

**INFLUENCE OF ACCESS TO PUBLIC UTILITIES ON THE
SOCIO-ECONOMIC STATUS OF RURAL COMMUNITIES: A
CASE OF THARAKA SOUTH DISTRICT, THARAKA-NITHI
COUNTY, KENYA**

BY

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**A research project report presented in partial fulfilment for the
requirements of the award of a Master of Arts in project planning
and management,**

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DECLARATION

This research project report is my original work and has not been presented for examination in any other University.

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DEDICATION

This work is dedicated to my parents Jemima Igoki and the late David Njeru who planted and nurtured the seed of Education in me, sparing no resources to ensure I get only the best. To my little Angel Patience whose coming into my life gave me a renewed impetus for industry.

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ABBREVIATIONS AND ACRONYMS

EAs	Enumeration Areas
IFAD	International Fund for Agricultural Development
KNBS	Kenya National Bureau of Statistics
SES	Socio-Economic Status

ABSTRACT

The purpose of this study was to investigate the extent to which access to Public Service facilities has influenced the socio-economic status of rural residents of Tharaka South District in Kenya. The specific objectives pursued in this study were to establish the influence of access to; health facilities, education facilities, water services, electricity and transport infrastructure on socio-economic status of rural residents in Tharaka South District. This study used a cross sectional survey design. The population for this study was all the residents of Tharaka South district. This study used stratified sampling and simple random sampling. The respondents were grouped into three strata of rural residents, peri-urban and urban residents. Within each stratum, simple random sampling was used to identify the individual respondents. The aim of this study was to reach out to 300 respondents with 100 for each stratum. The instruments which were used in this research are observation, interviews and questionnaires. Descriptive statistical methods were employed to analyze the data, particularly by deriving the minimum, maximum, median, mean and mode of the study. Additional statistical analyses were performed; including analysis of the inferential statistics and significance test on the independent variables to explain the significant difference in the variables. All these tests were done by using SPSS (statistical package for social science). The study findings revealed access to health facilities, education facilities. Electricity, water services and transport infrastructure were key determinant factors of socio-economic status. This was demonstrated by the mean score of responses and also the regression coefficient. The study findings showed that the residents value water as an ingredient of their socio economic growth. The findings indicated that there was a positive and significant relationship between accessibility to water services and socio economic status. It was found that transport infrastructure was important to socio economic status and was statistically significant. It can be concluded that access to education is an important determinant of resident's socio economic growth. The study also concludes that there was need for the Government to ensure more health facilities were built in the area in order to uplift and improve the resident's living standards. This conclusion is notably similar to the efforts and emphasis that the Government is putting in promoting health care facilities in the country. It can therefore be concluded that the respondents were happy about the government initiative of supplying piped water in the area and could carry out different tasks through the use of that water for example keeping cattle and farming. Electricity is important in socio-economic growth due to its intrinsic value but many residents have the fear that its expensive and not affordable but they are adopting slowly to the technological changes which makes the residents also embrace rural electrification. Transport infrastructure is a key driver to improved socio-economic status at Tharaka South. It can therefore be concluded that the poor transport infrastructure has led to deteriorating socio-economic growth as all the residents' cannot be able to access all areas and promote businesses. The study also recommends that more health facilities should be built to reduce overcrowding in the two hospitals in the whole district. The county Government should place emphasis on strategies that will ensure better pupil survival rate at all levels of education. Public benefit organizations should be encouraged to launch their education programs in the district as a way of supplementing and complementing Government efforts in education.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Changes are necessary in the rural economy if proper development is to take place (Verhoef, 2002). One of the major causes of poverty is isolation. Improving the access and mobility of the isolated poor paves the way for access to markets, services, and opportunities (IFAD, 2001). The lack of basic public goods such as security, sanitation, health facilities, and transportation infrastructure is a central development problem in many parts of the world. A growing body of research in comparative politics and development economics has attempted to explain why some communities are able to solve public goods problems, while others are not (Wantchekon 2003; Miguel 2004; Miguel and Gugerty 2005; Habyarimana et al. 2007; Tsai 2007). For example as late as the 1990s, in China, more than 13 percent of villages were still not connected by any road to the outside world; almost half of rural areas lacked telephones; nearly 83 percent of villages in rural China were unable to access to clean drinking water (Gao, 2003; Yu, 2003).

Encouraging economic development in these areas is a challenge as noted by Pindus, (2001) as the rural areas often lack the infrastructure needed to attract businesses, and expenses associated with development can be high; both factors limiting job opportunities. On the other hand, he notes that less economic development and low per capita income limit local tax revenue in rural areas which mean fewer resources for public service facilities whereas public services differ from other services in that public authorities have a responsibility to ensure their supply regardless of whether they are profitable or not.

Compared to urban areas, public services in rural areas have imperfect infrastructures, the quality of education and medical treatment is low (Hao-chuan, 2011). The general slack in public service provision in rural communities quite often results in lower investments as compared to urban areas which often experience efficient and effective public service provisions. The effect of demography in the

influence public services have on rural communities has been predominantly felt within African countries. Margaret (2012) while using variance in rural demography associated with proximity to rivers in Burkina Faso to investigate whether villages with larger populations obtain closer provision of public services, public infrastructure, religious facilities, and markets, establishes that that variance in village population size is significantly correlated with village-level access to infrastructure, markets, and individual land rights. The study concludes that public amenities are clearly of great importance for rural development (Margaret, 2012).

The US department of agriculture noted a number of rural characteristics that affect public service delivery to rural communities: Isolation- the geographic separation of rural areas from urban areas which leads to low utilization rates for rural public services, inadequate response times for emergency services, and the detachment of service delivery professionals from their colleagues; Low population density resulting in higher per unit costs of special services like those of the handicapped and the inability to supply specialized help because the area cannot support the services for so few clients; A lack of fiscal resources puts many rural communities in a financial squeeze with resulting service deprivation for local residents. Less commercial development and lower per capita incomes in rural areas may mean fewer resources for public services; the lack of an adequate supply of trained personnel has several implications for service delivery in rural communities. Critical functions may go understaffed, scarce employees are often overworked, service quality and quantity suffer, and long-range planning becomes difficult.

According to Mwageni (2002), in Tanzania, health inequalities have been facilitated by poor development strategies in the provision of public services. A relationship between socio-economic status and health indicators comes out strongly with evidence of higher mortality among the poorest residents of Rufiji, Tanzania. Mwageni (2002) points out that the importance of effective public service provision would ensure equitable resource allocation, improvement in the quality of the health services offered to the poor, and redesigning interventions and their delivery to ensure they are more pro-poor.

Government decisions and activity significantly influence the economic environment of a community when it comes to education, infrastructure investment and upkeep, taxes and regulations, zoning and land use, and the provision of public services. The public sector also takes more targeted actions for economic development to assist businesses and workers. Public-sector involvement in economic development often stems from legitimate concerns about positive and negative spillovers, failures in the information market, sunken investment in physical infrastructure, the social impacts of growth and development, and the political impacts of economic stagnation or decline. (Kane, 2004)

In their study of western Kenyan villages, Miguel and Gugerty (2005) found that the quality of public goods was worse in villages with greater ethnic diversity. Akramov and Asante (2009) reach similar conclusions using data from Ghana. In a study of water and sanitation projects in Ghana, Sun et al. (2010) find that ethnically diverse communities are less likely to have functioning committees to manage provision at the local level, and accordingly a lower standard of water and sanitation facilities. This suggests the link between ethnic heterogeneity and the success of community-driven development projects may be the effectiveness of the political system.

Maiyo, Amunga and Ashioya (2009) asserts that Poverty reduction in Kenya has been a major challenge since independence. Elimination of ignorance, diseases and poverty alleviation was identified as a major policy objective spelt out in session paper No. 10 of 1965. This has later been echoed in one of the millennium development goals which is to reduce by half the proportion of people living in extreme poverty by 2015 and reduce by half the proportion of people who suffer from hunger. This goal is coupled with the vision 2030 initiative which aims at making Kenya a newly industrializing middle income country providing high quality life for all its citizens by the year 2030. Poverty in Kenya manifests itself in the form of illiteracy, lack of shelter, insecurity, failure to access basic social services like education, health, shelter, water and sanitation, hunger and malnutrition. The poor are defined as those members of the society who are unable to afford minimum basic needs comprising food and non-food items. It encompasses inadequacy of income and deprivation of basic needs and rights. Among the poor are the aged, pastoralists,

people with disabilities and female headed household without formal education, casual laborers, Aids orphans, street children, slum dwellers and the unemployed youth.

1.1.1 Kenya Rural Community

There is no single, universally preferred definition of rural that serves all policy and public service purposes. Rural definitions are used to identify rural people, places, and/or public service providers. The choice of rural definition affects who benefits from public services and who does not. Key considerations for understanding the policy implications of different rural definitions include major demographic, economic, or health care provider characteristics (Corbun, 2007)

The definition of rural areas shall be derived from the Kenya National Population and Housing Census of 2009. In the census, a sub-location was segmented into convenient areas called the Enumeration Areas (EAs). Therefore rural areas were defined to be conglomerations of EAs with the following characteristics: population fewer than 2,000 persons, excluding areas falling inside the boundaries of designated cities, municipalities, towns and urban centres; poorly developed physical infrastructure, including roads, electricity, and water (KNBS, 2009)

In Kenya's rural areas, people live on farms away from urban centres. Peasant farmers grow crops and/or keep animals for cash and subsistence. People living in rural areas own their land, with freehold title deeds that give them full rights to it. Kenya's population is predominantly rural: about 65% of the total population live in the rural areas (UNESCO, 2005)

1.1.2 Tharaka South District

Tharaka South District was created out of the larger Tharaka District vide gazette notice. No. 2908 of 20th March 2009. It is one of the thirteen districts of Eastern province. The district shares common borders with Mbeere North; Maara; Meru South; Meru Central; Imenti South Tharaka North and Mumoni Districts. Tharaka South District is divided into (five) 5 administrative Divisions- Nkondi Division comprising of 3 Locations and 6 Sub-Locations; Tharaka Central Division with 3

Locations and 8 Sub-locations; Turima Division with 2 Locations and 4 Sub-Locations; Tharaka South Division with 4 Locations and 8 Sub-Locations and Tunyai Division with 2 Locations and 7 Sub-locations. There are three (3) wards in Tharaka South District namely Chiakariga, Marimanti and Nkondi served together with the two (2) in Tharaka South district by only one local authority – Tharaka County Council.

