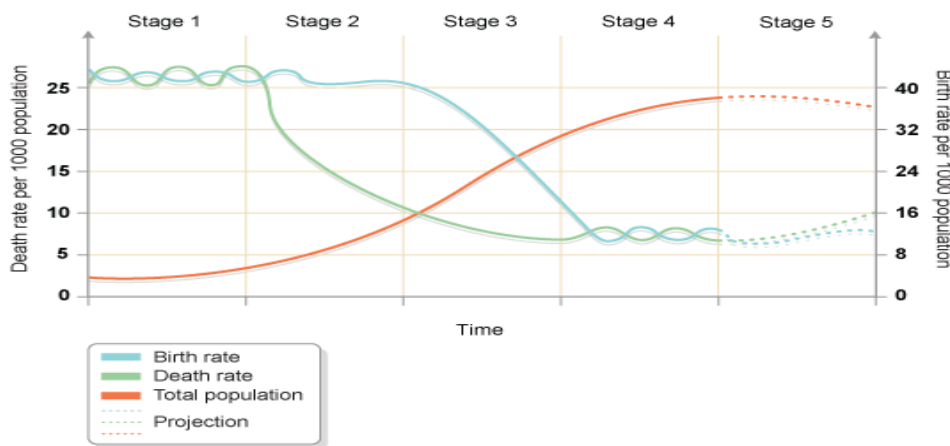
Source: <http://users.monash.edu.au/~sangus/Beamer04.pdf>

Contemporary related to after the Second World War, the Green revolution, initiated by Norman Borlaug (1914-2009), in the 1960s and 1970s significantly adding to the world's food production and prevented Paul Ehrlich's (1932-) hunger predictions (section 3.1.2). Thus, the Green Revolution was the advance in agricultural technology that made it possible to increase the food production with the use of pesticides and chemical fertilisation (Lehner, 2011: 35-36; Liotta & Miskel, 2012: 13; Møller, 2012: 11-12). The Green Revolution was similar to the Industrial Revolution a part of human progress which made us escape predicted dire future scenarios. Both revolutions have increased humans life, both in length and quality. That is to say most humans. Hundreds of millions of people remain left starving, malnourished, without clean water, living in cramped homes, and prone to severe diseases.

The increase in population can be viewed in the Demographic Transition Model (Figure 4) which indicates a break in the malthusian trap. The model shows that Stage 1 is dominated by high birth and death rates which was typical for the pre-industrial societies and where the total population is stabilised at a low point. Stage 2 shows a decrease in death rates indicating that living standards have increased and the total population rises. Today, many less developed countries are in Stage 2 of the demographic transition. In Stage 3 the birth rate also decreases as families have fewer children focusing on modern jobs where a large family not necessarily is needed. Stage 3 is describing many of the countries that are on the verge to become developed. In stage 4 the total population rate stabilises, and birth and death rates are equally low. Birth control is in this stage

widely available and smaller families are in fact desirable. Stage 5 could be what especially Western European countries and Japan are experiencing these years. These countries are struggling with an ageing population where people tend to have fewer children and later in their lives.

Figure 4: The Demographic Transition Model



Source: http://www.bbc.co.uk/schools/gcsebitesize/geography/population/population_change_structure_rev4.shtml

As Malthus' original theory was aimed at a national British context and mostly focused on food production, it is difficult to operationalize the theory to modern cities such as Lagos which is not a closed system but a part of Nigeria and extended a part of a globalised world. It is therefore reasonable to include the new malthusianism: neo-malthusian which is more contemporary and has a broader area of subjects.

3.1.2 Neo-malthusianism

Neo-malthusianism largely draws upon Malthus' original theory about population growth strains available resources. However, neo-malthusianism is not simple to pin down to one meaning or area. It can be described as: ... *they [neo-malthusians] suggest that continued rapid population growth will add tremendous strains to the social problems we already have, from employment to ethnic strife to environmental degradation* (Nixon, 1994: 14), and in a more critical view:

“Malthusianism and neo-Malthusianism are not conceptually or methodologically distinct. They differ insofar as the victims of their ideas or methods are concerned.

While Malthusians were concerned with the poor of their own countries, neo-Malthusians looked across the seas at the poor in developing countries. And while Malthusians spoke of moral restraint, neo-Malthusians came equipped with contraceptive technology. The parents of neo-Malthusianism were the eugenisists and birth controllers” (Rao, 2004: 92).

The academic area can be divided into two eras. The first era of neo-malthusianism was from the middle of the eighteenth centuries and well into the nineteenth centuries. Most important then, was the introduction of contraception which was perceived as a bottom-up movement advocating this new preventive check as voluntarily. The most significant organisation in this era was *The Malthusian League* (1877-1927) (Martinez-Alier & Masjuan, 2005: 21). The second era emerged after World War Two and remains active today, where contraception methods were implemented from top to bottom by states and international organisations. An example hereof is China’s one-child policy (Martinez-Alier & Masjuan, 2005: 1). Also the USA, the World Bank and the UN have been a supporter of neo-malthusian initiatives (Rao, 2004: 112). Furthermore, neo-malthusianism from the later era entails that population growth in itself causes poverty and environmental scarcity (Martinez-Alier & Masjuan, 2005: 21; Rao & Sexton, 2010: 105). According to Chrispeels and Sadava (2003) and Buttel (2000) modern neo-malthusians can be divided to two academic fractions: Ecological neo-malthusians and productionist neo-malthusians. The former believes that population growth puts strain on natural resources, and population growth causes deforestation, soil erosion, water and air pollution, etc. This further aggravates poverty, which can lead to even additional population growth (Chrispeels & Sadava, 2003: 5). According to Buttel (2003), using the food example, ecological neo-malthusians believe that hunger is caused by population growth and environmental degradation, and can be countered by using technology and institutions to slow population growth and consumption, in line with available resources (Buttel, 2000: 17). Thus this fraction of neo-malthusianism relates itself to the environment and the increasingly popular climate change debate. Indeed, the contemporary climate debate is thus the main reason for the re-emerged interest in neo-malthusianism as the international community recently decided to agree on that climate change occurs due to overexploitation of our earth’s resources.

The productionists focus on the social aspects of population growth. They believe that areas such as education, housing and health care prevent economic growth and that the governmental institutions should undertake the responsibility to provide jobs and basic services in the society (Ibid). Productionist neo-malthusians believe that hunger for instance is caused by the situation

when food production cannot keep up with population growth. This view is closely related to what Malthus originally presented about the relation between food production and population growth. However, according to Buttel (2000), the productionists believe that the issue of hunger is solved, or reduced, through research in agricultural productivity (Buttel, 2000: 17). The analysis of this thesis would in according to this typology belong to the area of the productionist neo-malthusians.

A more mathematical approach to neo-malthusianism is the equation: $I = P \times A \times T$, where I stands for impact, P for population, A for affluence and T for technology. There is a lack of consensus among the neo-malthusian scholars of what factors are most important in the calculation. The factor P is prevailing as the most important among the academic area, however, some scholars argue that A or T is the most important (Ibid).

One of the most famous scholars within the neo-malthusian area is the aforementioned Paul Ehrlich and his malthusian horrific scenarios of mass starvation that would lead to drastic increase in the world's death rates which is described in his book *The Population Bomb* from 1968 (Møller, 2012: 7). However, like Malthus, Ehrlich was also incorrect about his worries of the future. As we know today, there were no mass starvations. Also well-known is the Club of Rome which in 1972 published their report: *The Limits to Growth*, which paid attention to population growth and its environmental impacts (Møller, 2012: 12).

Contemporary neo-malthusian scholars include Thomas Homer-Dixon (1956-), who has researched on the correlation between population growth, resource depletion and violent conflicts, of which the latter is among the positive checks Malthus originally put forth. Homer-Dixon rejects that armed conflicts are directly caused by resource shortage. However, he maintains that the relationship between population pressure, uneven wealth distribution and non-renewable natural resources, such as water, cropland and forests can cause problems (Møller, 2012: 12; Urdal, 2005: 5).

Despite being outdated due to technological advances in medicine and food production, Malthus remains interesting when observing life-threatening humanitarian situations around the world, as: "... many people still believe it holds in poor countries today" (Todaro & Smith, 2011: 285). With the knowledge of the Industrial and Green revolutions, the neo-malthusian concerns are not merely the issue of food production would be outrun by population growth which was the main focus of Malthus' theory. Food production is merely one concern that has to be considered when researching upon overpopulation today. The neo-malthusian book *Beyond Malthus* (Brown et al.,

1999) relates overpopulation to areas such as lack of water and energy, urbanisation, diseases, environmental and climate issues, conflicts, employment, education and income.

Also, the Industrial and the Green revolution described above have made it possible for the world to feed itself which is why the neo-malthusian theory does not subscribe to the idea that it is merely the lack of production that is causing hunger but rather it is the *distribution* of food that is the problem. Even though many countries cannot produce significant quantities of food to feed their own population, the global market and trade possibilities ensure that it is possible to import sufficient food to everyone (Rao, 2004: 105). This thesis will not focus on the world's issue of lacking resources in the present nor the future. Neither will the thesis analyse the climate area or environmental issues in Nigeria or Lagos. The analysis will instead use neo-malthusianism to address the question of poverty, diseases, sanitation and other social indicators related to current issues of overpopulation which affect the city of Lagos.

3.1.3 Critique and validity

What is perhaps most fascinating about malthusian theory, is how it continues to cause extensive debate today, despite the historical predicted misery and starvation failed to materialise.

Malthus was very straightforward in his views, and his perhaps most significant error was to assume: "*That population cannot increase without the means of subsistence is a proposition so evident that it needs no illustration*" (Malthus, 1798: 11) and: "*The truth is that the pressure of distress on this part of the community... is an evil so deeply seated that no human ingenuity can reach it*" (Malthus cited in Rao, 2004: 81). Thus, the critique of the malthusian theory is that it did not take possible technological advances sufficiently into account (Todaro & Smith, 2011: 285) .

Malthusianism has been subjected to a wide range of criticism because of its simplistic nature of logic and the history which largely disproved the theory. Throughout the critical literature of malthusianism are Ester Boserup (1910-1999) and Julian Simon (1932-1998). Boserup critiqued the original malthusianism, and Simon critiqued neo-malthusian Paul Ehrlich's predictions. Boserup believed unlike Malthus that food production was not fixed and population growth could enhance the food production by substituting the agricultural technology. Thus, reversing the causality Boserup believed that population growth affected food production and not opposite as Malthus initially described. Simon stated that population growth in the short run would decrease a country's living standards, but in the long run population growth would advance technology and knowledge,

thus affect the society in a positive outcome (Abramitzky & Braggion, 2003: 9-10; Martinez-Alier & Masjuan, 2005: 19; Rao, 2004: 115-116).

A strong opponent of both malthusianism and neo-malthusianism is scholar Mohan Rao (Rao, 2004; Rao & Sexton, 2010). Rao criticises the obviously outdated original malthusian theory relating food and population growth, referring to that it is too simplistic to be operationalized in reality as it merely include the factors of procreation and food production while leaving out ‘real’ causal factors and lacks empirical validation (Rao, 2004: 86). Rao writes: “*What Malthus arrives at is not a theory; he makes certain statements of facts but fails to arrive at any coherent explanation*” (Rao, 2004: 86).

Although malthusianism has been under much criticism because of the empirical counter-evidence that history has provided: “*Malthus’ theory still applies to many poor countries that are still struggling to get out of the malthusian cycle*” (Abramitzky & Braggion, 2003: 11), which is highly undeserved according to Rao. He writes in a post-industrial revolution historical aspect: “*It [malthusianism] was not, however, put to deserved rest. It continued to be resurrected as an explanation of poverty in other parts of the world*” (Rao, 2004: 90). Hence, there exists a continuous discussion of whether Malthus was wrong as the world’s poorest countries continue to struggle with hunger and malnutrition. If such famines are related to overpopulation, or to political, economic, ethnic tensions, etc. are thus natural subjects of such discussion. Furthermore, one could argue that the critique of today related to malthusianism should not lie within the theory itself as it is now more than 200 years old, but rather in the aftermath of Malthus’ death. Thomas Malthus created a focus on population growth yet unseen at his time which was a product of the misery of the poor living standards which dominated the society in the eighteenth century. He did not expect the technological advances that were to come after his death.

Furthermore, Mohan Rao’s critique of neo-malthusianism is similar to his assessment of malthusianism. He believes that neo-malthusianism “... *focuses on a part of the larger picture, misjudges association for cause, provides misleading and partial explanations, and is based entirely on the validity of the assumption made*” (Rao, 2004: 113). The assumption being that population growth will outgrow available resources. Rao continue explaining that the premise of population growth burdens the world’s finite resources are the weakest truism in the neo-malthusian theory. Rao criticises the theory for neglecting who is in fact consuming the ‘scarce’ resources. It is not the weak and poor that causes social problems such as hunger and poverty by overusing the world’s resources, as they consume the least, both in total and per capita. (Rao, 2004: 113).

According to Rao: *“Population growth in the periphery is a drop in the ocean compared to the consumption of the populations of rich nations”* (Rao, 2004: 114). Thus, neo-malthusians are looking at the wrong perspective. They should not stare blind at the population growth, but rather at the effect of the rich countries that consume without limits (Ibid).

As this thesis investigates overpopulation in an urban area, a presentation of urbanisation and related terms to the area is needed, and therefore follows next.

3.2 Urbanisation

Similar to the area of neo-malthusianism, urbanisation is a broad topic with different sub-areas: *“...urbanisation involves much more than a mere increase in the number of people living and working in cities... It is driven by a series of interrelated processes of change – economic, demographic, political, cultural, technological, environmental, and social”* (Knox & McCarthy, 2011: 9).

It is not nature-given why urban areas have come to exist. That one day, early in the third millennium, the world would mostly be living in cities and many in megacities, is not a deliberate decision made by someone but rather a tendency and a sudden reality that is difficult to explain the underlying reasons of. Today, there have been cities for hundreds of years and one of the theories of why cities originated is the considerations related to agricultural surplus production. In the past when farmers produced more food than they needed for themselves, a need for more efficient ways of distributing and dealing with the trade of this surplus came into being. Cities were therefore a natural next step caused by more food production and created new non-agricultural functions within cities (Knox & McCarthy, 2011: 22). Naturally, urbanisation has today changed and become significantly embedded in society where the expansions of current cities are preferred rather than settle new ones. Though, high percentage of urbanisation remains rather new in the global South compared to the global North. The allegedly successful story of urbanisation is what today constitutes the developed part of the world which started to become urbanised over a hundred years ago, and is in some ways similar to the way the developing countries are now. However, it is certain that the same outcome will not occur to the megacities in the developing countries as the well-known business magazine Forbes describes it: *The implications for the Third World are clear: Urbanization on an epic scale is inevitably traumatic, but it need not end in complete disaster”* (Lewis, 2007).

