

**POPULATION INCREASE AND LAND FRAGMENTATION IN KAWEMPE  
DIVISION, KAMPALA-UGANDA**

**BY**

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UNIVERSITY.**

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### DECLARATION

I **Nalubega Faith**, declare that this dissertation is my original work and has never been presented anywhere for any award in any other university or institution of higher learning.

Signature:.....*Nalubega Faith*.....

Date:.....*07/09/15*.....

### APPROVAL

This is to certify that this dissertation entitled "Population increase and land fragmentation" has been done under my supervision and submitted to the college of humanities and social sciences under my supervision.

Supervisor: **Dr. Otanga Rusoke**

Sign: Otanga Rusoke

Date: 7<sup>th</sup> September 2015

### **DEDICATION**

This dissertation is dedicated to my beloved parent Mrs. Namulondo Jane and Mrs. Nabasiye Ruth, Mr. Ssekito Charles, and my siblings for the love and feel of belongingness, the courage they bestowed to me which has devoted me to the completion of this course.

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## LIST OF ABBREVIATIONS

CEE	Central and Eastern Europe
CIA	central intelligence agency
CIS	Commonwealth of Independent States
DCDC	Development, Concepts and Doctrine Centre
ECA	Economic commission for Africa
EU	European Union
GaWC	Globalization and World Cities
ILRI	International Livestock Research Institute
KCCA	Kampala Capital City Authority
LAPSET	Lamu Port-Southern Sudan-Ethiopia Transport
OECD	Organisation for Economic Co-operation and Development
UK	United Kingdom
UN	United Nations
UNEP	United Nations Environment Programme
UN-OCHA	United Nations Office for the Coordination of Humanitarian Affairs

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### **ABSTRACT**

There has been a steady population increase in Kampala City over the last century; that is considered to be one of the causes of land fragmentation in Kawempe division. High birth rates, immigration and urbanization are one of the causes of population increase in Kampala. Land has been sub divided into very small portions of land owned by different individuals. This has slowed down the general development of the area since there is limited land for development. This research examines the relationship between population increase and land fragmentation in Kawempe division by determining the causes of population increase, its influence on land fragmentation and the impact of land fragmentation to the general development of Kawempe. Kawempe is a division in Kampala city-Uganda, among other divisions of Kampala Central Division, Rubaga Division, Makindye Division and Nakawa Division. Kawempe is located on the northwestern edge of Kampala. It is bordered by Nabweru to the north, Kisaasi to the east, Bwaise to the south, Kazo to the southwest and Nansana in Wakiso District to the west. The study found out that among other causes of population increase in Kawempe division, immigration (20%) and high birth rate (16%) are the most causes. Population increase (24%) and poverty (18%) are the most factors that lead to land fragmentation while limitation in economic development (27%) and poorly planned urbanization (24%) are the most evident effects of land fragmentation in the area. The study recommends use of land use and land ownership laws and policies to solve the general problem of land fragmentation. Alongside that, sensitization and extension work should be implemented to influence family planning to curb down population growth and reduce poverty respectively.



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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

Human population growth is perhaps the most significant cause of the complex problems the world faces; climate change, poverty and resource scarcity complete the list (Foresight, 2009). By 2050, the world's population will have grown by 2.7 billion to 9 billion. Most of this increase will be in Asia and Africa, which, along with the rest of the globe, will face increased strain on already insufficient resources. Sustained population growth, aggressive economic competition and increased consumption will result in intensive exploitation and pressure on resources (UNEP, 2009; OECD, 2003; DCDC, 2007). Although the global population is currently very young (half of the world's peoples are below 28 years of age), the overall global population is ageing. Most are found in developed countries; however, a third of the developing country population will be aged over 60 by 2050 and by 2050 nearly 80 percent of older people will live in developing countries (Millennium Project, 2008). Some developing regions and countries, on the other hand, will witness an increasingly young population. Both trends will mean a shrinking working population, significantly altering the balance between economically-active and -inactive members (DCDC, 2007; OECD, 2003). The number of people living outside their country of origin is likely to grow to 230 million from the current 175 million by 2050 (DCDC, 2007). Migration will mostly occur between developing countries and will increase in response to environmental pressures, extreme poverty and natural disasters (OECD, 2003). These factors will be aggravated by the consequences of climate change, environmental changes, uneven distribution of wealth, the effect of disease and the inability of authorities to respond (DCDC, 2007). The availability and flow of energy, food and water will be critical. Resource challenges will intensify in areas where population expansion has the greatest impact, relative to local resources and economic growth. Sub-Saharan Africa's population is likely to grow by 81 percent by 2035, 15 percent of which is likely to be under-nourished. Competition for resources of all kinds will intensify and the risk of humanitarian catastrophe will increase, in most vulnerable regions, because of climate change.

After 50 years of collectivization, countries in Central and Eastern Europe (CEE) and the Commonwealth of Independent States (CIS) have made significant progress in the devolution of state-owned real estate to private urban and rural ownership. Despite the remarkable success of the land-reform process, land fragmentation has emerged as a side-effect, with detrimental implications for private and public investments, sustainable economic growth and social development. Less-favoured and least-developed regions with economies still dependent on agriculture have experienced negative growth rates, soaring unemployment and mounting rural poverty, resulting in serious social and economic disintegration and widespread disappointment among local actors and stakeholders. Land is a primary asset for survival and development in Eastern Africa. Land supports the livelihoods of most rural people (ECA, 2005). Rural population is high: in Rwanda, Ethiopia, Burundi, Eritrea and Uganda more than 80 percent of the people live in rural areas; in Kenya and Somalia more than 60 percent live in rural areas; and, in contrast, in Djibouti only 16.3 percent live in rural areas. Land also provides diverse functions in support of ecosystem processes (Bonger *et al.*, 2004).

Many parts of the rangeland in the Horn and East Africa have become highly fragmented, putting the pastoral systems in these areas at risk of complete collapse. Land fragmentation occurs when land gets converted for agriculture or ranching, is invaded by non-local plants, is enclosed for individual use, is appropriated for mineral extraction, or is removed from use to become a protected area. Many parts of the rangeland in the Horn and East Africa have become highly fragmented, putting the pastoral systems in these areas at risk of complete collapse. Land fragmentation occurs when land gets converted for agriculture or ranching, is invaded by non-local plants, is enclosed for individual use, is appropriated for mineral extraction, or is removed from use to become a protected area. The pastoralist production system suffers as it is dependent on having access to communally held seasonal grazing areas and water sources, and when migration routes to grazing and water get blocked, pastoralist production becomes impossible on the remaining areas of the rangeland. Fragmentation is the result of inappropriate development processes and ineffective land use planning that fail to recognize how rangeland is used, and the importance of its interconnected areas. Insecurity of tenure and resource rights is key factor making this possible.

Land fragmentation is one of the key reasons why the ability of pastoralists to overcome drought has been severely reduced. With less grazing land available; the poorest pastoralists in particular are now unable to retain herds of a sufficient size to survive protracted dry periods. And as resources become scarcer, those resources that remain are becoming 'privatized' by more powerful community members—keen to maintain their own access to them. Such individualistic attitudes are new, and disadvantage the poorest even further by affecting the traditional customary safety nets and livestock redistribution practices that used to support them. Now neither the government nor customary governance systems are effectively protecting resource access for the poorest.