The district covers an area of 716.6km² with a total population of 79,122 people (2009 Population and Housing Census). Pockets of high population density are found in the high potential areas of Tharaka central and south divisions. Tharaka central division had the highest population density of 84 people per km². Relatively high densities are also found in the divisional headquarters of Chiakariga, Marimanti and Tunyai because of a well developed and successful irrigation scheme. At Marimanti the population upsurge is expected since it's the district headquarters. The least populated locations are those bordering Tana River and Mumoni Districts which are the most arid, sometimes going up to six consecutive seasons without harvest, thus registering very high levels of poverty. (KNBS, 2009)

1.2 Statement of Problem

The effective provision of public goods is a key element of quality of life. While poverty is frequently measured and conceived in terms of private consumption, this is too narrow. Two groups of people with similar private consumption may enjoy different access to safe drinking water or medical care. Mechanisms for effective delivery of public goods and services are therefore central to any credible strategy of improving the socio-economic status of communities (Besley and Timothy, 2002)

An increase in rural investment in public goods by the government will enhance socio- economic levels, and this will in turn raise the consumption level and possibly improved accessibility to public goods and services within the rural environment (Jenyo, 2002 and Olawepo2004). (Cytron, 2007) cites lack of public infrastructure as one of the impediments to both economic and community development in rural areas the others being remoteness and low population densities. Her study observes that this can result in limited or low quality public infrastructure such as roads, public

transportation, utilities and information technologies which impede growth of businesses and industry in rural areas. There has been considerable recent research regarding the determinants of consumer demand for collectively provided goods, but relatively little of this research has focused on rural areas or issues that are particularly important to rural residents.

The government of Kenya has invested heavily on various public services in the country. Some of the investments are done based on the uniqueness of particular regions in order to spur desired economic and social developments. The effect of such investments on the life of rural communities will need to be investigated and established, just like Olawepo, (2010) explains the unique features of the Nigerian rural economy that necessitate specific planning options directed towards the rural economy directly. Studies have attempted to examine whether improved public goods contribute to increased income and food security, reduced poverty, and improved other basic socio-economic indicators of people. However little is known about impact of public services specific to Tharaka South District. This study therefore sought to establish the actual role of public services on the socio-economic status of Tharaka South district residents in terms of quality of life.

1.3 Purpose of the Study

The purpose of this study was to investigate the extent to which access to public service facilities have influenced the socio-economic status of rural residents of Tharaka South District in Kenya.

1.4 Objectives

The main objective of this study was to establish how access to public service facilities has influenced the socio-economic status of the rural residents of Tharaka South District in Kenya.

In addressing the general objective of the study, the following specific objectives guided the study:

- i. To determine the influence of access to health facilities on socio-economic status of rural residents in Tharaka South District.

- ii. To evaluate the influence of access to education facilities on socio-economic status of rural residents in Tharaka South District.
- iii. To evaluate the influence of access to water services on socio-economic Status of rural residents in Tharaka South District.
- iv. To establish the influence of access to electricity on socio-economic status of rural residents in Tharaka South District.
- v. To assess the influence of access to transport infrastructure on socio-economic status of rural residents in Tharaka South District.

1.5 Research Questions

In addressing the study objectives this study pursued to answer the following pertinent research questions.

- i. To what extent does access to health facilities influence the socio-economic status of rural residents in Tharaka South District?
- ii. How far does access to education facilities influence the socio-economic status of rural residents in Tharaka South District?
- iii. To what degree does access to water services influence the socio-economic Status of rural residents in Tharaka South District?
- iv. How does access to electricity influence the socio-economic status of rural residents in Tharaka South District?
- v. To what extent does access to transport infrastructure influence the socio-economic status of rural residents in Tharaka South District?

1.6 Significance of the Study

Findings, results and recommendations of this study yields some benefits to various parties as explained hereunder.

The first beneficiaries of this study are the residents of Tharaka South District who can appreciate the impact that public services have had on their lives. They can understand which public services were most successful public and which ones did not yield success. They are able to know how well to benefit and reap maximum benefits from future and existing public goods.

This study is very beneficial to the policy formulators at the central government and County level. They are able to know how to structure future public investments for ensuring value for money to the communities.

To the scholars this study provides area for further research which can be used to add value in this area of study. The study will also be available in the University repository system for access to future researchers.

1.7 Delimitation

The study was limited to Tharaka South District in Tharaka Nithi County and only to the households. This study did not cover other neighbouring districts. The study concentrated on the variables stated in the specific objectives. The study was carried out in the year 2013.

1.8 Limitations

The particular households who were interviewed were suspicious of the intentions of the study and they hesitated to participate in this study. However they were given assurance that the information provided was to be utilised for academic research purposes only and they were handled confidentially and coded to conceal respondents' identity. This study was not able to cover issues beyond the stated objectives due to time and budgetary constraints. The main mode of communication from the respondents was the local dialect i.e. Kitharaka. The translation posed challenges to the research assistants. This challenge was mitigated by having a local person accompany the research assistant for offering the correct interpretations of responses.

1.9 Assumptions

Some few key assumptions were made as a premise for the success of this study. The population of study were the residents of Tharaka South District and the sample was drawn from this population. It was assumed that the sample respondents were a true representative of the population to enable generalised conclusions on the characteristics of the population. It was also assumed that the respondents would answer questions correctly, truthfully and provide all the required information.

1.10 Definition of Significant Terms

Socio-economic status (SES) is an economic and sociological combined total measure of an individual's or family's economic and social position in relation to others, based on income, education, and occupation. When analyzing a family's SES, the household income, earners' education, and occupation are examined, as well as combined income, versus with an individual, when their own attributes are assessed

Public good is product that one individual can consume without reducing its availability to another individual and from which no one is excluded. Economists refer to public goods as "non-rivalrous" and "non-excludable". National defense, sewer systems, public parks and basic television and radio broadcasts could all be considered public goods.

Public service is a service which is provided by government to its citizens, either directly (through the public sector) or by financing private provision of services.

Poverty is the state of one who lacks a certain amount of material possessions or money. Extreme poverty is also called penury. Absolute poverty or destitution refers to the one who lacks basic human needs, which commonly includes clean and fresh water, nutrition, health care, education, clothing and shelter.

1.11 Organisation of the Study

This study is organised into five chapters. Chapter one focuses on introduction consisting of the background to the study, statement of the problem, Purpose of the study, objectives, research questions, Significance of the Study, Delimitation of the

Study, Limitations of the Study, Assumptions of the Study, definition of significant terms and organisation of the Study. Chapter two has Literature review which discusses theories relevant to the study, conceptual framework and review of empirical literature. Chapter three addresses research Methodology. It describes and discusses the methods which have been employed to assist in achieving the research objectives. Chapter four deals with Data analysis, presentation and interpretation. Chapter five consists of the Summary findings, discussions, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews various scholarly studies previously done on the impact of public goods on socio-economic status of people in various places of the world. A literature review surveys scholarly articles, books and other sources relevant to a particular issue, area of research, or theory, and by so doing, providing a description, summary, and critical evaluation of these works. Literature reviews are designed to provide an overview of sources while researching a particular topic and to demonstrate to readers how the research fits into the larger field of study (Creswell, 2003). Theories relevant to the area of study will also be reviewed and then a conceptual framework developed.

2.2 Theoretical Framework

This section reviews theoretical foundations of rural development, public goods and society socio economic status.

2.2.1 Community Development Theory

Development is change, a process of unfolding from an un-manifested, latent or previous condition to a more advanced or effective condition. In the process, qualities reveal possibilities, capabilities emerge, and potentials are realized. The community development perspective places the responsibility for the development of community on the people. The people, working through their own organizations, have the vision, know-how, capabilities and experience to confront and solve the problems of underdevelopment. External support is needed only as a complement to their resources and efforts to fashion a society where they are the architects, implementers and beneficiaries of development (York, 1994).

Community development theory is committed to the service of the people through service to people's organizations and communities. It supports the

people's economic and political resistance as the people strive for structural social transformation and the pursuit of human rights. It combines support for the people's initiatives towards immediate economic survival with support for their efforts at empowerment and self-organization. It is committed and is in solidarity with the people's struggle for genuine agrarian reform, national sovereignty, and respect for human rights, female empowerment, and the right to self-determination among indigenous peoples (Paiva, 1997).

Self-reliance is the major goal of community development. It is based on the recognition that people are the makers of history, and have but to rely on their own collective strength to realize their goals. Thus the people must rely on themselves first to achieve self-liberation and success (CPA, 1993; CHD, 1993; Werner, 1994). It is on this premise that Primary Health Care is considered an approach to community development (Eng, 1992; Lara, et al., 1993).

2.2.2 Growth Pole Theory

The growth pole theory is based on the assumption of unbalanced economic growth within nations. For an economy to attain higher income levels, it must and will first develop within itself one or several regional centres of economic strength (Perroux, 1950). The concept of growth or development poles (poles de croissance) was originally developed to explain the anatomy of economic development in abstract economic space. In due course, the concept came to be applied in a spatial setting within nations. The scope of the growth pole theory also widened to include the normative issues of policy intervention, and spatially-targeted investments for accelerating the economic growth in developing countries. The arguments in favor of implementing a growth pole strategy as a spatial planning tool draw on the following concepts: (i) economies of scale; (ii) the nurturing of backward and forward supply linkages, fiscal and final demand linkages; and, more generally (iii) economies of agglomeration associated with spatial clusters and geographic concentration of economic activities (Perroux, 1950).

