FACTORS INFLUENCING URBANIZATION OF INFORMAL SETTLEMENTS IN CITIES, CASE OF ELDORET MUNICIPALITY, UASIN GISHU COUNTY, KENYA

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DECLARATION

I declare that this research project is my original work and has never been presented for an award of a degree or any other academic purposes in any other university.

Signed…….. Date……..

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L50/73549/2014

This research has been submitted for examination with my approval as University Supervisor.

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DEDICATION

This study is dedicated to my father, who taught me that the best kind of knowledge to have is that which is learned for its own sake. It is also dedicated to my mother, who taught me that even the largest task can be accomplished if it is done one step at a time. To my husband and my brothers you have stood by me through this time. Thank you. You are the pillars of my life.

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LIST OF ABBREVIATIONS AND ACRONYMS

IS-Informal Settlements

GOK - Government of Kenya

SMEs – Small and Medium Enterprises

HABITAT - United Nations Human Settlements Programme

NGO - Non-Governmental Organization

CBO - Community Based Organizations

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ABSTRACT

With urbanization has come growth of the urban poor and informal settlements, also referred to as slums. A whopping 32% of the world's urban population lives in slums. Even with modest successes in poverty reduction and upgrading informal settlements, the world's slum population could still reach 889 million by 2030. Informal settlements are densely populated and lack basic property rights and access to critical infrastructure, such as clean water and sanitation.This study departed from the previous studies looking into this issue and concentrated only on Eldoret town and the informal settlements that have sprung up in the last few years such as Munyaka, Kamukunji, Huruma and Langas slums. The objectives of this research were to find out how availability of social amenities, cheap transport systems, availability of industries and new technology have influenced urbanization of informal settlements in Eldoret town. To realize the purpose of the study, a descriptive survey design was adopted. The population for this study included all residents of Munyaka slums in Eldoret. Staff from the Immigration and Planning Departments of the County Government were included in the population of study, bringing the population of interest to a total of 20,100.The study used simple random sampling. And the researcher therefore selected 396 households within Munyaka slum based on a proportionate stratified random sampling procedure, with which samples from various categories will be drawn. Data was collected using questionnaires that contain open and closed ended questions that were administered to the selected residents and employees of the immigration and planning departments. Piloting was done to test for ambiguities and inadequacies before the actual data collection. The instrument was piloted in Nyalenda Slums in Kisumu where 20 residential households and 5 people from relevant county department were selected at random to fill the questionnaires. Data collected from pilot samples were coded, classified and analysed using SPSS version 20, using Cronbach Reliability coefficient thereby obtaining a coefficient of 0.69. Data analysis began with data cleaning: editing, coding arranged for analysis using descriptive and inferential statistics such as frequencies, means, percentages and inferential statistics. Data analysis was aided by the use of computer programs SPSS v 20. Chi- square tests will be conducted to investigate the research questions to see the relationship between the variables of the study. A response rate of 93.413% was achieved of which 54.0% of the respondents sampled were Female in gender. The findings reflect that 74.9% of the respondents belonged to the age group 20-30 and 38.1% of the sampled population had gone through secondary education. 43.1% of the sampled population were employed and working within Eldoret town. The findings proved that 87.2% of the respondents did agree to improvement of health facilities within the informal settlements of Eldoret Town. This was further appraised by 96.3% of the sampled population who recorded to be satisfied with the services offered by the health facilities within Eldoret. 94.3% of the sampled population did record to take 30 minutes to get to town to do their day to day activities, this indicates an improvement in the transport systems, as the researcher further obtained more information on the road status and found that 56.9% of the sampled population agreed to this. Majority of the sampled population 93.47% reflected not to have understood how industrialisation had improved, the findings also reflected that 87.2% of the sampled population did interact with solar water filters in purification of the water that they use in their day to day activities.37.1% of the sampled population did strongly agree to the improvement of the mobile industry thus improvement in communication systems.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The rapid expansion of cities throughout the world has been accompanied by equally rapid growth of informal settlements, often known as slums. Slums develop as the formal housing market is unable to cater for the number of migrants, many of whom are extremely poor. It is estimated that by 2030, nearly five billion people will be living in urban areas, which compares to 3.2 billion in 2007. Slum conditions are defined by the UN as lacking at least one of the basic conditions of decent housing: adequate sanitation, improved water supply, durable housing or adequate living space. Although the proportion of urban dwellers living in slums appears to be falling, the absolute number is rising rapidly. This expansion is occurring quickest in the world's poorest regions such as Southern Asia and sub-Saharan Africa (UN-HABITAT, 2009).

One such challenge will be increasing urban sprawl, as the land area covered by expanding cities is expected to grow at about double the rate of the population. For example, from 1985 to 2000, the population of Accra, Ghana increased by 50%, whereas the city's land area grew by 153%.With urbanization has come growth of the urban poor and informal settlements, also referred to as slums. A whopping 32% of the world's urban population lives in slums. Even with modest successes in poverty reduction and upgrading informal settlements, the world's slum population could still reach 889 million by 2030. Informal settlements are densely populated and lack basic property rights and access to critical infrastructure, such as clean water and sanitation. They are also often most at risk in the event of environmental hazards. To protect their livelihoods, health, and safety, residents of

informal settlements are the most in need of secure property rights and inclusion in land management and planning, while also the most vulnerable to eviction without notice or compensation (UN-Habitat, 2013).

The population of most African cities have been growing since the 1960s at some of the fastest rates in the world, and by 2050, about 55% of Africans will be living in urban areas (up from 38% in 2000). Over 90% of new urban development in Africa is informal. While the locations, construction standards, population densities and other aspects of informal settlements vary tremendously, many informal settlements are characterized by severe environmental problems of one kind or another. In many cases, a poor sanitary environment, hazardous location, and lack of basic services means that environmental health issues affect quality of life and life expectancies of the inhabitants (Brakarz et. al. 2002).

There are currently more than 134 informal settlements in Nairobi. They are highly varied in size, types of housing, and the demographic composition and income levels of the inhabitants. The largest, Kibera slum, is home to over a quarter of a million people. Population densities also vary, but can be extremely high. In 2004, Kibera was home to 80,000 people per square kilometre (km). We may compare this to the situation in Karen, an up-market and historically 'white' suburb of Nairobi, which has a population density of 360 per square km (GoK 2003a).

1.2 Statement of the Problem

Kenya is facing an increasing growth of informal settlements in her urban centres. As rapid urbanization takes its toll, so has the development and growth of slums. More than 34% of Kenya's total population lives in urban areas and of this, more than 71% is confined in informal settlements. A vast majority of the dwellers live in extremely poor conditions. A rapid increase in the urban population and the limited capacity of the government to meet the

high demand for building plots has led to mushrooming of the informal settlements (Scholz, 2006).

Urbanization of informal settlements has been associated with the mushrooming of the slums and is one of the root causes for the spread of problems associated to informal settlements in Eldoret town. Eldoret is experiencing rapid urbanisation due to rural-urban migration and international migration. Many people moving to urban areas are poor, and when they get to town, they live in areas with low rentals resulting in families living in small rooms, shacks or even a few families sharing a room resulting in overcrowding. This creates huge pressure on basic services and facilities e.g. housing, schools, hospitals. The growth of the IS has resulted in many, and complex socio-economic and environmental consequences. These problems include increased crimes rates within the slums and in town, environmental pollution, deforestation, flooding, waste of agricultural lands among others. This has made it impossible for the local government to embark upon any meaningful developmental project that will enhance economic growth and development of the study area. The main causes of growth of informal settlements in Eldoret town include; industrialization, improved transport systems, technology advancement and increase in social amenities all these being affiliated with urbanization (Anyuro; Chege, 2012).

Housing remains a fundamental aspect of human life, because it determines the health, economic position and social status of individuals and therefore the need to provide for a mechanism that will ensure that all residents have access to affordable and decent housing with good environmental conditions. The recognition of the role of effective legislation, partnership, financial support and all stakeholders' participation should be enhanced (UN HABITAT, 2013).

This research work was set out to critically examine the influence of infrastructure development projects in respect to urbanization of informal settlements within Eldoret Town. The objectives of the study focused on identifying causes of urbanization in Munyaka settlement within Eldoret, identifying the environmental and social problems and proposing possible solutions (Brakarz et. al. 2002).

1.3 Purpose of the Study

The purpose of the study was to determine the factors influencing urbanization of informal settlements in Eldoret Municipality.

1.4 Research Objectives

1. To examine how availability of social amenities influences urbanization of informal settlements in Eldoret Municipality.
2. To establish how cheaper transport systems influences urbanization of informal settlements in Eldoret Municipality.
3. To assess how availability of industries influences urbanization of informal settlements in Eldoret Municipality.
4. To determine the influence of new technology on urbanization of informal settlements in Eldoret Municipality.

1.5 Research Questions

1. What is the influence of social amenities on urbanization of informal settlements in Eldoret?
2. How has cheaper transport systems affected urbanization of informal settlements in Eldoret?

3. How has availability of industries influenced urbanization of informal settlements in Eldoret?

4. What is the influence of new technology on urbanization of informal settlements in Eldoret?

1.6 Significance of the study

This study may resolve lingering questions or gaps in knowledge in the study of informal settlements and why the keep growing while the governments worldwide are trying hard to shrink them. It may also help to develop better theoretical models in your area in this area of study, it may also influence public policy and future policy developments by guiding decision makers in providing relevant information that they may require. Finally, it may change the way people do their jobs in this particular field of research, or may change the way people in the slums live their day to day lives.