Uganda has the highest proportion of potentially arable land, whereas in Rwanda, all arable land is in use and land pressure is pushing cultivation into marginal areas. In Eritrea, 88 percent is under cultivation (ECA, 2005). Countries such as Rwanda and Burundi face enormous challenges as they are physically small with high population densities. Burundi's population density is 265.8 per km<sup>2</sup> and Rwanda's 340.1 per km<sup>2</sup> (Bongeret *et al.*, 2004).

## **1.2 Problem statement.**

There has been a steady population increase in Kampala City over the last century; that is considered to be one of the causes of land fragmentation in Kawempe division. High birth rates, immigration and urbanization are one of the causes of population increase in Kampala. Land has been sub divided into very small portions of land owned by different individuals. This has slowed down the general development of the area since there is limited land for development. Most of the individuals own small plots of which they can only construct a small house with a toiled and there is no compound or even a small part for business like poultry keeping or any other kind of work. The area has become over populated and the poor people living in the area, who own the small plots are not even willing to sell to the rich investors so that land can be consolidated for development. This affects the development of Kawempe and forms the basis for this study on population and land fragmentation. The researcher wanted to investigate the impacts of population and land fragmentation on the socio-economic development of Kawempe as a model of how to solve the problems of over population and scarcity of resources.

### **1.3 Objectives of the study;**

#### **1.3.1 General objective**

To examine the relationship between population increase and land fragmentation in Kawempe division

#### **1.3.2 Specific objectives**

- i. To identify the causes of population increase
- i. To find out the factors that lead to land fragmentation in Kawempe division
- i. To assess the impacts of land fragmentation on the general development of Kawempe division

### **1.4 Research questions.**

- i. What are the causes of population increase?
- ii. What are the factors that lead to land fragmentation in Kawempe?
- iii. What are the impacts of land fragmentation on the general development of Kawempe division?

### **1.5 Scope.**

#### **1.5.1 Geographical scope**

Kawempe is an area in the city of Kampala, Uganda's capital. It is also the location of the headquarters of Kawempe Division, one of the five administrative divisions of Kampala. The five divisions are: Kampala Central Division, Rubaga Division, Kawempe Division, Makindye Division and Nakawa Division. Kawempe is located on the northwestern edge of Kampala. It is bordered by Nabweru to the north, Kisaasi to the east, Bwaise to the south, Kazo to the southwest and Nansana in Wakiso District to the west. The road distance between Kampala's central business district and Kawempe is approximately 8.5 kilometres (5.3 mi). The coordinates of Kawempe are: 0°22'45.0"N 32°33'27.0"E (Latitude: 0.3792; Longitude: 32.5574).

#### **1.5.2 Content scope**

The study was focused on the causes of population increase, its influence on land fragmentation and the impact of land fragmentation to the general development of Kawempe.

### **1.5.3 Time scope**

The study of population increase and land fragmentation was conducted in May and June 2015.

### **1.6 Significance.**

The study will be so much helpful to the planners of the city in as far as balanced development in all the divisions in Kampala. This study will suggest recommendations which Kampala Capital City Authority (KCCA) can use to make the city look better. The interested readers of the report after this research shall acquire knowledge about the past and present Kawempe in terms of land use and land ownership. The report shall even clearly point out the causes of population increase, its influence on land fragmentation and the effects to development of Kawempe.

### **1.7 Definition of key terms.**

#### **1.7.1 Population**

Population is the number of people living in a given area at a given time.

#### **1.7.2 Population growth**

Population growth is the increase in the number of individuals in a population. The population growth rate is the rate at which the number of individuals in a population increases in a given time period as a fraction of the initial population

#### **1.7.3 Population growth rate**

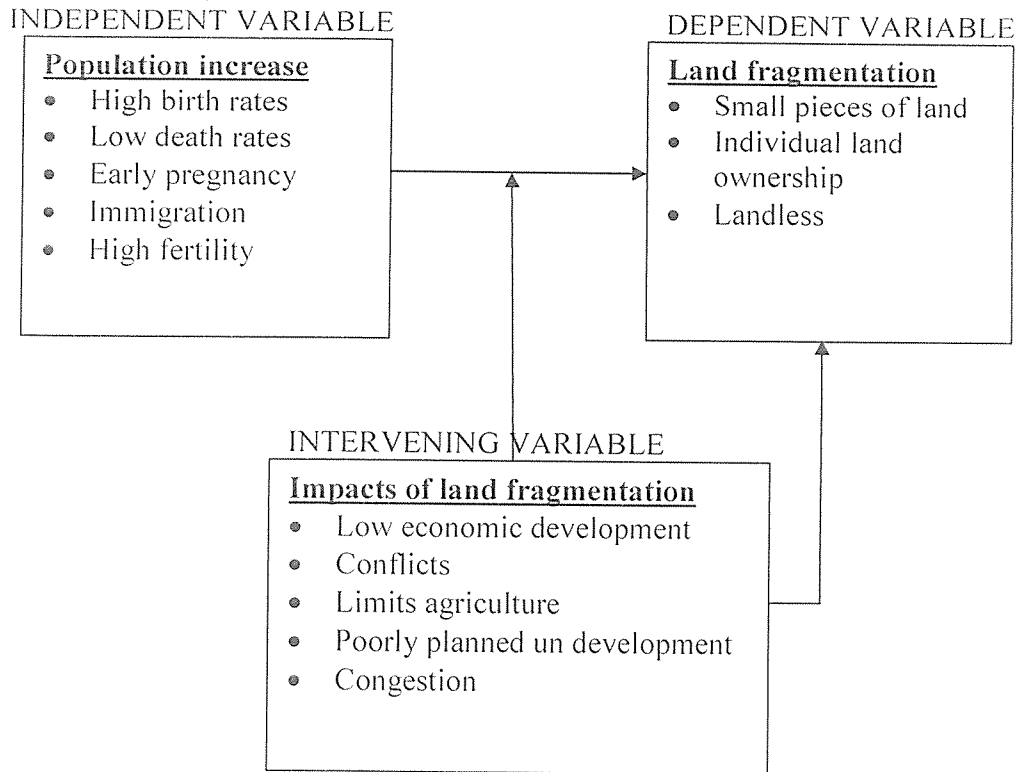
The "population growth rate" is the rate at which the number of individuals in a population increases in a given time period, expressed as a fraction of the initial population. Specifically, population growth rate refers to the change in population over a unit time period, often expressed as a percentage of the number of individuals in the population at the beginning of that period.

#### **1.7.4 Land fragmentation**

Land fragmentation is the division of land into smaller pieces of plots which are individually owned.



### 1.8 Conceptual frame work.



Population (IV) is the number of people living in an area at a given time. This affects the use of land especially when the population increases rapidly. Population has been seen to be positive change since every person deserves a right to live but it has not failed to come with consequences like land fragmentation. Population can be increased by different factors like; high birth rates and low death rates, early and unplanned pregnancies, immigration and high fertility of women.