Initial Variants of the Growth Pole Theory Francis Perroux formalized the growth pole concept and argued that the impetus to grow comes from poles, spread along

diverse channels, with varying terminal effects on the economy. Thus the concept viewed the economic development process as essentially polarized, in the sense that forces inherent in the development process worked towards polarization of economic activities. The notion of dynamic or leading industry or industries, inter-industry linkages, and industrial interdependence played a major role in the initial variants of the growth pole theory. The close relation between scale of operations, dynamic, leading or dominant industries, and the impulses of these leading industries to innovate were the main features of Perroux's growth pole theory (Perroux, 1950).

Central to the growth pole concept is a group of industries that are connected. The dynamic industries dominate other industries either by virtue of their dimension, or their negotiation strength, or their capacity to innovate and adapt to market conditions. The propulsive effects of growth come from the economies of scale of these dominant industries. Some of the propulsive effects are internal to the dominant industry itself. That is, the growth of the dynamic industry generates investment, employment, and distribution of factor payments, including profits that may be reinvested. The growth of the dominant industry generates external effects that stimulate the growth of other industries due to inter-industry linkages (Perroux, 1950).

2.2.3 Tiebout model

Tiebout describes municipalities within a region as offering varying baskets of goods (government services) at a variety of prices (tax rates). Given that individuals have differing personal valuations on these services and varying ability to pay the attendant taxes, individuals will move from one local community to another until they find the one which maximizes their personal utility. The model states that through the choice process of individuals, jurisdictions and residents will determine an equilibrium provision of local public goods in accord with the tastes of residents, thereby sorting the population into optimum communities. The model has the benefit of solving two major problems with government provision of public goods: reference revelation and preference aggregation (Tiebout, 1956).

The Tiebout model relies on a set of basic assumptions. The primary assumptions are that consumers are free to choose their communities, enjoying perfect mobility and perfect information. This essentially means that they can move from community to community at no cost, and that they know everything they need to know about services provided by local governments and the tax rates of all local governments (Tiebout, 1956).

The Tiebout model has been shown to be most accurate in suburban areas with many different independent communities. Moving between communities in these areas tends to have the lowest costs, and the set of possible choices is very diverse. In areas subject to rural flooding, Tiebout sorting explains why more affluent residents live in communities protected by river levees, while poorer residents tend to live without those expensive and rarely utilized protections (Tiebout, 1956).

2.2.4 Wagner's Law

Over one hundred years ago a German economist, Adolph Wagner in his classic book, *Grundlegung der Politischen Ökonomie* (1863) formulated a law of expanding state activity. He asserted that there is a long run propensity for the scope of government to increase with higher levels of economic development. Wagner's contribution to public expenditure theories is particularly significant when we consider that before Wagner made his observations, the prevailing view was the notion that as a country grows richer, government activities would have a tendency to decline (Henrekson, 1993).

The law suggests that the share of the public sector in the economy will rise as economic growth proceeds, owing to the intensification of existing activities and extension of new activities. According to Wagner, social-economic progress has led to increasing state activity with resultant increase in public expenditure. It is the result of growing administrative and protective actions of government in response to more complex legal and economic relations, increased urbanisation, and rising cultural and welfare expenditures.

Amos (2002) argues that Wagner's law is plausible and universal after conducting an empirical analysis in four countries at varying stages of development, of different

economic and physical size, and with different economic history and experiences of public sector expansion; namely USA, Thailand, Barbados and Haiti. He argues that the 'law' may be applicable to a wider range of countries due to advancements in technology and communications. However, according to (Diamond, 2007), Wagner's law is not applicable in developing countries. Evidence from empirical findings show that there exists a negative relationship between public expenditure and economic growth in the 41 countries analysed.

2.2.5 Peacock-Wiseman Hypothesis

As per a study on public expenditure for the period 1891-1955 in U.K. conducted by Peacock and Wiseman based on Wagner's Law, it was found that There has been considerable increase in revenue to the governments due to the economic developments over the years, there by leading to a boost in public expenditure (Peacock & Wiseman, 1961).

The government can simply not ignore the demands that people make regarding various services, especially, when there is an increase in revenue collection at a constant rate of taxation. Further it stated that during the times of war the tax rates are increased by the government to generate more funds to meet the increase in defense expenditure. This is known as displacement effect. Such 'displacement effect' is created when the earlier lower tax and expenditure levels are displaced by new and higher budgetary levels. But it remains the same even after the war as people become habituated to it. Such an increase in revenue therefore gives rise to government expenditure (Peacock & Wiseman, 1961).

2.2.6 Samuelson's Theory of Public Goods

The Samuelson condition (Samuelson 1954, 1955) is the main criterion helping policymakers frame the determination of the efficient provision level of public goods. The condition is met when the marginal cost of providing the public good equals the sum of the marginal amount each person affected by the good is willing to pay. The important point about public goods, which was carefully analyzed in Samuelson's 1954 article, is that private markets generally do not guarantee efficient production. In this respect, then, production of public goods such as national defence

differs from production of bread. Efficient production of public goods requires collective action to overcome the inability of private firms to capture the benefits that may arise.

Critiques have cited that applying the Samuelson condition may lead to inadequate (over- or under-) provision. Public goods—because of their complexity—are especially likely to generate such problems. The challenge thus is how to improve the availability of information about the costs and benefits of the current provision status of various global public goods and the net benefits to be derived from any enhancement measures. Colm (1956) criticizes the individualistic aspect Samuelson took, in taking the marginal utility cost of individuals (Musgrave and Musgrave 1989) argues that Samuelson's approach would have been improved by separating correct income distribution from the efficiency condition in the analysis.

2.3 Literature Review

Public resources are finite: manpower and financial resources are already being stretched to cope with the increasing volume and complexity of requests. The fact is that government agencies will not be able to accede to every request. While the Public Service strives to be more people-centric, it has also to ensure that country remains well-governed, that procedures are fair, and that no one gets short-changed because of undue attention to the demands of a few. According to the World Energy Council (2008) some two billion people in rural areas of developing countries do not have adequate energy sources to allow fulfilment of the basic human needs of nutrition, warmth and light - let alone the possibility of harnessing energy for productive uses that might allow them to escape from the cycle of poverty. The IEA Bulletin (2002) notes that lack of electricity exacerbates poverty and contributes to its perpetration, as it precludes most industrial activities and the jobs they create. Unfortunately Africa's electricity consumption remains low at about 8% of global electricity consumption (Etiosa, 2010)

Rural communities have many distinctive assets that provide a basis for economic development activities. Natural amenities like mountains, rivers, forests, wildlife and open space are appealing to people and present unique opportunities for rural

development (Raconline, 2012). The Rural economic structure is predominantly a goods-producing sector comprising of on-farm economic activities of mainly small-scale thereby having high rates of self employment, increasing opportunities for entrepreneurial ventures (Faruqee, 2012).

However, taking advantage of these unique assets present challenges for rural communities which are characterized by low population density and a lack of basic infrastructure particularly transport and communications systems, which often hinder economic development efforts that could bring new opportunities to rural areas. Rural communities are more likely to depend on a single employment sector. This dependency coupled with government agency job creation program offers wages that tend to be lower and seasonal (Raconline, 2012)

2.3.1 Health and Socio-Economic Status

Though the connections between health care services and rural development are often overlooked, at least three primary areas of commonality exist. A strong health care system can help attract and maintain business and industry growth, attract and retain retirees, and also create jobs in the local area. Studies have found that quality of life factors play a dramatic role in business and industry location decisions. Health care services represent some of the most significant quality of life factors for at least three reasons. Good health and education services are imperative to industrial and business leaders as they select a community for location, ensures that the local labour force will be productive, with good health serving as a key productivity factor and also the factor that cost of health care services is a consideration investors make in location decisions.

Though the concept of primary health care is appropriate to rural areas, it remains sound on paper only because of the deliberate lack of attempts by health professionals to implement policy decisions (Ashok, 2009). Ashok further notes that after independence, India's healthcare sector chose to follow 'western models' of health service provision, which are highly selective, institutionalised, centralised and top down – not by oversight but by design – and which treats people as objects rather than subjects. This system has failed to address the needs of the majority, that is to

say, the rural poor and indigenous people, thus affects severely the poorest of the population. It obviously denies the basic fundamental right for essential health care and also forces rural poor to revert to social taboos and resort to harmful health-seeking behaviours ('quacks', witch doctors and illegal medical practitioners). He notes that while the incidence of all diseases are twice higher in rural than in urban areas, the rural people have been denied access to proper health care, as the systems and structures were built up mainly to serve the better off (Ashok, 2009)..

WHO (2006), points out that the role of government in service delivery contributes to increasing equity in access to health care, particularly in rural and remote areas where qualified private providers, concerned about their income, are in limited supply. The direct provision of health services by governments contributes to market regulation for both pricing and quantity of services, therefore, improving the social and economic welfare of citizens in rural areas.

Jill (2010) noted that the Health Services sector of Smith County, Kansas, plays a large role in the area's economy. Health Services represents one of the largest employers in the area and also serves as one of the largest contributors to income. Additionally, the health sector has indirect impacts on the local economy, creating additional jobs and income in other sectors. The health sector also contributes substantially to retail sales in the region. All of this demonstrates the importance of the health care sector to the local economy.

2.3.2 Education and Socio-Economic Status

Aoki (2003), notes that inadequate education is one of the most powerful determinants of poverty and unequal access to educational opportunity is a strong correlate of income inequality. One out of every five children in developing countries—more than 113 million children—lacks access to schooling, and some 880 million adults are illiterate. Two-thirds of those out-of-school children and illiterate adults are female. Failure to provide basic education seriously compromises a country's efforts to reduce poverty. A large body of research points to the catalytic role of basic education for those individuals in society who are most likely to be

poor—that is, girls, ethnic minorities, orphans, people with disabilities, and people living in rural areas.