High speed urbanisation on a large scale is today a fact, especially in the global South while the growth of rural population is either stagnating or negative (Davis, 2007: 3; Todaro & Smith, 2011: 312). When major cities in the now developed countries were expanding, the pace of which this was occurring was accompanied by the progress of the Industrial Revolution in the Western world. Today's developing countries are going through the same transition of urbanisation in merely 40 or 50 years and this has caused reason for concern: *"For the past half-century, urban growth rates throughout the developing world (excluding China) have continued to skyrocket in spite of stagnant urban employment, shrunken public sectors, and recessive urban economics"* (James, 2008: 30).

Furthermore, the cause of urbanisation has also changed. When the old global North was initiating its urbanisation process, it was due to a pull-factor from the cities attracting people from the countryside with better jobs and living standards. Contrary, urbanisation in the new global is more related to a push-factor where people are being pushed away from the rural areas, rather than pulled into the urban areas as there are little jobs available in the countryside (Brown et al., 1999: 83). Knox and Paul (2011) describe it as: *"In sharp contrast to the experience of the world's more developed countries, where urbanization was largely an outcome of economic growth, urbanization in the less developed countries has resulted from demographic growth that preceded economic development"* (Knox & McCarthy, 2011: 117).

A positive aspect of urbanisation is that the greater a country is urbanised the greater the country's per capita income tends to be. For example, a rich country like Denmark has a very high percentage of urban population (87 % in 2010), and has a very high standard of living and income. Opposite is a traditional poorer country like Ethiopia that has a very low percentage of urban population (17 % in 2010) and low income per capita (UNFPA, 2011: 117). Thus, there seems to be an empirical historical connection between economic development of countries and urbanisation. However, related to the Industrial Revolution, history cannot with certainty explain what causes what; if more development causes urbanisation or opposite, urbanisation causes development. However, history shows that:

"Urbanization and growth go together: no country has ever reached middleincome status without a significant population shift into cities. Urbanization is necessary to sustain (though not necessarily drive) growth in developing countries, and it yields other benefits as well" (Buckley et al., 2008: 1).

Thus, despite the richer parts of the world are highly urbanised and urbanisation is occurring everywhere in the world, it is a false deduction to conclude that the urbanisation phenomenon in itself is a guaranty for economic growth (Knox & McCarthy, 2011: 122-123; Todaro & Smith, 2011: 312):

“While it is true that cities offer the cost-reducing advantages of agglomeration economies and economies of scale and proximity as well as numerous economic and social externalities (e.g. skilled workers, cheap transport, social and cultural amenities), the social cost of a progressive overloading of housing and social services, not to mention increased crime, pollution, and congestion, can outweigh these historical urban advantages” (Todaro & Smith, 2011: 314-315).

Thus, urbanisation is not a one-sided factor even though there seems to be many advantages related to the phenomenon.

3.2.1 Rural-urban migration

Migration is an important factor in the urbanisation progress and is most often manifested in the phenomenon *rural-urban migration* (James, 2008: 30). The term is strongly connected with globalisation which is linked with a neo-liberal agenda, which promotes urbanisation and pushes people from rural areas to the cities even though there is little pull-effect with job creation in the cities (Davis, 2007:16-17). Know and McCarthy (2011) describes it as such:

“Rural-to-urban migration involves impoverished rural residents migrating to the larger towns and cities in search of a better life. These people are driven by the desire for employment and the prospect of access to schools, health clinics, piped water, and the kinds of public facilities and services that are often unavailable in rural regions... Rural migrants have moved to cities out of desperation and hope, rather than being drawn by actual jobs and opportunities” (Knox & McCarthy, 2011: 122).

Thus, rural-urban migrants often become the urban poor instead of the rural poor (Todaro & Smith, 2011: 329). Rural-urban migration exists all over the world, and is not a new phenomenon. However, if the migration becomes too massive it can make the population growth of a city unhealthy. In fact, the natural increase of population creates a stable population growth in cities and

if the migration to urban areas adds too many people to the city it creates what can be identified as *over-urbanisation* or *hyper-urbanisation*, and can become a hazard to a city's sustainability (Knox & McCarthy, 2011: 62 & 135; Kuvaja, 2007: 101). In many poorer countries it is a pressing problem that their cities grow significantly faster than the capacity to supply accommodation as well as employment possibilities (Knox & McCarthy, 2011: 117). Furthermore:

“As rural population growth decreases the possibility of eking out a decent living, the effects of scarcity can spill over to the city through massive rural-urban migrations. At stake in the urban environment is not only scarcity of natural resources, but shortages of infrastructure, housing, and jobs, leading to poverty, unemployment, and social unrest. From Los Angeles to Lagos, swelling populations hamper provision of basic social services to poor city dwellers, creating a volatile setting if food shortages or economic recession suddenly worsen the situation” (Brown et al., 1999: 100).

Thus, the most devastating effects of rural-urban migration are when migration supersedes the number of jobs and social services in the cities which further lead to a state of underdevelopment (Todaro & Smith, 2011: 333-335).

3.2.2 The urban informal sector

Related to the rural-urban migration, many of these migrants end up in what can only be described as the shadow side of the urbanisation process: the informal sector. Cities are traditionally divided into two: a formal sector, which is a part of the official system of a given city's economy and has a relatively high income level, and an informal sector. The latter is mainly dominated by a low average income where people are unskilled, lack formal education work and are not registered in the official economic system. The informal sector is usually constituted by a significant number of small-scale production and service activities that are owned by individuals or a family business. Also, the sector represents a life with little job security, ruthless work condition and surely no pensions (Todaro & Smith, 2011: 328). However, the informal sector is not one-sided negative: *“But the informal sector of the economy is ambiguous – it encompasses wealth and poverty, productivity and efficiency, exploitation and liberation”* (Knox & McCarthy, 2011: 170).

The sheer size of informal sectors is a general problem in developing countries, and should be carefully used in relation to other numbers related due to lack of official statistics concerning people who work and live in informal parts of cities. It is estimated that between 30 and 70 per cent of the urban labour force works in the informal sector in less developed countries. Globally, the informal sector could by the year 2020 be as large as two-thirds of the workforce (Knox & McCarthy, 2011: 171; Todaro & Smith, 2011: 328). Thus, it is difficult to measure the size of the informal labour force, as these most jobs here are unregistered. Workers in this sector are not a part of the official system and do not receive the benefits hereof. They also only rarely pay taxes. Despite informal sectors produce almost one-third of the urban income (Todaro & Smith, 2011: 331), the sector is a great beneficer to the creation of slums and poverty in the cities of the developing part of the world (UN-Habitat Kenya, 2007: 1). The informal sectors will be basis for employment for 90 per cent of the urban Africa's coming workers in the coming years (Channel 4 News, 2008: 3min). Therefore, one of the embedded problems for a city like Lagos is the large size of the informal job sector.

However, a positive aspect of the informal sector is that the informal sector creates jobs for the rural population who most likely cannot achieve employment in the formal sector in the city. Therefore immigrants can possibly increase his or her standard of living by moving to the city and work within the informal sector (Todaro & Smith, 2011: 332). The informal sector is vital for a city to function, and the formal and informal sectors have to co-exist and also co-operate. For example formal sectors need cheap labour from the informal sectors (Knox & McCarthy, 2011: 171; Todaro & Smith, 2011: 329). The informal sectors are possible as important as the formal sectors in some cities, especially in the poorest parts of the world. It is estimated that informal sectors support as much as two billion people in the world (Knox & McCarthy, 2011: 171; Todaro & Smith, 2011: 331). However, large informal sectors are not strong foundations for any society. As James (2008) describes: *"For although the informal sector does serve as a source of employment and income for the poor, it is simultaneously an anomaly, often subjecting people to severe health risks, insecurity, and exploitation"* (James, 2008: 41). Thus, the informal sector is often a necessary evil in many cities in the global South, and many of the rural-urban migrants that end up working in the informal sector never make the transform into the formal sector (Todaro & Smith, 2011: 328).

3.2.3 Slums

Informal sectors and slums are highly related. Slums are often located in the informal part of a city, where registration and official social services are not a part of reality. Slums are often referred to as informal settlements. Initially in this section, a quote from the ground-breaking UN-report *The Challenge of Slums* is presented:

“The urban poor are trapped in an informal and ‘illegal’ world – in slums that are not reflected on maps, where waste is not collected, where taxes are not paid and where public services are not provided. Officially, they do not exist” (UN-Habitat, 2003: 6).

Existence of slums can due to often high density and low social standards be related to over-population and over-urbanisation, and can be considered as a consequence of among other things, rapid urbanisation (Todaro & Smith, 2011: 315). Slums are defined widely and deserve elaboration. Some might merely refer to it as places where poor people live. However, a slum area can be defined as: *“... a heavily populated urban area characterised by substandard housing and squalor”* (UN-Habitat Kenya, 2007: 1), and it can also be defined in accordance to the five points in section 2.4.2. Another definition by the UN in 2002 which entails slums as being overcrowded, poor or informal housing, inadequate access to safe water and sanitation, and insecurity of tenure (Davis, 2007: 22-23). The term has several related names or synonyms such as ghetto, shantytown, rookery and favela depending on the geographic context.

Today, not all slums are subjected to equal living conditions, even though sub-standard living conditions seem to be the general key description. Slums have as described by the UN-Habitat: *“...come to include the vast informal settlements that are quickly becoming the most visible manifestation of urban poverty in developing world cities”* (UN-Habitat Kenya, 2007: 1). Furthermore, slums are often related to the population pressure problem which is central in the thesis:

“Partly as a result of the mounting pressure for people to migrate to cities, the growth in urban populations is far outstripping the availability of basic services such as water, sewerage, transportation, and electricity. As a result, life in urban shantytowns is plagued by poverty, pollution, congestion, homelessness, and unemployment” (Brown et al., 1999: 84).

In worst case: “*Crowded and degraded slums, for example, can lead to higher death rates...*” (Knox & McCarthy, 2011: 11), because they are more prone to diseases such as tuberculosis, diarrheal diseases, and HIV/AIDS. Statistics from 2010 show that the number of people living in slum in sub-Saharan Africa was approximately 213 million people, which equals 61.7 of the urban population (UN-Habitat, 2012: 127). Half (51 %) of these slums are deprived by more than one of the points described in section 2.4.2. In reference to this, Davis (2006) interestingly notes that the poorest slum dwellers today might live under worse conditions than humans thousands of years ago (Davis, 2007: 19). However, it is important to keep in mind that the socio-economic area of slum is not black and white. As Davis points out: “*Not all urban poor, to be sure, live in slums, nor are all slum-dwellers poor...*” (Davis, 2007: 25).

In 2005 more than one billion people in the world lived in slum (Davis, 2007: 23). In 2012 that equalled more than 1 out of 7 people worldwide and 1 out of 3 of those who lived in cities. Of the latter, 78 per cent lived in developing countries (Davis, 2007: 23; Knox & McCarthy, 2011: 173; Todaro & Smith, 2011: 315; UN Human Rights Council, 2012). By 2030 there is estimated to be around two billion slum dwellers globally (Liotta & Miskel, 2012: 7; UN-Habitat Kenya, 2007: 1).

The measure of the increasing slum tendency can be referred to as *slum growth rate*. Mike Davis describes the historic relation between slum and urbanisation as: “*Since 1970, slum growth everywhere in the South has outpaced urbanization per se*” (Davis, 2007: 17), and it is both astonishing and terrifying that: “*...more than 115,000 people moving into a slum somewhere in Africa, Asia or Latin America each week, or more than 11 people each minute*” (STWR, 2010: 13). Most severe is it in Africa where the slum growth is twice as fast as the expansion of the cities on the continent (Davis, 2007: 17).

Most major cities worldwide have their slums in some variation. It is difficult to pinpoint one causing factor of why slums exist, however, several issues can be identified as underlying factors such as rural-urban migration, poverty and inequality in the cities, and globalisation. Furthermore, one crucial factor causing the existence of slum areas is *insecure tenure* which indicates that people do not own or even have the right to live there. With knowing that the next day might be the last for their house as the governments anytime can demolish their slum-residence they have little incitement in expanding, improve or maintain their homes (UN-Habitat Kenya, 2007: 3).

3.2.4 Megacities

Megacities are the subject of much discussion about the future of our planet. A *Megacity* is measured differently. The UN defines the phenomenon as an urban area with more than 10 million inhabitants within an urban agglomeration. The definition is related to the number of inhabitants and not the physical area of the city. This is also the definition which will be used throughout this thesis. In 1970 the world had two megacities: Tokyo, Japan with 23.3 million inhabitants and New York, USA with 16.2 million Inhabitants (UN ESA, 2012: 6). In 2005 the number had increased to 20 megacities, and it is estimated by the UN that there will be approximately 37 megacities in the year 2025. In 1970 the two megacities inhabited 39.5 million people. In 2011 there were 23 megacities in which 359.4 million people resided. This equals every one out of twenty on earth (UN ESA, 2012: 7). Interestingly, 17 out of the 23 megacities in 2011 were located in the developing part of the world (Todaro & Smith, 2011: 314).

Megacities can be perceived as being the ultimate symbol of today's urbanisation. Megacities are enormous and have many benefits such as generating a high level of economic growth. However, a negative connotation related to megacities is that these urban massive areas are enormous and uncontrolled entities, often constituted by massive slum areas (Knox & McCarthy, 2011: 136; Liotta & Miskel, 2012: 3). Also, megacities: *"...addresses the increasingly discontinuous, fragmented, polycentric and almost kaleidoscopic socio-spatial structure of these cities"*, and: *"...these cities have become spaces where First and Third Worlds are 'wrapped' into one"* (Kuvaja, 2007: 17). As expressed by the governor of Lagos in a lecture: *"... megacities mean megaproblems"* (The London School of Economics, 2010: 15min). Former World Bank president Robert McNamara also points out that megacities often suffer from overpopulation: *"The rapid population growth that has produced them will have far outpaced the growth of human and physical infrastructure needed for even moderately efficient economic life and orderly political and social relationships, let alone amenity for their residents"* (Todaro & Smith, 2011: 315).

Often, megacities emerge when several cities or urban localities that are functionally linked form an urban agglomeration (UN ESA, 2012: 6). There are several definitions in terms of what constitute a city or an urban area. Therefore, for both author and reader, some definitions are in place:

1. *City*: Including the population in the city centre without the suburbs
2. *Urban agglomeration*: Including the city and suburbs [megacities]
3. *Metropolitan area*: Including the greater surrounding areas

Furthermore, different countries have different measurements and definitions of when an area is urban. In Nigeria for example, the minimum number of inhabitants for an area to be urban is 40,000 (Birch & Wachter, 2011: 105). Megacities as this thesis research upon are measured as *urban agglomerations* which count both the core city and its surrounding suburbs. Examples of other related definitions are *Metacities* which are cities with more than 20 million inhabitants. *Megaregions* constitute when major cities form a connected unit and become merged into one. Examples of these regions are found in Japan where Tokyo, Nagoya, Osaka, Kyoto and Kobe form a megaregion consisting of nearly 60 million people. More atypically, the term *urban corridor* is defined as larger cities connected through transportation and economic, which for example form the West African cities of Ibadan, Lagos and Accra. (UNICEF, 2012: 10-11). The terms, urban agglomeration and megacities will primarily be used from above throughout the thesis.