On the other hand, land fragmentation (DV) is the division of land into small plots which are owned by individuals and it is usually as a result of population increase. Land fragmentation is evidenced by small pieces of land and sometimes fenced and individual ownership of land and lack of land by some individuals. In land fragmentation there is no communal land ownership. Land fragmentation leads to consequences like limited economic development, limited agriculture, poorly planned urban development, congestion and conflicts.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

This involves the review of Literature that is in existence especially in line with the objectives and themes of the study.

#### 2.1 Factors that lead to population increase

Globally, the growth rate of the human population has been declining since peaking in 1962 and 1963 at 2.20% per annum. In 2009, the estimated annual growth rate was 1.1%. The CIA World Factbook gives the world annual birthrate, mortality rate, and growth rate as 1.89%, 0.79%, and 1.096% respectively. The last 100 years have seen a rapid increase in population due to medical advances and massive increase in agricultural productivity made possible by the Green Revolution (Rosling& Hans, 2009). The world's total population reached 1 billion in the early 19th century. According to the "Guardian" newspaper, it hit 7 billion in 2011. This means the world's population has grown at a much higher rate in the last 200 years than it did in prior recorded history. While there are a number of reasons for this, they can be simplified into two broad themes: Falling death rates and rising birth rates. Of course, it is substantially more complex than this, but if you approach it from this angle, you can make a good start toward your understanding of global population growth (Sam Grover, 2015).

The actual annual growth in the number of humans fell from its peak of 88.0 million in 1989, to low of 73.9 million in 2003, after which it rose again to 75.2 million in 2006. Since then, annual growth has declined. In 2009, the human population increased by 74.6 million, which is projected to fall steadily to about 41 million per annum in 2050, at which time the population will have increased to about 9.2 billion. Each region of the globe has seen great reductions in growth rate in recent decades, though growth rates remain above 2% in some countries of the Middle East and Sub-Saharan Africa, and also in South Asia, Southeast Asia, and Latin America(Gerland,2014). Some countries experience negative population growth, especially in Eastern Europe mainly due to low fertility rates, high death rates and emigration. In Southern Africa, growth is slowing due to the high number of HIV-related deaths (Rosling& Hans, 2009).

Some Western Europe countries might also encounter negative population growth. Japan's population began decreasing in 2005. The United Nations Population Division expects world population to peak at over 10 billion at the end of the 21st century but SanjeevSanyal has argued that global fertility will fall below replacement rates in the 2020s and that world population will peak below 9 billion by 2050 followed by a long decline (Gerland, 2014).

According to United Nations population statistics, the world population grew by 30%, or 1.6 billion people, between 1990 and 2010. In number of people the increase was highest in India (350 million) and China (196 million). Population growth was among highest in the United Arab Emirates (315%) and Qatar (271%) (Population Reference Bureau, 2013). According to UN's 2010 revision to its population projections, world population will peak at 10.1bn in 2100 compared to 7bn in 2111. A 2014 paper by demographers from several universities and the United Nations Population Division forecast that the world's population will reach about 10.9 billion in 2100 and continue growing thereafter. However, some experts dispute the UN's forecast and have argued that birthrates will fall below replacement rate in the 2020s. According to these forecasters, population growth will be only sustained till the 2040s by rising longevity but will peak below 9bn by 2050 (Population Reference Bureau, 2013).

In Europe, the most populous member state is Germany, with an estimated 82.1 million people, and the least populous member state is Malta with 0.4 million. Birth rates in the EU are low with the average woman having 1.6 children (Global Cities Index, 2008). The highest birth-rates are found in Ireland with 16.876 births per thousand people per year and France with 13.013 births per thousand people per year. Germany has the lowest birth rate in Europe with 8.221 births per thousand people per year (GaWC, 2008). Urbanization Europe has a significant influence on their population. The European Union has a significant number of global cities (Global Cities Index, 2008). It contains 13 of the 60 cities which compose the 2008 Global Cities Index, as well as 16 of the 41 "alpha" global cities classified by GaWC (including London, Paris, Milan, Amsterdam and Brussels among others) (GaWC, 2008).

According to European Union (EU) report 2012, there is substantial movement of people within the Union i.e. internal migration; this has traditionally followed two patterns:



Younger workers from less economically developed regions and countries of the EU tend to move to more prosperous regions in their country or to EU countries with good economic prospects (i.e. UK, Ireland, Germany, Netherlands, France, Italy, Portugal, Spain, Poland). Retirees from wealthier places with colder weather (i.e. Benelux, Britain and Germany) tend to move to the Sun Belt in southern Europe - i.e. Spain, Portugal, Southern France, Italian peninsula and Greece. Citizens from the European Union make up a growing proportion of immigrants in Spain (Ellison & Michael, 2000). They mainly come from countries like the UK and Germany, but the British migration case is of particular interest due to its magnitude. The British authorities estimate that the real population of UK citizens living in Spain is much bigger than Spanish official figures suggest, establishing them at about 1,000,000 and about 800,000 being permanent residents (EU, 2012).

At present, more people immigrate into the European Union than emigrate from it. Immigration is a controversial issue in many member states, including Belgium, Sweden, Germany, Italy, the Netherlands, Spain, France, and the UK (Ellison & Michael, 2000). In 2010, 47.3 million people living in the EU, or 9.4% of the total population, had been born outside their resident country. Of these, 31.4 million (6.3%) had been born outside the EU; 16.0 million (3.2%) had been born in another member state. The largest absolute numbers of people born outside the EU were in Germany (6.4 million), France (5.1 million), the United Kingdom (4.7 million), Spain (4.1 million), Italy (3.2 million), and the Netherlands (1.4 million) (Ellison & Michael, 2000). Spain in particular receives most of the immigrants coming illegally to Europe from Africa, probably due to its large coastal area and its proximity to and land borders with Morocco at Ceuta and Melilla; African immigrants try to enter the country by boat from Morocco or Senegal or by jumping the border fences (Mettler & Ann, 2007). For example, during just the first weekend of September 2006, more than 1,300 illegal immigrants arrived on beaches in the Canary Islands and estimates are that between 50,000 and 70,000 people enter the European Union illegally through Spanish borders or beaches (Demography Report, 2010). Border fences have been built at both the Ceuta and Melilla borders in an attempt to stop illegal entrance to the country (Claros & Eulalia, 2013). Illegal immigration is an issue in Spanish politics, and also a big human rights problem, since many people die during the journey. Spain has been Europe's largest absorber of migrants for the past six years, with its immigrant population increasing

fourfold as 2.8 million people have arrived, mostly from Latin America. Spectacular growth in Spain's immigrant population came as the country's economy created more than half of all the new jobs in the European Union between 2001 and 2006 (Mettler & Ann, 2007). The net migration rate for the EU in 2008 was 3.1 per 1,000 inhabitants; this figure is for migration into and out of the European Union, and therefore excludes any internal movements between member states. Annual net migration has varied from 1.5 to 2.0 million people since 2003 (Demography Report, 2010).