Porter (2002) established that education directly contributes to worker productivity, and can promote better natural resource management and more rapid technological adaptation and innovation. It is fundamental to the creation of a competitive, knowledge-based economy is crucial for enabling workers and citizens in both the traditional and modern sectors to increase productivity. (Hanushek and Kimko 2002) point out that impacts are strongest where education is integrated into a broader competitiveness strategy that includes macroeconomic stability, trade openness, incentives for foreign investment, competitive telecommunications pricing, and adequate infrastructure investments.

More educated people in most countries, including low income developing countries, enjoy higher earnings than less educated ones. There is thus at least private benefit from education. The impact of differing levels of educational attainment (or years of schooling) on earnings has been tested econometrically many times and is invariably found to be strongly positive (Psaracharopoulos 2003)

2.3.3 Water and Socio-Economic Status

Land and water are two key natural resources upon which poor people depend for their livelihoods, and often more heavily than the non-poor. However, poverty is an outcome of complex interactions of these and other resources, institutions, actions and policies and their ultimate outcomes. However, though water is only a single element in the poverty equation, it plays a disproportionately powerful role through its wider impacts on such factors as food production, hygiene, sanitation, food security, and the environment. For instance, as a production input in agriculture, irrigation water is an important socioeconomic “good”, with a positive role in poverty alleviation (Intizar, 2004).

Improved access to safe drinking water is a prerequisite to poverty reduction. Access to safe drinking water prevents the spread of water-borne and sanitation-related diseases. Lack of access to safe water and adequate sanitation services especially in developing countries often result in about two million infant death

annually.(Cosgrove and Rijsberman, 2003; Gomez and Nakat, 2002; The World Bank, 2001).

In addition to increasing crop production and farm and family incomes, improved irrigation access significantly contributes to rural poverty reduction through improved employment and livelihoods within a region (Chambers 1988; Barker et al., 2000). Indirect benefits, such as more stable rural employment as well as higher rural wage rates, help landless farm laborers obtain a significant share of the improved agricultural production. According to (Madhusudan, 2002) full benefits of irrigation are not only captured by farmers, but are also spread to wider sections of society—also called positive externality effects of irrigation access to society. These externality effects are the unintended income (also employment) equivalent of welfare changes brought about by the irrigation project. The extent of such irrigation induced positive externalities, or spill over impacts of irrigation benefits, is much wider in scope in large-scale irrigation projects—contributing significantly to the regional and national development pace of a country

2.3.4 Electricity and Social Economic Status

The nexus between energy and socio-economic development of any nation is strong. Energy resources remain the key to industrialization of any nation especially when judiciously and effectively harnessed for developmental purposes. More so, energy availability and its proper harnessing is a strong factor in achieving the Millennium Development Goals (MDGs) (Agba, 2010). Among strategic energy objectives of most of the developed and several developing countries are, to improve the efficiency in energy supply and energy use and to increase the importance of different renewable sources of energy in sustainable development (Kjaerheim, 2005; Makipelto, 2009).

Agba (2010) in analysing the overview of the nature and implications/consequences of Nigeria's energy poverty notes that Nigeria continues to experience an energy crisis despite abundant energy resources shows that, due to faulty implementation of the Nigerian energy policy. The implications of this crisis have resulted in a series of socioeconomic problems such as accelerating the problem of unemployment in

Nigeria, grounding the development of entrepreneurship spirit among youths, affecting the productivity of workers and contributing to poor academic performance among students in tertiary institutions.

Andreas (2010) studied the Socio-economic and Socio-cultural Impact of Rural Electrification in Four Districts of the Kingdom of Bhutan. The results of the study verify impressively the assumption that rural electrification is an especially appropriate tool for improving the quality of life of the rural population in Bhutan. Many changes on socio-economic levels such as tremendous improvement in public health; in time-savings, allowing additional economic and social activities; greater awareness of the importance of investments in agriculture; greater understanding of the 'world outside' brought by new and more intensive media-consumption patterns made rural life more attractive, especially to young people. The impact of electrification on the quality and the standard of living in the rural societies surveyed is quite high, so we can say that rural electrification is indeed an efficient tool for poverty alleviation.

2.3.5 Transport and Social Economic Status

The pattern and the degree of development of transport network in any area is a factor of crucial significance influencing political, economic and social progress and these must be considered in every stage of national and regional development planning. The precise role of transport in simulating greater economic and social development has been a target of research for some time. Wide spread growth of the region may be promoted or otherwise, and to some extent, regional inequalities in development can be addressed when there is adequate linkages among the regions, as good transport system may be impetus to even development and growth. Inadequacy or absence of transport facilities may undermine the productive process. Inadequate transport facilities are one of the bottlenecks to socio-economic development and national integration in many developing countries (Umoren, 2009).

The rural poor in Tigray, Ethiopia however do not have access to competitive markets (Umoren, 2009). They have to confront with the imperfect markets contributed by poor transport networks in the region due to the significantly high transaction costs. (Bharat 2004) in his study, tries to examine whether improved road

transportation facilities contribute to increased income and food security, reduced poverty, and improved other basic socio-economic indicators of people. (Bharat 2004) notes that improved road accessibility significantly influenced the households to enrol their children to school, paves the way for access to markets, services, and opportunities.

Bharat (2004) notes that policies of reducing the transport barriers and costs through proper construction and maintenance of road network could contribute to socioeconomic transformations given the good policy environment for efficient allocation of resources, and complementary investment. His findings note that roads are an inseparable component of physical infrastructure and play an important role in the development of other sectors as its development directly influence the development of both productive and social sectors such as agriculture, industry, commerce, education and health.

(Umoren, 2009) notes that the absence of access roads and the poor state of roads in Iboino (an entirely rural area in AkwaIbom State, Nigeria) hinders transport and communication. This has consequently resulted in increased distances from raw materials source, market, and the diffusion of innovation in the area. Another major problem identified is high transport costs, which have resulted in vehicles not plying the roads because of their bad condition. As a remedy, he recommends that the local government in collaboration with the state ministry of works and transport should identify and improve the important secondary routes and open up new ones as a means of sustaining the already existing relationship between transportation network and socio-economic activity development.

2.4 Summary and Research Gaps

From the foregoing literature review, it is evident that public goods cum public services are key ingredients for not only the overall growth of an economy but also the well being of both its urban and rural populace. One notable thing in the studies reviewed, they studied only one or a few variables. This study is unique due to its comprehensive nature of having composite variables and their effect on socio-

economic status. Like the study from India by Ashok (2009) this study is based on a rural setting while the one of Ashok only studied impact of health care on welfare.

2.5 Conceptual Framework

The goal of a conceptual framework is to categorize and describe concepts relevant to the study and map relationships among them. According to Kombo and Tromp (2009), a concept is an abstract or general idea inferred or derived from specific instances. A conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. Mugenda and Mugenda (2003) and Smith (2004), define a conceptual framework a hypothesized model identifying the model under study and the relationship between the dependent and independent variables. Kothari (2004) defines an independent variable also known as the explanatory variable is the presumed cause of the changes of the dependent variable, while a dependent variable refers to the variable which the researcher wishes to explain. Below is a figurative representation of the variables to be explored by this study. The conceptual framework for this study is figuratively depicted below under Figure 1

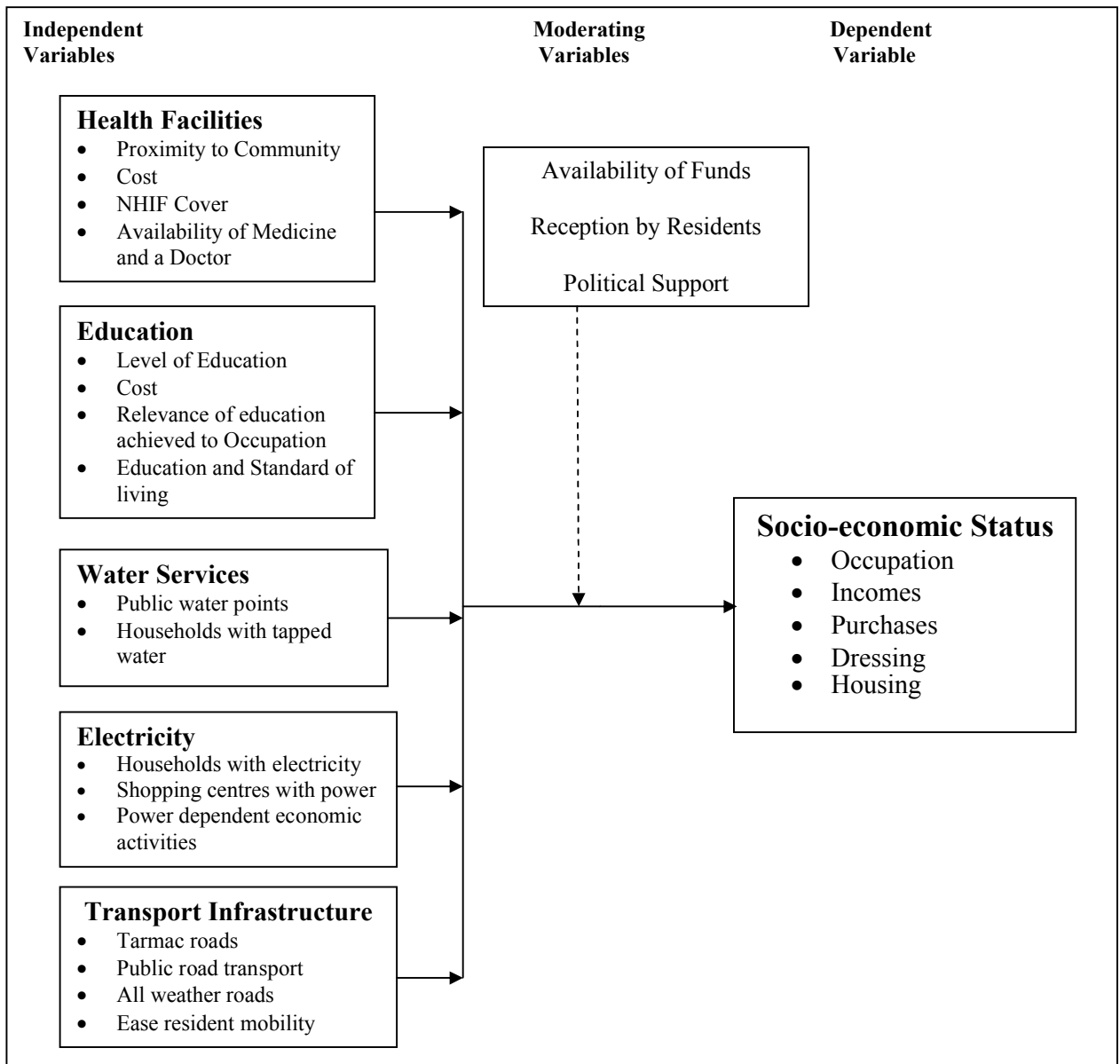


Figure 2.1: Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter identifies the methodology for conducting this research. The areas to be covered are research design, population, sampling, research instruments, pilot testing and data analysis.