1.7 Basic Assumption

According to Leedy and Ormrod (2010) assumptions are so basic that, without them, the project itself could not exist. The assumption in this project was that the respondents in the project represented the characteristics of all household in Eldoret Municipality. The respondents provided unbiased responses and that there will be policies in place to mitigate the effects of overpopulation and that the target population is going to assist in providing information.

1.8 Delimitations of the Study

Delimitations are those characteristics that limit the scope and define the boundaries of your study (Simon, 2011). In order for the study to be carried out successfully, the following assumptions were made; that the objectives to be looked at include availability of

social amenities, availability of industries, new technology and cheaper transport systems; that the information obtained from the research study was a representative of the slum households and that the informants are willing to participate in the research process.

1.9 Limitations of the Study

Within the context of project, the term limitation denotes the limiting conditions or restrictive weaknesses (Mugenda & Mugenda, 2003). In this project they included available resources within the town may constrain the findings of the study, respondents may be reluctant to give full and honest information and the research is carried out within a limited period of time of about 3 months.

1.10 Definition of Significant Terms as used in the Study

Urbanization: The gradual increase in the population of Munyaka slum, increased residential housing/dwellings, and business premises.

Informal settlements: Unplanned settlements and areas where housing is not in compliance with current planning and building regulations (unauthorized housing in Eldoret Municipality).

Social amenities: Something that contributes to physical or material comfort. Such are Schools, hospitals and housing.

Cheaper transport systems: These include road networks, drainage systems, and electricity lines available in Munyaka slum.

Industries: Job creation firms and sectors. Include Jua kali, manufacturing firms/factories and SMEs

New Technology advancements: Solar lighting, Portable toilets, Mobile systems, ICT, Affordable building materials e.g. prefab houses, interlocking bricks etc in Eldoret Municipality.

1.11 Organisation of the study

This study work had five chapters, the first chapter entails background of the study, statement of the problem, the purpose of the study, the research objectives, research questions, significance of the study, delimitation of the study, limitation of the study, basic assumptions of the study, definition of significant terms and organization of the study.

Chapter two consists of the literature review which is divided into various topics and the conceptual framework, which shows the relationship between the independent and the dependent variables. Chapter three comprises of research design, target population, sample size and sampling techniques, data collection instruments, reliability of research instruments, validity of research instruments, data collection procedures, data analysis technique and lastly ethical consideration. Chapter four has statement of findings and data analysis, while chapter five has discussion of findings, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The rapid expansion of cities throughout the world has been accompanied by equally rapid growth of informal settlements, often known as slums. Slums develop as the formal housing market is unable to cater for the number of migrants, many of whom are extremely poor. It is estimated that by 2030, nearly five billion people will be living in urban areas, which compares to 3.2 billion in 2007. Slum conditions are defined by the UN as lacking at least one of the basic conditions of decent housing: adequate sanitation, improved water supply, durable housing or adequate living space. Although the proportion of urban dwellers living in slums appears to be falling, the absolute number is rising rapidly. This expansion is occurring quickest in the world's poorest regions such as Southern Asia and sub-Saharan Africa (Kamau; Ngari, 2002).

2.2 Factors that Influence Urbanization of Informal Settlements

Generally, slums represent a major challenge to development. Urban expansion and the growth of informal settlements (or slums) places great pressure on already struggling health and education systems. Slums place great pressure on the environment and are often highly polluted. They also pose challenges to security and social cohesion. In 2003, UN-Habitat produced their Global Report on Human Settlements with a focus on slums and informal settlements. This report, entitled "The Challenge of Slums", is an extensive examination of the reasons behind and reality of world slums. The report also examines the processes at work within slums and other informal settlements and provides a deeper understanding of the challenges facing those who reside in such settlements (GoZ, 2005).

According to the UN, within the developing regions, sub-Saharan Africa had the largest proportion of the urban population resident in slums in 2001 (71.9 per cent) and Oceania had the lowest (24.1 per cent). In between these were South-central Asia (58 per cent), Eastern Asia (36.4 per cent), Western Asia (33.1 per cent), Latin America and the Caribbean (31.9 per cent), Northern Africa (28.2 per cent) and Southeast Asia (28 per cent). With respect to absolute numbers of slum dwellers, Asia (all of its sub-regions combined) dominated the global picture, having a total of 554 million slum dwellers in 2001 (about 60 per cent of the world's total slum dwellers). Africa had a total of 187 million slum dwellers (about 20 per cent of the world's total), while Latin America and the Caribbean had 128 million slum dwellers (about 14 per cent of the world's total) and Europe and other developed countries had 54 million slum dwellers (about 6 per cent of the world's total) (UN HABITAT, 2013).

2.3 Availability of Social Amenities and Urbanization of Informal Settlements

Slums in Nairobi have existed since the city's inception, and the government has failed to respond to the plight of slums dwellers accordingly. The residents in these areas live under deplorable conditions with lack of the most basic needs and social amenities and face multi-dimensional challenges which require multi-dimensional interventions such as clean water supply and improved sanitation, energy, solid waste management, housing, schools, and hospitals Even after being classified as illegal, life is very difficult to approximately 1.5 million people in Nairobi's informal settlements(United Nations, 2006; Centre on Housing Rights and Evictions, 2008). Being illegal, informal settlements were previously abolished by the government through forced evictions which often lead to conflicts. Fortunately, the government has recently drafted strategic plan papers and policies recognizing the existence

of slums and the need to improve them though this does not address the lack of security of tenure and fails to help with access to the most essential social services (Mitullah, 2003).

The popular major problem in the urbanization process is housing as more populations are seen to live in very poor structures and those who are affected most are the ones who earn little incomes, and therefore live in slums that are overcrowded and congested in terms of shared facilities. And for the housing to be effective on the city thing like water, electricity, sanitation, quality of construction and drainage should be taken into account but this also depends on the social classes (Milan, 2003).

To better understand this, there are more than 30,000 structures in Kibera slums which are mud walled and thatched with corrugated iron sheets as indicated by research results from Amnesty International. A household in the slums comprises of seven members on average and usually stands on a 12ft by 12ft structure costing almost US$15 per month. The local authorities usually issue temporary occupation licenses to the owners. Around 10% of Kibera residents own the structures and sub-let them to the remaining 90%. The structures are owned by informal owners who are recognized by the tenants, but they have no legal ownership. The tenants pay a monthly micro-lease to the owners (UN-Habitat, 2003).

The British colonial administration initially, had allowed Nairobi "to grow with no proper survey or control" (Home, 1997). However, after a period of sustained economic growth in the 1940s, British colonial rulers devised Nairobi's first master plan in 1948 that sought to shape Nairobi's growth over the preceding 25 years. This approach was heavily influenced by European city planning and was not designed with Kenyan topography in mind. The plan specifically targeted the building of "new administrative buildings set in landscaped public spaces, a modern commercial centre, a greatly enlarged industrial area to attract investment, a vastly improved transport system, and the construction of new African

housing estates" only meant for African servants working for British (Anderson, 2010). The plan excluded African inhabited parts of the city. Once Kenya gained independence in 1963, autocratic leadership, poor governance and planning structures adopted by the African elite served to further entrench class segregation and social exclusion of the poor (Huchzermeyer, 2011). The reversal of the native restriction law after independence, poor agricultural rural land and lack of employment opportunities in the rural areas forced people, especially the youth, to move to urban areas in large numbers. The rapid urbanization and the lack of plans to accommodate the newcomers to the city only served to exacerbate the housing situation as people were forced to construct makeshifts and substandard housing (K'Akumu & Olima, 2007).

Lack of good governance and proper leadership in these settlements has worsened the situation. The experience of slum-dwellers starkly illustrates that people living in poverty not only face deprivation but are also trapped in poverty because they are excluded from the rest of the society, denied a say, and threatened with violence and insecurity (Amnesty International, 2009). There is indeed a clean lack of empowerment and social capital and corrupt authorities have taken advantage of this. Kibera informal settlements (began in 1912) have an estimated population of 950,000 people, while Mathare slums (started in 1963) houses more than 500,000 people, Korogocho slums (started in 1980s) has an estimated population of 150,000 people and Mukuru Kwa Njenga (began in 1958) has an estimated population of 100,000 people (Umande Trust, 2007).

Lack of affordable low cost housing and poor planning usually encourages the supply side of slums. The Millennium Development Goals proposes that member nations should make a "significant improvement in the lives of at least 100 million slum dwellers" by 2020. If member nations succeed in achieving this goal, 90% of the world total slum dwellers

may remain in the poorly housed settlements by 2020. Choguill claims that the large number of slum dwellers indicates a deficiency of practical housing policy. Whenever there is a significant gap in growing demand for housing and insufficient supply of affordable housing, this gap is typically met in part by slums. The Economist summarizes this as, "good housing is obviously better than a slum, but a slum is better than none" (Choguill, 2009).

At the centre of the IS phenomenon lies the question of poverty. With an average annual per capita income of less than Ksh.20,000, the majority of the population can be categorized as extremely poor. To construct a house in a planned area one needs to have enough money to buy a plot and build a "decent house". On average, a plot of 400 square metres is sold between Ksh.4,000,000 and 5,000,000 which is beyond reach for many residents. Therefore, to build a house is a life time project. People start constructing houses by using mud and thatch and these are gradually replaced over time by cement bricks and corrugated iron sheets. This process can take years; there are houses that were built in the 1960s and 1970s which can still be regarded as unfinished, even though families have been living in them for all these years (Ling; Long, 2007).