It should be noted that even though many people live in these enormous cities, merely 10 to 12 per cent of the world's urban population in fact live in a megacity which is approximately one of out every eighth person who lives in larger cities above 100,000 inhabitants (Birch & Wachter, 2011: 90; Knox & McCarthy, 2011: 136). As stated before, megacities are attracting increasingly attention and these giant cities are most probably the paradigm of our urban future. Therefore, it is natural to question what problems arise when slum proportion as seen in Lagos significantly supersedes the rest of the inhabitants. To end this main section the following will present the linkage between population growth, overpopulation and urbanisation.

3.3 Linking overpopulation and urbanisation

The initial task of this thesis is to connect a megacity with population growth and overpopulation. Thus, neo-malthusianism can be used in a wide range of areas, also in relation to urbanisation. Inspiration to linking the phenomenon of overpopulation and megacities derives from the terms *malthusian cities* or *neo-malthusian nightmares*, meaning that some larger cities in the global south are prone to overpopulation and experiencing issues related to the malthusian trap (Buckley, 2012; Sisk, 2004). As mentioned earlier, Malthus did not foresee the progress that societies have

experienced the last two hundred years and he could probably never have imagined that mankind was able to produce cities with more than 10 million inhabitants. However, his ideas of population pressure and resources hereof are compatible to understand the situation in a megacity like Lagos.

The thesis further gains inspiration from Miskel & Liotta (2012) when linking the two areas of demographics and urbanisation. The authors note that Malthus and his later famous follower, Paul Ehrlich both were wrong in their predictions about their dystopian future of starvation and misery, thanks to the progresses of the Industrial and the Green revolutions. However, the malthusian legacy remains relevant, however in an urban context. They are concerned about the *real* population bomb as they call it, which are manifesting in today's megacities in the global South:

“With the rapidly increasing concentration of human populations within cities, we are witnessing a real population bomb. The urban growth of the twenty-first century, however, results from human migration as much as higher birth and lower death rates – and there are no quick technological fixes for the problems of cities because they already have grown too large, too fast. This may well be the central challenge of our times” (Liotta & Miskel, 2012: 13).

Areas that relate to the linkage between population pressure and urbanisation in the context of Lagos include diseases, water and food, basic sanitation, maternal death, life expectancy, housing and income. These areas are highly visible in Lagos and when observing the city there is little doubt that the high rate of urbanisation and population growth are rational to emerge in the analysis of Lagos megacity. The next section presents the case-study which is the social situation in contemporary Lagos.

4. PRESENTATION OF THE EMPIRICAL CASE

This main section is the descriptive part of the case of Lagos and Nigeria. As there are no primary empirical data collected in this thesis, the presented data in this section is secondary empirical data. The data consists of mostly social and demographic statistics. They are presented to offer a picture of the current situation in Lagos. The statistics will further be analysed in section 5 in relation to the neo-malthusian theoretical frame chosen in this thesis. The first part describes Nigeria' demography while the second part focuses on Lagos megacity, including the historical, demographic and economic factors. Finally, the section will present a more optimistic view on Lagos.

4.1 Nigeria

Prior of the case of Lagos city, this section shortly introduces the national scope: Nigeria, the most populous country in Africa. Nigeria is home for more than 1.5 out of 10 people in Africa. In 2011 Nigeria had a total of 162 million citizens and an annual population growth of 2.5 per cent. In 2010 every woman in Nigeria gave birth to approximately 5.5 children throughout her lifetime (Appendix II, 2012), whereas the world experienced a decreasing fertility rate of 2.5 children per woman in 2010 (Appendix IV, 2013). Nigeria is ranked within top 13 by 2010 when listing all countries in the world according to total fertility rate (UN ESA, 2011), and the country has quadrupled its population since 1950 (Berlatsky, 2009: 44). Moreover, Nigerians can at the beginning of their lives expect to live between 43 and 52 years depending on different statistics. The life expectancy is 70 years worldwide and in high income countries the average life expectancy in 2003 was 78.8 (Liotta & Miskel, 2012: 19, 107; Rao & Sexton, 2010: 246; The World Bank, 2013; UN ESA, 2011; UNFPA, 2007: 87). Specific statistics from UNDP show that the Nigerian life expectancy has dropped from 50.4 in 1992 to a staggering 43.4 in 2003 (Rao & Sexton, 2010: 246). Accompanied with the low life expectancy age, Nigeria also struggle with a very young population, where 4 out of 10 are under the age of 14, and approximately 50 per cent of all Nigerian women are under 19 years old. British Council warns about a “demographic disaster” in Nigeria due to the population composition which in worst case scenario can lead to civil conflicts (British Council & Harvard School of Public Health, 2010: 9-10; Rosenthal, 2012). In spite of Nigeria is a country rich on oil, failure to invest in the infrastructure and production is preventing the country from developing according to its population growth. This is manifested in Nigeria as there are “...*too many young men with not enough to do*” (British Council & Harvard School of Public Health, 2010: 26). This is

resembled in the Demographic Transition Model where Nigeria is at stage 2 with high birth rate and falling death rate (Figure 4). Nations in stage two are striving towards stage 3 with lower birth rates where the population growth stabilises. If not it is possible that countries like Nigeria will:

“...eventually fall back into stage one of the demographic transition when their economic and social systems break down under mounting population pressure. One or the other of the two self-reinforcing cycles will take over. There are no other options. Among the many countries at risk of falling back into stage one if they do not quickly check their population growth are...India, Myanmar, Nigeria, Pakistan, the Sudan, Tanzania, and Yemen” (Brown et al., 1999: 118).

However, the young population can also be viewed positive in a future aspect: *“By 2030, it [Nigeria] will be one of the few countries in the world that has young workers in plentiful supply. Youth, not oil, will be the country’s most valuable resource in the twenty-first century”* (British Council & Harvard School of Public Health, 2010: 8). This is in stark contrast to the Western countries whose low fertility rates mean that they in coming decades will lack a significantly large workforce to provide for their aging population.

However, Nigeria has similar to many other sub-Saharan African countries experienced a slight decline in average fertility rates to approximately 5.5 last year from 6.8 in 1975. However, this level of fertility, combined with an exceptional young population continuously places such countries on a steep and dangerous population growth curve. The high number of young people is exemplified in the many so-called *area boys* in Lagos. They are gangs of local youth in the urban slums where most depend on drugs selling and protecting money (Channel 4 News, 2008: 3min; James, 2008: 39; Liotta & Miskel, 2012: 24). This leads to the next section where Lagos is described in relation to demographics, social indicators and slum areas.

4.2 Lagos

To introduce this section is a typical story in Lagos about a man called Adegoke Taylor whose life paints a cynical picture of Lagos. He moved from a smaller city to Lagos to find job in 1999. As he could not find any real work he took different odd jobs. After a while, he lost his home which was burned down, however, he remained in Lagos:

“...At times, he longed for the calm of his home town, but there was never any question of returning to Ile-Oluji, with its early nights and monotonous days and the prospect of a lifetime of manual labor. His future was in Lagos . . . “There’s no escape, except to make it, Taylor said” (UNFPA, 2007: 5).

Lagos is the largest economic centre in the region of West Africa and a case of explosive urban population growth. Lagos is a well-located port city with high oil exports and is attracting lots of foreign investments (Liotta & Miskel, 2012: 98). Lagos is the largest city in Nigeria, and it was replaced by Abuja as the capital of Nigeria in 1992 (Kuvaja, 2007: 33). Lagos is dominated by its large percentage of slum areas and poor infrastructure, which means that water and electricity are not always around. Blackouts are a daily occurrence, even in the richer parts of the city (Pedersen & Sand, 2010). This is illustrated well by the electricity company in Lagos: *National Electronic Power Authority* (NEPA) which has been nick-named *Never Electricity, Power Anywhere* by the people of Lagos. Furthermore, pipeline water only gets out to 35 per cent of the inhabitants by one estimate (Kuvaja, 2007: 39). The UN estimates that merely 25 per cent of Lagos’ inhabitants have access to water within 200 metres. Statistics from other large and poor cities 72 per cent in Kinshasa, 78 per cent in New Delhi and 89 per cent in Karachi (UN-Habitat, 2003: 274-275).

The GDP per capita in Lagos is approximately 3,500 dollars per capita which is close to 60 per cent higher than the average 2,500 dollars GDP per capita in Nigeria (Deloitte & Planet Retail, 2012: 19). However, despite being very important economically and culturally for the region of West Africa, Lagos is also a place of extreme poverty and inequality. Approximately 53 per cent of the households in Lagos were below the poverty line which is the highest followed by another African city, Kinshasa (22.9 %) and to other megacities such as Dhaka (44.3 %) and Karachi (35 %). Additionally, Lagos is struggling with a large unemployment rate, between 20 and 50 per cent. The informal sector is ought to constitute between 50 and 70 per cent in Lagos (James, 2008: 39; Kuvaja, 2007: 40).

Furthermore, the UN-Habitat places Lagos as ranking very low considering the Gini-coefficient. Lagos is in general much poorer than South Africa’s major cities, but almost nearly as unequal (UN-Habitat, 2012: 69). Related, Lagos is among the most unequal cities in the world (UN-Habitat, 2010: 73) with a Gini-coefficient of 0.64¹ in 2006 which is much higher than for example

¹ 1 is perfect inequality and 0 is perfect equality (UNDP, 2008 - 2009: 47).

Kinshasa (0.39) (UN-Habitat, 2010: 193). Nigeria's Gini-coefficient in 2004 was 0.49, rising from 0.43 in 1985 which is significantly lower than in Lagos. However, Nigeria remains among the countries with the widest gap between poor and rich citizens (UNDP, 2008 - 2009: 47).

The Human Development Index (HDI) is a well-known social indicator to describe both countries and cities globally. According to the UNDP in 2005, Lagos' HDI-number was a dreading 0.453 which is very low compared to the other megacities of Mumbai (0.602) and Dhaka (0.502). Lagos is only surpassed by the smaller Kinshasa (0.385) in the war-torn country of DRC. The list of 49 major cities worldwide is topped by global north megacities such as Tokyo (0.943) and New York (0.944) (Bourdeau-Lepage & Huriot, 2006: 19). Related to this area, the Economist Intelligence Unit (EIU), in 2012, ranked the world's major cities according to different indicators related to their socio-economic situation. The report researched upon the world's major cities' well-being in terms of stability, healthcare, culture, environment, education and infrastructure (Economist Intelligence Unit, 2012). The highest rated city is Melbourne, Australia (Economist Intelligence Unit, 2012: 6). The worst ranked city is Dhaka, followed by Port Moresby in Papua New Guinea. The report ranks Lagos as the third worst city to live in which indicates that: *"Most aspects of living are severely restricted"* (Economist Intelligence Unit, 2012: 4).

Another relevant social indicator regarding the inhabitants of Lagos is life expectancy. The life expectancy age at birth in Lagos was 55.5 for women and 52 for men which is slightly higher than the other significantly large city in sub-Saharan Africa, Kinshasa with a life expectancy of respectively 51 and 50. Other relevant cities to compare Lagos with are Dhaka which has significantly higher life expectancy with 60.9 years for women and 61 for men and Karachi which where life expectancy for women is 65 years and 63 for men. Other social indicators show that Nigeria and Lagos have an unusually high maternal mortality rates as: *"Nearly one in six maternal childbirth deaths globally occurs in Nigeria"* (Murdock, 2012) and:

"The situation has been made worse by the high fertility rate of females in Nigeria and low use of family planning methods in the country that is considered to be already over populated with over 150 million people struggling to survive on scarce resources" (Odeh, 2011).

The problem is for both Nigeria and Lagos that the hospitals are overcrowded by child deliveries as the institutions have decided to charge a fee for giving birth at the hospital. This has led to an

increase in unsafe births performed outside the hospitals which further has caused an increase in maternal deaths (Odeh, 2011). Besides the fees in hospitals, factors such as poverty, traditions, and inadequate health care are causing the high number of women dying during childbirth (Murdock, 2012). Nigeria has an average maternal mortality above 1,000 per 100,000 live births which is shared by merely 13 other countries in the world such as Somalia and Afghanistan. Furthermore, Lagos has the highest maternal mortality rate among the major cities of Nigeria. Statistics from UNFP estimate 400 women out of 100,000 died giving birth in Lagos in 2009. The local State Ministry of Health estimates that the number is more likely to be 650 women per 100,000 live births (Fabamwo & Okonofua, 2010: 56). In comparison for example Dhaka has a maternal mortality rate of merely 158 per 100,000 live births (World Health Organization, 2010).

There are both good and poor aspects of Lagos, and it is a very complex city which is often described as a paradox: “*Lagos is a city that is simultaneously growing, dividing, polarizing and decaying*” (Gandy, 2005: 52). The next section describes the demographics of Lagos.

4.2.1 The population statistics

Lagos is the fastest growing megacity in the world (The Economist, 2007; UN ESA, 2012: 24) and is the largest city in Africa competing with Cairo, Egypt. It can be difficult to estimate the actual population number of Lagos as the number varies depending on the source and what kind of definition of the city is used. Lagos is the only city together with Cairo, in Africa that can be compared to the Asian megacities regarding size. The term megacity implies as mentioned that the population is at least consistent of 10 million inhabitants (section 3.2.4). In 1950 Lagos had a population of approximately 325,000 people (Appendix III, 2013; Davis, 2007: 4), approximately 5.7 million in 1991 and 9.1 million in 2006 according to statistics from National Population Commission, Nigeria (Brinkhoff, 2006). According to the official website of Lagos State Government, the metropolitan area of Lagos had a population close to 15 million people in 2006 (Lagos State, 2011).