3.2 Research Design

According to Upagade and Shende (2012), research design is the arrangement of condition from collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. It is the logical manner in which individuals or other units are compared and analysed and acts as the basis of making interpretations from the data. Lavkaras (2008) describes a research design as a general plan or strategy for conducting a research study to examine specific testable research questions of interest. Research design is the blue print for the collection, measurement and analysis of data. It is a plan and structure of investment conceived so as to obtain answers to research questions (Coopers & Schindler, 2008).

The study followed a cross-sectional survey design. A cross-sectional design is a type of design that enabled the researcher to collect data across a wide range in a relatively short time and at a point in time. The data collected from cross-sectional design are 'snap-shot' of respondents' views at that moment of data collection (Rubin, 2005). A cross-sectional design is defined by Polit and Hungler (2003) as a study based on observation of different age or development groups at a single point in time for the purpose of inferring trends over time. A cross-sectional design indicates that the phenomena under study are captured at a particular point in time during one-data collection period.

Cross-sectional surveys are used to gather information on a population at a single point in time. According to Rubin (2005) the advantage of this method is that it is

less expensive, relatively easy to administer, efficient way of collecting information from a large number of respondents, permits anonymity and may result in more honest responses.

3.3 Target Population

According to Mugenda and Mugenda (2003), a population refers to an entire group of individuals, events or objects having a common observable characteristic. In other words, population is the aggregate of all that conforms to a given specification. Accessible population was those respondents who were easily and conveniently available to participate in the study.

The target population for this study was all the residents of Tharaka South district. According to 2009 population and housing census, the district had a total population of 79,122 people with pockets of high population density found in the high potential areas of Tharaka central and south divisions. This population is distributed between rural, urban and peri-urban areas of the district.

3.4 Sampling Procedures

This study used stratified sampling and simple random sampling. The respondents were grouped into three strata of rural residents, peri-urban and urban residents. Urban residents are those who live within the various towns and shopping centres of the district, peri-urban are those who live in the immediate neighbourhoods of towns and shopping centres and rural residents are those who live at least more than ten kilometres from the towns and shopping centres. This segregation has been found necessary to be able to alienate the effects of public services on distinct groups of residents. Within each stratum, simple random sampling was used to identify the individual respondents. With the use of simple random sampling, it means that each individual in the population has an equal chance of being selected (Creswell, 2003). The aim of this study was to reach out to 300 respondents with 100 for each stratum. Local community leaders were used as key informants in order to assist in identifying the respondents based on the stratification.

Table 3.1: Sample Matrix

Category	Sample	Percentage
Rural residents	100	33.33
Peri-urban	100	33.33
Urban residents	100	33.33
Total	300	100

3.5 Methods of Data Collection

A questionnaire was used to gather more information. The questionnaire contained statements meant to address the research questions and objectives. According to Mugenda and Mugenda (2003), questionnaires are commonly used to obtain important information about the population. Each item in the questionnaire is developed to address a specific objective, research question or hypothesis of the study. The questionnaire has two main sections. The first section titled section A was meant to gather information on the bio data of the respondents regarding their gender and age. Section B has subsections aligned to the objectives and variables of the study. The statements are close ended and use a likert scale to capture the responses. A five ordered response level scale is used which are; - 5= strongly agree, 4= agree, 3=not sure 2=disagree and 1=strongly disagree. This allows the respondent some flexibility when deciding how to respond along the likert scale choices. The questionnaire should be organized in a manner that addresses the study objectives. The researcher should avoid questionnaires that have mixed up information or sections. So, the researcher must know how information obtained from each questionnaire item will be analyzed (Mugenda and Mugenda, 2003).The questionnaires were issued to the respondents through self introductions and where need be internal informants were used to give a lead on how to get to the respondents.

3.6 Instrument Validity

According to Rodney (1998), an instrument is valid if it measures the concept that it is supposed to measure. Then, an instrument is valid if it actually measures the concept it is meant to measure (Rodney, 1998). The validity of the questionnaire was

tested through discussion with two randomly selected community development experts who reside in Tharaka Nithi. Their proposed changes were evaluated and considered for adjusting the questionnaire to enhance its validity. This ensured that the questionnaire content does not conflict on the confidentiality and ensure that vague statements are rectified. The research supervisor also discussed the questionnaire for purposes of improving its validity.

3.7 Instrument Reliability

A variable is reliable if it is consistent. A Reliability test answers to the consideration whether the procedures of data collection and analysis will generate the same results on other occasions or will other observers make similar observations and arrive at the same conclusions from the raw data (Smith et al., 2002 and Saunders et al 2007). It means that repeat observations give similar results. The reliability of the questionnaire was tested by use of statistical package for social sciences (SPSS). To test reliability of the questionnaire, twenty questionnaires were piloted using randomly selected residents of the Tharaka Nithi community and the responses input into SPSS and the results of the reliability test produced. Kurpius and Stafford (2006) recommend that a cronbach alpha reliability correlation coefficient should be around 0.70 for a newly developed tool. The results of the reliability test produced a Cronbach Alpha correlation coefficient of 0.789. The closer Cronbach's alpha coefficient is to 1, the higher the internal consistency reliability (Sekaran, 2003). A coefficient of 0.7 is recommended for a newly developed questionnaire and therefore 0.789 is adequate for this study.

3.8 Operational Definition of Variables

Research Objective	Type of Variable	Indicators	Data Collection Method	Type of Scale	Type of Analysis	Level of Analysis
1. To determine the influence of access to health facilities on socio-economic status of rural residents in Tharaka South District	Independent Variable health facilities	<ul style="list-style-type: none"> Proximity to Community Cost NHIF cover Availability of Medicines and a Doctor 	Questionnaire Informal interview Observation	Nominal	Qualitative Quantitative	Descriptive and inferential statistics
2. To evaluate the influence of access to education facilities on socio-economic status of rural residents in Tharaka South District.	Independent Variable education facilities	<ul style="list-style-type: none"> Level of Education Cost Relevance of Education achieved to Occupation Education and Standard 	Questionnaire Informal interview Observation	Interval	Qualitative Quantitative	Descriptive and inferential statistics
3. To evaluate the influence of access to water services on socio-economic Status of rural residents in Tharaka South District.	Independent Variable water services	<ul style="list-style-type: none"> Public water points Households with tapped water 	Questionnaire Informal interview Observation	Nominal	Qualitative Quantitative	Descriptive and inferential statistics
4. To establish the influence of access to electricity on socio-economic status of rural residents in Tharaka South District.	Independent Variable electricity	<ul style="list-style-type: none"> Households with electricity Shopping centres with power Power dependent economic activities 	Questionnaire Informal interview Observation	Nominal	Qualitative Quantitative	Descriptive and inferential statistics
5. To assess the influence of access to transport infrastructure on socio-economic status of rural residents in	Independent Variable transport infrastructure	<ul style="list-style-type: none"> Tarmac roads Public road transport All weather roads Ease resident mobility 	Questionnaire Informal interview Observation	Nominal	Qualitative Quantitative	Descriptive and inferential statistics

Research Objective	Type of Variable	Indicators	Data Collection Method	Type of Scale	Type of Analysis	Level of Analysis
Tharaka South District.						
6. Socio-economic status	Dependent variable	<ul style="list-style-type: none"> • Standard of living • Sanitation • Poverty • Occupation • Housing • Incomes • Dressing • Purchases 	Questionnaire Observation	Nominal	Qualitative Quantitative	Descriptive and inferential statistics

3.9 Methods of Data Analysis

A likert scale questionnaire was used to gather information. A Likert scale is one of the most widely used approaches to scaling responses in survey research where the respondent has to choose on a scale between strongly disagree and strongly agree. The collected data is ordinal and it has an inherent sequence, this means that the difference between strongly agree and agree is not the same as the difference between agree and neither agree nor disagree. The descriptive statistical methods were employed to analyze the data, particularly by deriving the minimum, maximum, median, mean and mode of the study.

Additional statistical analyses were performed; including analysis of the inferential statistics and significance test on the independent variables to explain the significant difference in the variables. All these tests were done by using SPSS (statistical package for social science).

3.10 Ethical Considerations

The first ethical consideration is to get a letter of authority to conduct research from the board of postgraduate studies of the University of Nairobi. Consent to conduct research was obtained from the District Commissioner of Tharaka South District. The researcher introduced herself to the authority to explain what the study entails,

as well as the purpose of the study. It was necessary to make clear that the purpose of the study was purely academic in order to enhance knowledge.

There respondents were assured that their identity and information provided would be kept confidential, and shall be treated with discreet confidence. Rapport was built right from the start in order to win the confidence of the respondents. The researcher booked appointments with the respondents beforehand, and was careful to manage the time availed for any kind of interaction (e.g. interview or questionnaire), properly.