There are still many urban dwellers who feel very comfortable living in IS and perceive it as the only place where you can enjoy "Swahili life" which entails sharing and togetherness among neighbours. They consider the well planned and serviced areas like Mombasa, Mbweni and Mazizini (where residents build high fencing walls) to be places of people of high income brackets or uzunguni. Some of these areas have been dubbed "masikini hajengi" which means poor cannot afford to build. In the minds of the residents, there is no doubt about the "legality" of their houses. Recent surveys on IS indicate that security of tenure is generally not considered to be an issue, as once you build a house no one

can claim ownership of it, and there is almost no possibility of being forcefully removed from the area (Azzan et al 2005).

Throughout the history of the existence of the IS, one of the major causes has been failure or inability of the responsible institution to provide residential plots to the ever increasing urban population. While official applications for residential plots in Zanzibar Town have been steadily increasing, supply of the same is staggeringly inadequate, an average of between 20 and 30 per cent per year (DoLR, various files). There is a general perception among the urban dwellers that there is virtually no possibility of getting residential plots from the land authority. Therefore, the mushrooming of the IS could be seen as a process of "filling the gap" as determined and driven by the basic economic principal of demand and supply (Haji, Salim; 2006).

2.4 Cheaper Transport Systems and Urbanization of Informal Settlements

The search for solutions to urban and social problems prompted by informal settlements is gaining importance in the development agenda of most large cities in Latin America. Nearly 60% of the population lives in informal, often centrally located settlements. The significance of the issue is emphasized by the inclusion of an objective in the Millennium Development Goals to reduce the number of people living in slums by 100 million by 2025 (UN, 2000). Within Latin America, municipalities are tackling the land tenure, sanitation, and urban services deficiencies of informal settlements either with their own resources or with transfers from other government tiers. A wide array of practical experience has come from the region, mainly from programs executed in the settlements located in the periphery of cities (Brakarz et. al. 2002).

In regards to transport and communication, the working system of urban areas as far as transport and communication is concerned makes it easier for the populations to access

many places around the urban places hence making their lives improved. But there are other things that hinder the system from being effective like traffic jam, unlicensed operators, thieves, accidents among others (Thuo, 2013).

Most slums dwellers have three main concerns with water: access, cost and quality. They complain about the limited access to water points, which are often located far from their houses, some landlords ration water such that it is only available on specific days of the week and at specific times. For many years, Kibera slums has not had clean water points as most collected water comes from Nairobi dam. The Kenyan government in 2007 admitted that sustainable access to water dropped to as low as 20 per cent in the settlements of the urban poor where half of the urban population lives. This is a tragic situation given that Kenya falls far below the estimated defined minimum water per capita requirement. This is a limitation especially for people who have children and would require high amounts of water. However, for those who have access they decry the high cost of buying water in the informal settlements. This is costly especially relative to the slum residents' income levels (Water Sanitation Program, 2008).

A lot has been done by the Kenyan government in the past to improve water provision to urban poor. In 2003, the Water Act 2000 was implemented to pave way to water reforms including privatization of water services. However, this has not improved the situation in Kibera slums, it only made water services more expensive than neighbouring areas. In Kibera slums, for example, the cost of water is seven times higher than that paid by people in high-income settlements served by the Nairobi Water and Sewage Company (UNDP, 2007; National Water Strategy, 2007).

Furthermore, lack of improved sanitation facilities, including toilets, showers, and sewage disposal has been well documented in Kibera. Ninety four percent of the population

in informal settlements does not have access to adequate sanitation. Up to sixty per cent of the population in Kibera must share pit latrines with approximately fifty others. Even when toilet facilities are available, people complain that they are not conveniently located, that they are unclean, or that using them at night poses a security risk. Children are especially vulnerable to inadequate toilets because they may lack access to house hold keys which unlock the community toilets. The toilets are mostly built by the support of NGOs and managed by CBOs. The residents live under mass poverty leading to a collection of sustainability challenges. Access to clean water, improved population sanitation, solid waste management, security and energy are some of the most fundamental challenges faced by slums dwellers. Together with this is the lack of enough schools and educational centres and a huge deficiency of other urban infrastructure (Guy, Marvin & Moss, 2001). For example, Kibera is heavily polluted by human refuse, garbage, soot, dust, and other wastes. The slum is contaminated with human and animal faeces and all sorts of wastes which are worsened by open sewages and lack of drainage systems (Hardoy, Mitlin & Satterthwaite, 2003; Hodson& Marvin, 2009). Therefore, poverty, lack of improved sanitation combined with poor nutrition among residents' accounts for many illnesses and diseases in slums. It is estimated that 20% of the 2.2 million Kenyans living with HIV live in Kibera (Heynen, Kaika & Swyngedouw, 2006; Kumar, Shigeo & Harada, 2003).

Research shows that more than 70% of the slums lack electricity. While provision of energy is controlled by government owned firms, these energy firms have not been able to set power transmission points in many parts of Kibera since the settlement is classified as illegal. In addition, the cost of electricity is quite high not only to slums residents but also to the rest of Kenyans living in the city. Therefore, Kibera residents have to rely almost exclusively on firewood and charcoal. Mostly women and girls have to walk for distances to look for

firewood while charcoal is often prepared for commercial purposes. This means that trees are being carbonized and sold in sacks to the poor in urban areas (Mitisya; Yarime, 2011).

In this era, energy development must precede economic development because no area can succeed in shaking loose from a subsistence economy without widespread access to energy services.A good example is the Adopt-A-Light project commissioned in 2002 to assist in lighting the city of Nairobi in collaboration with the Nairobi's city council and has erected lighting masts in Kibera slums. In 2005, the UN-Habitat's Slum Lighting Project was commissioned to assist with lighting the city. These two initiatives have helped in providing light in Kibera slums among other slums in the city (Gichuri, Wambui; 2002).

2.5 Availability of Industries and Urbanization of Informal Settlements

The strong relation between urbanisation and industrialisation characterises the territorial, demographic and economic dynamics of the country. Financial investment, particularly from the 1950s onwards, has been mainly aimed at the country's modernisation, with urbanisation playing a strategic role. From an agricultural economy the country has changed to an industrialised and urbanised society in thirty years. During the 1970s, the most important period of this process, the country grew at an average annual rate of 8.6 per cent. In the same period the annual industrial average production was 9 per cent and the urban population increased from 44 to over 55 per cent. The new world economic dynamism, emerging from the mid-1990s, had an impact on the country's industrial structure. This has been reflected in its spatial organisation and the market relations with innovations that came with globalisation. These changes to the productive structure were followed by the country's free trade policy, and ended with the consolidation of monetary stabilisation and the adoption of a new free exchange currency policy. Economic growth patterns during the 1990s were characterised by two sub-periods. Between 1990 and 1993 the economy was in recession with

average annual growth reaching only 1.2 per cent. Between 1993 and 1997 average growth was higher reaching 1.7 per cent a year while for industry it was 3.8 per cent (IPEA,2001).

Slums are generally the only type of settlement affordable and accessible to the poor in cities, where competition for land and profits is intense. People move to urban areas following the industries for employment. Consequently, they end up with shelter problems and that leads to the growth of slums. A good example is what happened during the industrial revolution in the 18th Century in Europe when most people started moving to cities like Sheffield and Manchester to work in the manufacturing industry. As a result of fewer available jobs, people have low incomes, which make it difficult for them to own houses but to live in slums(Mutisya; Yarime, 2011). Most often the incomes of slum dwellers are too low for formally regulated housing markets to provide them with any kind of permanent housing. For this reason, slums are inhabited by people who cannot afford to live in or are disqualified from accessing formally developed houses, even though not all urban poor live in slums nor are all slum dwellers poor. Slums are often found on the outskirts of cities or in inner cities locations (Nabutola, 2011).

Ling and Hong (2007) in their research continue that insufficient financial resources and lack of coordination in government bureaucracy are two main causes of poor housing planning. Financial deficiency in some governments may explain the lack of affordable public housing for the poor since any improvement of the tenant in slums and expansion of public housing programs involve a great increase in the government expenditure. The problem can also lie on the failure in coordination among different departments in charge of economic development, urban planning, and land allocation. In some cities, governments assume that the housing market will adjust the supply of housing with a change in demand. However, with little economic incentive, the housing

market is more likely to develop middle-income housing rather than low-cost housing. The urban poor gradually become marginalized in the housing market where few houses are built to sell to them (Gichuri, Wambui; 2002).

The understanding of the level of urbanization or its scale in developing countries is challenged by differences in the definition of "urban" and in turn, the lack of reliable data. Furthermore, the process of urbanization is far from homogenous across regions and swathes of territory that are wholly different in terms of economy and political structures. In many of the poorest countries, there are cities that are really urban or metropolitan regions in terms of population sizes and territorial extent (University of Melbourne, 2003).