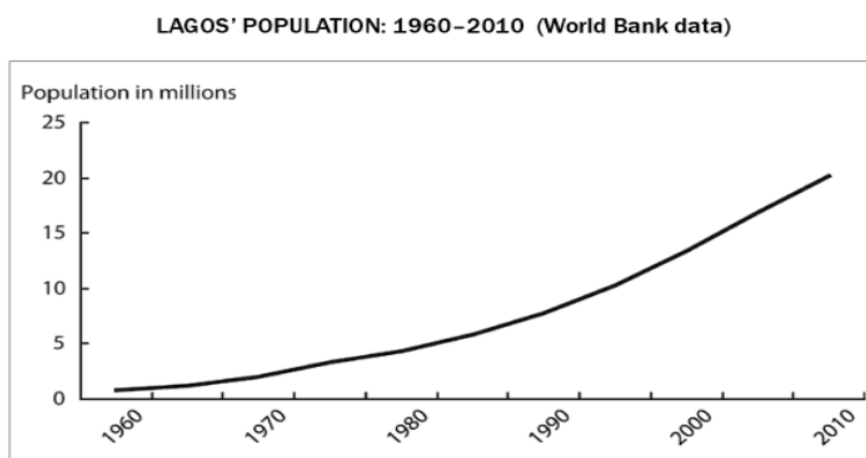
In 2010 Lagos’ urban agglomeration inhabited 10.6 million people (Appendix III, 2013; Knox & McCarthy, 2011: 121) and in 2011 UN estimated that urban agglomeration of Lagos was 11.2 million inhabitants (UN ESA, 2012: 8). The core city is likely to have approximately 8 million inhabitants (Deloitte & Planet Retail, 2012: 19). According to the UN-Habitat Lagos became a megacity between 2000 and 2005 (UN-Habitat, 2003: 267), and has grown more than 25 times its

original size from 1950 (Liotta & Miskel, 2012: 5). Lagos has the last two decades (1990-2011) grown with 4.08 per cent per year which is similar to the Asian cities of New Delhi in India (4.03 %) and Dhaka (4.02 %). Furthermore, Lagos has a fertility rate of 4.0 births per woman meaning approximately 275,000 inhabitants are added each year (Fabamwo & Okonofua, 2010: 56-57).

It is important to keep in mind when working with population statistics in a city such as Lagos that many citizens that are not accounted for, as most people in Lagos live and work in the informal sector. Thus, there is great dispute and confusion about how many people actually live in Lagos (Liotta & Miskel, 2012: 103): *“The actual population total is disputed between the official Nigerian Census of 2006, and a much higher figure claimed by the Lagos State Government”* (National Bureau of Statistics, the Federal Republic of Nigeria, 2013). Estimates from different sources range from 10 million to above 20 million inhabitants (Davis, 2007: 4; Demographia, 2012: 16; Kuvaja, 2007: 33; Liotta & Miskel, 2012: 103; Packer, 2006; Todaro & Smith, 2011: 315). In the high end of the scale, one source projects there will be 23 million people living in Lagos by 2015 (Davis, 2007: 5), The New York Times estimates more than 20 million people in 2012 (Rosenthal, 2012), and approximately 20 million inhabitants was according to the World Bank resided in Lagos in 2010 (Figure 5).

Lagos is by far the largest city in Nigeria, and the city is a giant compared to the other urban areas in the country. The top 5 of the cities: Lagos (11.5 million), Kano (3.4 million), Ibadan (3 million), Abuja (2.2 million) and Port Harcourt (1.9 million) (Demographia, 2012: 77-78). Figure 5 below shows the increase of Lagos’ population over 50 years.

Figure 5: The population of Lagos over time.



Source: Liotta & Miskel, 2012: 110

With a projected population growth of 3.71 per cent in average per year in 2011-2025 Lagos is the world's fastest growing megacity in the world. Lagos is projected by the UN to grow to the 11th largest city in the world with 18.9 million people by 2025 (UN ESA, 2012: 7). Another projection of the population number of Lagos is 25 million by the same year (Liotta & Miskel, 2012: 104).

Lagos is even growing faster than the fast growing megacities in East Asian countries like India, China, Bangladesh and Pakistan. However, the population growth rate in Lagos is like the world's population growth decreasing, with a growth rate at 6 per cent in the period of 1970-1990 and 4 per cent in 1990-2011 globally (UN ESA, 2012: 8). Furthermore, immigration has a great role in the expansion of Lagos. Every year, 600,000, or 10,000 people per week, migrate to the city in hope of a better future, however, most end up in the slum areas (Anderson, 2010: episode 2, 1min; Channel 4 News, 2008: 1min; James, 2008: 3; Packer, 2006). Combined with the number of children born in Lagos, there are almost 40 people added to the population of the city every single hour compared to London which has an hourly increase of 1.4 people (The London School of Economics, 2010: 4). Another, however more dramatic number, stems from CNN which claims that the number of migrants to Lagos is 6000 per day, or more than two million people per year (CNN, 2009).

4.2.2 The slums of Lagos

Lagos is a city manifesting a paradox. It is driving Nigeria forward as a vast economic engine while being a city largely dominating by poor slum areas. This section will explore the latter. The slums of Lagos are estimated to inhabit 6 to 8 million people which can be well above half of the population (Davis, 2007: 23). Others estimate that Lagos inhabits a slum population between two-thirds and three quarters of the entire population (Allianz Knowledge, 2009a; Anderson, 2010: episode 2, 1min; Campbell, 2012; IRIN Africa, 2006). Thus, the sheer number of slum dwellers in Lagos almost constitutes a megacity, and the city can be labelled as a *megaslum* (Channel 4 News, 2008: 5min; James, 2008: 39).

The slums in Lagos lack, like many other slum areas, basic social infrastructure. The population size and density have simply outpaced the capacity of these services (Kuvaja, 2007: 74). A major problem in Lagos is the massive lack of housing (Ademiluyi & Raji, 2008: 143). It is estimated that Lagos is short of more than five million houses to accommodate its current number of citizens (Ilesanmi, 2010: 247; see also UNFPA, 2011: 84). Other estimates show that there more

than a million illegal slum squatters in the city, and for those who have a home in Lagos, most households consists of merely one room (Kuvaja, 2007: 38). In the slum area of Shomolu, it is not uncommon that a family of five live together in a shared room of only 5 m² (Kuvaja, 2007: 76). In Lagos, many newcomers are forced to live under menial living standards as they are settling down in illegal slum areas which are mostly built on dumpsites, floodplains and swamps (Channel 4 News, 2008: 5min; James, 2008: 3). The city is struggling with massive social inequality and high density which among others are the result of the intense urbanisation. Like other megacities Lagos has many social structural barriers which obstruct equal and broad-based development to manifest (Kuvaja, 2007: 13, 38).

Density can, if used contextually correct, be used as an indicator for the socio-economic situation for example a country or a city. South Korea, Taiwan and The Netherlands are among the most densely populated areas in the world but also have high levels of living standards (Allianz Knowledge, 2009b). Opposite, the high density is a critical factor in the Gaza Strip in occupied Palestine as food and water are both scarce, and the little land area is massively overcrowded (Liotta & Miskel, 2012: 56). The density in Lagos is estimated to be two to three times higher than the most crowded cities in Europe and USA (Liotta & Miskel, 2012: 104). The density in the city varies widely from 4,000 to 26,000 people per km². Very characteristic for such a large and unequal city, people who live in the densest areas normally has low incomes, and in the less dense areas the citizens with high income groups are living in nice and green areas (Kuvaja, 2007: 35).

Related to the population density in Lagos, the state governor, Babatunde Fashola, stated in a lecture given at The London School of Economics that households in Lagos are by definition inhabited by large families: “...we enumerated 4.5 million households, and if you know Lagos, and if you know Nigeria, there is no household where you find less than four people on the average: husband, wife and at least two kids. And that was the figure in 2006” (The London School of Economics, 2010: 16min). Moreover, a characteristic term describing the housing situation in Lagos is called “Face Me, Face You” (Packer, 2006):

“Lifelong residents like Peju Taofika and her three granddaughters inhabit a room in a typical apartment block known as a “Face Me, Face You” because whole families squeeze into 7-by-11-foot rooms along a narrow corridor. Up to 50 people share a kitchen, toilet and sink — though the pipes in the neighborhood often no longer carry water” (Rosenthal, 2012).

Lagos is among the top ranking major cities in the world measured by density, and it is clearly a great problem in Lagos, especially in the slum areas (Liotta & Miskel, 2012: 104). Only four other megacities in the world are closer populated than Lagos, and are all located in Asia. More specific, Dhaka is the megacity in the world with the highest density (44,000 people per km²), mostly due to its low area size of 347 km². Then follows Mumbai (30,900 people per km²), Karachi (18,300 people per km²), Manila, Philippines (15,400 people per km²) and then Lagos with 12,700 people per km² (Demographia, 2012: 16). Thus, Lagos city had in 2012 an area of 907 km² and a density of 12,700 people per km² with a population of 11.5 million inhabitants (Demographia, 2012: 16). James (2008) estimates that the density in Lagos is 260 people per hectare (26,000 people per km²,²). However, this would necessarily mean that Lagos has more than 23.5 million inhabitants³, which is possible, though less probable. Moreover, the density in the slums in Lagos is between 790 and 1,240 people per hectare (79,000 and 124,000 people per km²,⁴). This means that the density in the slum areas is more than 3 times greater than the average of the rest of the city (James, 2008: 42). Despite the high density, the slums of Lagos cannot compete with the density of the slum area of Dharavi in Mumbai which has an estimated density of one million people per mile² (386,000 people per km²,⁵) (Tovrov, 2011). However, this is merely one of the slums in Mumbai which is not necessarily the average of all the slums in Mumbai. Furthermore, the largest slum area in Lagos is called *Ajegunle* and is the sixth largest slum area in the world (Davis, 2007: 28). In 1972 it had 90,000 people who lived on 8 km², and today it is home to 1.5 million people (Davis, 2007: 93; James, 2008: 42), and: “*where drainage canals are often so caked with sludge that even light rainfall quickly inundates entire communities, sweeping raw sewage into homes*” (Channel 4 News, 2008: 5min). In general, the slums in Lagos are struggling with critical problems such as access to clean water, overflow of garbage and sewage canals which all make life in the slum both difficult and dangerous (James, 2008: 42; Kuvaja, 2007: 37).

In large cities in the less developed part of the world there have often been attempts to eradicate squatter settlements as a simple solution to the “slum problem” (Packer, 2006): “*Encouraged by Western housing experts and development economists advocating neo-liberal policies, many cities tried to stamp out this kind of unplanned urbanization through large-scale*

² Conversion to km²: 100 hectare = 1 km². 260 people per hectare equal 26,000 people per km².

³ With a density of 26,000 people per km² and a size of 907 km², this would equal a population of 23.5 million people.

⁴ Conversion to km²: 100 hectare = 1 km². 790 people per hectare equal 79,000 people per km² and 1,240 people per hectare equal 124,000 people per km².

⁵ Conversion to km²: 1 mi² = 2.59 km². 1,000,000 people per mi² equal 386,000 per km².

eviction and clearance programs” (Knox & McCarthy, 2011: 174). An example in Lagos is the slum of *Maroko* where a quarter of million people resided was in 1990 completely destroyed. A more recent incident is the case of *Makoko*. In July 2012 the large slum area was torn down. Makoko had prior to its destruction been the subject in many articles and reports throughout the last decade due to its spectacular way of life, and had become one of the strongest symbols of the Lagosian slum (Onomo, 2012; UNFPA, 2011: 84). The area had almost 100,000 inhabitants, most of who lived in the typical shacks built on piles in the lagoon water and used canoes as transportation (BBC News Africa, 2012a). The government destroyed the area to clean up and modernise Lagos to prepare for the future of the city. An outright population bomb will lead to that 40 million inhabitants are expected to live in Lagos within the coming decades. The slum dwellers claimed that they were not warned about the demolishing plans (Euronews, 2012). Contrary, the government claimed that a letter was given to the inhabitants of the slum stating that the illegal housing built in the area constituted an: “...*environmental nuisance, security risk and an impediment to the economic and gainful utilisation of the waterfront*”, which further undermined Lagos’ status as a modern megacity (BBC News Africa, 2012a).

4.2.3 Lagos is working

In spite of the unsettling cases of slum and statistics presented above, Lagos does seem to have aspects of hope and prosperity represented by the culture and dynamics embedded in the city. Thus, the city remains “... *a vivacious, dynamic place, inhabited by socially mobile individuals pursuing the hope of a better life*” (James, 2008: 38). When researching upon Lagos, it is difficult not to get acquainted with the Dutch architect and Harvard professor in architecture Rem Koolhaas, who is among those few who believe that Lagos is well-functioning and is a city of the future with great potential (Koolhaas, 2003: 18min; Koolhaas, 2009). In 2003 he made a documentary about his visits to Lagos around the millennium, in which he explains the functionality of Lagos (Koolhaas, 2003). In the documentary he investigates how Lagos ‘works’ as there was no existing data on the subject. Koolhaas did not have any knowledge of Africa prior to his visits, which naturally made his project even more difficult. He started visiting Lagos in 1999 when democracy was re-instated in Nigeria after a long period of military rule. According to Koolhaas, Lagos consists of self-organised entities with a high level of autonomy, and where others see traffic jams, Koolhaas grasps the opportunities for the street vendors to be very efficiently selling their goods to people stuck in

traffic (Koolhaas, 2003: 11min & 19min). The city is in fact working because of such everyday improvisation skills and not due to structures made top-down (Koolhaas, 2003: 31min). Thus, Koolhaas is impressed by how the informal sector works in Lagos.

Koolhaas has during his visits in the Lagos observed improvements. To this, the native Nigerian TV-hostess challenges Koolhaas when saying that most Lagosians would probably say that they have not seen any sort of improvement. Interestingly, Koolhaas states that the people themselves want to keep a myth of Lagos as a city that is in an impossible situation, but there actually have been improvements and that the city is going to become like many other cities (Koolhaas, 2003: 42min). According to Koolhaas there exists an: “... *incredible skill of the city, incredible capacity to organise and the incredible power of potential latency in Nigeria, so if that can happen, then the city can also decide in five years to completely reinvent itself*” (Koolhaas, 2003: 51min). However, ten years after the city remains significantly unchanged.

Koolhaas is widely criticised due to his profound optimistic view on Lagos (Davis, 2007; Gandy, 2005; Packer, 2006). What is most striking in Koolhaas’ documentary is the neglecting of what Lagos suffers most from: the massive slum proportions, overpopulation and poverty. Instead Koolhaas praises how the city works in its own way. As a critique of Koolhaas, Matthew Gandy states: “*The informal economy of poverty celebrated by the Harvard team is the result of a specific set of policies pursued by Nigeria’s military dictatorships over the last decades under IMF and World Bank guidance, which decimated the metropolitan economy*” (Gandy, 2005: 42). Although the criticism of Koolhaas is just, he seems to be one of the only scholars to in fact be optimistic about Lagos, which is very important for the future of more than just Nigeria. In the next main section, overpopulation and Lagos will be analysed, followed by other explanations of the situation in Lagos.

5. OVERPOPULATION AND LAGOS MEGACITY

Thus this final main section will focus on the empirical aspects presented throughout the previous sections, and analyse these in relation to the issue of overpopulation and the neo-malthusian theory. The section is divided into three sub-sections drawing upon the three prior main sections. First, it will analyse the merging of neo-malthusianism and urbanisation with Lagos as the empirical case. Second, it will investigate beyond the scope of overpopulation as what else can be the explanation of the social situation in Lagos. Third and last, it will be discussed what can be done in order to control the population growth and make Lagos sustainable to the future.

5.1 Lagos: A neo-malthusian nightmare?

“Newcomers to the city are not greeted with the word “Welcome to Lagos.” They are told, “This is Lagos” ... ‘Nobody will care for you, and you have to struggle to survive’
” (Packer, 2006).