Simple and acceptable language was used to reach different levels of people. All respondents and informants were acknowledged for their contribution. The researcher ensured that all research instruments were reliable and gave accurate data. Interpretation of data was accurate as possible; to ensure the research findings are reliable. A copy of findings shall be made available to the District Commissioner with a view of giving the some feedback.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The study had five objectives which investigated the effect of access to health facilities, education facilities, water services, electricity and transport infrastructure on socio-economic status of rural residents in Tharaka South District. This chapter describes the findings derived from the responses of the residents. The findings are organized based on the specific objectives of the study.

4.2 Response Rate

The initial target sample for the study was 300 respondents. Three hundred questionnaires were circulated to randomly selected residents of Tharaka South District. A research assistant was deployed to circulate and follow up on the questionnaires. Out of the 300 self administered questionnaires, 243 were duly completed and returned. This turns out to a response rate of 81% as shown on Table 4.1. According to Mugenda and Mugenda (2003) and also Kothari (2004) a response rate of 50% is adequate for a descriptive study. Babbie (2004) also asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good. Based on these assertions from renowned scholars 81% response rate is adequate for the study.

Table 4.1: Response Rate

Response	Frequency	Percentage
Returned	243	81
Unreturned	57	19
Total	300	100

4.3 Demographic Characteristics

The preliminary information gathered regarding the characteristics of the respondents was about; Gender and age of the residents at Tharaka South District.

4.3.1 Gender of the Respondents

The respondents were asked to indicate their gender. Table 4.2 indicates that 53% of the respondents were male and 47% were female. The findings imply that the respondents were well spread among the gender hence accurate responses for the study.

Table 4.2: Gender of Respondents

Gender	Frequency	Percentage
Male	129	53.1
Female	114	46.9
Total	243	100

4.3.2 Age of Respondents

The respondents were asked to indicate their age brackets. Results in Table 4.3 revealed that 67% of the respondents were aged between 26 to 35 years and 22% were aged between 18 to 25 years. Only 11% were aged between 36 to 45 years. The findings imply that most of the respondents were youthful and hence were more aware of the issues the government was doing in upgrading of the counties by improving public services.

Table 4.3: Age of respondents

Age	Frequency	Percentage
18 to 25 years	54	22.2
26 to 35 years	163	67.1
36 - 45 years	26	10.7
Total	243	100

4.4 Frequencies and Descriptive Analysis

This section is presented based on the objectives of the study.

4.4.1 Health Facilities and Socio-economic Status

The first objective of the study was to determine the influence of access to health facilities on socio-economic status of rural residents in Tharaka South District. Table

4.4 shows that 65% of the respondents disagreed that the nearest government healthcare facilities was within a walking distance from their home, 76% disagreed that they were able to be treated in government hospital in their locality with only a minimum fee and 88% disagreed that they have an NHIF medical cover. Eighty two percent of the respondents disagreed that all their family members undergo annual medical check-up in a government hospital, 66% disagreed that government hospitals in their district are fully stocked with medicines and 81% agreed that they were always seen by a Doctor whenever they visited a government hospital. The mean score of the responses for this variable was 2.52 indicating that more respondents agreed that accessibility to health facilities was a key driver of socio-economic status. The findings imply that there was less health facilities at Tharaka South District thus poor accessibility to the facilities.

Table 4.4: Health Facilities

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %	Likert Mean
The nearest government healthcare facilities is within a walking distance from my home	26	39	12	9	14	2.47
I am able to be treated in government hospital in my locality with only a minimum fee	17	59	8	10	6	2.29
I have an NHIF medical cover	31	57	6	5	2	1.91
All my family members undergo annual medical check-up in a government hospital	26	56	4	7	8	2.15
Government hospitals in my district are fully stocked with medicines	26	40	10	19	6	2.39
I am always seen by a Doctor whenever I visit a government hospital	2	13	4	57	24	3.89
Average						2.52

4.4.2 Education Facilities and Socio-Economic Status

The second objective of the study was to evaluate the influence of access to education facilities on socio-economic status of rural residents in Tharaka South District. Results on Table 4.5 indicates that 77% of the respondents disagreed that they attended school beyond primary school, 80% disagreed that their current job was relevant to their level of education and 81% disagreed that they don't pay fees for their children who attend public schools. Furthermore, 80% of the respondents disagreed that in their homestead nobody fails to go to school because of fees related problems, 86% disagreed that due to free primary and secondary education people can save more money and 85% disagreed that all the subjects they did in school are applicable to their current work environment. Finally, 78% of the respondents agreed that educated people in their district have good jobs and 78% agreed that families with educated people have a better standard of living in the district. The mean score for the responses was 2.51 which indicate that many respondents agreed that access to education facilities was a key driver of Socio-economic status. The results revealed that the residents were illiterate as most of them were primary school drop outs. However the residents knew that education was a key determinant in having a good job and better living standards.

Table 4.5: Education Facilities

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %	Likert Mean
I attended school beyond primary school	28	49	10	13	0	2.08
My current job is relevant to my level of education	21	59	7	10	3	2.15
I don't pay fees for my children who attend public schools	31	50	6	12	2	2.04
In our homestead nobody fails to go to school because of fees related problems	30	50	7	11	2	2.04
Due to free primary and secondary education people can save more money	28	58	8	5	1	1.94

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %	Likert Mean
All the subjects I did in school are applicable to my current work environment	24	61	6	6	3	2.04
Educated people in our district have good jobs	7	7	9	48	30	3.86
Families with educated people have a better standard of living in our district	7	10	6	43	35	3.9
Average						2.51

4.4.3 Water services and Socio-economic Status

The third objective of the study was to evaluate the influence of access to water services on socio-economic status of rural residents in Tharaka South District. Table 4.6 shows that 72% of the respondents disagreed that their home has supply of piped clean water from the district water company, 82% disagreed that they have not had water borne infection for past five years and 81% disagreed that there was small scale irrigation in their area by use of government water. Eighty one percent of the respondents disagreed that their animals take on piped water and 65% disagreed that there was no water rationing in their area. The mean score for the responses was 2.14 which indicate that many respondents disagreed that there was water accessibility at Tharaka South District. The findings imply that there was less accessibility of water services to the residents of Tharaka south thus deteriorating living standards.

Table 4.6: Water Services

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %	Likert Mean
My home has supply of piped clean water from the district water company	35	37	11	14	3	2.12
I have not had a water borne infection for past five years	28	54	9	6	3	2.02
There is small scale irrigation in my area by use of government water	9	72	12	7	1	2.19
Our animals take on piped water	23	58	9	7	3	2.08
There is no water rationing in my area	12	53	31	5	0	2.28
Average						2.14

4.4.4 Electricity and Socio-economic Status

The fourth objective of the study was to establish the influence of access to electricity on socio-economic status of rural residents in Tharaka South District. Results on Table 4.7 indicates that 79% of the respondents disagreed that their homes have electricity from Kenya Power and lighting company, 73% disagreed that electricity supply in their area was reliable – there are frequent blackouts and 73% agreed that electricity was expensive and beyond reach of many Tharaka South district. Eighty two percent of the respondents disagreed that most of their domestic appliances use electricity and 75% disagreed that the government was committed to providing electricity to Tharaka South residents. The mean score of the responses for this section was 2.44 indicating that more respondents disagreed that there was good access to electricity at Tharaka south District.

Table 4.7: Electricity

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %	Likert Mean
My home has electricity from Kenya Power and lighting company	35	44	6	12	3	2.04
Electricity supply in our area is reliable – there are less frequent blackouts	34	39	7	21	0	2.14
Electricity is expensive and beyond reach of many Tharaka South district	6	14	7	56	17	3.63
Most of my domestic appliances use electricity	33	49	6	8	5	2.03
The government is committed to providing electricity to Tharaka South residents	16	59	6	14	5	2.35
Average						2.44

4.4.5 Transport Infrastructure and Socio-economic Status

The fifth objective of the study was to assess the influence of access to transport infrastructure on socio-economic status of rural residents in Tharaka South District. Table 4.8 reveals that 58% of the respondents disagreed that their home was a walking distance to a tarmac road, 67% disagreed that farmers in Tharaka South were able to deliver their produce to the market due to good roads and 76% disagreed that post office services were at least less than 5 kilometers from their home. Seventy eight percent of the respondents disagreed that during rainy seasons vehicles are able to access their homes and 80% disagreed that the government was doing its best to improve provision of good roads in Tharaka South district. The mean score of the responses for this section was 2.20 indicating that more respondents disagreed that they had good transport infrastructure thus poor socio-economic status at Tharaka South District.

Table 4.8: Transport Infrastructure

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %	Likert Mean
My home is a walking distance to a tarmac road	19	39	14	18	10	2.59
Farmers in Tharaka South are able to deliver their produce to the market due to good roads	23	44	10	18	6	2.41
Post office services are at least less than 5 kilometers from my home	19	57	7	14	4	2.28
During rainy seasons vehicles are able to access our homes	36	42	18	4	0	1.9
The government is doing its best to improve provision of good roads in Tharaka South district	38	42	16	3	0	1.84
Average						2.20

4.4.6 Socio-economic Status

The study sought to test the views of the residents regarding socio-economic status of the rural residents of Tharaka South District in Kenya. Results on Table 4.9 indicates 78% of the respondents disagreed that the standard of living for residents have improved for the last five years, 75% disagreed that there is good and improved sanitation at Tharaka South district and 88% disagreed that there was reduced level of poverty at the district due to improved public services. In addition, 78% disagreed that they have increased their income by starting their own business, 84% disagreed that there was increased growth of businesses hence many residents have permanent type of occupation and 91% disagreed that they have improved their way of dressing due to accessibility to public services such as market. Eighty three percent of the respondents disagreed that they have built permanent houses due to improved accessibility to public services. The mean score for the responses was 1.91 which

indicated that many respondents disagreed to the statements regarding Socio-economic status of the rural residents of Tharaka South District.