The formation of slums need not be inevitable with rapid industrialization. Such an argument appears to be contradicted by evidence of large slum populations in a large number of developing countries and particularly in rapidly urbanizing regions like Asia. The evidence discussed suggests that city authorities faced with rapid urban development lack the capacity to cope with the diverse demands for infrastructural provision to meet economic and social needs. Not only are strategic planning and intervention major issues in agenda to manage rapid urbanization, but city governments are not effectively linking the economic development trajectory to implications for urban growth and, hence, housing needs. This is the agendum that has been largely neglected by city and national governments that have been narrowly focused on economic growth with the consequent proliferation of slum formation as a housing solution (Anyuro,Chege; 2012).

The growth rate of manufacturing and mining sector was much higher than that of agricultural sector. The wage for the factory workers was more than twice as high as the wage for agricultural workers. Rapid growth in manufacturing and mining industry was possible because of the intensive investment to the transportation and energy sectors in urban

area. And steady growth of national income was achievable through the rapid growth in manufacturing and mining industry under the Japanese colonial rule. This was the main cause of the influx of slum dwellers who could be able to use the little income to find a house in the slum areas (Ling, 2007).

2.6 New Technology and Urbanization of Informal Settlements

Kenya's slum residents lack basic services like running water and electricity. But that is changing as the World Bank and the Nairobi City Water and Sewerage Company roll out a program to allow residents to pay their water bills by mobile phone. The technology is the first of its kind in East Africa, and with the water company more confident it will be able to collect revenues, it is working to connect piped water to every household in the Kayole slum, which consists of more than 10,000 households (World Bank, 2013).

Now, the World Bank and Nairobi water company are advancing a program begun five years ago to provide clean and cheap water to residents. Thousands of people now have water piped to their homes and more are applying for water connections. Those who have piped water, like Njeri, say it has saved them time and has contributed to the general cleanliness and health of their families. The connected residents use their mobile phones to acquire and pay their bills. Mary Mwangi said it's now easy for her to pay her bills without delay. This innovative technology has boosted the confidence of the water authorities to expand the distribution system. The company has incurred losses in slum areas where there are illegal water connections and consumers are not paying their bills (World Bank, 2013).

In Worldwatch’s State of the World 2012, contributing author Eric Belsky argues that “governments must be proactive rather than reactive in addressing slums and the growth of urban poverty.” Worldwide, more than 800 million people live in slums, where they often

lack access to clean drinking water and sanitation and face crowded living conditions, high levels of crime, and fear of eviction. Although government intervention is needed to address these problems, many governments have been challenged by unclear land ownership in slums and the pursuit of economic activities outside the social or legal norms. From a political perspective, it is often easier to ignore the slums than to address them (Bowler, 2005).

But as both slum populations and global awareness of these disadvantaged areas grow, some governments and organizations are developing new approaches to integrating slums into cities. While some of these methods are innovative solutions, others seem to be nothing more than temporary band-aids. In Mumbai, India, several nongovernmental organizations, as well as local and national government agencies, are working on slum rehabilitation (Mutisya; Yarime, 2011). Their efforts are focused primarily on improving housing conditions. Throughout the process, slum dwellers are involved in appointing developers and in creating communities that further implement rehabilitation programs, such as building low-cost housing to replace the crowded, unsafe conditions. Once housed, the slum dwellers receive tax reductions and get help with apartment maintenance, in addition to a guarantee that the tenement cannot be sold for at least 10 years. While low-cost housing is a substantial improvement, many of Mumbai's slum development schemes neglect important aspects of slum culture, such as multi-use spaces, social interactions, street life, and hygienic conditions. Interviews with slum dwellers reveal an unwillingness to relocate because residents will lose their businesses and communities. To successfully rehabilitate and integrate slums, such concerns must be incorporated into rehabilitation attempts, and slum dwellers should be invited to participate in all stages of development. Programs must also consider transportation, employment opportunities, and education (Reback, 2005).

One example of a largely successful slum rehabilitation program can be found in Curitiba, Brazil. Here, new bus stops are built when the slums expand, and slum dwellers are given a bag of fresh produce in exchange for each bag of garbage they present to the city. Efforts like these encourage sanitation and nutrition. Additionally, the city is combating insecurity in land ownership by selling land to slum dwellers at discounted rates. Residents can build their homes on land they hold the rights to—and even get a free consultation with an architect. In addition to offering extensive public transport and affordable housing, Curitiba has developed an innovative, informal educational system called Lighthouses of Knowledge (Reback, 2005). The Lighthouses are free centres with libraries and Internet access, and they offer various vocational training programs. These Lighthouses provide education to those who would otherwise be unable to attend school. Beyond education, they serve as community gathering places and cultural resources. Thanks in large part to these facilities, despite Curitiba's large population of poor residents, the city boasts the highest literacy rate of Brazil's state capitals (World Bank, 2013).

2.7 Theoretical Framework

In attempt to address the problem of informal settlements, a number of theories have been propounded linking the growth of informal settlements to many factors. Among these theories is the theory developed by the Chicago School in 1930's which associate informal settlements to residential differentiation resulting from the different income levels of different people who compete for 'valuable' or desirable urban lands (Burgess, 1925 as cited in UN-Habitat, 2003). The Alonso's neo-liberal theory of slums attributes the growth of informal settlements to discriminatory urban regulations and public spending that fails to deal with housing problems of the poor who cannot afford a formal dwelling (Smith, 1980). The factorial ecology theory or post-modern theory of urban landscape stressed that the

segregation of skills or profession of urban dwellers within urban spaces causes the growth of informal settlements (Flood, 2000).

The paper utilised the theory of planned behaviour (TPB) due to its strength in determining individuals intentions on a particular behaviour and has chocked several successes in uncovering behaviours underlying a given activity or event (Conner & Armitage, 1998; Ajzen, 1996; Conner & Sparks, 1996; Godin &Kok, 1996). It adopts a cognitive approach to explain behaviour which centres on individuals' intention. This theory was developed by Ajzen (1991) and evolved from the theory of reasoned action (Ajzen&Fishbein, 1980; Fishbein&Ajzen 1975) which postulated intention to act as the best predictor of behaviour. The TPB laid much emphasis on individuals' intention which is the cognitive representation of a person's readiness to perform a given behaviour, and it is considered to be the immediate antecedent of behaviour. The greater one intends to perform abehaviour, the higher that behaviour shall actually be performed. This intention is determined by three things: one's attitude toward a specific behaviour, subjective norms and perceived behavioural control (Azani, 1991). Finally, the theory found perceived behavioural control to also have influence on one's intention. The perceived behavioural control is people's perceptions of their ability to perform a given behaviour. These predictors (attitudes towards a behaviour, subjective norms and perceived behavioural control) affect a person's intention which in turn influence the behaviour of that person. A general assumption of TPB is that the more favourable the attitude and the subjective norm, and the greater the perceived control, the stronger shall be a person's intention to perform a particular behaviour. Intention is therefore at the heart of the TPB and play a predominant role in predicting the behaviour of people (Ajzen, 1991).

2.8 Conceptual Framework

This is how I conceptualized the framework of the problem I am looking at, to show the relationship between the dependent and the independent variable.