The massive number of inhabitants, the excessive influx of migrants, low living conditions, massive slum areas, and other low social indicators can together signify that Lagos is one of the greatest examples of urban despair today. Davis (2007) describes the urban corridor (section 3.2.4) between Benin City and Accra with 60 million people including Lagos: *“Tragically, it probably will also be the biggest single footprint of urban poverty on earth”* (Davis, 2007: 6).

Thus, this section questions if Lagos is becoming overpopulated to the extent where survival is an everyday question, and what is possibly more important, why it has come to this. In a neo-malthusian perspective, the problems in Lagos are caused by the added number of people. It is because of the vastly overcrowded city that social problems emerge, and the solution would be to reduce the number of added people in the city. This could be a neo-malthusian explanation and solution to Lagos’ social problems. This section consists of an analysis of what can be related to contemporary neo-malthusian checks such as low life expectancy, density, widespread poverty and so on. The question is thus if these low social indicators can be related to the increasingly large population in Lagos.

5.1.1 Analysing the statistics

Drawing from the empirical data about Lagos presented in section 4.2, the first subject to be elaborated on is the confusion about the actual size of the population in Lagos. As described in section 4.2.1 the number of people living in the city varies from UN statistics with approximately 11 million to World Bank data with more than 20 million. However, there is more to it than just confusion. The population distribution in Nigeria determines among others the distribution of the federal (oil) money and the balance of political power. The 2006 national census, the first since 1991, created numerous disturbances around the country and demonstrated how unreliable the population numbers in Nigeria actually are. The Nigerian constitution dictates that the population numbers decides how included the ethnic groups become in the political process, which is the underlying reason of why manipulating the censuses occurs in the country (Population Reference Bureau, 2006). Thus, the more people in a given state, the more power and money, the state receives.

Nonetheless, Lagos has been growing at an incredible speed the last decades (Figure 5) and has by a conservative estimate grown 25 times since 1950 (Liotta & Miskel, 2012: 5). However, a simple calculation show that the urban agglomeration of 11.2 million (UN statistics) is more likely to have grown 37 times its original size of 300,000 in 1950. Lagos has been growing very fast in the past and is projected to be the fastest growing megacity in the world in the period of 2011-2025 according to UN statistics (section 4.2.1). Lagos thus supersedes overcrowded cities such as Dhaka and Karachi, and is growing almost twice as fast as the perhaps best known slum-dominated city of Mumbai. Also, Lagos will succeed Cairo, Egypt as Africa's most populated city within the next coming years (UN ESA, 2012: 24), if this has not already occurred.

Furthermore, the slum proportion of Lagos is overwhelming, and the slum areas are overcrowded and experience lack of clean water, sanitation, low income, etc. Slums cause social exclusion where the inhabitants in the slums cannot afford or access basic social structures which leaves most of Lagos' population without such possibilities (Buckley, 2012: 67). Furthermore, the Lagos lagoon where many slum dwellers are resided is:

“...bad polluted thanks to years of dumping untreated human waste and is unsuitable for drinking or fishing. Yet fishing is one of the main occupations of city residents. During the rainy season, the lagoon floods and polluted saltwater spreads onto the land, fouling fields and crops. Moreover, the lagoon overflows and seawater from

storms has been gradually seeping in to the groundwater that is the source of the city's drinking water" (Liotta & Miskel, 2012: 102).

Moreover, in Lagos merely a quarter of the citizens in Lagos have access to water within a reasonable distance (200 metres). Considering UN-habitat's five points from section 2.4.2 defining slum areas, the sheer number of people lacking access to water (point 3) is overwhelmingly large compared to the others cities according to the UN-Habitat. In comparable cities such as Karachi, New Delhi and Kinshasa the percentage of inhabitants that have access to water are closer to being three quarters rather than merely one quarter in Lagos (UN-Habitat, 2003: 274-275)

Furthermore, many of the slum dwellers in Lagos earn almost close to nothing which makes it difficult to understand how these people manage to stay alive. This phenomenon is known as *the wage puzzle* (Channel 4 News, 2008: 2min; Davis, 2007: 156; Packer, 2006), and there is no time for breaks for the slum dwellers: "*If you sit down, you will die of hunger*" one Lagosian said (Packer, 2006). Related to the informal employment sector, architect Rem Koolhaas perceives the Lagosian street-selling as innovative and prosperous for the city. However, this could be argued as being a romantic idea of people that innovate and selling as a voluntary option, but in fact it is their *last option of survival* (Packer, 2006).

It is thus clear that there is a broken link between the population growth and economic growth in Lagos: "*The size of a city's economy, as a result, often bears surprisingly little relationship to its population size, and vice versa*" (Davis, 2007: 13). Thus, Lagos has simply been outrun by its vast growing population.

Also, the maternal mortality rate described in section 4.2 is relevant in a neo-malthusian aspect. Nigeria's maternal rate is approximately above 1,000 deaths per 100,000 live births which equals one per cent which is among the highest in the world. Lagos has a significantly lower rate that is between 400 and 650 deaths per 100,000 live births, or approximately a half per cent. The maternal mortality rate in a comparable megacity such as Dhaka (158/100,000) is significantly lower than in Lagos. The statistics from Lagos and Nigeria show that the region is struggling with an unusually high maternal mortality.

Furthermore, as described in section 4.2, GDP per capita in Nigeria are 2,500 dollars and 3,500 dollars specific in Lagos. Interestingly, statistics show that the English GDP per capita in 1850 was 2.719 dollars⁶ and in 1870 it was 3.670 dollars (Broadberry et al., 2010: 61). Thus, Lagos

⁶ GDP per capita levels in 1990 international dollars

is nearly 150 years behind England in GDP per capita as most of Africa. Moreover, other statistics show that the average income level of Lagos is twice as high as the national average. However, such statistics should be considered carefully in relation to the social conditions of Lagos as they do not include for example social infrastructure: “...it [the income level] *does not necessarily reveal the real purchasing power of Lagosian salaries nor does it reveal other aspects of poverty such as experiences of inadequate service provision, social exclusion, powerlessness or vulnerability*” (Kuvaja, 2007: 40).

As cities such as Lagos often consist of many poor people and few rich people, a high average GDP does not necessarily signify that the economic equality in Lagos is high too. This can better be understood by using the Gini-coefficient where both Nigeria and Lagos are among the most unequal in the world (section 4.2).

Furthermore, it can be argued that density is one of the strongest indicators to determine if a geographical place can be labelled overpopulated. If too many people live in one place it can easily compromise the well-being of the population. Density measures the boundaries of a city's physical space and is therefore pragmatic when researching upon the social well-being of a city such as Lagos. As described in section 4.2.2 the density in Lagos is similar the population statistics, widely disputed. The density of Lagos varies from 4,000 to 26,000 people km². The density in the slum areas is varying between 79,000 and 124,000 people per km². In perspective, Manhattan in New York has a density of approximately 27,000 people per km² (Onboard Informatics, 2013). Thus, the slums of Lagos are four times as dense as Manhattan, despite the lacking opportunity of vertical construction. The density of the slums in Lagos is critical to address, if the people in the slums of Lagos should be able to uphold decent life conditions. It is a sign of a situation in Lagos where population have exceedingly superseded the housing capacity and is therefore an indicator of Lagos is struggling with what could be defined as overpopulation. Thus, the issue of housing is another population pressure issue related to UN-Habitat's list of what constitutes a slum (section 2.4.2). Point 2 which states that no more than three people should share the same room, is also critical, as Lagos is more than five million houses short, which means that people in the slums often are cramped together in small rooms where 7 or 8 often share one room. In the slum of Isale Eko, many people even have to sleep outdoors due to the lack of housing (Packer, 2006). The previously described Makoko-case addresses point 5 as the inhabitants in this slum area were evicted due to city planning and thus are victims of insecure tenure. Point 4 regarding toilet sharing, is completely disproportionate in Lagos when 50 people share the same toilet and where merely 0.4 per cent of

the residents have sewage connection. Such numbers can in a neo-malthusian perspective signify that the slum of Lagos is indeed overpopulated as the number of people largely supersedes the available resources.

Furthermore, as described in section 4.2 the EIU report from January 2010 shows that Lagos was ranked as 136 out of 140 (Economist Intelligence Unit, 2010). The report confirms Lagos is doing very poorly regarding *Prevalence of petty crime*, *Prevalence of violent crime* and *Threat of civil unrest/conflict*. Less concerning areas are *Threat of military conflict* and *Threat of terrorism* (Economist Intelligence Unit, 2010: 74). This shows that Lagos and Nigeria are more likely to experience internal than external conflict. The EIU reports (2010, 2012) demonstrate that Lagos is struggling with deep social problems. Additionally, Lagos is known to be one of the most dirty and most unhealthy cities to live in worldwide which can help explain the low life expectancy (Kuvaja, 2007: 37).

5.1.2 Is overpopulation the explanation?

Even though Thomas Malthus' concerns about population growth exceeding food production did not manifest globally, his worries of overpopulation can be related to the reality of places in the developing part of the world. For example in third world cities that are struggling with overpopulation, overurbanisation, poor living conditions and massive slums areas. In cities such as Lagos, Mumbai and Dhaka slums dominate the city picture, rather than what should be the gains of urbanisation such as economic growth as seen throughout the developed world's history. Inspiration for the thesis analysis is as mentioned earlier, found in terms such as *Malthusian Cities* (Buckley, 2012) and *Neo-malthusian nightmare* (Sisk, 2004: 11). Rapid urbanisation, poverty, diseases, famine, environmental degradation and violence are attached to such terms. It can be argued that the term "neo-malthusian" is more consistent with the reality today than the classic malthusian term, as the societal situation in Lagos is different from the one Malthus' lived in, and the analysis involves more than merely food production. Thus, large urban areas can connect population pressure, alarmingly low living conditions and overurbanisation which are revealed by social indicators in slum areas:

"In the worst cases, overcrowding, inadequate sanitation, and lack of maintenance promote extremely high levels of illness and infant mortality" (Knox & McCarthy,

2011: 174), and: *“A greater incidence of sickness and death is closely associated with housing that is crowded, poor built, located in unsafe areas and inadequately serviced by water facilities, sewage treatment, and -garbage disposal.”* (Knox & McCarthy, 2011: 180).

The situation poor urban areas can be described as horrible as many of the slum dwellers' only choice is to: *“...line up at the boreholes to pay five cents and fill their plastic buckets with contaminated water, which some of them drink anyway”* (Packer, 2006). Less than half of the households in the less developed countries have water piped into their homes, many of whom are typically the residents of the most affluent neighbourhoods (Knox & McCarthy, 2011: 175).

Furthermore, infectious diseases occur more frequently in urban slums than other places, and are often infested with outbreak diseases which can jeopardise the rest of the city (Brown et al., 1999: 59). Furthermore, slums can be considered as undermining development, thus keeping cities in a malthusian trap without progress or development in living standards (Buckley, 2012: 67). According to the UN there are some specific health issues related to urban areas such as malnutrition and poor sanitary conditions, while also being exposed to: *“... stress arising from overcrowding and poor working conditions”* (Knox & McCarthy, 2011: 176). Overcrowding in cities is also connected to a higher risk of dying than if living in surrounding rural areas due to higher rates of diarrhea, respiratory infections and tuberculosis. Also, children in such urban squatter settlements are 50 times as likely to die before the age of five compared to children in the developed part of the world (Knox & McCarthy, 2011: 179). Furthermore, most slum dwellers work and live within the informal sector where:

“It is difficult for people ... to make the transition to the more prosperous formal sector of the urban economy. Modern technology, which is relatively easily available to those in the formal sector, is virtually inaccessible to most people in the informal sector. This situation presents particular problems for cities that are experiencing overurbanization. These include Sub-Saharan Africa's only megacity, Lagos” (Knox & McCarthy, 2011: 148).

Thus the informal sector, overurbanisation and overcrowded slum areas are together keeping the slum dwellers in a contemporary form of malthusian trap of poverty with little prospects of

advancing up the social ladder to reach the formal sector with job security, decent working conditions and a good salary, despite its every increasing numbers.

Furthermore, it is significant to investigate why cities such as Lagos are struggling with extraordinary low living conditions. Buckley (2012) points to three reasons why “malthusian cities” emerge: urbanisation has changed, international migration are too strict, and income levels of the urban dwellers are simply too low to pay for social infrastructure (Buckley, 2012: 38). That urbanisation has changed refers to the high rate of rural-urban migration which in the global South is often pushed rather than pulled, and that the developing countries today are not the same paths of urbanisation as the old global North followed when they experienced the urbanisation process (Buckley, 2012: 39). Furthermore, urbanisation rates are today higher than in the past which can lead to overurbanisation (Lovett, 2008: 461; Todaro & Smith, 2011: 313). Overurbanisation is exemplified when: “...nations... lack a sufficient level of development to provide adequate employment and housing for citizens migrating to urban areas” (Bradshaw, 1985:74). That international migrations is too strict indicates that many people in the developing countries are stuck in their part of the world as they do not have resources or legal permission to migrate to the West to gain a better life. If migrants from areas such as Africa would be able to migrate to Western countries, they could increase their living standards significantly. However, this could also enhance of the problem of brain-drain (Buckley, 2012: 50). The cost of social infrastructures in cities such as Lagos is too high and therefore unaffordable to most of the population. Social infrastructures include areas such as health services, hygiene and basic needs such as clean drinking water and sufficient food, reliable energy sources, education and housing. All which can be related to the aspects of population pressure. Thus, this is Buckley’s explanation of why overcrowded cities in the global South emerge.

Interestingly, what scholars like Buckley (2012) and Liotta and Miskel (2012) bypass completely is the impact of the neo-liberal world agenda which began in the late 1970s, and is accredited to a large portion of the socio-economic problems in the developing parts of the world, including Lagos (Kuvaja, 2007: 102). For example, the massive rural-urban migration is naturally linked to the neo-liberal policies which have dismantled state intervention and have left many poor rural residents without other choice than to be pushed into the big city. This is further elaborated on in section 5.2.1. Liotta and Miskel (2012) instead focus on corruption and government incompetence as the main causes for poverty in for example Lagos. Their concerns are related to that Lagos might become a menace to the Western freedom paradigm as it is becoming an

overpopulated safe-haven for terrorism. They are also uncritical towards the international responsibility of dividing the world into a rich North that exploits the natural resources in the poor South, which should not be ignored when analysing the situation in city such as Lagos. Nonetheless, the authors decide not to incorporate the neo-liberal world order into their analysis.

Before the neo-liberal era, Lagos was in early 1960s a prosperous city which was: “...a bustling capital of just under a million, with one of the most vibrant cultural scenes in sub-Saharan Africa” (Gandy, 2005: 44). In his movie Rem Koolhaas also describes Nigeria as a country moving forward during the 1960s and 1970s (Koolhaas, 2003: 18min), and Lagos as a modern city moving forward, and was once a nice place as a TV-hostess in the documentary puts it (Koolhaas, 2003: 25min). According to the TV-hostess, since the 1970s, where things were good and prosper, it has become unsafe to be in Lagos, where no one would get on a bus unless they did not have another choice. She remembers how she as a child enjoyed the stable resources of water and light but today neither the phone lines, water nor electricity come naturally anymore (Koolhaas, 2003: 23min, 25min, 39min).