The EU faces challenges in its demographic future. Most concerns center on several related issues: an ageing population, growing life expectancy and immigrant flow (Claros & Eulalia, 2013). After hitting a historical low of 1.47 children born per female, the total fertility rate of the EU started to increase again, to reach a level of 1.60 in 2008 (Davies & Ron 2013). The positive trend was observed in all member states with the exception of Luxembourg, Malta and Portugal. The largest increases over this period were observed in Bulgaria (from 1.23 children per woman in 2003 to 1.57 in 2009); Slovenia (from 1.20 to 1.53), the Czech Republic (from 1.18 to 1.49) and Lithuania (from 1.26 to 1.55) (Claros & Eulalia, 2013). In 2009, the Member States with the highest fertility rates were Ireland (2.06), France (2.00), Sweden (1.94), and the United Kingdom (1.90), all approaching the replacement level of 2.1 children born per female.

The lowest rates were observed in Latvia (1.31), Hungary and Portugal (both 1.32) and Germany (1.36) (Mettler & Ann, 2007). The increasing fertility rate has also been accompanied by an upward trend in the natural increase of the population which is due to the moderate increase of the crude birth rate that reached 10.9 births per 1000 inhabitants in 2008, an increase of 0.3 compared with 2007. The increase was observed in all member countries except Germany. The EU crude death rate remained stable at 9.7 per 1000 inhabitants (Davies & Ron 2013). The relatively low fertility rate means retirement age workers are not entirely replaced by younger workers joining the workforce. The EU faces a potential future dominated by an ever-increasing population of retired citizens, without enough younger workers to fund (via taxes) retirement programs or other state welfare agendas (Demography Report, 2010).

A low fertility rate, without supplement from immigration, also suggests a declining overall EU population, which further suggests economic contraction or even a possible economic crisis. Some media have noted the 'baby crisis' in the EU, some governments have noted the problem, and the UN and other multinational authorities continue to warn of a possible crisis (Claros & Eulalia, 2013). At this point however such a decrease in the population of the EU is not observed as the overall natural growth remains positive and the EU continues to attract large numbers of immigrants. In 2010, a breakdown of the population by citizenship showed that there were 20.1 million foreign citizens living in the EU representing 4% of the population (Davies & Ron 2013).

Over the last 50 years, life expectancy at birth in the EU 27 has increased by around 10 years for both women and men, to reach 82.4 years for women and 76.4 years for men in 2008. The life expectancy at birth rose in all Member States, with the largest increases for both women and men recorded in Estonia and Slovenia (Ellison & Michael, 2000).

According to Sam Grover factors that have caused the population growths in the Last 200 Years include the following;

#### **Reduced Death Rate**

According to "The Population Explosion," a Yale University article, many children born before 1800 did not live past the age of five. The year 1800 marked the rough beginning of an era where children started living longer, thus reducing the number of people dying in relation to the number of people being born, which in turn caused the population to rise. This reduced death rate can be attributed to better medical procedures and the rise of vaccines, better public health, cleaner drinking water and more food to keep children from dying of starvation.

#### **Increased Birth Rate**

The birth rate also increased over the last 200 years. This is because the children who were able to live past their fifth birthdays went on to have children of their own. The infant mortality rate in 1750 was roughly 25 per 1,000 births, but by 2000, it had dropped to less than 10 per 1,000 births, according to the University of Michigan's Global Change Center. These people then procreated, which caused explosive population growth. A look at a graph of reduced infant mortality shows steep drops at certain points. For example, soap's prevalence caused a drop in infant mortality, as did antibiotics and vaccines.

## **Food**

One of the key reasons for both the increased birth rate and reduced death rate is food production. Farming and animal husbandry have become more efficient over the last 200 years, which means people have been better equipped to feed themselves. Nutrition was much more readily available by 1800 with the opening of trade with the Americas, giving people access to potato and maize, and the simultaneous agricultural revolution, which brought with it the ability to grow more food on less space. These changes occurred before public health changes, but the death rate still decreased, which indicates that food was a key variable in this situation.

## **Health**

Public health also changed over the last 200 years. One of the biggest changes to public health has been better access to clean water, which has reduced disease. With reduced disease is a reduced death rate, which contributed to an increased birth rate and increased population growth. Health care improved, as well. For example, doctors and surgeons started sterilizing their instruments and hands before carrying out procedures, which reduced the rate of hospital-borne infections. The invention of antibiotics is another key part of health care improvements that contributed to a drop in the death rate, which led to a general increase in population. This drop in death rates is illustrated by mortality graphs, where the same drops occur in the same time periods for multiple countries during the advent of improved sanitation, antibiotics and sterilizing medicine. For example, the Swedish death rate per 1,000 was around 25 in the early 1800s, and then sharply dropped to below 20, when soap was introduced to hospitals.

### **2.2 Factors that lead to land fragmentation**

In areas where there are nomadic pastoralists, there are different causes of land fragmentation which include; lack of support for pastoralism as the most appropriate land use system for dry land areas. Pastoralism is uniquely capable of utilizing the 'poor quality' parts of rangelands, as long as access to key seasonal 'rich quality' resources is secured. This lack of support comes from a general misunderstanding of the interconnectedness of pastoralism, where the different parts of the pastoral system (social and ecological) can be impossible to separate. Inappropriate development and land use planning systems for the rangelands fail to take this interconnectedness into account when they limit planning to small areas, individual resources or government administrative units, which in fact are only a minor part of the greater rangeland. A



rangeland that is customarily and holistically managed ensures that the complete whole remains healthy, and is capable of supporting pastoral systems in times of drought.

The establishment of water points or enclosures is often used to provide short-term relief during drier periods, but in the longer-term these are also likely to contribute to rangeland fragmentation. For example the establishment of water points and private enclosures in both northern Kenya (Enghoff et al 2010; Walker and Omar 2002; Kitanyi et al 2002) and Ethiopia (Sugale and Walker 1998) may have had immediate benefits, but have also contributed to rangeland fragmentation (YacobAklilu and Catley 2010). In the eyes of land use planners and decision makers pastoralism is often not recognised as successfully competing with other land uses, and the pastoral system as a whole gets inadvertently destroyed by the removal or blocked access to its key resources.

Still in Africa, large-scale agricultural irrigation schemes, introduced as part of agriculture-led development policies, have been a major cause of rangeland fragmentation. By 1989 Ethiopia had developed 68,800 hectares of land adjacent to the Awash River (Beyene 2008), and in Kenya the Tana Delta absorbed one quarter of Kenya's total agricultural development funding for several years in the 1970s. The process resulted in the settlement of over 26,000 people (Umar 1997), and the major displacement of others, including the 6,000 displaced by the Kiambere Dam and its associated irrigation project (World Bank in FIAN 2010). Elsewhere in Kenya other agricultural schemes have been introduced in drier areas, such as the 9,000 hectares Turkwell Gorge project in Pokot district (Nangulu 2001).

Of greater concern currently is the increasing trend of leasing large tracts of land in pastoral areas for commercial investment (both foreign and national). In Kenya and Ethiopia particularly this is a significant concern, as it is being carried out in areas of lower and variable rainfall where irrigation therefore becomes necessary. This forces new farms to congregate along rivers and waterways, threatening the vital access of pastoralists to key resources (water and grazing) found here during the dry seasons.