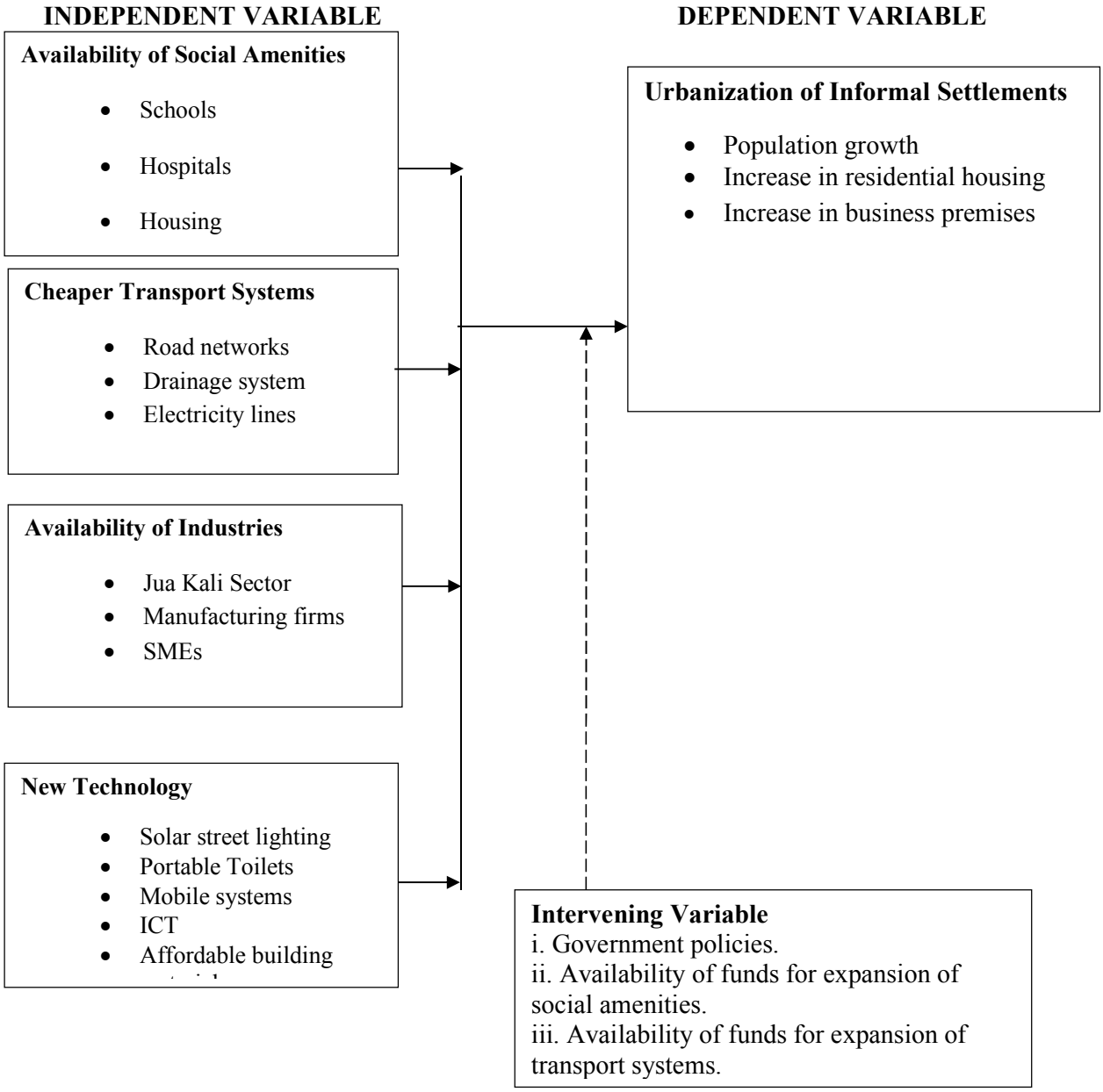

Figure 1: Conceptual Framework

2.9 Summary of Literature Review

Research clearly points out that the problem of unsustainable urban growth in Kenya is not just about poverty but the poverty of ideas. The government and organizations operating in informal settlements in Nairobi and other stakeholders have not been able to come up with new and applicable ideas to combat the rising growth of slums. Nairobi, just like any other African city is not only faced by sustainable development challenges but also sustainability of developmental efforts (Thale, 2002).

Negligence by the Kenyan government to improve informal settlements and at least to provide the minimum support on basic requirements and services has led to unimaginable suffering to slums residents. This is coupled by the fact that the government fails to recognize the growth and proliferation of informal settlements and thus excludes them from the rest of the city's development plan. The government and UN-Habitat development plan for Kibera settlements upgrading is a good gesture but falls short of a comprehensive plan to recognize the settlements and to invest in improving the living conditions. The increasing level of population without equivalent development of these settlements is worrying. With so many sustainability challenges, increase in population in Nairobi slums has aggravated the situation. Together with this, the lack of allocation of resources by the central (UN-HABITAT, 2012).

The prevention of new informal settlements is critical to the sustainability of the solutions financed by these programs. This requires an adequate institutional and legal framework for land development regulation that facilitates the production of affordable land for residential uses, thus reducing the illegal occupation of land and adding an important institutional development dimension to the urban program. Most traditional settlement upgrading projects are conceptualized as poverty alleviation operations counting on their

contribution to: (1) the increase of the beneficiaries' physical capital through the regularization of land tenure and the consequent valorization of their properties due to infrastructure and urban services investments; (2) the improvement of the population's human capital through positive impacts in wellbeing and education, usually observable within beneficiary communities; and (3) the enhancement of the communities' social capital through public participation in the design and implementation of the projects (Gichuri, Wambui; 2002).

The investments financed by the urban development program in the case of Igarapés were designed to take on two urgent tasks: restoring the drainage function of the Igarapés and improving the housing and social deficiencies of those settlers living on the waterbed of the Igarapés in the areas they are actually occupying or nearby. By tackling the two problems simultaneously, the program made the execution of infrastructure and the reclamation of the land possible, while also improving living conditions of illegal occupants without affecting their social networks, sources of employment, and access to urban services. A third component of the program took on the long-term issue of preventing the proliferation of informal city settlements (Bentley, 2000).

These unprecedented rates of urbanization can be linked to massive migratory movements as well as to natural growth, challenging urban planning and thereby causing environmental problems with far reaching effects. While the low quality of housing and the general lack of basic infrastructure especially sanitation, drainage, access to energy and clean water supply result in poor social and environmental conditions, high levels of unemployment and low income give rise to conflicts. The situation is not helped by lack of supporting policies for effective urban planning and improvement (Beatley, 2000; Smith & Hanson, 2003; Pamoja Trust, 2009).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter deals with the research methodology, which will be used to carry out the study. This includes research design, population, sample and sampling procedures, instrumentation, pilot testing for reliability and validity, data collection and data analysis procedures.

3.2 Research Design

The research design for this study was descriptive survey. This describes the observation of data, tabulates, depicts and describes the collection of data under consideration. Inferences are made as a generalization to all the samples under consideration. Descriptive research is done to obtain pertinent and precise information concerning urbanization of informal settlements in Eldoret. This is because every phenomenon in the universe has a reason behind it, and the aims of research are to understand and evaluate what is happening. Kathuri and Pals (1993) assert that survey studies as such are conducted to come out with detailed descriptions of existing phenomena with the intent of employing data to justify the current conditions and practices to make more intelligent plans to improve them. Questionnaires and interviews are used to determine opinions, attitudes, preferences and perceptions of groups of people of interest to the researcher (Kathuri and Pals, 1993).

3.3 Target Population

Population refers to an entire group of individuals, objects or events that have a common observable characteristic (Mugenda & Mugenda, 2003). The population for this study included all residents of Munyaka slums in Eldoret. Staff from the Immigration and

Planning Departments of the County Government was included in the population of study, bringing the population of interest to a total of 20,100 as depicted in the Table 3.3 below.

Table 3.3 Population and Sample of study

	Target Population	**Sample**
Munyaka Residents	**20,000**	**400**
County Staff	10	10
Total	20,010	410

Source: Uasin Gishu County Government Records Department (2014)

3.4 Sample Size and sampling procedures.

3.4.1 Sample Size

The sample size included staff from the relevant government departments who were selected using purposive random sampling to be able to get the most data from the said staff, while dwellers from the informal settlement of Munyaka, were positively sampled for the purpose of this study. This study used simple random sampling. This method exposes the researcher to various stakeholders who have different experiences with the issues under study.

3.4.2 Sampling Procedure

On the other hand, samples from the households was calculated using statistical formulae provided by Role (2013);

$$n = \frac{N}{1 + Ne^2}$$

Where n=sample size N=population size = 20,000

E=margin of error ($e \leq 0.05$)

Therefore, the sample size, $n = \frac{20000}{1+20000*0.05^2} = 400$ Residents

The researcher therefore selected396 households within Munyaka slum based on a proportionate stratified random sampling procedure, with which samples from various categories will be drawn. The goal of random sampling is to achieve desired representation from various population subgroups (Mugenda & Mugenda, 2003). The number of respondents selected from each category is proportionate to the relative number of respondents for each category in the target population as summarized in Table 1 above.

3.5 Research Instruments

Instrumentation indicates the type of instrument used for data collection and how the instrument will be validated. Bell (1993) indicates that whatever the procedure used, it should always be examined critically to determine its reliability. Data was collected using questionnaires that contain open and closed ended questions that were administered to the selected residents and employees of the immigration and planning departments.

The first section obtained personal information, while the second, third and fourth sections aimed at obtaining data on the influence of infrastructure development projects on urbanization of informal settlements in Eldoret. While the main disadvantage with questionnaires is that they are tedious to develop, they are particularly useful to ensure respondent anonymity and confidentiality.

3.5.1 Piloting of the Instruments

Piloting was done to test for ambiguities and inadequacies before the actual data collection. The instrument was piloted in Nyalenda Slums in Kisumu where 20 residential

households and 5 people from relevant county department were selected at random to fill the questionnaires. One of the reasons of conducting a pilot study was to give advance warning on where the main project study could fail, where research protocols may not be followed, or whether proposed methods and instruments are inappropriate or may be too complicated (Polkonghorne, 1998).

3.5.2 Validity of Instruments

Validity is referred to as being the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure (Kothari, 1990). That is to mean, it is the extent to which differences found with a measuring instrument reflect true differences among those being tested. The Researcher used the information that she got from piloting to validate the instruments.

3.5.3 Reliability of Instruments

Data collected from pilot samples were coded, classified and analysed using SPSS version20, using Cronbach Reliability coefficient thereby obtaining a coefficient of 0.69. This is a high degree of reliability hence the instruments were considered reliable. Kerlinger, (1983) asserts that reliability is the consistency that the instruments used demonstrated when applied repeatedly under similar situations. It is also referred to as the measure to which a research instrument yields consistent results after repeated trials (Thale, 2002).

3.6 Data Collection Methods

Upon approval from University of Nairobi, the research was conducted through administration of questionnaires to the identified respondents as per the specified categories. The respondents were given one week to respond.

3.7 Data Analysis Techniques

Data analysis began with data cleaning: editing, coding arranged for analysis using descriptive and inferential statistics such as frequencies, means, percentages and inferential statistics involving Correlation co-efficient and Chi-square. Pell (1995) maintains that when making the results of each research known to a variety of readers, percentages have a considerable advantage over more complex statistics.

Data analysis was aided by the use of computer programs SPSS v 20. Chi- square tests will be conducted to investigate the research questions to see the relationship between the variables of the study.

3.8 Ethical Considerations

First, Permission was sought by the researcher to carry out the research from Uasin Gishu County offices.

Secondly, Confidentiality was highly maintained. This means that the participants were guaranteed that the identifying information will not be made available to anyone who will not be involved in the study and it will remain confidential for the purposes it is intended for.