The image of Lagos and Nigeria as prosperous places has changed due to periods of military rules and neo-liberal economic management (Gandy, 2005: 44-46). Packer (2006) notes there once was a master plan for the city of Lagos, but it is a nothing by a ghost today, thanks to the military rule starting in 1983 which complete disregarded a structured plan for the development of the city. Despite the reinstatement of democracy in 1999 in Nigeria brought a new plan for Lagos, there has been little improvement since then (Packer, 2006).

Related to the push from rural to urban is the fact that the population of Lagos has throughout the last half century been steadily rising regardless of the economic situation (Figure 5). Davis asks an important question, related to the population issue: “*How could Lagos in the 1980s grow twice as fast as the Nigerian population, while its urban economy was in deep recession?*” (Davis, 2007: 14) and continues:

“Indeed, how has Africa as a whole, currently in a dark age of stagnant urban employment and stalled agricultural productivity, been able to sustain an annual urbanization rate (3.5 to 4.0 percent) considerably higher than the average of most European cities (2.1 percent) during peak Victorian growth years?” (Davis, 2007: 14-15).

Keeping in mind that: *“Most cities of the South, however, more closely resemble Victorian Dublin...”* (Davis, 2007: 16), Lagos can be described as being an urban chaos without many positive aspects. James (2008) describes Lagos one way: *“a swampy agglomeration of crowded, substandard housing, flooding, and disease, with no facilities or sanitation, receiving an incessant stream of migrants from depressed rural areas who expect little and receive less”* (James, 2008: 37). Liotta and Miskel identify the largest issues in Lagos to be poor infrastructure, inequity, poor governance, anomie and violence (Liotta & Miskel, 2012: 102, 121), whilst leaving out other underlying reasons such as neo-liberal policies and the context of Nigeria as a country with deep ethnic strifes and political instability. One could believe that population pressure is the causing problems in Lagos and with that follows poverty, diseases and indeed considerable proportion of slum areas. The pressure from population growth creates further strain on already alarming issues such as corruption and crime as a documentary describe it (Channel 4 News, 2008: 3min).

Furthermore, the slums of Lagos have become very poor as 53 per cent of the households are below the poverty line (section 4.2), and that the people living there are once again trapped in the malthusian spiral of very poor human conditions. Moreover, Darwin’s evolution theory which originally was inspired by Malthus is used in Lagos’ slums where the conditions, according to footage material from Channel 4 News, are dominated by the rule of survival of the fittest, where most fight an everyday battle to survive (Channel 4 News, 2008: 7min). This is today the cynical reality of Lagos. As the documentary states:

“... by then [2020] it [Lagos] may be the biggest single footprint of urban poverty on earth. The UN Population Fund has issued a stark warning about the unprecedented move to cities taking place across the world. If we plan ahead we will create conditions for a stable world they say. If we don’t and don’t find education, jobs and houses for people in cities then these populations will become destructive to themselves and others” (Channel 4 News, 2008: 9min).

The latter indicates that is a possible malthusian positive check ahead in cities such as Lagos if population growth continues to outgrow the economic and social capacity. Recalling the pre-Industrial society caught in the malthusian trap (section 3.1.1), Packer (2006) paints a picture that resembles both Victorian London and Lagos: *“...darkness, dirt, pestilence, obscenity, misery and early death”* (Packer, 2006). Thus the problems in Lagos are seemingly cause by the neo-malthusian theory of population growth.

To sum up this section, there are several statistics presented throughout the thesis which indicate that Lagos is struggling with severe social problems and has to prepare for a future of perhaps three or four times as many people. Though, what is essential for this thesis is to investigate how the problems in Lagos are related to overpopulation. Lagos is a population magnet and is the world's fastest growing megacity. Hundreds of thousands of people migrate to the city every year and most of them end up in the slum areas of Lagos. If looking through the optics of neo-malthusian issues the problems in Lagos would mainly be caused by a demographic pressure where the social structures are simply overrun by the sheer number of added people, and where the number of slum dwellers largely exceeds the number of non-slum citizens. Thus, Lagos could already be approaching a modern kind of neo-malthusian trap, where the insecure informal sector is employing up to 60 per cent of the urban population (Packer, 2006), and where the majority in a city as Lagos live in slum areas surviving with less resources than what seems humanly possible meanwhile population numbers continue to rise. And not to forget, this not only affects one or two small communities, but concerns up to three quarters of Lagos' 12-20 million inhabitants. A neo-malthusian future nightmare in Lagos can be described as: *"The vision of twenty-three million people squeezed together and trying to survive, like creatures in a mad demographer's experiment gone badly wrong"* (Packer, 2006).

However, as described on a socialist website: *"Even if population growth were to end today, worsening rates of starvation, the growth of slums, and ecosystem collapse would continue more or less unabated"* (Williams, 2009). The two quotes end this section and capture the two sides of the case well. On one side, the problems in Lagos seem to be related to the neo-malthusian theory of that population growth, mostly driven by an extreme migration to the city, causes the social problems. The city has simply been overrun by (poor) people, which has caused an explosion of the informal sector and slum areas which then has led the social infrastructure close to collapsing. On the other side, as the second quote addresses, the population growth has in reality nothing to do with the problems in Lagos. It is merely a consequence of other factors, and if the population growth in Lagos decreased or even stopped it would not necessarily mean improvements of living standards in the city. The next section will conclude the neo-malthusian approach on Lagos, and then followed by a wider context of neo-liberalism and the Nigerian context, in trying to understand what has happened to Lagos.

5.1.3 Revising neo-malthusianism

The decision of viewing Lagos in a population perspective was decided as the city is one of the largest and fastest growing in the world. From the outside it could seem as population growth could be the causing factor for the social problems in Lagos. Families of five often live in a single room and slum dwellers often live in areas with open sewage. Thus, at first glance, overpopulation can seem to be the main problem in Lagos considering the high rate of urbanisation, massive rural-urban migration, the high level of density, scarce resources, and slum dwellers living side by side the city's sewage system.

However, it is difficult to avoid the extensive criticism when researching within the neo-malthusian theoretical universe. In fact, most of the neo-malthusian literature is presented through its critics rather than by self-proclaimed neo-malthusians themselves. A critic of neo-malthusianism is Frederick Buttel who believes that the theory does not recognise for example hunger as being caused by political issues but by population growth itself. He notes that the theory is not critical towards and tends to consider capitalistic market institutions, such as structural adjustment, trade liberalisation etc. as benevolent factors (Buttel, 2000: 16). Rao (2004) believes that neo-malthusianism is theoretically a logical misconception and refers to that there are no empirical evidence that support that population growth is basis for either explanation or solution to poverty and other social problems in developing countries (Rao, 2004: 116). Rao states that: *"Malthusianism and neo-Malthusianism offer an excessively simplistic, but appealing, understanding of the complex relationship of resources and population an understanding which has proven to be a theoretical red herring"* (Rao, 2004: 117). Thus, neo-malthusianism is per se appealing due to its simple nature in explaining a complex reality.

Malthus stated in his famous essay that because of the natural laws of our existence, the problem of overpopulation can be deduced logically, which thus would show the same results every time. He explains that human societies, because of limited food production and the urge to reproduce, inevitable will be overpopulated. Thus, it is the growth of population itself that is causing the misery and vice, as he calls it throughout his essay. The neo-malthusian paradigm of overpopulation causes misery, to use Malthus' original term, is arguable too simplistic to conclude. However, what makes Malthus seemingly interesting in the case of Lagos is that overpopulation is today a reality in Lagos when considering the empirical data collected. Even though, Rao (2004 and 2010) tends to disregard that overpopulation has anything to do with our reality, it is difficult to

understand how Rao can dismiss the concept of population pressure as an important factor when analysing upon social problems.

According to critics of neo-malthusianism and malthusianism, overpopulation is a consequence rather than a cause, and it is difficult to disagree with this criticism fundamentally. However, when considering the reality in Lagos, it is difficult to completely disregard the neo-malthusian perspective. When a home, consisting of merely one room and where more than five family members lives, it is difficult not to consider that overpopulation could be a co-causing factor to for example wide-spread diseases in the slums of Lagos. As neo-malthusianism has its clear limitations in explaining the situation in Lagos, the next section is investigating other underlying factors of why Lagos has become a city struggling with so much misery and that many people.

5.2 A more complex reality

5.2.1 Neo-liberal policies

If the simplicity of neo-malthusian theory is not significantly theoretical strong to explain the situation in Lagos, this thesis must consider a more complex reality in both Lagos and Nigeria. Thus, it turns towards a wider perspective of the economic structure: the neo-liberal world agenda, personified in leaders such as Reagan and Thatcher (Rao, 2004:114). The greater global economic structures are manifested in neo-liberal free marked structures and globalisation which according to much literature have caused increased poverty and inequality since the late 1970s. The free marked was responsible for that agriculture in developing countries could not compete internationally, and many farmers were forced to seek employment in urban areas (Knox & McCarthy, 2011: 35; STWR, 2010: 13). Throughout the 1980s and 1990s many developing countries, including Nigeria in 1986 under the military rule (1979-1999) became subject to what was called Structural Adjustment Programmes (SAPs), which was implemented largely to deal with the countries' debt (Adejumobi, 2011; Davis, 2007: 152; Omeje, 2006-2007: 47).

These programmes were led by IMF and the World Bank who are accused by many including the United Nations as the main factor for widespread poverty, inequality, low health conditions etc. in developing countries (Davis, 2007: 15; Gandy, 2005: 46; Rao, 2004: 9,32; STWR, 2010; UN-Habitat, 2003: 3). Despite the purpose of controlling the developing countries' debt it is largely

because of the structural adjustment that for example Uganda pays twelve times as much on debt per capita than on the struggle against HIV/AIDS (Davis, 2007: 153). The neo-liberal approach has further widened deep economic inequality in the world. In 1960 the 20 per cent poorest of the world's population received 2.3 per cent of the entire global income. This was in 1991 decreased to 1.4 per cent and around 2004 it was further shrunk to 1.1 per cent (Rao, 2004: 114).

Related to Lagos and the widespread slum areas in the city, the World Bank and IMF-critical organisation Share The World's Resources (STWR) explains in the report *The Seven Myths of 'Slums'* from 2010, that slums are among other things products of structural adjustment. These programmes caused massive inequality in cities in the global South, and were a part of the advancement of the neo-liberal agenda world and the withdrawal of Keynesian state intervention (Davis, 2007: 154; STWR, 2010: 14). STWR understands that overpopulation is commonly viewed as a possible explanation of why slums exist, however rejects it as a causing factor. Instead the organisation points to other underlying reasons:

“But the real problem is rooted in outdated institutional structures, inappropriate legal systems, incompetent national and local governance, and short-sighted urban development policies...the existence of slums is not an inevitable consequence of overpopulation, but a result of the failure of policy at all levels – global, national and local – and the adoption of an international development paradigm that fails to prioritise the basic needs of the poor”(STWR, 2010: 5).

A quote from the Challenge of Slums 2003 report from the UN states is clear on this: *“The main single cause of increases in poverty and inequality during the 1980s and 1990s was the retreat of the state”* (UN-Habitat, 2003: 43). The distribution of the wealth is controlled by the neo-liberal market mechanisms and favours the rich rather than slum dwellers, whose numbers have rapidly increased since the 1980s (STWR, 2010: 4-5). Neo-liberal policies of deregulation and privatisation of public services are according to STWR undermining social welfare which undermines the state to meet the needs of the slum dwellers who cannot afford to buy or rent a decent home, attend medical care, go to school or access basic sanitation facilities (STWR, 2010: 10).

STWR believes that as long as the economic policies are focusing on economic growth instead of the needs and rights of the poor, slum will continue to grow unchanged (STWR, 2010: 6). Thus, SAPs are viewed as the main cause for the misery which today is manifested in cities like Lagos. Countries such as Nigeria were in deep debt in the 1980s and therefore committed

themselves to these structural adjustments which essentially meant less state intervention, free market expansion and privatisation of public services. This meant that the former agrarian welfare states needed to dismantle its structure (de-agrarianisation), which was taken over by heavily subsidised transnational food corporations from the global North, which the small local farmers could not compete with (Davis, 2007: 15,153; STWR, 2010: 14). The SAPs led many cities into a vicious circle of rural-urban migration, decreasing formal employment, falling wages, which Lagos and other cities in developing countries in the global South are largely a product of today (Davis, 2007: 155).

According to a Nigerian scholar, Fidelis Balogun, the introduction of SAP in the 1980s was similar to the impact of a natural disaster which completely destroyed Lagos' development. The middle-class disappeared and become poor, the few rich became richer, and brain-drain to richer countries became reality (Davis, 2007: 152). Also, Davis (2007) draws a thick clear line of urban slum growth in developing countries back to the introduction of SAPs. Thanks to these programmes, both rural-urban migrants and urban dwellers living in the cities became the new urban poor (Davis, 2007: 152). According to Davis it was a neo-liberal world economy led by the USA and IMF who manufactured a depression in urban Africa and Latin America which in fact was more critical than the Great Depression (Davis, 2007: 155).

In the 1980s the Nigerian economy took a negative turn. Because of its oil-dependency and the fall in global oil prices Nigeria needed to undergo the infamous SAP (Adejumobi, 2011: 140). During a SAP (1987-1992) real GDP in Nigeria increased 40 per cent. However, most this increase (75 %) only benefitted the 30 per cent richest, while income among the 10 per cent poorest in Nigeria fell by 30 per cent. During the period, the inequality (the Gini-coefficient) rose by 20 per cent in the country. In a broader period (1980-1996), the proportion of Nigerians living in poverty (below 1.40 dollars) increased from 28 per cent to a staggering 66 per cent. This meant that 67.1 million people in Nigeria at that time lived in deep poverty (UN-Habitat, 2003: 39).

After the military regime, which ended in 1999, the structural adjustment approach was discarded by the new democratic rule. However, it was only to be replaced by the new Poverty Reduction Strategy Papers (PRSP), and by "home grown" neo-liberal programmes labelled National Economic Empowerment and Development (NEEDS), which among others aimed to increase the size of the private sector in Nigeria (Adejumobi, 2011: 145-148). Thus, the neo-liberal approach did not disappear along with the military rule, and Nigeria remains best described as a neo-liberal country (Adejumobi, 2011: 2, 8). The situation can be described as such:

“The neo- liberal state privileges capital accumulation over and above the welfare of the people, as the most important and ultimate goal is for oil and petro- dollar to flow unhindered no matter what the social cost may be... crises, conflicts, and contradictions in society have accompanied neo- liberal reforms in Nigeria. The gains of neo- liberal reforms are disproportionately distributed and highly skewed against majority of the people. A neo- liberal state is ideologically anti- social and anti- welfare, which by its very essence is conflict based” (Adejumobi, 2011: 14).