The findings disagree with those in Raconline (2012) and Faruqee (2012) who argued that rural communities have many distinctive assets that provide a basis for economic development activities. These natural amenities like mountains, rivers, forests, wildlife and open space are appealing to people and present unique opportunities for rural development, hence the Rural economic structure is predominantly a goods-producing sector comprising of on-farm economic activities of mainly small-scale thereby having high rates of self employment, increasing opportunities for entrepreneurial ventures

Table 4.9: Socio-Economic Status

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %	Likert Mean
The standard of living for residents have improved for the last five years	28	50	10	10	2	2.07
There is good and improved sanitation at Tharaka South district	41	34	3	19	3	2.08
There is reduced level of poverty at the district due to improved public services	26	62	1	10	2	2.01
I have increased my income by starting my own business	28	50	7	9	6	2.15
There is increased growth of businesses hence many residents have permanent type of occupation	27	57	8	8	0	1.97
I have improved my way of dressing due to accessibility to public services such as market	31	60	10	0	0	1.79
I have built a permanent house due to improved accessibility to public services	46	37	8	6	2	1.81
Average						1.91

4.5 Inferential Statistical Analysis

This section presents correlation and regression analysis.

4.5.1 Vicariate Correlation

Table 4.10 displays the results of correlation test analysis between the dependent variable (Socio-economic status) and independent variables and also correlation among the independent variables themselves. Results on Table 4.10 show that socio economic status was positively correlated with all the independent variables. This reveals that any positive change in health facilities, education facilities, water services, electricity and transport infrastructure led to improved Socio-economic status of Tharaka South District residents.

Table 4.10: Bivariate Correlation

Variable		Socio-Economic Status	Health Facilities	Education Facilities	Water Services	Electricity	Transport
Socio-Economic Status	Pearson Correlation	1					
	Sig. (2-tailed)						
Health Facilities	Pearson Correlation	0.310	1				
	Sig. (2-tailed)	0.000					
Education Facilities	Pearson Correlation	0.527	0.699	1			
	Sig. (2-tailed)	0.000	0.000				
Water Services	Pearson Correlation	0.382	0.295	0.335	1		
	Sig. (2-tailed)	0.000	0.000	0.000			
Electricity	Pearson Correlation	0.707	0.541	0.688	0.411	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		
Transport	Pearson Correlation	0.718	0.427	0.677	0.363	0.856	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	

4.5.2 Regression Analysis

In order to establish the statistical significance of the independent variables on the dependent variable (Socio-economic status) regression analysis was employed. The regression equation took the following form.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \mu$$

Where

Y = Socio-economic status

X₁ = Health facilities

X₂ = Education facilities

X₃ = Water services

X₄ = Electricity

X₅ = Transport infrastructure

In the model, β_0 = the constant term while the coefficient β_i , $i = 1 \dots 5$ was used to measure the sensitivity of the dependent variables (Y) to unit change in the predictor variables. μ is the error term which captures the unexplained variations in the model.

Table 4.11 shows that the coefficient of determination also called the R square is 56.3%. This means that the combined effect of the predictor variables (health facilities, education facilities, water services, electricity and transport infrastructure) explains 56.3% of the variations in Socio-economic status of Tharaka south district residents. The correlation coefficient of 75% indicates that the combined effect of the predictor variables has a strong and positive correlation with Socio-economic status. This also meant that a change in the drivers or determinants of Socio-economic status has a strong and a positive effect on socio economic status.

Table 4.11: Regression Model Fitness

Indicator	Coefficient
R	0.75
R Square	0.563
Std. Error of the Estimate	0.28878

Analysis of variance (ANOVA) on Table 4.12 shows that the combined effect of health facilities, education facilities, water services, electricity and transport infrastructure was statistically significant in explaining changes in socio-economic status in Tharaka south District. This is demonstrated by a p value of 0.000 which is less than the acceptance critical value of 0.05.

Table 4.12: ANOVA

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	25.426	5	5.085	60.981	0.000
Residual	19.764	237	0.083		
Total	45.19	242			

Table 4.13 displays the regression coefficients of the independent variables. The results reveal that water services, electricity and transport infrastructure are statistically significant in explaining socio-economic status of residents at Tharaka South district. However health facilities and education facilities had a positive relationship with socio-economic status though not statistically significant.

Table 4.13: Regression Coefficients

Variable	Beta	Std. Error	t	Sig.
Constant	0.476	0.166	2.865	0.005
Health Facilities	0.107	0.056	1.918	0.056
Education Facilities	0.110	0.104	1.056	0.292
Water Services	0.101	0.043	2.336	0.020
Electricity	0.284	0.074	3.853	0.000
Transport	0.270	0.064	4.234	0.000

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter finalises the study by providing the summary of key findings, conclusions and recommendations. The summary, conclusions and recommendations are aligned to the specific objectives of the study.

5.2 Summary of Key Findings

One of the key findings was that residents of Tharaka south were unhappy about their socio-economic status. This was demonstrated by the extent of disagreement with the statements in the questionnaire in support of socio-economic status of rural areas in Kenya.

The first objective was to explore whether access to health facilities influenced socio-economic status. The results revealed that access to health facilities was a key determinant of socio-economic status. This was demonstrated by the mean score of responses of 2.52 and also the regression coefficient of 0.056. The correlation between health facilities and socio-economic status was also found to be moderate and positive (0.310).

The second objective was to establish whether access to education facilities influenced socio economic status. Results showed that education influenced socio-economic status and it was structured in the way residents would have liked it to be, since they were not paying fees. However most of the residents were school dropouts and were determined to let their children benefit with the free education being offered by the government. Education was found not to be statistically significant (0.292) in influencing socio-economic status. The results had a likert mean score of 2.51.

The third objective of the study was to explore the influence of accessibility to water services on socio-economic status. The study findings showed that the residents value water as an ingredient of their socio-economic growth. However there was scarcity of water services in the district since there was no piped water hence they residents had to dwell with boreholes water. This was evidenced by a likert mean score of 2.14. The findings indicated that there was a positive and significant relationship between accessibility to water services and socio-economic status as shown by a regression coefficient of 0.020.

The fourth objective was to find out whether access to electricity influenced socio-economic status. It was found that electricity was important to residents but was not accessible as it was expensive as shown by a likert mean score of 2.44. The correlation (0.707) and regression results (0.000) indicated that there was a strong positive and significant relationship between electricity and socio-economic status.

The fifth and final objective was to find out whether accessibility to transport infrastructure influenced socio-economic status. The results mean score was 2.20 indicating high level of disagreement with the questionnaire statements. It was found that transport infrastructure was important to socio-economic status and was statistically significant. The findings indicated that there was a positive and significant relationship of 0.000 between transport infrastructure and socio-economic status. It was found that the infrastructure for Tharaka district was in bad shape hence needed much attention so as to uplift the living standards of residents in that area.

5.3 Discussion

Based on the findings, corroborations have been done with prior studies and are organised based on the objectives that the study pursued.

5.3.1 Health Facilities and Socio-economic Status

The findings imply that there was less health facilities at Tharaka South District thus poor accessibility to the facilities. The findings disagree with those in WHO (2006), who pointed out that the role of government in service delivery contributes to

increasing equity in access to health care, particularly in rural and remote areas where qualified private providers, concerned about their income, are in limited supply. The direct provision of health services by governments contributes to market regulation for both pricing and quantity of services, therefore, improving the social and economic welfare of citizens in rural areas.

5.3.2 Water services and Socio-economic Status

The mean score for the responses was 2.14 which indicate that many respondents disagreed that there was water accessibility at Tharaka South District. The findings imply that there was less accessibility of water services to the residents of Tharaka south thus deteriorating living standards. The findings agree with those in Cosgrove and Rijsberman (2003); Gomez and Nakat (2002) and The World Bank (2001) who asserted that improved access to safe drinking water is a prerequisite to poverty reduction. Access to safe drinking water prevents the spread of water-borne and sanitation-related diseases. Lack of access to safe water and adequate sanitation services especially in developing countries often result in about two million infant deaths annually.

Further support is found in Barker et al. (2000) who asserted that in addition to increasing crop production and farm and family incomes, improved irrigation access significantly contributes to rural poverty reduction through improved employment and livelihoods within a region. Indirect benefits, such as more stable rural employment as well as higher rural wage rates, help landless farm labourers obtain a significant share of the improved agricultural production. The findings further contrast with those in Jill (2010) who noted that the Health Services sector of Smith County, Kansas, plays a large role in the area's economy. Health Services represents one of the largest employers in the area and also serves as one of the largest contributors to income. Additionally, the health sector has indirect impacts on the local economy, creating additional jobs and income in other sectors.

5.3.3 Education Facilities and Socio-Economic Status

Many respondents disagreed that access to education facilities was a key driver of Socio-economic status. The results revealed that the residents were illiterate as most

of them were primary school drop outs. The findings agree with those in Porter (2002) who established that education directly contributes to worker productivity, and can promote better natural resource management and more rapid technological adaptation and innovation. It is fundamental to the creation of a competitive, knowledge-based economy is crucial for enabling workers and citizens in both the traditional and modern sectors to increase productivity. The findings also agree with those in Hanushek and Kimko (2002) who points out that impacts are strongest where education is integrated into a broader competitiveness strategy that includes macroeconomic stability, trade openness, incentives for foreign investment, competitive telecommunications pricing, and adequate infrastructure investments.

The findings further concur with those in Psaracharopoulos (2003) who asserted that more educated people in most countries, including low income developing countries, enjoy higher earnings than less educated ones. There is thus at least private benefit from education. The impact of differing levels of educational attainment (or years of schooling) on earnings has been tested econometrically many times and is invariably found to be strongly positive.