Thirdly, the prospective research participants were fully informed about the procedures involved in the research and were asked to give their consent to participate.

Lastly, the participants remained anonymous throughout the study and even to the Researchers themselves to guarantee privacy.

3.9 Operationalization of Variables

Summary of operationalization of variables is presented in Table 2 below.

Table 3.9: Operationalization of Variables Table

Objective	Variable	Indicators	Measures	Scale of Measurement	Research Approach	Tool of Measurement
To examine how availability of social amenities influences urbanization of informal settlements in Eldoret Municipality.	Independent	Availability of Schools, housing and hospitals	Number of immigrants into Eldoret and number of social amenities	Nominal/ Ordinal	Frequencies & percentages	Questionnaire and interview schedules
To establish how transport systems influences urbanization of informal settlements in Eldoret municipality	Independent	Improved Road networks, drainage systems and Electricity lines	The population in Eldoret and number of social amenities available for them	Nominal/ Ordinal	Frequencies & percentages	Questionnaire and interview schedules
To assess how industrialization influences urbanization of informal settlements in Eldoret municipality	Independent	Availability of jobs in Jua kali, manufacturing firms and	The population in Eldoret and number of industries that can offer jobs	Nominal/ Ordinal	Frequencies & percentages	Questionnaire and interview schedules
To determine the influence of new technology advancement on urbanization of informal settlements in Eldoret municipality	Independent	Use of Solar street lighting, portable toilets, improved water storage points	Number of street lighting and sanitary facilities improvised to suit the slums	Nominal/ Ordinal	Frequencies & percentages	Questionnaire and interview schedules

Source: Researcher 2015

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the data analysis, presentation, interpretation of the data collected in the study and discussion of the findings. Findings are presented based on the objectives that the study sought to achieve on the influence of infrastructure development projects on urbanization of informal settlements in Eldoret municipality

4.2 Questionnaire Return Rate

Table 4.2.1: Showing response rate

Respondents	Sample	Response rate	Percent
Munyaka	400	373	90.976
Officials	10	10	2.439
Total	410	383	93.415

A sample of four hundred and ten (410) respondents was selected from Munyaka and Uasin Gishu county officials. Table 4.1.1 show the distribution of the response rate within the four stations.

The findings indicate that the researcher was able to obtain 93.413% response rate from the field study. From a total of four hundred and ten (410) questionnaires that were given out, three hundred and eighty three (383) questionnaires were returned filled. The return yielded a response rate of 93.415%.Three hundred and seventy three (373) were from Munyaka giving a percentage of 90.976% of the total Target population Sample while officials were ten (10) representing 2.439%. This was due to the sampling procedure used which was purposive random sampling method due to the target population size. The officials were also small in number thus achieving the response of ten (10) officials was achievable.

The researcher also had four assistants at who assisted her with data collection in Munyaka who were residence of the area thus easier to collect data. This response rate was considered reliable for drawing conclusions from since the response rate was more than three quarters (¾) of the target.

4.3 Respondents Demographic Background

This section presents the demographic characteristics of respondents with respect to their, age bracket, gender, working experience and education background.

4.3.1 Gender Response

Table 4.3.1: Showing Gender

Category	Frequency	Percent
Male	176	46.0
Female	207	54.0
Total	**383**	**100.0**

The findings show that the respondents were mainly female represented by 54.0% of the respondents sampled. They had two hundred and seven (207) respondents who were female. One hundred and seventy six (176) of the respondents recorded to be male in gender. They represented 46.0% of the sampled population. This reflects that there is almost gender balance since the margin being less than 10% between the two genders.

Gender distribution is one of the effective ways of managing resources and activities in settlements as it shows the dominant gender and what is most likely to be needed in that area. The researcher therefore asked the respondents to indicate their gender and the findings were presented above.

4.3.2 Age Distribution

Table 4.3.2: Showing Age Distribution

Category	Frequency	Percent
20-30 years	287	74.9
30-40 years	67	17.5
40-50 years	25	6.5
Greater than 50 years	4	1.0
Total	**383**	**100.0**

The findings reflect that two hundred and eighty seven (287) of the respondents belonged to the age group 20-30 years are the main respondents, they represented 74.9% of the sampled population. This was followed by the age group 30-40 years who had a response of sixty seven (67) respondents, they represented 17.5% of the respondents. Twenty five (25) of the respondents belonged to the age group 40-50 years representing 6.5% of the sampled population. Only 1 % of the respondents belonged to the age group above 50 year, this bracket had four (4) respondents. Age reflects the experience that one has undergone through in various parts of work and life in general. The age difference also makes it easier for the residents to interact and work with each other with minimal intergeneration gap between them. The main age group being 20-30 years would be due to high number of universities and colleges within Eldoret town. The age group was therefore sought to be elaborate for the study.

Age is distribution is a key factor in any society. It shows the labour force driving a community (Dixon 2003). The study saw it fit to seek and classify the respondents according to their age bracket. The options allocated were 20-30 years, 30-40 years, 40-50 years and 50 years and above. Table 4.3.2 above reflects the finding of the age distribution.

4.3.3 Education level of respondents

Table 4.3.3: Showing education level of the staff

Level of Education	Frequency	Percent
Primary	54	14.1
Secondary	146	38.1
Diploma	143	37.3
Graduate	40	10.4
Total	**383**	**100.0**

Findings indicate that most of the respondents that is one hundred and forty six (146) had gone through Secondary education, they represented 38.1% of the sampled population. One hundred and forty three (143) of the respondents had attained diploma level of education, they represented 37.3% of the respondents. Primary education level had been attained by fifty four (54) respondents, they represented 14.1% of the respondents. Only 10.4% of the respondents had attained a degree from the university making them to be graduates; they had a response rate of forty (40) respondents. Knowledge and love, the things that the great men of wisdom preach, can be found only by the individual, through introspection, which requires tremendous effort. Art really can have an educative effect, but it's only a door which leads, in turn, to a further door (Antoni, 1923).

The study sought to find out the highest level of academic qualification that the respondents within the study area. The researcher therefore requested the respondents to indicate their highest level of education. Table 4.3.3 above reflects the findings of the highest education level attained by respondents. Different levels of education attained is evident due to the fact of age difference and different education system that they had gone through. This is a factor considered is key in improvement of products in social amenities and improvement of infrastructure.

4.3.4 Occupation of respondents

Table 4.3.4: Occupation

Occupation	Frequency	Percent
Employed	165	43.1
Business Person	88	23.0
Student	89	23.2
None	41	10.7
Total	**383**	**100.0**

The Findings reflect that most of the residents were employed with a response rate of one hundred and sixty five (165) response, they represented 43.1% of the sampled population. Eighty nine (89) of the respondents were recorded to be students of which they represented 23.2% of the sampled population. Eighty eight (88) of the respondents reported to be self-employed in their own business, they represented 23.0% of the sampled population. Only forty one (41) respondents did not reply this question from the questionnaire, they represented 10.7% of the sampled population. The rate of employment shows the rate of development of a particular town and city (Ming 2015). From the findings it was evident that more than half of the sampled population were involved in some income generating activities. This reflects that Eldoret town was growing as compared to the rate of employment and business activity the last census carried out (KNBS 2009). The rate of the people who did not respond to the question is also alarming since it may be due to illiteracy of not understanding the question or lack of income generating activity thus growth of illegal service in the Informal settlements of Eldoret town.

Employment, retention of an individual by a person or institution to provide labour in return for wages or other payment (Thale, 2002). Expertise and experience is obtained through work period which is basically the number of years that a person has worked in a

particular area of specialisation. The respondents were therefore asked to indicate their occupation. Table 4.3.4 gives details of the occupation of the respondents.

4.4 Social Amenities And Urbanization Of Informal Settlements

Table 4.4.1: Expansion of Health Facilities

Category	Frequency	Percent
Yes	334	87.2
No	49	12.8
Total	**383**	**100.0**

The findings reflected that three hundred and thirty four (334) respondents did record to expansion of the Health facilities in the informal settlements, they represented 87.2% of the respondents. Only forty nine (49) of the respondents did record not to seeing any expansion on the health facilities, they represented 12.8% of the sampled population. From the findings it was evident that infrastructure in terms of health facilities was developing thus growth of urbanisation was an eminent change that was being faced by the residents.

Social amenities refers to something that contributes to physical or material comfort. A feature that increases attractiveness or value, especially of a piece of real estate or a geographic location (Free dictionary.com 2006). The researcher therefore sought to find out the state of health facilitates and education system that the informal settlers normally use on daily activities. Table 4.4.1 above shows the findings with regards to health facilities expansion

In order to get a clearer picture about the health services, the researcher opted to find out the level of satisfaction of the services offered by the health facilities within the informal sector. Table 4.4.2 below shows the findings on customer satisfaction levels

Table 4.4.2: Satisfaction Level

Satisfaction Level	Frequency	Percent
Very Satisfied	2	0.5
Satisfied	369	96.3
Moderately Strong	4	1.0
Dissatisfied	8	2.1
Total	**383**	**100.0**

The findings indicate that three hundred and sixty nine (369) of the respondents recorded to be moderately satisfied with the services that were offered by the health facilities; they represented 96.3% of the sampled population. Eight (8) respondents did respond that they were not satisfied by the services offered by the health facilities, they represented 2.1% of the sampled population. Four (4) respondents did moderately like the services offered by the health facilities; they represented 1.0% of the sampled population. Only two (2) of the sampled population were very satisfied with the services offered by the health facilities, they represented 0.5% of the sampled population. From the findings it was evident that the residents of the informal sector within Eldoret town were satisfied with the health facilities in the area. This shows the governments dedication to provide quality health services since most of the residents in the informal sector do rely on government affiliated hospitals for major health crisis.