Thus, much literature accredits neo-liberal policies to much of the slum and poverty in many places around the world. However, in a contextual valid analysis, it must also be considered that Nigerians should be rich on oil, the massive corruption level in the country and the ethnic, religious and political fragmentation that seems to divide Nigeria. This is explored in the section below.

5.2.2 Nigeria: Oil, corruption and political turmoil

As this thesis aims to investigate the social dire situation in Lagos it further needs to consider the megacity in a Nigerian context. Many of the problems in Lagos can be connected to the complex situation in the country, and it is no surprise that Lagos is struggling with dire social aspects when considering the situation in Nigeria.

Nigeria’s economy has been rising steadily the last decade. GDP annually growth rate was in 2000 2.9 per cent and increased to 4.9 per cent in 2004 (Falola & Heaton, 2008: 212). In 2010 Nigeria’s GDP growth rate was incredible 7.8 per cent compared to the rest of the world with a little more than 4 per cent and the sub-Saharan region with 5.0 per cent. Compared to countries in sub-Saharan Africa, Nigeria is one of the leading countries measured in total GDP. Meanwhile, the country’s GDP per capita in 2011 was 2,500 dollars which is close to the sub-Saharan average at 2,350 dollars per capita. Thus, Nigeria remains a poor country compared to global standard which measured in GDP per capita was 11,600 dollars in 2011 (Appendix I, 2013). Nigeria generates most of its GDP from agriculture. However, this sector has been largely neglected the last decades (Adejumobi, 2011: 139). Nonetheless, Nigeria has experienced its economy flourish the last years, mainly because of its oil resources. However, the high economic growth should be considered with caution as an analytical factor, as the high oil prices in practice do not benefit the average Nigerian

significantly, as finances from the country's oil industry, in the end, probably find its corrupted way to the already affluent, rather than the poor average worker (IRIN Africa, 2006; Pedersen & Sand, 2010). UNICEF describes the situation in contemporary Nigeria as a country of great contrast, as it one of world's largest oil producers meanwhile 71 per cent of the population survive with less than a dollar a day and 92 per cent with less than two dollars a day. Though, the country's GDP may be rising, the inequality becomes increasingly greater. Thus, Nigeria is one of the poorest countries in the world while inhabiting the largest population in Africa (Adejumobi, 2011: 12).

Oil is without a doubt vital for the Nigerian economy. More than 90 per cent of Nigeria's income from export derives from the country's oil industry (Liotta & Miskel, 2012: 116; Shaxson, 2007: 1124; UN-Habitat, 2003: 39). Oil furthermore accounts for 80 per cent of government revenues (Omeje, 2006-2007: 44). The irony in this context is that Nigeria often experience fuel shortages (Adejumobi, 2011: 161). Nigeria should be rich from the oil revenues but instead the Gini-coefficient rankings conducted by the World Bank and the UN, places Nigeria among the 30 most unequal countries in the world, with a Gini-coefficient at 0.48 in 2010 (Index Mundi, 2010). Oil has become a curse or "a paradox of plenty" for Nigeria. Nigeria has between the start of the oil boom in 1970 and 2000 earned approximately 320-350 billion US dollars on oil, but in during the same period the percentage of the population that is defined as poor by the IMF rose from 36 in 1970 to 70 in 2000.

Another critical issue related to oil revenues, is that governments in countries such as Nigeria largely tax oil companies and not their own citizens. Therefore the relationship between the government and the people becomes unhealthy, as the government has no responsibility to the people, thus lacking what is, in philosophical terms, called a social contract between state and citizens. Tax collection is an important factor when creating strong and democratic institutions, which is clearly not the case in Nigeria (Nairne, 2007: 10; Shaxson, 2007: 1128). Furthermore, the massive oil findings and exports have caused a high dependency on oil in the Nigerian economy which is related to that: "*... there is evidence and analysis to support the notion that oil-dependent states tend to be more corrupt and more conflicted than others...*" (Shaxson, 2007: 1129). Shaxson (2007) connects the oil curse to government corruption. The simple answer to the absurd situation in Nigeria is corruption which means: "*... that large tides of oil money, for example, are simply too much for institutions to absorb*" (Shaxson, 2007: 1126).

Corruption⁷ is notoriously one of the most dominating problems in Nigeria and is disastrous for the political system and the economic development. Corruption is embedded in all levels of Nigeria's political life, in governments and all sectors of society (Adejumobi, 2011: 161). Corruption is estimated to have caused more than 380 billion dollars to disappear since oil sales began in the 1970s, which is more than the aforementioned oil earnings (Adejumobi, 2011: 157-158; Adekoya, 2011; Brock & Cocks, 2012). Massive corruption must therefore be considered when locating the root causes of the dire situation in both Nigeria and Lagos (Todaro & Smith, 2011: 316): *"Corruption and conflict are the consequences of states weakened by structural adjustment programs ... corruption follows World Bank privatization programs in Africa"* (Meredeth Turshen in Rao & Sexton, 2010: 262). A native professor describes the current Nigerian economy as such:

"Several international organizations have described Nigeria's mono-economy as one that is hobbled by political instability, corruption, inadequate infrastructure and poor macroeconomic management; an economy that our leaders, both military and civilian, despite promises by successive governments have failed to diversify since the discovery of crude oil in Nigeria shortly before our independence from British rule... the government of Nigeria and a handful of corrupt politicians and their cronies have pilfered our coffers, and left the country with a lower standard of living in 2010 than it was in 1960" (Yekpabo, 2010).

What is even more paradoxically about the Nigerian economy, is that the country receives a great sum of foreign aid. According to the UN, Nigeria was among the top 10 receivers in Africa in 2008 with an estimated 1.2 billion dollars (United Nations, 2010: 3).

Furthermore, slums are a vast problem not only in Lagos, but in all of Nigeria according the UN-Habitat. The political urban governance has since the 1950s been divided into governmental institutions: federal, state and local government. Power of the local governments largely decreased from 1960s to the 1980s, and slum creation was by governments in Nigeria considered as an

⁷ Corruption is a broad and for many an abstract concept. It can mean abusing public roles or resources for private gains, and difference between greater and petty in level. Corruption can entail acceptance of money or similar for awarding contracts, violations of procedures to advance personal interests, including kickbacks from development and aid programs or multinational corporations, payoffs for legislative support; the diversion of public resources for private use, to overlooking illegal and unconstitutional activities, or intervening in the justice process, nepotism, common theft, over-pricing, creating non-existing projects, pay roll padding, tax collection and tax assessment frauds, insider trading, bribery, extortion, embezzlement, and fraud (Adejumobi, 2011: 159)

inevitable reality, which thus led to a massive growth in slums. Despite initiatives from the late 1980s to make the local governments to create strategies and projects in order to cope with the increasing slum areas, corruption and political conflicts made these attempts unsuccessful. The UN-Habitat further points to that conflicts of jurisdiction, the lack of coordination between levels of governments, changes in the bureaucratic system and low priority for funding urban planning have all affected the outcome of poor urban structures in Nigeria, which surely can explain some of the reasons to why slums constitute three-quarters of Lagos (UN-Habitat, 2003: 211).

Moreover, the geo-political scene in Nigeria is very complicated as it involves many different aspects due to a high level of fragmentation within the country. Traditionally, Nigeria is divided into a poor North and a more developed South (BBC News Africa, 2012b). On one side, there exist conflicts related to religion and ethnicity, and on the other side there is the question of oil revenues and corruption. The entire historical political and economic situation in Nigeria is too broad to go in depth with, but it is important to understand the contextual situation which Lagos is located within. Thus, Nigeria has historically been a highly divided country. The country is divided into 36 states with high level of autonomy, and is largely divided into a largely Muslim part in the north and a largely Christian part in the South. Furthermore, there are four main ethnic groups in the country of a total of 250 smaller ethnicities (Population Reference Bureau, 2006). The four main groups are: Hausa in the north, Fulani, also in the north, Yoruba in the southwest, and Igbo in the southeast. This broad religious and ethnic division of Nigeria is largely why the country is divided into that many sections (Nairne, 2007: 7).

A Nigerian professor recently even expressed his concerns about the country being on the verge to a second civil war due to escalating religious tensions between Muslims and Christians, and the many ethnic groups spread over the country. Though, tensions between different ethnic groups are not new in the post-military period in Nigeria (Adejumobi, 2011: 13). Especially the religious extreme Muslim group Boko Haram is a threat to the country's stability (BBC News Africa, 2012b; Vanguard News, 2013). Nigeria was according to a survey the most religious country in the world, in which 90 per cent of the population were active practitioners of a religion (BBC News Africa, 2012b). This signifies a natural tension that can emerge when two parties of Muslim and Christians have to share such an oil-rich country. There are also violent tensions in the oil-rich Niger delta in the Southeast part of the country which complicate the situation in the country even further (Nairne, 2007: 3). There are moreover debates of dividing the country into two

or even three separate countries due to the tensions between the ethnic and religion parties (Adekoya, 2012). As we recently observed, Sudan split up recently, perhaps Nigeria is next.

In a Nigerian context, Lagos is very important for the future of the country. The city is the migrant magnet and economic centre of Nigeria. Perhaps the latter induce the former. Lagos is located in a country that, despite its rich oil resources, has a remarkable poor economic and political history which is largely caused by neo-liberal programmes, corruption and military ruling. It is clear that the dependency on oil and de-agrarianisation which has led to a poor population in Nigeria is well reflected in Lagos as the city, which despite its higher GDP income, is struggling with a massive proportion of slum dwellers where most fight daily to survive.

As formerly mentioned, more than 600,000 people moves to Lagos every year, and the city is the world's fastest growing megacity. As Lagos is the economic and cultural nerve-centre of Nigeria, the city is often described as a national melting pot or a "mini-Nigeria" where all ethnicities are present and co-exist (Lagos Indicator, 2012; PRIPODE, 2007). Lagos is extremely important for Nigeria as the city has to drive the country's economy forward. Today, Lagos accounts for 20 per cent of the Nigerian GDP (Atuanya & Afego, 2012). It can be perceived as merely logical that many Nigerians seek refuge in Lagos as a way out of a desperate life situation. In a country where almost everyone is considered poor (income with less than 1 or 2 dollars a day), Lagos must seem as the golden opportunity. However, there is little chance for a better life in this megacity. More likely, the immigrants will end up in the poor, dirty and overcrowded slums of Lagos where social indicators are worse than the urban slum giants in Bangladesh, Pakistan and India.

This section ends with a notion related to the population pressure. Considering the poor living conditions in Nigeria, it seems natural that Lagos is overwhelmed by migrants that hope for a better life in the city where most of the country's economic growth occurs. Overpopulation in Lagos can be thus perceived as product of rural-urban migration caused by a neo-liberal agenda, and less because of population growth and overpopulation. What makes the situation severely tragic, is the cruel irony that Nigeria due to its massive oil resources should be a country where everyone could enjoy life and a country without remarkably low life expectancy, high maternal mortality rate, etc. Lagos seems to be the economic engine that drives Nigeria forward, and is aiming to be a modern city capable of inhabiting 40 million residents within the next generation. However, observing Lagos through eyewitnesses and statistics, the city is more likely to be in a state of human despair,

which largely reflects the problems of Nigeria, and resembles a Hobbesian reality rather than the image of a well-functioning modern megacity.

5.3 What can be done?

This final section is a discussion of what could be done to respond to the impaired living conditions in Lagos. The city is, as stated above, expecting a population of 40 million people. If the city then inhabits the same proportion of slum dwellers as today, the city will be dealing with a slum population up to 30 million inhabitants which difficult to imagine anywhere in the world today. There is no simple solution to what can be done to make Lagos more sustainable to its ever growing population, especially in the slum areas. Cities like Lagos are extremely complex and it is difficult to change the social structures. The Lagosian government cannot make Lagos a better place by itself, other stakeholders such as private initiatives and NGOs need to assist in order to change the city (Kuvaja, 2007: 15). One of the most imminent factors that continue to put a strain on Lagos is the massive rural-urban migration which can only be described as unhealthy to a city's sustainability. Therefore it would be well-advised to slow down or reverse the rural-urban migration in developing and create jobs in the rural areas (Todaro & Smith, 2011: 317; UN ESA, 2005: 333). In section 4.2.1 population statistics show that Lagos is larger by population than the 4 largest cities following Lagos combined (11.5 million against 10.5 million), which may well indicate that rural-urban migrants prefer Lagos rather than other Nigerian cities. Another very visible problem in Lagos is the lack of (legal and affordable) housing, and it could be one of the reasons why slum is such a comprehensive problem in the city. Therefore, it would be reasonable to assume that both private and state should address the problem to that Lagos is short of five million houses (Ademiluyi & Raji, 2008: 149).

The policy towards slums in Lagos is well-demonstrated in the case of Makoko presented in section 4.2.2, in which the Lagosian government simply destroyed the houses in the slum area in order to upgrade the city. However, instead of eradicating people's homes, there is consensus among scholars including Davis (2007), Kuvaja (2007) and Know & McCarthy (2011) that slum communities need to be improved rather than destroyed, as destruction of these communities merely moves the problem of slums rather than solving it. Thus, there is a profound need to empower slum communities (Buckley, 2012: 69-70). It is most likely that:

“Displaced households have no option but to create new squatter settlements elsewhere in the city” if the city cannot afford new houses, which most cities cannot. However: “Recognizing the positive functions of this housing and the many self-help improvement efforts by residents, city governments have begun to support them instead of sending in police and municipal workers with bulldozers” (Knox & McCarthy, 2011: 174).

Furthermore, on a national scale, Shaxson (2007) proposes that distributing the Nigeria oil revenues directly to the citizens, and then taxing them afterwards could be an approach to increase the welfare and counter the negative oil effects. If everybody received a fair share of the oil revenues the society would according to Shaxson be more willing to trade with each other instead on focusing on fighting each other for corrupted political posts in order to get a piece of the oil-cake (Shaxson, 2007: 1135). On the other hand, such a proposal is rather simplified and lacks the practical reality as it would mean a large transformation of the entire political and economic system in Nigeria. The largest obstacle is according to Shaxson himself that greedy and corrupted politicians would never accept such a transformation (Shaxson, 2007: 1139), which can only be agreed upon. Though it sounds more as a repeated cliché, corruption is among the worst problems in Nigeria. It has been tried countered many times but the fight against it remains inefficient and weak (Adejumobi, 2011: 172). Nonetheless, there is no uncertainty that corruption must countered in order to improve the lives of Lagosians and Nigerians.