In Kenya the Tana Delta is again the primary target for this investment, as well as a development scheme planned for the LAPSET (Lamu Port-Southern Sudan-Ethiopia Transport) Corridor. Both present a huge risk to pastoral areas through increased competition over resources and knock-on negative impacts. In Ethiopia in 2009 the government launched a new investment plan to provide 3.7 million hectares of land for agricultural development. To date around 1.3 million hectares have been designated—the majority of which is found along the major rivers in pastoral areas. In South Omo for example 180,625 hectares have been delineated in districts that are all dominated by pastoral livelihood systems.

Insecurity of tenure is also one of the causes of land fragmentation in these three countries. The removal of key resources, and conversion of land to non-pastoral uses, has been facilitated by the overall lack of recognition given to customary pastoral land and resource tenure. Across the region governments have failed to provide protection to pastoralists through legislation and formal tenure systems. Kenya in particular has driven towards individualisation of land, and until recently failed to develop security of rights for common property. The Land Policy of 2009 offers some opportunities for securing ‘community land’ but implementation is still some way off. Uganda now also has some facilitating legislation but it requires improvement and implementation.

In Ethiopia pastoralism as a livelihood system is protected by the Constitution and pastoralists have the right to grazing land, but the regions are still in the process of developing land policies and legislation for pastoral areas including common property. In this tenure security vacuum pastoral lands are often considered ‘vacant’ ‘idle’ or ‘wastelands’ with their removal justified in the name of ‘development’. The vacuum also allows settlers and agriculturalists to move into pastoral areas. The fact that pastoralists use parts of the rangeland and its resources only at certain times of the year plays a major role in tenure insecurity, making these areas an easy target for conversion to agriculture and other land uses. Pastoralists also do not usually pay tax for occupying the rangelands, making it easier for the State to ignore their land usage and/or offer the land for the growing of crops which is seen as more ‘legitimate’, and for which tax is paid.

### **2.3 Impacts of land fragmentation**

During the past decade, countries in Central and Eastern Europe (CEE) and the Commonwealth of Independent States (CIS) have made significant progress concerning the devolution of state-held real estate and property, both urban and rural, to private owners. Considered to be a cornerstone in the economic transition process, this process of “reprivatization” has been accelerated so as to secure land tenure and property rights and to develop land markets. However, in spite of the remarkable success of the land reform process, land fragmentation emerged as a side effect with detrimental implications for private and public investments, sustainable economic growth and social development. Less-favored and least-developed regions with economies that still depend on agriculture have been witnessing negative growth rates, soaring unemployment, mounting rural poverty and, as a result, serious socio-economic disintegration and widespread disappointment among local actors and stakeholders.

Land fragmentation primarily affects the agriculture sector. When cooperative and state farmlands were distributed according to equity principles, without first taking farm management aspects into consideration, the result was that the parcels which farmers received were either too small or were badly shaped, for instance in length-to-width ratio. In some countries, farm size averages 0.5 to 2.5 ha, which has made it difficult to implement new production patterns or to utilize machinery and appropriate technologies. Re-allotment and amalgamation of plots (and parcels) is an important step to increase both productivity and efficiency in the agriculture sector. Most private farmers are restricted to subsistence agriculture and cannot participate in commercial production, which leads to migration and the abandonment of farmland, especially in areas far from markets. In the Czech Republic, for instance, privately owned agricultural land is still to some extent incorporated into large user units (a heritage from the era of collective management) which prevent private landowners from using their own land for farming. At the same time, the situation is inhibiting land market development, investment in land and completion of the restitution process.

In areas where ranching and nomadic pastoralism is practiced, livestock is being redistributed from the poor to the wealthy. Some pastoralists are benefiting from the fragmentation process, whilst others are losing out. Those who benefit are generally the more powerful, with greater

assets on hand, capable of influencing decision makers and land allocations, of enclosing property, building up their herds, or making the most of new livelihood diversification opportunities. In Kitengela, Kenya, for example, one-half of the cattle are now owned by the 20% of the households with the highest overall incomes. These households also have greater 'off-land' income, which means they can also invest in buying more livestock. They are also the ones educating their children past primary school so have improved employment opportunities (Nkedianye *et al.*, 2009).

In Ethiopia too processes of individualization of property rights have resulted in smaller herds. This gradual redistribution of livestock from the poor to the rich (YakobAklilu and Catley 2010), explains why pastoral areas can be seen to be exporting increasing numbers of livestock whilst also being characterised by increasing levels of destitution. For the poor the situation has become critical, as they are no longer able to access the common property resources upon which they relied, and there is increasing competition and conflict over the remaining resources— often with loss of life. As they lose control over their livelihoods they become increasingly vulnerable to crises such as drought (Eyasu Elias and FeyeraAbdi 2010; Rettberg 2010; DiresTsegaye *et al* 2010). The result is large numbers of people dropping out of the pastoral system without assets or a means to survive.

The opinion of pastoralists currently is that it is not drought itself that makes them vulnerable, but rather the increasing marginalization of their drought-response mechanisms, coupled with the gradual eroding of their asset base and the barriers being put on their mobility (Ethiopia - Devereux 2006; Eyasu Elias and FeyeraAbdi 2010; Siefulazia 2004; Rettberg 2010; Kenya - ILRI 2010; Nkedianye *et al* 2009; Uganda – Muchungazi forthcoming). The 2008/9 drought in Kenya highlighted the negative impact that land fragmentation is having on pastoralists' vulnerability, resilience and ability to overcome drought. It resulted in high loss of human life, high livestock losses, and heavy reliance on humanitarian aid, which amounted to around US\$4.6 million in six districts (ILRI 2010). Livestock loss was estimated to be a staggering US\$1 billion and the drought also slashed maize harvest from 30 million bags to 15 million (Western 2009). Those who were not able to move their herds saw 100% losses (UN-OCHA 2010). " If we could have had access to grazing areas that we used 30 years ago, this drought would not have affected

us and there would have been no need for you to come here ” - Samburu pastoralist talking about the 2009 drought (ILRI 2010).

Customary institutions are struggling to keep control “Today there are divisions and differences between those who have and those who have not. Everyone wants his own clan to get something and doesn’t care about the other clan. We didn’t have such things before” (Afar clan leader 2005 in Rettberg 2010). Mechanisms for resilience built up by pastoralists over centuries—including adaptive strategies, mutual support and safety-net systems, as well as social/customary organizations and institutions—are being severely challenged by the multiple internal and external factors affecting land use change and fragmentation. New values and practices, focused on the exclusive acquisition of monetary profit, are now in conflict with the egalitarian culture of ‘sharing’ that previously existed, and was supported by traditional values of solidarity, cooperation, reciprocal arrangements and collective wealth.

In Ethiopia, where customary institutions are still relatively strong, they too are struggling to control land fragmentation. Communal directives are ignored and individuals continue to plant crops and put up enclosures. Herders who are prevented from accessing grazing areas by community leaders will petition local government offices and return with formal permission to access them. As new opportunities open up, such as new markets and marketing routes (as in the Somali and Oromiya regions), there are greater incentives for individual rather than group gain (YakobAklilu and Catley 2010; BokuTacheDida 2011). This individualization further weakens the authority of customary institutions, which are already being challenged by the youth.

Increasing conflict within and between groups threatens the social cohesion of the whole pastoral clan society, and weakens risk-averting strategies that depend on negotiations with other pastoral groups. As good quality grazing lands are reduced, competition increases over those that are left and these become regular conflict hotspots. Groups who were once allies are now in conflict over land access. In many cases areas have become ‘no-go’ zones in order to avoid conflicts between opposing groups, including the Alledeghi Plain in Afar (Ethiopia)—the end result of the preclusion of 75,000 hectares of wet season grazing (Ahmed et al 2002). Tensions also increase as different ethnic groups are pushed closer together when access to their traditional areas is

curtailed (Eyasu Elias and FeyeraAbdi 2010). In many areas land uses that are incompatible with wildlife are on the increase, to the detriment of the wildlife and ecological processes.

In Karamoja (Uganda) the increasing incidences of violence are pushing poorer households closer to food insecurity, whilst chipping away at the assets of the better off (Browne and Glaeser 2010). Restrictions on movement further aggravate the situation (Muhezera 2006), and people live in a constant state of conflict and insecurity. Not only do the conflicts have costs for the communities, but it is estimated that the Government spends about 50% of its national budget on military interventions amounting to US\$100m a year with a significant proportion dedicated to resolving conflicts in the dry land areas (Adan and Pkalya 2005).

## CHAPTER THREE

### MATERIALS & METHODS

#### 3.0 Introduction

This chapter clearly elaborates the materials and methods the researcher will use to collect data, research design, sampling method, data sources among others. It also gives the description of the study area.

#### 3.1. Description of the study area

Kawempe is an area in the city of Kampala, Uganda's capital. It is also the location of the headquarters of Kawempe Division, one of the five administrative divisions of Kampala. The five divisions are: Kampala Central Division, Rubaga Division, Kawempe Division, Makindye Division and Nakawa Division.

##### Location

Kawempe is located on the northwestern edge of Kampala. It is bordered by Nabweru to the north, Kisaasi to the east, Bwaise to the south, Kazo to the southwest and Nansana in Wakiso District to the west. The road distance between Kampala's central business district and Kawempe is approximately 8.5 kilometres (5.3 mi). The coordinates of Kawempe are: 0°22'45.0"N 32°33'27.0"E (Latitude: 0.3792; Longitude: 32.5574). Kawempe lies on the main highway between Kampala and Masindi. It began as a trading center in the 1950s but has mushroomed into a busy, albeit disorganized, metropolitan area with businesses, small industries, retail shops and a thriving farmers market. Many of the surrounding villages have been turned into low income housing.

#### 3.2 Research Design.

The study used both qualitative and quantitative research designs. Qualitative design was used through asking related questions and getting the feedback which was recorded and presented in a narrative form using tables. Quantitative design was applied to reveal the numerical form of data such as statistics, percentages and so forth. It was used to quantify the size, distribution and association of the variables.

### **3.3 Target Population**

The target population was the residents of Kawempe division, the local leaders, the elders and the population officer in the district.

### **3.4 Sampling Design**

#### **3.4.1 Sample Size**

The total sample size of the study was 51 respondents, comprising of 47 local people both male and female, 2 local leaders and 2 elders.

47 Local people + 2 Local leaders + 1 Elders + 1 population officer = 51 respondents

#### **3.4.2 Sampling Method**

I used simple random sampling that gave each member an equal chance to be chosen in the sample group. This method was used only with the local people's side because they have the kind of information which is non-formal and it was used to get 47 local people. Non random sampling specifically judgmental method was used to select the 2 leaders in the area and 2 elders who are believed to have data that can be more detailed than the rest of the community members.

#### **3.4.3 Sampling procedure**

On reaching to the field of study, the researcher used simple random sampling by requesting the local people who are interested in giving relevant data to gather in one place. Their number becomes higher than required and I rolled papers equivalent to their number and some of the papers possessed numbers from 1 to 47. Those who picked papers numbered from 1 to 47 became the group to represent the rest of the community members. For the case of elders and local leaders, I judged following their availability and readiness to give information.

### **3.5 Sources of Data**

The source of data of this study was both primary and secondary data.

#### **3.5.1 Primary data**

This involved collection of data from targeted respondents in the designated area.



### **3.5.2 Secondary Data**

The secondary data was acquired from reports, which had been compiled by field researchers, internet, text books, magazines and newspapers that concern population increase and land fragmentation.

## **3.6 Data Collection Methods**

In order to address the objectives of this research, the researcher used the following instruments which assisted in gathering and collection of data.

### **3.6.1 Questionnaires**

Questionnaires were issued to the selected respondents, made up of open and closed ended questions. The questionnaires were self-administered amongst the respondents who were able to read and write in order to collect all the complete responses within a short time since clarity to questions were given on the spot. For those who were not able to read and write, the researcher was able to read the questions for them and filled in the questionnaire.

### **3.6.2 Interview guide**

This was used on different community members who did not need questionnaires but just an interaction with the researcher through interviews. The researcher conducted personal interviews with the help of community leaders that were administered to the key informants. They involved leaders themselves, environmental officers, population officer and other responsible people as far as population increase and land fragmentation was concerned, to get the different views from a variety of personalities.

### **3.6.3 Observation**

This involved seeing different facts in relation to the problem of study. The researcher was much interested in observing what is exactly on the ground in terms of population density, population distribution and land fragmentation.

#### **3.6.4 Focus group discussions**

This instrument was used in data collection in that, the researcher put respondents in small groups of between 10 to 15 people and then asked them to give responses to the set questions in the interview guide. The responses were then recorded and later compiled to make them relevant to the study. The researcher engaged the groups in open discussion but specifically on the topic of study to get wider information.

#### **3.7 Data Analysis and Presentation**

Data was analyzed and presented with the use of tables, and percentage scores basically showing Potential themes, categories and patterns were closely examined to see how they actually emerge from the data in relation to the objectives of the study.

#### **3.8 Validity and Reliability**

The interview instrument and questionnaire was cross examined for approval by the research expert (supervisor), to ensure that the information they generated was appropriate and consistent.

#### **3.9 Ethical Consideration**

I got an introduction letter from the University to introduce me to the area. This involved seeking permission by the researcher from the senior leaders of the study area. Permission was also sought from the relevant authorities like Local Council leaders; with respect to the respondents' views. This was important for the protection of the respondents from harm or harassment and the confidentiality of the respondents and their superiors' sensitive information.

## CHAPTER FOUR

### PRESENTATION OF FINDINGS AND DISCUSSION

#### 4.0 Introduction

This chapter comprises the research findings which includes among others; the demographic characteristics of the respondents, factors for high population in Kawempe, causes of land fragmentation and the effects of land fragmentation on the development of Kawempe.

#### 4.1 Demographic characteristics of respondents

Table 1: Sex of respondents

SEX	FREQUENCY	PERCENTAGE
Male	20	39
Female	31	61
Total	51	100

Source; primary source

Among the respondents involved in this research, female (61%) were higher than males (39%). an indication that there is high reproduction which is one of the reasons why there is population increase of people living in Kawempe division.

Table 2: Age of the respondents

AGE	FREQUENCY	PERCENTAGE
Below 15 years	4	8
16-35 years	25	49
36-50 years	16	31
50 above	6	12
Total	51	100

Source; primary source

This research found out that 49% of the respondents were aged 16-35 years which is the highest. followed by 31% aged 36-50 years. The least percentage of the population is represented by those aged below 15 years (8%) and those above 50 years (12%). This elaborates that there is a higher population of individuals who are strong and able to utilize the land individually for their development which is one of the causes of land fragmentation.

Table 3: Marital status of respondents

MARITAL STATUS	FREQUENCY	PERCENTAGE
Single	26	51
Married	14	28
Widowed	3	5
Divorced	8	16
Total	51	100

Source: primary source

Table 3 above illustrates that most of the population staying in and around Kawempe were single (51%), an indication that the youth who still have enough energy and many things to achieve are the highest. This predicts more land fragmentation and degradation in the few years to come because most of these are currently still staying with their parents and they will need to acquire their land to stay individually.

Table 4: Occupation of respondents

OCCUPATION	FREQUENCY	PERCENTAGE
Business	15	29
Student	12	24
Farmer	5	10
Official	4	7
Professional	6	11
Casual	9	17
Total	51	100

Source: primary source

Most of the people living in Kawempe were business men (29%) and the least number of respondents were officers (7%) and farmers (10%) indicating that Kawempe is still developing and attracting more business people who do not mind about how much land they need or how land is, but only on what they can do and achieve from there. This ideology clearly shows that even with small pieces of land, business can go on and this leads to more fragmentation without control.

Table 5: Population per house hold

No. OF PEOPLE	FREQUENCY	PERCENTAGE
< 6	16	31
6-10	28	55
>10	7	14
Total	51	100

Source; primary source

According to the study, the most households are comprised of 6-10 (55%) members that clearly show that there is less or no use of family planning in these families that has resulted to increase in population of people living in Kawempe which contributes to land fragmentation.

#### 4.2 Causes of population increase in Kawempe division

Table 6: Causes of population increase in Kawempe division

CAUSE	FREQUENCY	PERCENTAGE
High fertility of women	3	6
High birth rate	8	16
Low death rate	7	13
Early pregnancy	5	10
Polygamy marriage	6	11
Improved health	4	9
Lack of family planning	2	4
Immigration	10	20
Urbanization	6	11
Total	51	100

Source; primary source

According to table 6 above, population increase has not been influenced by a single factor but quite a number of them. Immigration (20%) was pointed out as the most factor that increased population in the area. Respondents said that most of the people in Kawempe are not the real inhabitants of the area though some of them were born from there. Most residents of the area

trace their ancestral origin from different regions of the country like northern, western, and eastern and some are from Buganda but not in Kampala district while others are foreigners like Sudanese, Congolese, Rwandese, Kenyans among others. Immigration in Kawempe is influenced by many factors which includes; its strategic location in the city of Kampala where most of the business opportunities are; alongside being a good place for residential houses, availability of social services like schools, health centers, commercial centers like banks, good transport means, security, electricity and clean water supplies. Urbanization (11%) has also attracted people to Kawempe division. With the availability of the above services has attracted many people to Kawempe while those who have been there also remain to continue enjoying those services. This relates with Mettler & Ann, (2007) who noted that Spain in particular receives most of the immigrants coming illegally to Europe from Africa, probably due to its large coastal area and its proximity to and land borders with Morocco at Ceuta and Melilla; African immigrants try to enter the country by boat from Morocco or Senegal or by jumping the border fences. For example, during just the first weekend of September 2006, more than 1,300 illegal immigrants arrived on beaches in the Canary Islands and estimates are that between 50,000 and 70,000 people enter the European Union illegally through Spanish borders or beaches (Demography Report, 2010). Border fences have been built at both the Ceuta and Melilla borders in an attempt to stop illegal entrance to the country (Claros & Eulalia, 2013). Illegal immigration is an issue in Spanish politics, and also a big human rights problem, since many people die during the journey. Spain has been Europe's largest absorber of migrants for the past six years, with its immigrant population increasing fourfold as 2.8 million people have arrived, mostly from Latin America. Spectacular growth in Spain's immigrant population came as the country's economy created more than half of all the new jobs in the European Union between 2001 and 2006 (Mettler & Ann, 2007).

However, immigration was not the only factor pointed to have increased population growth but also people who come there and those who have been there have high birth rates (16%) an indication that most people are hardly practicing family planning (4%) alongside early pregnancies (10%), polygamy kind of marriage (11%). High fertility of women (6%), Low death rate (13%) and improved health (9%) have also increased the population in Kawempe division. These factors are in line with Sam Grover factors that have caused the population growths in the last 200 years which include the following; reduced death rate, increased birth rate, food, health.

#### 4.3 Causes of land fragmentation in Kawempe division

Table 7: Causes of land fragmentation in Kawempe division

CAUSE	FREQUENCY	PERCENTAGE
High population growth	12	24
Poverty	9	18
Individual land ownership	7	14
No land policies to prevent land fragmentation	4	8
Weakness in available land policies	3	6
Family conflicts	8	15
Ignorance	2	4
Poor planning by KCCA	6	11
Total	51	100

Source: primary source

Table 7 above elaborates population increase (24%) in Kawempe as the most cause of land fragmentation. It was reported that Kawempe's population increases almost on a daily basis through new born babies and immigration yet people who evacuate the place through death and emigration are very few. The area has become congested because of high population through dividing of land for different activities like construction and other businesses. The inborn residents of Kawempe sell small plots of land to the immigrants while the immigrants later divide for their children which, leads to land fragmentation. It was found out that 55% of the respondents in Kawempe were staying 6-10 people per household (table 6) which indicates population increase through birth rates. According to Nabukenya, a widow in who owns 7 children in Kawempe, there is no other land they own anywhere because land in the Village (Mukono) was sold when the husband was sick to death. She said that she has 5 boys who will have to share the plot of land she has when they grow up. However, she also reported that the plot seems to be too small for division among the five boys and this might lead into conflicts in future. Mrs. Nabukenya also said that this problem is not only with her but most of the people in Kawempe including those women with their husbands alive. "If it was not because of many children in my family, this plot would be enough to feed us for more years to come," said Mrs. Nabukenya.

The LC1 chair person in Kazo-Kawempe division, together with other respondents reported that poverty (18%) is one of the obvious factors that lead to land fragmentation in Kawempe division. He said that if it was not because of poverty, people in Kawempe would not be forced to sell off their land to immigrants, one of the causes of population to increase. He reported that population increase has partly been influenced by poverty because it forces residents to cut plots of land for sale. More to that, the LC 1 among other respondents said that family conflicts (15%) have risen due to poverty and scarcity of enough land by the residents of Kawempe that has caused land fragmentation in one way or the other. "For example, the family of Mr. Ssentongo in Kazo-Kawempe division was involved in family conflicts which forced them to divide the big land they had among 6 boys and 3 girls after they had grown mature and requested for their portions which led to land fragmentation," Mrs. Allen Namatovu reported.

Lack of laws and policies to control land fragmentation (8%), weakness in the available laws (6%) and ignorance (4%) were the least causes of land fragmentation in Kawempe, an indication that people are aware of the laws and policies but the other factors of population increase, poverty and conflicts are inevitably leading to land fragmentation.

#### 4.4 Effects of land fragmentation in Kawempe division

Table 8: Effects of land fragmentation in Kawempe Division

EFFECT	FREQUENCY	PERCENTAGE
Limits economic development	14	27
Poorly planned urbanization	12	24
Development of slums	7	14
Traffic challenges	9	18
Conflicts	5	10
Limits agriculture	4	7
Total	51	100

Source; primary source

Limitation in economic development (27%) and poorly planned urbanization (24%) were reported as the most effects of land fragmentation to the people of Kawempe division. According to Elias Byomunda, an immigrant in Kawempe who arrived there in 1999, Kawempe was by that time sparsely populated and land was large enough for any economic activity. Elias said that he



reached in Kawempe without money but he started growing crops and rearing animals freely in the land owned by people who allowed him because they had more enough for, them which helped also to buy land and even construct his own house where he lives now. "Considering the situation in Kawempe today, it is hard for someone to come with nothing and get free land to utilize for agriculture, this is because of land fragmentation and it limits economic development," Elias reported. As reported by Lukwago a resident of Kawempe division who practices poultry farming, it is difficult to do different agricultural practices especially commercial farming because of limited land. He said that he would love to expand his poultry farm because he has more customers but it has become impossible without enough land. Lukwago said that he requested one of his neighbors, who has a small plot of land that is still empty but the money he requested for can never be paid back by poultry farming even in 20 years. Most of the respondents said that lack of land to expand their businesses has limited their economic development. Alongside limited economic development, poorly planned urbanization (24%) was also pointed out to a serious effect of land fragmentation in Kawempe division. The respondents said that it is always very hard and sometimes impossible to construct bigger roads and good buildings because of limited land. There is traffic congestion (18%) and especially in rush hours development of slums (14%) which are signs of less economic development and poorly planned urbanization. The least effects of rapid land fragmentation were that it leads to conflicts (10%) and limits agriculture (7%).

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter is comprised of general conclusions on the findings of the study and the recommendations.

#### **5.1 CONCLUSIONS**

Among the causes of population increase in Kawempe division, immigration (20%) and high birth rate (16%) were pointed out as the most factors that increased population in Kawempe. whereas lack of family planning (4%) was the least.

Population increase (24%) and poverty (18%) are the most factors that lead to land fragmentation in Kawempe division, not ignoring family conflicts (15%) to be the causes of need to distribute land respectively to the family members leading to land fragmentation. Weakness of land use policies (6%) and ignorance (4%) among the people of Kawempe are the least causes of land fragmentation.

Land fragmentation has got different effects in Kawempe division, the most prominent ones being limitation in economic development (27%) and poorly planned urbanization (24%). The least but inevitable and serious effects of land fragmentation were reported as conflicts (10%) and limitation in agriculture (7%). Conflicts and limitation in agriculture were the least pointed effects but their impact is sound and well known in Kawempe.

#### **5.2 RECOMMENDATIONS**

Immigration (20%) and high birth rate (16%) being the most causes of population increase on Kawempe, I recommend more sensitization and extension of family planning methods to the people of Kawempe and the rest of the people in Uganda. Since population increase in Kawempe is more influenced by immigration, I would still recommend sensitization and extension of family planning methods even in other areas so that there is less pressure on land that would force them to migrate to other areas like Kawempe. Also to reduce population growth in the area.

I recommend the introduction of laws and policies governing the citizenship of Kawempe and Uganda as a whole and strengthening of the available laws.

I would recommend the government and/or the Kingdom of Buganda to come up with better land use and land management policies to reduce land fragmentation. For example, the land ownership policies have influence on fragmentation of land and this could be regulated by setting minimum size of land owned by an individual in that nobody should own land below the standards. Alongside that, population increase (24%) being the most cause of land fragmentation. I recommend regulation of immigration by the government using laws and policies. Since poverty is also a key factor that leads to land fragmentation, I recommend the introduction of poverty reduction activities in Kawempe funded by the government through issuing out easily accessed loans to responsible youths and even train them how to use them for development. Other strategies to reduce poverty can include regular sensitization and encouragement of people and funding and promotion of their local activities like agriculture and small scale industries. These strategies if done strategically would limit further fragmentation of land.

Considering the effects of land fragmentation like less economic development and traffic congestion among others, I suggest that there should be proper implementation of the above measures to solve both the short term and long term challenges of land fragmentation in Kawempe.

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## APPENDIX I

### PROPOSED BUDGET

ITEM	QUANTITY	RATE	TOTAL COST
Ream of papers	1	12,000/=	12,000/=
Pens	4	500/=	2,000/=
Proposal printing and binding	2 copies	15,000/=	30,000/=
Transport	1 person	95,000/=	95,000/=
Accommodation & food	1 person	200,000/=	200,000/=
Dissertation Printing	3	10,000/=	30,000/=
Binding	3	10,000/=	30,000/=
Miscellaneous		50,000/=	50,000/=
TOTAL			449,000/=

## APPENDIX I

### QUESTIONNAIRE

I am **Nalubega Faith**; a student of Kampala International University (main campus), college of humanities and social sciences conducting a research entitled “population increase and land fragmentation in kawempe-division, Kampala”. Please answer all the questions below.

Questionnaire number.....

Date.....

Tick the right options

#### Section A: Socio-Demographic data

Sex

Male ☐

Female ☐

Marital Status

Single ☐

Married ☐

Any other .....

#### 3. Age

a. Below 15 years ☐

b. 16-35 years ☐

c. 36-50 years ☐

d. 50 above ☐

4. Occupation ☐

a. Business ☐

b. Official ☐

c. Student ☐

d. Others (specify).....

#### 6. Number of persons per house hold

a. < 6 ☐

b. 6-10 ☐

c. 11> ☐



Section B: Causes of population increase in Kawempe division

7. What are the causes of population increase in Kawempe division?

Causes	Tick your choice									
High fertility of women										
High birth rate										
Low death rate										
Early pregnancy										
Polygamy marriage										
Improved health										
Lack of family planning										
Immigration										
Urbanization										

Section C: Causes of land fragmentation

8. What are the causes of land fragmentation in Kawempe division?

Causes	Tick your choice									
High population growth										
Poverty										
Individual land ownership										
No land policies to prevent land fragmentation										
Weakness in available land policies										
Family conflicts										
Ignorance										
Poor planning by KCCA										

Section D: Effects of land fragmentation in Kawempe division

9. What are effects of land fragmentation in Kawempe Division?

Effects	Tick your choice							
Limits economic development								
Poorly planned urbanization								
Development of slums								
Traffic challenges								
Conflicts								
High crime rate								
Limits agriculture								

## APPENDIX II

### INTERVIEW GUIDE

- a. Were you born in Kawempe division?
- b. What factors attracted you to this division?
- c. How long have you been in this area?
- d. What is the difference in population distribution today and when you came?
- e. Do you think population in Kawempe is increasing?
- f. What factors lead to population increase in Kawempe?
- g. If it is due to immigration what are the factors influencing these people to come to Kawempe?
- h. Is there any influence of population increase on land fragmentation in this area?
- i. What other factors have led to land fragmentation?
- j. Are there laws and policies put across to stop or reduce land fragmentation in Kawempe?
- k. What are the effects of land fragmentation towards the development of Kawempe?
- l. What recommendations do you give to reduce or stop land fragmentation?