4.5 Cheaper Transport Systems And Urbanization Of Informal Settlements

The poor cannot afford private cars (Fukuoka, 1998). Nor can the very poor afford the small motorcycles that are now plentiful in many parts of Kenya cities. Due to this major reason, the researcher found it necessary to obtain various aspects of the transport system from the informal settlements point of view.

4.5.1 Time taken to reach Town

Table 4.5.1: Time taken to reach Town

Category	Frequency	Percent

30 mins	361	94.3
40 mins	19	5.0
50 mins	3	0.8
Total	**383**	**100.0**

The findings show that three hundred and sixty one (361) respondents did record to take 30 minutes to town, they represented 94.3% of the sampled population. 5.0% of the sampled population did record to take 40 minutes to town with a response rate of nineteen (19) respondents. Only three (3) respondents did record to take 50 minutes to town, they represented 0.8% of the sampled population.

From the data it was evident that most of the informal settlers do take 30 minutes to Eldoret town, with factors such traffic and road status this would be considered a short time to town compare to the capital city of Nairobi where one would take an average of 45-50 minutes to town (Thuo, 2013). The researcher their sought to find out the road status and the relationship it had towards urbanisation of the informal sector. The aspects that were investigated included time taken to get to Eldoret town and state of the road. Table 4.5.1 shows the findings with regards to time taken to reach Eldoret town.

4.5.2 State of Road Networks

Table 4.5.2: Congestion in Roads

Category	Frequency	Percent
Strong	27	7.0
Moderately	124	32.4
Weakly	218	56.9
Very Weakly	14	3.7
Total	**383**	**100.0**

The findings reflect that two hundred and eighteen (218) respondents weakly felt congestions in the road networks; they represented 56.9% of the sampled population. One hundred and twenty four (124) respondents recorded that road congestion was moderately affecting the day to day traffic; they represented 32.4% of the sampled population. 7% of the sampled population recorded to have strongly influenced by road congestions, they had a response rate of twenty seven (27) respondents. Fourteen (14) respondents were recorded to have said that road congestion very weakly affected the users of roads.

From the findings it was evident that the roads have been well maintained and developed within Eldoret town. From the data on transport systems and urbanization, it is factual that good transport systems do actually affect the development and urbanization process. The main transport system is backed up by the quality of roads, and congestion which is low within Eldoret.

Road building, from very ancient times, has been one of the first signs of an advancing civilization. As the cities of early civilizations increased in size and density of population, communication with other regions became necessary as a means of bringing in food supplies and carrying on other commerce. With these facts the researcher opted to find out the state of road networks within the informal settlement area giving options of Very Strong, Strong, Moderately, Weak and Very Weak with regards to road congestion (Encarta, 2009).

4.6 Availability of Industries and Urbanization of Informal Settlements

Table 4.6: Promoted Industries by the County Government

Category	Frequency	Percent
Jua Kali	358	93.47
Manufacturing	15	3.92
SMEs	10	2.61
No Response	0	0
Total	**383**	**100.0**

The findings do reflect that three hundred and fifty eight (358) of the residents of the informal settlements agreed that the Jua Kali sector has been promoted, they represented 93.47% of the sampled population. 3.92% of the sampled population did record to have seen some inputs from the county government into the manufacturing sector with a response rate of fifteen respondents (15). Ten (10) respondents did record that the county government had promoted the SMEs sector with a presentation of 2.61% of the sampled population. From the findings it was evident that alot had been done with regards to development in the industrialisation sector since the response rate of the Jua kali and SMEs were more than ¾ of the sampled population.

The relationship between urbanization and development is a vital policy concern, especially in Africa and Asia. Urbanization, removal of the rural character of a town or area, a process associated with the development of civilization. Demographically, the term denotes redistribution of populations from rural to urban settlements (Turok, 2013).

From the data on industrialisation and urbanization, it is factual that change in industrialisation will affect urbanisation, if industrialisation is affected in a negative way urbanisation will also be affected in a negative way. The county government has tried its best in upgrading industrialisation systems such as jua kali and manufacturing sector.

4.7 New Technology and Urbanization of Informal Settlements

4.7.1 Availability of Solar Water Filters

Table 4.7.1: Solar Water Filters

Category	Frequency	Percent
Yes	334	87.2
No	49	12.8
Total	**383**	**100.0**

The findings reflected that three hundred and thirty four (334) respondents did have direct or indirect use of solar water filters in their daily activities of obtaining clean water, they represented 87.2% of the sampled population. Forty nine (49) of the respondents were recorded not to have interacted with solar water filters in their daily activities. They represented 12.8% of the sampled population.

From the findings it was evident that technology was being embraced by the natives in the informal settlement. This would be due to the results that they obtained from using technology as compared to the old methods of doing the same activities. This was done using various aspects such as the hygiene of drinking water using solar filters, response by the police to hotline numbers, Mobile systems and many more.

4.7.1 Availability of Solar Street Lighting

Table 4.7.1: Solar Street Lighting

Category	Frequency	Percent
Yes	**334**	**87.2**
No	**49**	**12.8**
Total	383	100.0

The findings reflected that three hundred and thirty four (334) respondents agreed that there were solar street lights erected in various parts of the slums, they represented 87.2% of

the sampled population. Forty nine (49) of the respondents disagreed that there were solar street lights around Munyaka. They represented 12.8% of the sampled population.

Most slum areas are congested and there is hardly any space to lay cables for street lights. Solar poles are easy to install as they take little space. The intention is to promote unconventional energy sources and to reduce the expenses on electricity for street lights.

4.7.3 Mobile Systems and ICT

Table 4.7.2: Mobile Systems Improvement

Category	Frequency	Percent
Strongly Agree	142	37.1
Moderately Agree	127	33.2
Weak	114	29.8
Total	**383**	**100.0**

The findings did reflect that one hundred and forty two (142) respondents strongly agreed to mobile systems improvement, they reflected 37.1% of the sampled population. 33.2% of the sampled populations did moderately agree to improvement of the mobile systems improvement with a response rate of one hundred and twenty seven (127) respondents. 29.8 % of the sampled population felt a weak improvement on mobile; they had a response rate of one hundred and fourteen (114) respondents.

The findings show that it was evident that technology is advancing not only in the health and transport but also in the communication sectors. Mobile phones and mobile radio telephone systems, which has rapidly supplemented landline telecommunications as a means of two-way personal communications (Encarta 2009). Change in the communication systems impact improvement in various industries and efficiency in communication. Thus, the

researcher investigated the influence of mobile systems and ICT on industrialisation within the informal settlements.

Technology, a purposeful human activity which involves designing and making products as diverse as clothing, foods, artefacts, machines, structures, electronic devices and computer systems, collectively often referred to as “the made world”. Change in technology helps in development of services and products in various parts in the society (Layton 2008).

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusions and recommendations of the study. These are derived from the findings of the study. The summary, conclusions and recommendations are presented based on the findings of the objectives that the study sought to achieve.

5.2 Summary of Findings

The study aimed at obtaining influence of infrastructure development projects on urbanization of informal settlements in Eldoret municipality. A response rate of 93.413% was achieved of which 54.0% of the respondents sampled were Female in gender. The findings reflect that 74.9% of the respondents belonged to the age group 20-30 and 38.1% of the sampled population had gone through secondary education. 43.1% of the sampled population were employed and working within Eldoret town.

5.2.1 Availability of Social Amenities and Urbanization of Informal Settlements

The findings proved that 87.2% of the respondents did agree to the improvement of health facilities within the informal settlements of Eldoret Town. This was further appraised by 96.3% of the sampled population who recorded to be satisfied with the services offered by the health facilities within Eldoret. From the data obtained the social amenities had some improvement with factors such as health care services and education at school improving.

This indicates that the social amenities sectors have improvement and thus in turn influence the growth and urbanisation of informal settlements Eldoret Municipality in a positive way.

5.2.2 Cheaper Transport Systems and Urbanization of Informal Settlements

94.3% of the sampled population did record to take 30 minutes to get to town to do their day to day activities, this indicates an improvement in the transport sector, the researcher further obtained more information on the road status and found that 56.9% of the sampled population, weakly agreed to the improvement of the road networks. This would be due to re-fabrication of roads did not last long but there was minimal congestion on the roads compared to major cities in Kenya. Transport systems has improved within the informal system with majority of the residents taking less than an hour to get to town on their daily routine. From the results it was evident that improvement of roads affects urbanisation.

5.2.3 Availability of Industries and Urbanization of Informal Settlements

Majority of the sampled population 93.47% reflected that the Jua Kali sector had improved. This shows the dedication of the County Government to improving industrialisation in Eldoret Town by devolving funds to this area. Industrialisation and allocation of funds has been done to the required level, this was so since allocation has been done to the Jua Kali sector and those that had been allocated were more than three quarter of the sampled population. This improves industrialisation and in turn influenced urbanisation in a positive manner.