There are many socio-economic areas considering how to deal with the future in megacities such as Lagos. Overpopulation is one of these areas and controlling population growth is one tool among many. Better governance and economic and social development are the most imminent factors to focus on. However, as there is no projection of a significantly lower population growth rate in Lagos or Nigeria, the neo-malthusian paradigm of birth control which is the modern preventive malthusian check (Todaro & Smith, 2011: 281, 283), could also be addressed as a part of the solution. This could lower the fertility rate of poor families in Nigeria and Lagos and aiding the already overpopulated slum areas with fewer children to support. In fact, Nigeria has recently made contraceptives free in order to promote smaller families (Rosenthal, 2012). However, lower fertility rates do not necessarily equal high income or better living standard:

“...population control cannot eradicate poverty unless people also deal with the fundamental causes of rising population. These include economic dependency, maldistribution of land, and unemployment” (Chrispeels & Sadava, 2003: 7).

Free abortion, free use of contraceptive and enlightenment of family planning could however be tools to lower fertility rate that could empower the Nigerian women, and which further is a general important issue to increase the democratisation process in the country (Adejumobi, 2011: 113).

A more drastic approach could be making large families illegal similar to the one-child policy in China. However, this would probably cause drastic change in the Nigerian society. Also, there exists a correlation between neo-liberalism and neo-malthusianism in the above-mentioned structural adjustment programmes. Gambia has been forced by the IMF to reduce its population growth rate and induce family planning as a part of the programmes (Rao & Sexton, 2010: 140). Furthermore, there are gruesome images related to the largest neo-malthusian family planning programmes examples: India and China. In India it has largely failed (Rao, 2004), while China has reduced its population growth significantly, but the costs have been high, too high many would say. Forced sterilisations of women and human rights violations in China are notorious in the international media, and it is difficult to make the brutal regime accountable for their actions related to their population policies.

It seems more likely that Nigeria needs a well distributed economic development policy and a strong state which created the strong states in the global North. Also, when considering the rich countries in the world, there is a clear relation between high development and low fertility. The fertility rates in the developed countries are struggling just to reach the reproductive minimum level. This situation is rather new in history demonstrated by the classic demographic transition (figure 4) which has not included such a situation.

Furthermore, Buckley (2012) calls upon to ease the strict migration rules that keep many people in cities in the developing part of the world in order to tackle the problem of overpopulated major cities. This approach seems rather romantic and unrealistic as the Western world is not likely to merely open up its borders to the entire Third World, and it would not per se create a solution the social problems in cities such as Lagos.

Another approach to improve the conditions of cities such as Lagos is more information. Scholars Jordi Borja and Manuel Castells believe that it is not the geographical location or the history of a city that determine a city's success or failure. It is rather the information available about

the complexity and diversity of the city that are important in order to confront urban problems emerging (Kuvaja, 2007: 105). Following this mind-set, there should definitely be more exact statistics on both the number of inhabitants of the whole of Lagos (and Nigeria), and on the numbers of slum dwellers, who largely dominate the urban picture in both the city and the nation.

Furthermore, the STWR report focuses on five areas that are especially related to slums: the neo-liberal induced phenomenon of globalisation and its devastating economic impacts on third world societies, the importance of strong national governments, the importance of informal sector, the inefficiency of international aid, and the lack of data in and on slums. The report's solution to the dream of a world without slums: "...lies in supporting the resourcefulness, capacity and organisational ability of the people who actually live inside these settlements" (STWR, 2010: 5). One of the most essential factors of dealing with slums is throughout the report that there is a profound need to incorporate the slum dwellers themselves in the development of their slum communities.

Lastly, Koolhaas is perhaps the only realist in the discussion of Lagos, as he accepts what Lagos is and works out from what exists instead of trying to reshape the entire city. Despite being critiqued in numerous literature, Koolhaas states that the paradigm of our urban future is not megacities that are wealthy and organised such as Tokyo but instead Lagos which: "... is not catching up with us," but: "*Rather, we may be catching up with Lagos*" (Allianz Knowledge, 2009a). Lagos is very important for Africa and what happens in Lagos can change the course of the region and possibly even the whole continent (Liotta & Miskel, 2012: 99), as the governor of expresses: "*What we do ultimately in Lagos, will redefine the continent of Africa...*" (The London School of Economics, 2010: 10min).

As the hostess in the fore mentioned documentary asks Koolhaas "*Will Lagos survive?*" (Koolhaas, 2003: 26min). If Koolhaas is correct in, that: "*Lagos is not "a kind of backward situation, "... but, rather, "an announcement of the future"*" (Packer, 2006), the future is a very dark place where possibly most people can tell a similar story as Adegoke where survival is a day-to-day reality (section 4.2). However, the future of Lagos depends on the future of Nigeria which also is in a difficult situation with corruption, inequality and poverty, and ethnic and political controversies. However, both Nigeria and Lagos have strong economic resources of crude oil and high annual growth to improve the lives of their citizens. Nonetheless, the word apocalypse is either used or indicated too often when scholars describe the present or the future situation in Lagos (Davis, 2007; Gandy, 2005; Haynes, 2007; Packer, 2006).

6. CONCLUSION

The conclusion shall answer the problem definition which questioned the relation between overpopulation and the social problems which exist in Lagos. Lagos is the fastest growing megacity in the world and will most likely reach 40 billion inhabitants within the coming decades. There already seems to be no doubt that Lagos struggles with social factors related to overpopulation. The thesis set out to test this image of Lagos, and through the empirical data presented by documentaries, newspapers, books, papers and statistical data there is little evidence to counter that Lagos is in fact overcrowded. Especially in the slum areas, where families live very closely together and where the population pressure causes great strain on the social capacities. Furthermore, Lagos is, despite being the economic nerve centre of Nigeria, compared to other poor megacities in the developing world, such as Kinshasa, Mumbai, Karachi and Dhaka, doing rather poorly when reviewing social indicators in these cities.

Population growth in Lagos can at first glimpse seem to be the reason of the high level of poverty, extreme density in the slum areas, low life expectancy, lack of access to clean water, lack of basic sanitation, and lack of electricity. It could seem as there are just too many people fighting for too little space and too few resources. If the analysis was considered only out from a fairly high fertility rate in Lagos (4 children per women) and the intense influx of migrants (600,000 people per year), one could conclude that overpopulation is the causing factor of misery in Lagos. From a neo-malthusian view it is possible to consider an occurrence of a contemporary form of the malthusian trap. However, what is different from the pre-Industrial malthusian trap is that the slum populations are increasing without being slowed by the infamous positive checks. Thus, the number of poor slum dwellers are increasing without being accompanied by a similar increase of living standards which thus could be labelled as a modern malthusian situation.

However, noteworthy terms such as malthusian cities and neo-malthusian (urban) nightmares described in section 5.1 tend to neglect, or confuse the relation between cause and effect. The terms by their embedded nature theoretical deduce that population growth is the source of problems. However, literature related to Lagos tends to describe situations as being ended up in a state of overpopulation rather than being caused by population growth itself. Therefore, as the thesis also aimed to test the validity of neo-malthusianism, the underlying reasons of Lagos' social distress, it is ostensibly less related to population growth. Thus, the neo-malthusian theoretical paradigm of too many people causes social instability lacks validity in explaining the *real* causes for the social situation in Lagos. Although there are well founded reasons to believe that population growth in the

slum areas are causing problems in Lagos, it is presumably not the underlying explanation. Considering neo-malthusian as the main explanation of the problems in Lagos would not only be simplistic to conclude, it also diverts focus away from the real problems, which rather must be found within problems related to Nigeria and the social effects of the neo-liberal economic approach that shapes slum-dominated, unequal, rural-urban migration magnets like Lagos. Although neo-malthusianism offers a simple explanation and perhaps even a mediocre solution to an incredible complex chaotic image of the overcrowded city of Lagos, it surely contains limitations of explaining the causes of reality.

Thus, this leads to the second part of the problem definition of what other factors can help understand the social situation in Lagos. In a Nigerian context, one need to consider the historical aspect of the devastating military regimes and neo-liberal economy structure in Nigeria, contemporary political, religious and ethnic instability, neglecting the agricultural sector which has led to massive rural-urban migration, the notorious cultural embedded corruption, and the paradox or curse of the oil resources in Nigeria. The latter refers to that Lagos should be located in a country with a high level of living standards due to vast natural resources, and not in a country where nine of ten earn close to nothing. Thus, the situation in Lagos must be perceived as a product of a more complex Nigerian reality.

However, there exist more optimistic views on Lagos, as presented by Rem Koolhaas in his documentary about the city in which he observes a self-organised informal sector that employs many of the city's poor people. However, literatures including Gandy (2005) and Davis (2007) among others either disagree with or explicitly criticise Koolhaas' optimistic view on Lagos. There is nothing wrong with considering a dire situation in a positive or optimistic light, however there has throughout the thesis been very little empirical evidence to substantiate that Lagos is a city of prospects. Rather, Lagos' current low social indicators show that the city is on the verge of a being an extreme example of social poverty. Paradoxically, Lagos is one of the few bright spots considering Nigeria and is estimated to be the main engine that will drive Nigeria's economy forward in the next coming decades.

Furthermore, it is interesting to reflect upon what else could have been relevant for the thesis to include. As Nigeria is the most populous country in Africa, it could have been interesting to have explored why the country, compared to other African nations, has become excessively populated, and further if such a large population could help explain the ethnic, religious and political tensions which threaten to divide the country. This could possibly also help us understand why Lagos is

becoming one of the most populous cities in the world. However, this inclusion would entail a wider demographic historical and cultural research of Nigeria.

Thus, the thesis concludes that the neo-malthusian connection between population pressure and resources is possibly valid considering less people in the extremely dense and unhygienic slum areas in Lagos would probably be better off with fewer inhabitants. However, the neo-malthusian theory falls short when explaining the actual causes of the gloomy situation in Lagos. For this, Lagos must be considered as being located in a rather poor and unstable country which struggles with deep inequality, massive corruption and political turbulence, which further has been largely negatively affected by a neo-liberal economic approach since the 1980s and remains prevalent today.

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Appendix I

| Indicator Name | Country Name | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|------------------------|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| GDP per capita, PPP \$ | Nigeria | 1484,71 | 1647,01 | 1749,65 | 1871,02 | 1999,06 | 2112,15 | 2232,25 | 2367,03 | 2533,05 |
| | Sub-Saharan | 1388 | 173 | 133 | 907 | 702 | 055 | 957 | 77 | 299 |
| GDP per capita, PPP \$ | Africa (developing only) | 1531,28 | 1636,85 | 1749,47 | 1879,46 | 2016,34 | 2121,61 | 2154,10 | 2230,45 | 2332,88 |
| | Sub-Saharan | 1176 | 202 | 156 | 934 | 09 | 463 | 899 | 392 | 554 |
| GDP per capita, PPP \$ | Africa (all income levels) | 1543,36 | 1653,95 | 1768,44 | 1898,72 | 2040,04 | 2147,86 | 2181,27 | 2256,89 | 2361,35 |
| | | 0639 | 917 | 014 | 849 | 371 | 016 | 234 | 467 | 376 |
| GDP per capita, PPP \$ | World | 7751,30 | 8255,12 | 8800,13 | 9514,37 | 10187,7 | 10651,7 | 10569,8 | 11066,4 | 11594,2 |
| | | 8712 | 082 | 413 | 197 | 26 | 449 | 666 | 859 | 421 |

Generated from the World Bank: World dataBank: January 18-01-2013 (Appendix I, 2013)

Appendix II

| Country Name | Indicator Name | 2011 | 2010 | 2009 | 2008 | 2007 |
|--------------|--|------------|------------|------------|------------|------------|
| Nigeria | Population, total | 162470737 | 158423182 | 154488072 | 150665730 | 146951477 |
| Nigeria | Population growth (annual %) | 2,52280858 | 2,51529302 | 2,50532151 | 2,49612304 | 2,48904153 |
| Nigeria | Fertility rate, total (births per woman) | 7 | 1 | 4 | 8 | 2,48904153 |
| Nigeria | GDP growth (annual %) | 6,67347913 | 7,82394675 | 5,525 | 5,56 | 5,595 |
| Nigeria | GDP per capita, PPP (current international \$) | 6 | 7 | 7 | 6 | 7 |
| Nigeria | GDP per capita, PPP (constant 2005 international \$) | 2531,97451 | 2369,49924 | 2227,86696 | 2112,47611 | 1999,06702 |
| Nigeria | Poverty gap at national poverty line (%) | 2 | 4 | 3 | 7 | 4 |
| Nigeria | Unemployment, total (% of total labor force) | 2220,6844 | 6 | 4 | 1945,77245 | 6 |
| Nigeria | Urban population (% of total) | | 49,8 | | | |
| Nigeria | Urban population growth (annual %) | | | 3,98318092 | 3,99615117 | |
| Nigeria | Rural population growth (annual %) | | 3,97162944 | 4 | 4 | 4,0119136 |
| Nigeria | Rural population growth (annual %) | | 1,09121832 | 1,10124228 | 1,11148554 | 1,12331468 |
| Nigeria | Rural population (% of total population) | | 2 | 5 | 2 | 7 |
| Nigeria | Life expectancy at birth, total (years) | | 50,2 | 50,92 | 51,64 | 52,36 |
| Nigeria | | | 51,4100243 | 50,9494146 | 50,4797317 | |
| Nigeria | | | 9 | 3 | 1 | 49,9994878 |

Generated from the World: World dataBank: 2012 (Appendix II, 2012)

Appendix III

| Lagos | | | |
|---|------------|------------------------|-------------------------|
| Year | Population | % of urban population* | % of total population** |
| 1950 | 325 000 | 8.7 | 0.9 |
| 1955 | 468 000 | 9.4 | 1.2 |
| 1960 | 762 000 | 10.4 | 1.7 |
| 1965 | 1 135 000 | 11.2 | 2.3 |
| 1970 | 1 414 000 | 11.0 | 2.5 |
| 1975 | 1 890 000 | 11.6 | 3.0 |
| 1980 | 2 572 000 | 12.1 | 3.5 |
| 1985 | 3 500 000 | 12.9 | 4.1 |
| 1990 | 4 764 000 | 13.9 | 4.9 |
| 1995 | 5 966 000 | 13.9 | 5.4 |
| 2000 | 7 233 000 | 13.6 | 5.8 |
| 2005 | 8 767 000 | 13.5 | 6.2 |
| 2009 | 10 203 000 | 13.4 | 6.6 |
| 2010 | 10 578 000 | 13.4 | 6.7 |
| 2015 | 12 427 000 | 13.2 | 7.1 |
| 2020 | 14 162 000 | 12.9 | 7.3 |
| 2025 | 15 810 000 | 12.5 | 7.5 |
| Source: UN World Urbanization Prospects 2009 | | | |
| *Population residing in agglomeration as percentage of urban population of the country. | | | |
| ** Population residing in agglomeration as percentage of total population of the country. | | | |

Population of Lagos (Department of Geography, University of Cologne, 2011)

Appendix IV

| | | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fertility rate, total | | 2,5866 | 2,5639 | 2,5379 | 2,5227 | 2,5088 | 2,4926 | 2,4682 | 2,4511 |
| (births per woman) | World | 4713 | 1397 | 5754 | 3549 | 376 | 2398 | 3515 | 112 |

Generated from the World Bank: World dataBank: January 09-02-2013 (Appendix IV, 2013)