5.3.4 Electricity and Socio-economic Status

The mean score of the responses for this section was 2.44 indicating that more respondents disagreed that there was good access to electricity at Tharaka south District. The findings agree with those in Andreas (2010) who studied the Socio-economic and Socio-cultural Impact of Rural Electrification in Four Districts of the Kingdom of Bhutan. The results of the study verify impressively the assumption that rural electrification is an especially appropriate tool for improving the quality of life of the rural population in Bhutan. Many changes on socio-economic levels such as tremendous improvement in public health; in time-savings, allowing additional economic and social activities; greater awareness of the importance of investments in agriculture; greater understanding of the 'world outside' brought by new and more intensive media-consumption patterns made rural life more attractive, especially to young people. The impact of electrification on the quality and the standard of living in the rural societies surveyed is quite high, so we can say that rural electrification is indeed an efficient tool for poverty alleviation.

5.3.5 Transport Infrastructure and Socio-economic Status

The mean score of the responses for this section was 2.20 indicating that more respondents disagreed that they had good transport infrastructure thus poor socio-economic status at Tharaka South District. The results agree with those in Bharat (2004) who noted that policies of reducing the transport barriers and costs through proper construction and maintenance of road network could contribute to socio-economic transformations given the good policy environment for efficient allocation of resources, and complementary investment. His findings noted that roads are an inseparable component of physical infrastructure and play an important role in the development of other sectors as its development directly influence the development of both productive and social sectors such as agriculture, industry, commerce, education and health.

Further agreement with the findings is found in Umoren (2009) who noted that the absence of access to roads and the poor state of roads in Iboino (an entirely rural area in AkwaIbom State, Nigeria) hindered transport and communication. This has consequently resulted in increased distances from raw materials source, market, and the diffusion of innovation in the area. Another major problem identified was high transport costs, which have resulted in vehicles not plying the roads because of their bad condition.

5.4 Conclusions

Based on the objectives and the findings of the study the following conclusions can be made.

Health facilities were a key driver to socio-economic status at Tharaka District. It was possible to conclude that access to health facilities is very vital in improving the living standards and socio-economic status of rural residents. The study also concludes that there was need for the Government to ensure more health facilities were built in the area in order to uplift and improve the resident's living standards. This conclusion is notably similar to the efforts and emphasis that the Government is putting in promoting health care facilities in the country.

Education facilities were found to be effective in driving socio-economic growth. It can be concluded that access to education is an important determinant of resident's socio-economic growth. This kind of finding is consistent as it has been supported by other scholars and hence highlighting the intensity of education in promoting socio economic growth and help fight poverty in the rural areas.

Water services were statistically significant in explaining socio-economic status; the respondents were very distressed by the situation in their district as they lacked basic necessities to upgrade their socio economic growth. It can therefore be concluded that the respondents were happy about the government initiative of supplying piped water in the area and could carry out different tasks through the use of that water for example keeping cattle and farming.

Electricity was found to influence socio-economic status of Tharaka South District residents. Accessibility to electricity is therefore important despite it being a long range or long term benefit. Electricity is important in socio-economic growth due to its intrinsic value but many residents have the fear that it is expensive and not affordable but they are adopting slowly to the technological changes which makes the residents also embrace rural electrification.

Transport infrastructure is a key driver to improved socio-economic status at Tharaka. It can therefore be concluded that the poor transport infrastructure has led to deteriorating socio-economic growth as all the residents' cannot be able to access all areas and promote businesses. The government should ensure that it sets aside ample funds for all counties for developments and building of roads in all rural areas to facilitate moving of goods and people from one place to another. Transport infrastructure is a key ingredient for development in any economy. Tarmac roads are known to create development corridors which improve economic growth and employment creation on top of improving the overall productivity of all production chains in near the road.

5.5 Recommendations

Based on the results, findings and conclusions the following recommendations have been deciphered. Health facilities were found to be a determinant factor in determining socio-economic status. It is recommended that the government needs to emphasize and encourage the employees at the health facilities to offer services in the best of their knowledge to ensure that all residents access the services they require. It is recommended that the government should ensure that there are audits done around the public hospitals to ensure that the facilities are fully equipped and all drugs required stocked and put into the right use. The study also recommends that more health facilities should be built to reduce overcrowding in the two hospitals in the whole district. Lessons from other well to do economies can be replicated in Tharaka especially in terms of community nursing services which have proved to reduce the levels of morbidity and mortality especially in relation to infants. Mobile clinics would also come in handy in the district because they will improve access by reducing the time spent and distance travelled by residents in search of health care.

It was found that education affects socio-economic status of residents in rural areas. It is recommended to the general residents to ensure that they get education and ensure they complete as education is a key factor for success. It is also recommended that the parents give equal opportunities to both boys and girl child in getting education as they are the leaders of tomorrow. The county Government should place emphasis on strategies that will ensure better pupil survival rate at all levels of education. Public benefit organizations should be encouraged to launch their education programs in the district as a way of supplementing and complementing Government efforts in education.

It is recommended that the residents need to emphasize and enhance correct use of water available in the area. The study recommends that the government should ensure that all areas in the country access clean water for consumption and use hence should start projects for distributing piped water in the district. Much rain water in

the district goes into waste and simple rain harvesting technologies should be encouraged.

Residents found electricity to be unaffordable due to price and the cost of installation. The Government should encourage use of simple and efficient sources of power. Such sources of energy are mainly renewable ones like solar and biogas. Micro finance institutions should partner with public benefit organizations in providing cheaper financing for renewable energy.

5.6 Areas for Further Study

Arising from the findings and the gaps in the study a replica study is recommended in another district or county in order to test whether the conclusions of this study will hold true. Future studies should apply different research instruments like focus group discussions to involve respondents in discussions in order to generate detailed information which would help improve public utility implementation.

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APPENDICES

Appendix 1: Letter of Introduction

Date.....

District Commissioner
Tharaka South District
P.O Box
Tharaka

Dear Sir,

RE: DATA COLLECTION FOR ACADEMIC RESEARCH

I am a post graduate student of the University of Nairobi pursuing a Masters of Arts in project planning and management. I wish to conduct a research titled "*Influence of access to public utilities on the socio-economic status of rural communities: a case of Tharaka South district, Kenya*". I will use questionnaires, interviews and observation as the main tools for gathering information from the respondents. The target respondents will be sampled from among the residents of Tharaka South district.

I hereby request your authority to permit my research assistants to serve the questionnaire to randomly selected respondents. I will ensure that the information gathered is used for this research only and all research ethical standards will be observed.

A copy of the final study will be given to your office as a token of appreciation for facilitating the success of this study.

Yours Sincerely,

Susan Njeru

Appendix 2: Questionnaire for Tharaka South District Residents

Introduction

This questionnaire is meant to gather information regarding *the influence of public utilities on the socio- economic status of Tharaka South District residents*. Your participation in filling this questionnaire is highly welcome and it will contribute to this research. Your responses to this questionnaire will be handled confidentially and ethically.

SECTION 1: BASIC INFORMATION

1) Name (Optional).....

2) Gender (tick as appropriate) - Male..... Female.....

3) Kindly indicate your age?

18 to 25 years [] 26 to 35 years []

36 - 45 years [] 46 to 55 years []

55 – 60 years [] Over 60 years []

SECTION 2: PUBLIC SERVICES AND SOCIO-ECONOMIC STATUS

This section has five sub-sections. Each sub-section has an objective and statements related to the objective or variable. Please indicate by a tick your opinion on each statement

Part A: To determine the influence of access to health facilities on socio-economic status of rural residents in Tharaka South District.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
The nearest government healthcare facilities is within a walking distance from my home					
I am able to be treated in government hospital in my locality with only a minimum fee					
I have an NHIF medical cover					
All my family members undergo annual medical check-up in a government hospital					
Government hospitals in my district are fully stocked with medicines					
I am always seen by a Doctor whenever I visit a government hospital					

Part B: To evaluate the influence of access to education facilities on socio-economic status of rural residents in Tharaka South District.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
I attended school beyond primary school					
My current job is relevant to my level of education					
I don't pay fees for my children who					

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
attend public schools					
In our homestead nobody fails to go to school because of fees related problems					
Due to free primary and secondary education people can save more money					
All the subjects I did in school are applicable to my current work environment					
Educated people in our district have good jobs					
Families with educated people have a better standard of living in our district					

Part C:To evaluate the influence of access to waterservices on socio-economic Status of rural residents in Tharaka South District.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
My home has supply of piped clean water from the district water company					
I have not had a water borne infection for past five years					
There is small scale irrigation in my area by use of government water					
Our animals take on piped water					
There is no water rationing in my area					

Part D:To establish the influence of access to electricity on socio-economic status of rural residents in Tharaka South District.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
My home has electricity from Kenya Power and lighting company					
Electricity supply in our area is reliable – there are less frequent blackouts					
Electricity is expensive and beyond					

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
reach of many Tharaka South district					
Most of my domestic appliances use electricity					
The government is committed to providing electricity to Tharaka South residents					

Part E: To assess the influence of access to transport infrastructure on socio-economic status of rural residents in Tharaka South District.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
My home is a walking distance to a tarmac road					
Farmers in Tharaka South are able to deliver their produce to the market due to good roads					
Post office services are at least less than 5 kilometres from my home					
During rainy seasons vehicles are able to access our homes					
The government is doing its best to improve provision of good roads in Tharaka South district					

Part F: Socio- Economic Status

This Section is concerned with assessing the socio- economic status of rural residents in Tharaka South District. Please mark (x) in the box which best describes your agreement or disagreement on each of the following statements.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
The standard of living for residents have improved for the last five years					
There is good and improved sanitation					

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
at Tharaka South district					
There is reduced level of poverty at the district due to improved public services					
I have increased my income by starting my own business					
There is increased growth of businesses hence many residents have permanent type of occupation					
I have improved my way of dressing due to accessibility to public services such as market					
I have built a permanent house due to improved accessibility to public services					

SECTION 3: Kindly state and explain other issues you may wish to mention regarding the impact of public services to the residents of Tharaka South District

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