5.2.4 New Technology and Urbanization of Informal Settlements

The findings reflected that 87.2% of the sampled population did interact with solar water filters in purification of the water that they use in their day to day activities. 37.1% of

the sampled population did strongly agree to the improvement of the mobile industry thus improvement in communication systems. Technology has therefore improved greatly with more than ¾ of the respondents giving a positive influence technology on urbanization in various aspects such as security, construction and communication.

5.3 Conclusion

In conclusion it is evident that technological advancement and improved transport systems greatly influences urbanization of informal settlements in Eldoret town because of increased security, availability of street lights and clean water for domestic purposes. Social amenities and industrialization also have the same effect but on a smaller scale, with the results indicating a weak positive relationship. On the other hand, the government seems to have done little in trying to support SMEs and Manufacturing industries for its citizens and this has led to low returns from residents' small businesses thus making it harder for them to improve their livelihoods and consequently their places of living.

Rapid urbanization and inadequate capability to cope with the housing needs of people in urban areas have contributed to the development of informal settlements. Living in these settlements often poses significant health risks. Sanitation, food storage facilities and drinking water quality are often poor, with the result that inhabitants are exposed to a wide range of pathogens and houses may act as breeding grounds for insect vectors. Cooking and heating facilities are often basic, with the consequence that levels of excessive exposures to indoor pollution may occur. Access to health and other services may be limited; overcrowding can contribute to stress, violence and increased problems of drugs and other social problems. Together, these pose special risks to children both during the prenatal period and after birth. This indicator provides a general measure of these risks.

5.4 Contribution to the Body of Knowledge

Objective	Contribution
1. To examine how availability of social amenities influences urbanization of informal settlements in Eldoret Municipality.	The deficit in housing supply as a result of a combination of factors including high population growth leading to growth of inexpensive housing, schools and hospital facilities in slums. As a result of the inadequacies of the formal systems for housing supply such as those discussed in the study, informal housing processes develop. Resettlement is an option for intervention in informal settlements that involves the movement of residents to alternate, planned sites, such as a site and service scheme, and clearance of informal buildings
2. To establish how cheaper transport systems influences urbanization of informal settlements in Eldoret municipality	In the slums, there is usually, no electric power, no piped waters in the house, no roads, no sanitation, no drainage. Transport professionals generally focus on the quality of the transport that connects place of residence and destination, therefore taking into consideration various factors such as time, distance, mode, cost, quality, reliability and levels of service to the dwellers of the informal settlements. Due to the nature of the unplanned dwellings, it is also difficult to plan transport systems properly.
3. To assess how industrialization influences urbanization of informal	The local governments should strive to provide subsidies and reduce taxes levied on industries which employ none and semi skilled labour that mainly live in slums so that they can be paid a reasonable wages to enable them afford proper

settlements in Eldoret municipality	housing and avoid urbanization of informal settlements.
4. To determine the influence of new technology on urbanization of informal settlements in Eldoret Municipality.	Encouraging low cost construction methods such s interlocking bricks and prefabricated housing can help in curbing growth of informal settlements by reducing the time for construction as well as rent paid by the tenants. In addition, reforming licensing requirements in Kenya by reducing the processing time as well as decreasing the costs would increase the size of the formal construction sector while reducing the costs of housing construction.

5.5 Recommendations

As per the analysis and findings of this research, more should be done on industrialization in order to have it at the same rates with other economic pillars.

The county government should set funds to see improvements of small businesses and manufacturing sectors.

Further research on the influence of infrastructure development projects on urbanization of informal settlements, should be conducted in other counties and also other countries with growing slums, as well as possible ways to mitigate the growth and expansion brought by infrastructural development projects. This will show if this research has a universal application.

A study should also be carried out to find out whether eradication of these informal settlements can be possible, and if not, whether they bring any economic value to the urban centers they are located in.

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APPENDIX II: QUESTIONNAIRE

TRANSMITTAL LETTER

Dear respondent.

This questionnaire is for the purpose of research only and the information you give will be treated confidentially. Your cooperation will be highly appreciated. Do not write your name on this questionnaire. Thank you.

Instruction: please tick in the brackets or provide information where necessary.

GENERAL INFORMATION

1. What is your gender?

Male ( ) Female ( )

2. What is your age bracket?

20-30 yrs( ) 30-40 yrs( ) 40-50 yrs ( ) Above 50 yrs ( )

3. What is your level of education?

Primary school( ) Secondary school( ) Diploma( ) Graduate( ) Post graduate( )

4. What is your Occupation?

Employed ( ) Business Person ( ) Student ( ) None ( )

SECTION 1: QUESTIONNAIRE FOR RESIDENTS OF MUNYAKA

PART A: TRANSPORT SYSTEMS

5. How are the road networks in Eldoret town?

Excellent ( ) V. Good ( ) Good ( ) Fair ( ) Bad ( )

6. a) How long does it take you to get to town at peak hours?

10mins( ) 20mins( ) 30mins( ) 40min( ) 50mins( )

b) How long does it take you to get to town at off peak hours?

10mins( ) 20mins( ) 30mins( ) 40mins( ) 50mins( )

7. Since the implementation devolution, have the road networks been expanded in Munyaka?

Yes ( ) No ( )

8. In your opinion, which of the following challenges strongly affects the residents of Munyaka?

Use a scale of very strong to very weak to rate these challenges.

	Challenge	**Very Strongly Affects**	**Strongly Affects**	**Affects Moderately**	**Weakly Affects**	**Very Weakly Affects**
8.1	Congestion in Roads					
8.2	Lack of drainage systems					
8.3	Poor connection to electricity					

9. i) Do you think the county solid waste collection facilities are adequate in all areas of the Munyaka? Yes ( ) No ( )

ii) Please explain_____

PART B: SOCIAL AMENITIES

10. Where do your children go to school?

Public School ( ) Private Public School ( ) Private School ( ) None ( )

11. What has the local and national government done to improve on availability of these social amenities and infrastructure?

a) Expansion of hospitals and health facilities Yes ( ) No ( )

b) Improvement of Schools through deployment of additional teachers **Yes( ) No( )**

12. To what level are you satisfied with the improvement of the social amenities within Munyaka?

	Social Amenity	**Very Satisfied**	**Satisfied**	**Moderately strong**	**Dissatisfied**	**Very Dissatisfied**
12.1	Schools					
12.2	Hospitals					
12.3	Housing					

PART C: INDUSTRIALIZATION

13. What has the county government done to promote local Jua Kali Sector?

a) Subsidize Loan Interests Yes ( ) No ( )

b) Provision of work spaces Yes ( ) No ( )

14. Has the county government done anything to promote local industrial sectors below? (Tick where appropriate in space provided)

	Industrial Sector	**Tax Reduced**	**Reduced Business permit fees**
14.1	Jua Kali		
14.2	Manufacturing		
14.3	SMEs		

PART D: TECHNOLOGY

15. What has the county government done to improve security in Munyaka?

a) Slum Mapping to improve accessibility Yes ( ) No ( )

b) Police hotlines to improve response time Yes ( ) No ( )

16. How has technology helped in obtaining clean drinking water?

a) Solar Water Filters Yes ( ) No ( )

b) Water pipeline bust reporting hotlines? Yes ( ) No ( )

17. Do you agree that technological advancement brought urbanization in Munyaka On a scale of Very Strong to Very Weak.

	Technological Development	**Very Strongly Agree**	**Strongly Agree**	**Moderately Agree**	**Weak**	**Very Weak**
17.1	Solar street Lighting					
17.2	Portable Toilets					
17.3	Mobile Systems					
17.4	ICT					
17.5	After building materials e.g. interlocking bricks					

SECTION II: QUESTIONNAIRE FOR COUNTY OFFICIALS

PART A: TRANSPORT SYSTEMS

16. What has the county done to improve the roads in Munyaka?

a) Road expansion Yes ( ) No ( )

b) Road upgrading to tarmac Yes ( ) No ( )

c) Drainage improvement Yes ( ) No ( )

PART B: SOCIAL AMENITIES

17. What has the county done to improve the houses and dwellings in slums?

PART C: INDUSTRIALIZATION

18. What has the county government done to promote these local industries?

a) Providing funds for start ups and expansion Yes ( ) No ( )

b) Reducing the tax burden on entrepreneurs Yes ( ) No ( )

PART D: TECHNOLOGY

19. In terms of use of technology, how would you rate the performance of the following activities of government in regards to improving the social amenities and infrastructure to reflect the growth of Munyaka? Tick the most appropriate answer to correspond to your choice.

	Activity	**Excellent**	**Very Good**	**Good**	**Fair**	**Poor**
19.1	Provision of Solar Water Purifiers					
19.2	Encouraging locals to convert Waste to Energy e.g. Plastic recycling					
19.3	Solid waste management					
19.4	Installing Solar Lights For Slums					

END

APPENDIX III : NACOSTI LETTER

THIS IS TO CERTIFY THAT:
MISS. SYLVIA JEBET CHEPSIROR
of UNIVERSITY OF NAIROBI, 3333-30100
eldoret,has been permitted to conduct
research in *Uasin-Gishu County*

on the topic: *INFLUENCE OF INFRASTRUCTURE DEVELOPMENT PROJECTS ON URBANIZATION OF INFORMAL SETTLEMENTS IN ELDORET KENYA.*

for the period ending:
17th September,2016

Permit No : NACOSTI/P/15/2975/7307
Date Of Issue : 17th September,2015
Fee Recieved :Ksh 1,000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation