

**ASHESI UNIVERSITY COLLEGE**

**AN ASSESSMENT OF THE POTENTIAL IMPACT  
OF CONSTRUCTING THE KWABENYA – KITASE ROAD  
ON THE LOCAL ECONOMY**

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## DECLARATION

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

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I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by Ashesi University College.

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Date: .....

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I dedicate this work to all the inhabitants and non-inhabitant users of the Kwabenya – Berekuso – Kitase road. Your expectation for the construction of the road will not be cut off.

## **ABSTRACT**

Road construction typically confers significant benefits on the population the road serves. In spite of these benefits, many roads in rural regions of developing countries such as Ghana are in a deplorable state.

The recent rapid growth of urban residential areas in Ghana, however, has necessitated the construction and rehabilitation of the roads linking these areas to major commercial towns in the country. The Kwabenya (Abuom) to Kitase area is a typical example. This study assesses the impact of constructing the Kwabenya (Abuom) – Kitase road on the local economy.

This research drew heavily on primary data. However, some secondary data was also used in this research in telling the story of the Kwabenya – Kitase road. The study made extensive use of questionnaires and interviews. 100 questionnaires were sent out to inhabitants and non-inhabitants of the area and 2 interviews were conducted.

The research results revealed that, agricultural production was perceived by several respondents as significantly being improved by the construction of the road. The study however, identified other major sectors to be affected as education, real estate, arts, entertainment and recreation, construction and hospitality. It was also seen that in spite of the positive impacts, a construction of the road was likely to come along with some negative implications such as the destruction of arable land and a consequent change in the livelihoods of inhabitants, especially within the Agyemanti – Kitase area.

The study established that constructing the Kwabenya – Kitase road was likely to boost the local economy. It also established from responses that there was the concern that an influx of businesses is likely to diminish arable land for construction and commercial purposes.

The study noted that local community participation should be increased in constructing the Kwabenya – Kitase road. Also, maintenance culture needed to be enforced to sustain the benefits of the road.

Key Words:

Assessment, Road construction, Local economy, Public goods, Free rider

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## DEFINITION OF TERMS

**Usual destination of inhabitants** - the typical places (along the Kwabenya – Kitase road) users terminate their journey in their use of the road

**Free rider** - the user who benefits from a public good without contributing any effort to its production

**Highest value consumer** – those individuals and organisations that profit immensely from a construction of a public good such as the road

## CHAPTER 1 - INTRODUCTION

### Background

Road construction is a major issue in many regions of the world, especially developing countries (Poku-Boansi, Ekekpe, & Bonney, 2010). It is estimated that approximately 900 million people, more than 12% of the world's population, who live in rural areas in developing countries do not have consistent, all season access to reliable main road networks. Of this, 300 million do not have motorized access at all (Lebo & Schelling, 2001).

The existence or non-existence of a good road system, no doubt, has great economic impacts on many people. In Ghana, an improvement of road systems for many communities means an improved access to jobs, educational and health facilities and a facilitation of domestic trade, whether to a nearby community or a country sharing borders (Ghana National Commission for UNESCO, 2009).

Many governments, including the government of Ghana, have over time, made efforts for expansion, seeing there are many opportunities for growth and development from a good transport system. According to a World Bank report, the government of Ghana's on-going Ghana Transport Sector Policy has increased the rural population who are within 2 kilometres of an all season road to 66%, and increased the number of road networks in good and fair condition to 57% (The World Bank, 2014).

Over the years, Ghana's move to the status of a lower middle income country, and the recognition of the current state of the country's transport system has increased the efforts that have been made to provide not just good roads, but also infrastructure, to improve mobility and access within the country (Porter, 2012). In

spite of this, evidence shows that one group that has not so much as benefited from this gradually expanding paved road networks is the rural poor (Porter, 2012).

One distinct characteristic of many rural areas in Ghana is the deplorable state of roads (Okoko, 2011). Indeed, studies by scholars have shown that this deplorable state of roads in rural areas to a very large extent slows down development (Okoko, 2011) as it constrains access to both private and public infrastructure in health, and education, agricultural extension services, banking and credit facilities, and even centres of power, influence and information.

In recent times, due to a surge in population, opportunities for development have sprung up in the suburban communities in the Greater Accra Region of Ghana (Ghanney, 2000). These opportunities emerge from development in various sectors of the economy, especially, housing and real estate (Yeboah, 2003), as individuals settle and businesses seize opportunities to maximize returns.

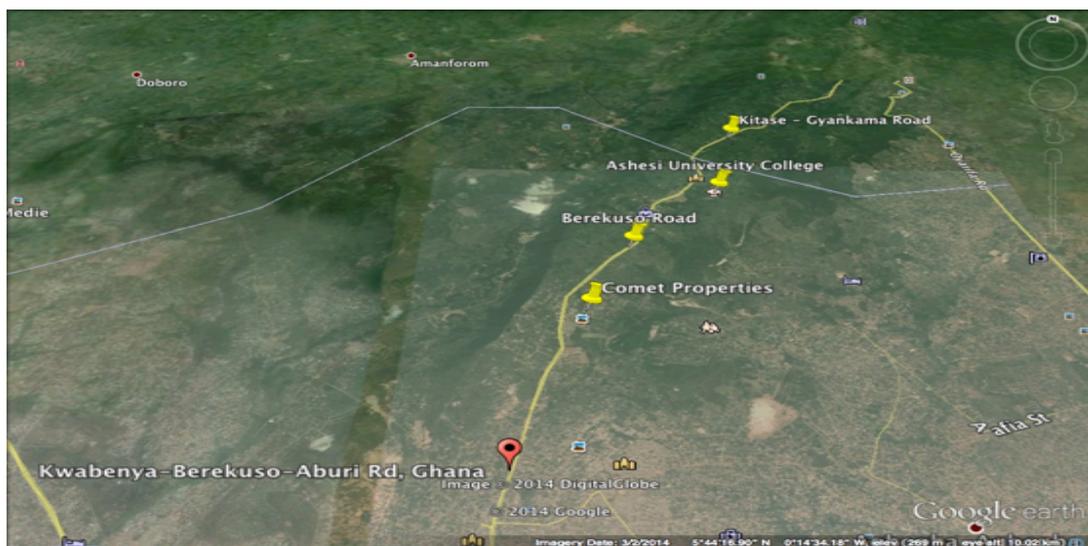
Communities like Adenta, Gbawe, Amanfrom and Madina, which in the 1980's and 2000's, saw rapid population surges began to also experience better provision of electricity, water, access to roads and other essential amenities (Yeboah, 2003). This positive development can also be found in suburbs like Kasoa, Pokuase, Abokobi, Danfa, Oyibi, among others. As a result, these areas, have not only seen great increases in micro and small-scale enterprises (Attom, 2012) but also better provision of electricity, water and most commonly, real estate developments (Awuah, Baffour, Hammond, Lamond, & Booth, 2014) which continuously create affordable housing units for the populace.

The research will try to understand and unearth the kind of commercial economic opportunities that a major feeder road linking some of these emerging suburban areas can generate by focusing on the Kwabenya (Abuom) – Kitase road.

## Study Area

The Kwabenya (Abuom) – Kitase stretch is a fast growing area spanning the north-eastern outskirts of Accra (the capital of Ghana) and meeting the Eastern region. Communities within this area include Kwabenya (Abuom and Aboasa), Comet Hills, Berekuso and Kitase.

*Fig 1: Google map of the Kwabenya (Abuom) to Kitase road*



Source: Google earth

Berekuso and Kitase are both townships on the foothills of the Aburi Ridge, about 35km northeast of Accra (Addai, 2005). This area, about five years ago, had a population of approximately 9,000 inhabitants, according to the 2010 Ghana population and housing census (Ghana Statistical Service, 2013)

Within Kwabenya (Abuom and Aboasa), majority of inhabitants own or are employed in micro and small-scale enterprises, usually trading in foodstuff,

household equipment and other consumer goods. There is also the minority who are professionals in various economic sectors like the banking, health and educational sectors, among others. Inhabitants of Berekuso and Kitase are mostly involved in small-scale farming with the minority employed in micro and small-scale enterprises, usually trading in foodstuffs and consumer goods (Addai, 2005).

This area, in spite of its abundant productive land, had in the past seen little significant investment in medium or large-scale businesses, whether agricultural related or not. As the population increased and more people moved to settle in the outskirts of Accra for various reasons, this area, especially Kwabenya (Abuom and Aboasa) saw a significant level of increase in housing settlements.

The development of Comet Properties, a privately owned real estate company, and the Agricultural Development Bank (ADB) housing units, resulted in an even greater settlement increase as families acquired not just housing units, but also properties for private investment. A related effect of this was the need to acquire caretakers for their properties. The relatively peaceful and quiet nature of the area also saw a large number of seasonal migrants build large houses, especially within Kwabenya (Aboasa), and visiting their property occasionally. Property owners leave their property in safekeeping with local residents who take advantage of the opportunity to enjoy free housing. These caretakers also settled, raised families and engaged in some other forms of livelihood.

Further, with the relocation of Ashesi University College from its previous Labone campus to its current campus in Berekuso, the Kwabenya-Kitase road is enjoying more traffic than before. Students, faculty and staff, and visitors to the campus reach the campus using either the road from the Kwabenya stretch though the

Berekuso township, or from the Aburi road through the Kitase township.

Until very recently, the road under study had not seen any significant development since the rehabilitation of the Aburi road in 2004 to make way for travellers to Aburi, Mamfe, Akropong and other parts of the Eastern region. It is worthwhile to note that the inhabitants of the area for over 10 years have taken very little pride in the road that links them to the major cities in Accra and the Eastern region, suffering instead severe dust problems and an unwillingness of public transport owners to ply the road.

For an area with such economic viability, including the sighting of a real estate property, Comet Properties and an institution for higher education, Ashesi University College, it is disconcerting that appeals to the stakeholders involved in its construction or rehabilitation seem ineffective (Ghana Today, 2011). Currently parts of the road seem to have been awarded to Comet Properties, a real estate company. However, given that Comet is not a road construction company, its efforts at constructing the road clearly leaves much to be desired.

### Statement of the Problem

Opportunities to improve the livelihoods of individuals and economic opportunities for businesses have been thwarted because of the deplorable state of the Kwabenya (Abuom) - Kitase road.

A good road network from Kwabenya (Abuom) to Kitase in the Eastern region is one important solution to the problem faced by inhabitants in accessing jobs, schools and hospitals. Also and even most importantly, many opportunities exist for businesses and individuals for trade, commerce, and investments in health,

education, transportation, real estate development, and hospitality sectors among many others within the Kwabenya (Abuom) – Kitase area. These opportunities can improve the local economy while contributing significantly to the growth of the country as a whole.

Roads are public goods and it is thus the expectation that government provides them. It seems however, that the Ghanaian government is hindered in its provision of many important roads in the country due to problems such as the lack of funds, contractor difficulties, among others. A possible way to overcome this is through private intervention, either by the complete provision of some roads by private market or by public - private partnerships although this also introduces the free rider problem.

The problem that remains unresolved is that, there has been no investigation into the possible impacts of the construction of the road on the local economy so as to incentivise the private market. Secondly, there is very little documentation of the story of the Kwabenya – Kitase road, thus the entire account/report of the area is not known.

### Research Variables

This research seeks to assess the potential impact of constructing the Kwabenya – Kitase road on the local economy. Variables to be analysed in this research are road construction and the local economy. That is, the potential impact of road construction in boosting old businesses, generating new businesses, creating jobs for inhabitants thus increasing the incomes of inhabitants, reducing unemployment and generally improving the local economy.

### Research Questions

It is evident from the aforementioned that the Kwabenya (Abuom) - Kitase road is not in good condition. Regardless, there are still many opportunities to revamp the local economy of the inhabitants within the Kwabenya (Abuom) – Kitase space.

In view of this, the main research questions for the study are:

- What is the story of the Kwabenya (Abuom) – Kitase road and what problem/s does its current state pose to the local economy?
- What are the theoretical and practical reasons why the Kwabenya - Kitase road has not been constructed all this while?
- How will repairing the road boost the local economy?

### Research Objectives

This study is intended to:

- Tell the story of the Kwabenya (Abuom) – Kitase road and discuss the problem/s the current state of the road poses to the local economy
- Explain the theoretical and practical reasons why the Kwabenya – Kitase road has not been constructed all this while
- Determine through interactions with relevant stakeholders, how repairing the road can boost the local economy

### Significance of the Study

This paper makes a contribution by documenting the story of the Kwabenya (Abuom) – Kitase road and providing an economic rationale for why the road, as a public good, is yet to be constructed.

Secondly, results will serve as reference in the feasibility studies of new business opportunities as well as for the expansion of current enterprises or investments in the Kwabenya – Kitase area.

The research results will also be valuable to policy makers in Ghana and other African countries debating the pros and cons of constructing certain major roads.

The results of this research will add to existing literature and serve as a review on public good provision in rural, under-developed areas.

### Organization of the Research

This thesis is examined under five chapters:

Chapter One – Introduction: This chapter, which has just been covered, gives a brief background into the subject under research. It investigates briefly the history of roads in Ghana. It also examines shortly the impact of Ghana's population growth on settlements and gives contextual information on the area under study. This chapter finally gives detailed information on the exact problem under study, questions to be asked in conducting the research, the objectives of the research and finally the significance of the research.

Chapter Two – Theoretical Framework and Literature Review: This comprises a framework of the economic theory, which will be used to explain the research and elaborate on the ideas of this research. The second section of this chapter is the review of literature relevant to this research. This section reviews and analyses related literature, their ideas, theories and hypothesis in relation to this research.

Chapter Three – Methodology: The methods used by the researcher in the

collection of data, and the approaches and procedures for the analysis of this data, are examined here in detail. The validity and reliability of the research are also covered in this chapter.

Chapter Four – Data findings and discussion of results: This is the full analysis and examination of the data collected from all sources. Here, relationships and existing correlations are identified and presented.

Chapter Five – Conclusion: This chapter envelops discussions and summarizes the findings of this research and its contribution to existing knowledge on the subject. The chapter also includes recommendations based on the research as well as suggestions for further studies. Limitations faced in the entire research process are also presented here.

## CHAPTER 2 – THEORETICAL FRAMEWORK & LITERATURE REVIEW

Transportation is pivotal to the overall development of Ghana (Ghana National Commission for UNESCO, 2009). It is a key infrastructure sector that is a stimulus to economic growth and accounts for a large portion of public investments. The availability of proper transport infrastructure is a crucial determinant for socio-economic development (Ghana National Commission for UNESCO, 2009).

### Theoretical Framework

This paper used the theory of public goods to examine the incentive for private sector involvement in the construction of the road vis-à-vis the incentive for market participants who do not have the highest valuation for the road to free ride on the investment of the highest value user. Positive externalities associated with the road construction were also discussed.

### *Theory of Public Goods*

A public good is defined as a good that, once produced, can be consumed by an additional consumer at no additional cost (Holcombe, 1997). In other words, a public good is non-rivalrous and non-excludable in consumption (Mankiw, 2009). Similarly, Samuelson's definition, often referred to by economists, defines public goods as, "those goods other consumers can enjoy when produced for some consumers at no additional cost" (Samuelson, 1954). A public good is both non-excludable and non-rivalrous in consumption, which means that individuals cannot be effectively excluded from their use and the use by one individual does not reduce the availability of the good to others.

Mathematically, this can be expressed as:  $Q = Q_A = Q_B = Q_C$

Where  $Q$  = the total quantity of the public good

$Q_A$  = the quantity consumed by person A

$Q_B$  = the quantity consumed by person B

$Q_C$  = the quantity consumed by person C

Unlike in the consumption of a private good where  $Q = Q_A + Q_B + Q_C$ , and each individual consumes exactly the same amount of a public good, which is also the total amount of public good.

The construction of the road also yields positive externalities. A positive externality is the beneficial effect on a bystander due to the interaction of market participants. With a positive externality, the marginal social benefit (MSB) from the good or service exceeds the marginal private cost (MPC).

When the Kwabenya (Abuom) – Kitase road is constructed, other people, besides the highest value consumers will be at an advantage because the benefits will spill over. These people will enjoy a positive externality.

Public goods have the characteristic of being under-produced or not being produced at all in the private sector. This is due to the free rider problem, which occurs when an investment has a personal cost but a common benefit, as well as firms not taking external benefits into account (Gruber, 2010). The private provision of a public good creates a positive externality, and goods with positive externalities are under-supplied by the market. However, the free rider problem can be combatted when the private sector charges user fees, which are proportional to their valuation of the public good (Gruber, 2010).

There are however some instances when private provision overcomes the free rider problem. One such instance is when individuals have a high demand for or

interest in a public good. Here private provision for the good may emerge although this does not necessarily mean there will be an optimal provision.

## Literature Review

### **Brief Overview of Roads Construction in Ghana**

Roads in Ghana generally fall under one of three main categories. They are trunk roads, urban roads and feeder roads (Government of Ghana , 2014).

**Trunk roads:** trunk roads are essentially what most people refer to as highways. These roads link major popular centres in Ghana and offer essential regional and inter-regional market connectivity services. In addition, these roads link Ghana to its neighbouring countries (Ministry of Roads and Highways, 2012). The Ghana Highway Authority oversees these roads.

**Urban roads:** these are road units in the metropolitan, municipal and district assemblies. Urban roads provide all-weather city road access in support of the economic development taking place in the metropolitan, municipal and district assemblies (Ministry of Roads and Highways, 2012). The Department of Urban Roads under the Ministry of Roads and Highways oversees the construction of these roads.

**Feeder roads:** feeder roads are generally roads linking rural communities in Ghana. The feeder road network involves the provision of safe and all-weather accessible feeder roads at optimum cost which facilitate the movements of people, goods and services to promote socio-economic development, especially agriculture. Better rural road travel reliability also improves the access to social services and employment opportunities (Ministry of Roads and Highways, 2012). The Department of Feeder Roads under the Ministry of Roads and Highways oversees the construction and maintenance of feeder roads in Ghana.

Given the description of feeder road by the Ministry of Roads and Highways, the Kwabenya (Abuom) – Kitase road, which is the road this paper examines, is a feeder road. This road links the communities of Kitase, Agyemanti, Berekuso and Comet to Kwabenya in the Greater Accra region and Aburi in the Eastern Region, facilitating the movement of people, goods and services to promote socio-economic development, especially agriculture.

### *Road Construction and Real Estate Development*

A study by Larbi (2010) analysed the current situation of roads in Accra vis-à-vis real estate development within the city. Among the author's research questions was to find out measures being put in place to link outskirts of the city and rural areas with better roads. The author used surveys, focus group discussions and interviews with a select sample in carrying out this research

According to this study, the real estate industry in Ghana has continued to see tremendous growth in recent times, presenting good opportunities to investors (Larbi, 2010). Research, however, shows that roads on the outskirts of major cities very often tend to be feeder roads, which are not properly networked. Considering the high cost of housing within the city, increased pollution, among others, resulting from population surges within the city, the middle class of the Ghanaian society tend to opt for houses on the outskirts than within the city (Larbi, 2010).

Similarly, Oruonye, in his assessment of the impact of road construction in the case of the Jalingo metropolis in Nigeria (Oruonye, 2014), showed that, land use along the major newly constructed roads had undergone a substantial level of

change. This had been a change from agricultural farmlands and open fields, to residential and commercial uses.

This was a similar case with some outskirts of Accra such as Dodowa, Kasoa, Oyibi and Kwabenya where new settlement patterns have emerged as a result of a number of factors including population growth (Yeboah, 2003). The outskirts of the Jalingo metropolis in Nigeria, according to Oruonye's assessment of the impact of road construction, were hitherto predominantly farmlands. The River Lamurde, and the lack of access roads prevented movement to this area.

The study revealed that the construction of a bye-pass road and bridge on the river and some other road network extension caused people to begin to move to this area. Study findings indicated that the study area had no buildings about twenty years ago, however, the construction of the new road facilitated the outward expansion of the town with new residential houses, shopping stores and filling stations springing up all over the area (Oruonye, 2014).

According to Oruonye (2014), an influx of people into the metropolis because of the relative quietness of the area had attracted more residential properties and businesses. Furthermore, it was noted that with the expansion of the Jalingo metropolis through the expansion of the road network, there is the need to put adequate development control mechanisms in place for maximum effectiveness.

Both studies by Larbi (2010) and Oruonye (2014) indicated that lands that have bad road networks or access are usually left as open spaces or fallow land, which is usually because of their low values. On the other hand, lands that are along newly constructed roads are in high demand and command high value because of

their proximity to the road. Most of these lands are used for building commercial shopping stores and complex, petroleum filling stations, educational institutions, health institutions, among others (Oruonye, 2014). In other words new roads can increase the value of existing properties while attracting new businesses and creating opportunities for the creation of new jobs.

This study intended to assess the impact of a potential road construction as it looked at the opportunities for investment in sectors including real estate development on the Kwabenya (Aboasa) - Kitase local economy.

#### *Road Construction and Health*

Among the disparities between rural outskirts and urban areas is the access to health services and centres (Aderamo & Magaji, 2010). The role of transport in increasing access to health services includes facilitating the movement of individuals to the health facilities and health workers to outreach activities as (Usman & Sulyman, 2013). According to Okoko (2011), this movement is usually on the unsurfaced and poorly maintained feeder roads which link the rural outskirts to other rural outskirts and even urban areas (Okoko, 2011) for the provision of timely emergency services and allows improved distribution of drugs and other services to health outposts.

To corroborate this, Usman and Sulyman (2013) in their study on transport and access to rural health centres in Ilorin, Nigeria, found evidence that households in areas with poor transport facilities had less access to medical services (Usman & Sulyman, 2013). Data analyses from this study showed a relationship between access to health centres and road transport in the study area. It was seen that the

better the transport facilities available, the less the time required to travel and the greater the access to health services.

Furthermore, it was indicated that people living in remote areas had poor access, as they required more time and efforts to travel to obtain health services. Usman and Sulyman (2013) recommended that adequate funds should be allocated to improving roads in the study area, giving priority to the construction of new roads and the reactivation and improvement of existing roads, especially in the rural areas considering that transport plays an important role in providing physical access to health centres.

Poku-Boansi, Ekekpe and Bonney's (2010) study on the role of transportation in combating maternal mortality in the Gushegu district of Ghana, which was not too different from Usman and Sulyman's (2013) research, showed similarly, that road infrastructure and transportation system influenced the ability of the poor to access health facilities (Grimbergen and Thönissen, 2007 cited in Poku-Boansi, Ekekpe, & Bonney, 2010).

The study establishes the relationship between rural transportation and efforts in achieving a reduction in maternal mortality in Ghana (Poku-Boansi, Ekekpe, & Bonney, 2010). This study ascertained, among other things, that the poor state of transport infrastructure had negatively affected the ability of pregnant women to seek healthcare in the recognize health institutions. They relied on traditional birth attendants who lacked the requisite skills and equipment to deal with complications.

A network of trunk roads, feeder roads and footpaths, which characterize the transport system of the Gushegu district, was categorized into engineered, partially engineered and non-engineered roads (Poku-Boansi, Ekekpe, & Bonney, 2010). The non-engineered roads were prevalent, being predominantly unpaved. Apart from the 3.5 km bituminous surface feeder road within the Gushegu Township, all other feeder roads within the districts were of earth or gravel surface (Poku-Boansi, Ekekpe, & Bonney, 2010). Low volumes of vehicles operated in the area due to the poor nature of the roads as it increased their maintenance cost.

Findings from this research, similar to findings by Usman and Sulyman, established that the lack of transport and cost of transport were important reasons why people did not use healthcare services, especially services requiring a referral (Poku-Boansi, Ekekpe, & Bonney, 2010). Furthermore, problems with transport also affected the ability of staff to deliver health services. Thus, access to quality healthcare was key in reducing the health disparities between people living in urban and rural areas.

Road construction not only improves access to health facilities (Ghana National Commission for UNESCO, 2009), but also opens up land for the establishment of health institutions (Oruonye, 2014).

#### *Road Construction and Commerce*

Rural infrastructure, for many years, has been a major development priority (World Bank, 1994 cited in Jacoby, 2000), playing a vital part in rural development. Among the many benefits of road construction in rural areas is the provision of rural infrastructure, offering cost-efficient access to both markets for agricultural

output and for modern input. Jacoby (2000), in his study, used data from Nepal to examine the distributional consequences of rural roads. He gave evidence of the country as one with a largely agrarian economy, a sparse highway network and an extremely difficult terrain.

In this study, Jacoby (2000) estimated the income gains from road projects using the relationship between farm profits and distance to markets to calculate the income gains from road projects. He again used the approach of measuring the relationship between household consumption expenditures and the distance to markets to estimate the benefits of rural roads.

This research suggested that providing extensive road access to markets would present substantial profits (Jacoby, 2000). The author admitted that although rural road construction was not the only approach to alleviating poverty, it certainly had its benefits including cheaper transport to and fro agricultural markets and better access to many other facilities and a greater variety of consumer goods (Jacoby, 2000).

Similarly, Oruonye (2014), in his research on the Jalingo metropolis in Nigeria established how a newly constructed road has increased commercial land use in the study area. Commercial land uses in the area included office buildings of various types, shopping complexes of various types and sizes, petrol and service stations, open market places and exhibition centres (Oruonye, 2014). It is important to note that although some of the specific uses were planned for in the metropolis, others grew out of the spontaneous needs of the community in a residential area.

### *Road Construction and Development in General*

There seems to be no other types of development, which can effect so speedily a change in the economic and social conditions of backward nations except transport (Hailey, 1957 cited in Aderamo & Magaji, 2010). A study by the International Fund for Agricultural Development (IFAD, 2000) suggested that the physical costs of market access could be reduced by road construction, road maintenance, improved transport, storage and information.

Analysis of this research showed that the construction of roads and improvement of existing ones was regarded in some parts of Africa, more important than some other developmental projects. For instance, Uganda, in 1995, negotiated for a World Bank loan to construct new roads than new primary schools (IFAD, 2000). In Ghana and Cote d'Ivoire, rural roads were ranked higher than educational needs, health and water supplies (IFAD, 2000). Indeed this could be due to roads in these areas being means to ends like educational institutions, health institutions, and other developmental infrastructure.

Evidence of this showed in Nepal and Bangladesh, when road provision led to the influx of education services and provided access to health care in a wider area. In Egypt, villages enjoyed an increase in non-farm employment in post-primary schooling availability when connected to road networks. A district in Pakistan recorded decreases in unemployment when new roads created opportunities for drivers, conductors, mechanics, filling stations, tea stalls near bus stops, shops and other services for travellers.

Poor transportation in rural areas poses a great challenge to rural development efforts (Aderamo & Magaji, 2010), resulting in low productivity, low income and a

fall in the standard of living of rural residents. A study, Rural Transportation and the Distribution of Public Facilities in Nigeria: A Case of Edu Local Government (Aderamo & Magaji, 2010) examined the role played by road transport in the distribution of public facilities in a rural environment in Nigeria. Evidence from studies showed how motorable roads in rural areas in Nigeria, were mostly of unpaved surface, narrow width, and circuitous alignment and with low-quality bridges (Ogunsanya, 1987 and Filani, 1993 cited in Aderamo & Magaji, 2010). Such roads were almost impossible to use during the rainy season when vehicles got stuck in mud or when the improved bridges got swept away by flood.

In assessing the road quality in the study area (Aderamo & Magaji, 2010), indices used were road surface condition, road width, number of bends, number of bridges and roads' ability to be used. Data analyses of the study area indicated that only two roads representing 5% of the forty roads studied were tarred while thirty-eight roads representing 95% were not tarred. Similarly, only two roads representing 5% were of two lanes while thirty-eight roads representing 95% were single-lane roads. As for the number of bridges in the study area, only two roads had bridges wide enough to accommodate two vehicles at a time while thirty-eight roads had bridges wide enough to take only a vehicle.

For the roads' response to floods, only 5% of the roads were not liable to floods while thirty-eight roads representing 95% were. Also 5% of the roads were in good condition throughout the year while 95% of the roads were either partly or completely seasonal in nature. The seasonal nature of these roads was a by-product of poor drainage, poorly constructed culverts and absence of modern drainage systems along the roads.

This research showed that the relationship between road network development and distribution of public facilities could be examined through the use of regression analysis (Aderamo & Magaji, 2010). Many scholars have identified different indices as measures of socio-economic development at both rural and urban scales which were used in this research to assess the nature of rural infrastructural development in the study area. The indices used in this analysis were Educational Facilities (EF); Healthcare Services (HS); Security Services (SS); Water Supply (WS); Commercial Activities (CA) and Communication Services (CS).

Findings from this case study on rural transportation and the distribution of public facilities in Nigeria again showed that the study area had a poorly connected road network and the level of provision of public facilities was also low. These two have a very strong relationship. The authors, Aderamo and Magaji, concluded that rural network has a significant effect on the distribution on facilities in rural areas and has the potential of reducing poverty.

### *Roads as Public Goods*

It is impossible to review work in this field of study without properly considering what has been said about the case of roads as public goods with positive externalities. Block (1983) in his analyses of roads as public goods with positive externalities argued that any entrepreneur who constructs a road would have to bear all costs (of labour, materials, among others), just as in any other business. However, due to roads being public goods will be unable to reap the rewards proportional to the benefits provided (Block, 1983). According to him, there was an

existing claim that private road builders, being only partially compensated for all the costs they incurred, underinvested in the construction of roads.

The author stated an objection in the argument that a private market in roads would result in underinvestment because private developers would not be able to reap the benefits of their investment associated with increased land values and the low costs of transporting goods. Most economists, according to Block, suggested that an appropriate way to offset the presumed low benefits for private road builders was to increase the property taxes on the increased value of the lands which prior to the road construction were not as valuable.

Block (1983) again, analysed the “evil” free rider. In his opinion, instead of the presumed under-provision of the road by the road builder, the user who benefitted without any effort is labelled as a free rider. He suggested that this free rider problem could be addressed when the users paid for the benefit of the road. For instance, in the shipping of consumer goods, the road builder would reap his benefit when there was a price charge for using the road, which was almost equivalent to what free riders saved by the development of the road. In this way, all users of the road including the private road builder benefitted.

All analyses made by Block (1983) were extremely relevant to this research seeing as there was the question of why the road under the study had not been constructed and practical ways to ensure a maintenance of the road once it had been provided.

It is observed that literature predominantly mentioned analysed road construction as an activity that only spills off positive benefits. This research, on the other hand, also analysed certain significant negative impacts of a construction of the Kwabenya – Kitase road as perceived by respondents of the research. Recommendations were made concerning the ways in which these negative impacts of a road construction could be curtailed.

## CHAPTER 3 – METHODOLOGY

### Chapter Overview

This chapter discussed in detail information on sampling for this research, the research strategy and design, the sources of data, along with the tools and methods for collecting this data, as well as the approaches that were used in analysing collected data. Justifications for all selected approaches were also discussed.

### Operational Definition of Variables

#### *Road Construction*

The construction of a road, whether from asphalt or concrete, is the production of an excellently bonded pavement structure, beginning with a stable base layer and going all the way to a precisely levelled surface course (Wirtgen Group, 2014). Road construction broadly involves the process of road construction and maintenance, including the design, contracting, implementation, supervision, and maintenance of roads and related structures, such as bridges and interchanges (The World Bank, 2001).

#### *The Local Economy*

Governments and business communities worldwide recognize that continued investment in businesses and entrepreneurship is crucial to maintaining growth in their local economies (The World Bank Group, 2011). Local economic development offers local governments, the private and not-for-profit sectors, and local communities the opportunity to work together to improve the local economy (The World Bank Group, 2011). A boost of the local economy in this paper essentially meant new businesses and investments, an improvement of existing

businesses, an increase in employment due to the rise in businesses and investments and a general increase in income levels.

### Research Design and Procedure

This research was a case study involving the detailed and intensive analysis of the single case (Gerring, 2007) of the Kwabenya (Abuom) – Kitase area and the potential impact of a road construction on the local economy.

This research used the mixed method approach. That is, it used a combination of both qualitative and quantitative analysis techniques. The first part of this research, which involved telling the problem posed by the state of the road made heavy use of the qualitative technique. Quantitative analysis techniques were used in drawing conclusions from information, which were provided by the respondents.

The objectives of this research were to discuss the problems the current state of the road posed to the local economy, to explain the theoretical and practical reasons for which the Kwabenya (Abuom) – Kitase road has not been constructed and to determine through interactions with relevant stakeholders, how repairing the road could boost the local economy. This was done through exploration, thus making the research an exploratory one. Exploratory research is conducted to provide a better understanding of a situation and when researchers hope to produce hypotheses about a particular situation (Brown & Suter, 2012). Exploratory research is also used when the research strategy involves identifying relations between two or more variables and how they impact each other (Trochim, 2005).

### Research Scope

As aforementioned, this study was taken within the Kwabenya (Abuom)–Kitase area. This encompassed Kwabenya (Abuom and Aboasa), Comet Hills, and Berekuso all the way to Kitase. The study population was inhabitants of the study area as well as non-inhabitants who frequented the Kwabenya (Abuom) – Kitase road. These included workers within the area, students within the area, owners of businesses and property within the area, travellers who use the road to another destination, highest value consumers of the road within the area such as Comet Properties, and the relevant stakeholders responsible for the provision of the road, that is, the Department of Feeder Roads of the Ministry of Roads and Highways.

### Sampling Strategy

The sampling strategy of this research was the use of purposive sampling for interviews and purposive, non-probability sampling for questionnaires. Purposive sampling was used in selecting interviewees from Comet Properties and the Department of Feeder Roads of the Ministry of Roads and Highways. This was in order to obtain reliable, valid and relevant information for the research. The choice of respondents was guided by the judgement of the researcher and there were no particular procedures involved in the actual choice of respondents (Sarantakos, 2005).

Also purposive, non-probability sampling was used to administer questionnaires for inhabitants and non-inhabitants of the area. In this population, groups such as taxi drivers, shopkeepers, homeowners, caretakers, students, teachers and visitors to the area were purposively selected. The research required information

from persons who had knowledge and experience with road, thus this method of purposive non-probability sampling was used.

Due to the heterogeneous nature of the population, the sample population was divided into sub-groups. These sub groups were inhabitants of the area, non-inhabitants of the area, and the relevant stakeholders responsible for the provision of the road. This was in order to separate the responses of the sub groups so as to draw comparisons and make inferences from responses.

This study made extensive use of questionnaires and interviews. 100 questionnaires were sent out, with ideally 50 respondents from inhabitants and non-inhabitants of the area and 2 respondents were selected for interviews (Saunders, Lewis, & Thornhill, 2007).

#### Sources of Data

This research drew heavily on primary data. This encompassed information, which was obtained from the questionnaires as well as the interviews. This was primarily because little information was available concerning the subject of research with regards to the study area. Also, interactions with people gave opinions.

However, some secondary data was also used in this research, particularly in telling the story of the road. This included information from publications such as the Daily Graphic, the Daily Heritage, a publication by the National Democratic Congress (NDC), Ghanaweb and the 2003 Budget Statement from the Ministry of Finance and Economic Planning. This was because the study needed established information beyond what respondents provided in interviews or questionnaires to

help report the story of the road and ascertain the certain reasons why the road has not been fixed.

### Data Collection Instruments

Face-to-face, semi-structured interviews and questionnaires were used to collect primary data in this research. Face-to-face interviews were conducted for two main reasons. First was the nature of the research, which was exploratory, thus seeking to dig for and perhaps stumble upon some information (McNamara, 2008). This gave further insight into the topic from the thorough communication between the respondents and the researcher.

A second reason for the use of face-to-face interviews was to enhance communication between the researcher and interviewees (Office of the Auditor General of Canada, 1998). Questionnaires were administered by post to respondents. Responses from questionnaires were used in data analysis and aided in drawing certain conclusions from the responses.

Questions for the interviews and questionnaires were mostly closed ended requiring respondents to select which options closely matched their personal opinions. This was in order to analyse data effectively by using descriptive and inferential statistical tools (Offiong, Eteng, Atu, & Offiong, 2013). The descriptive tools included tables, charts and simple percentages. However, a few open-ended questions were included to allow the respondents to give answers based on their experiences where the topic was concerned.

### Data Analysis

Data analysis was influenced significantly by data analysis methods used in literature. Data obtained from the administered questionnaire were analysed using Microsoft Excel. This was done using descriptive statistical tools. The descriptive tools that were used included graphs, pie charts, tables, and simple percentages (Offiong, Eteng, Atu, & Offiong, 2013).

Data from interviews were recorded and analysed using the content analysis technique. Thematic analysis, which involves finding recurrent patterns, was used to analyse the responses of respondents from both interviews and questionnaires (Braun & Clarke, 2006). This was to establish the reasons why the road had not been fixed as well as the opinions on the current state on the roads and its effect on the users and inhabitants of the road.

### Validity and Reliability

Validity is the extent to which the survey information is relevant to the conclusion being drawn and is sufficiently accurate and complete to support the conclusion (Office of the Auditor General of Canada, 1998).

Reliability is the use of standardized information collection instruments and survey procedures that are designed to enhance consistency (Office of the Auditor General of Canada, 1998).

All survey questions were carefully designed and refined to ensure their validity and reliability. Measurement was consistent from individual to individual surveyed and interviewed, across settings and at different times (Office of the Auditor General of Canada, 1998). Information from this study was a true reflection of

information from both primary and secondary sources. An appropriate sample size was used in order for the outcome of the study to truly reflect the current situation.

### Ethical Considerations

The researcher tactfully ensured anonymity and confidentiality of information from the respondents. Also, all respondents were briefed on the purpose of the study and had the free will to choose to give or withhold information.

### Limitations

There were quite a number of limitations faced in conducting the study. A total number of 4 interviews were to be conducted with two interviews each from Comet Properties and the Department of Feeder Roads of the Ministry of Roads and Highways. However, only one interview was conducted with Comet Properties and the Department of Feeder Roads of the Ministry of Roads and Highways. Thus, conclusions drawn and recommendations made were based on information gotten from these sources.

Difficult accessibility to Agyemanti, Kitase and its surrounding areas skewed responses to cover mostly the Kwabenya – Berekuso area.

The non-probability sampling method used hindered inferential analysis and making more general assumptions based on responses.

## CHAPTER 4 – DATA ANALYSIS AND DISCUSSION OF RESULTS

This chapter analysed the data collected from interviews and questionnaire to better appreciate and understand the topic of this study. Thus, this chapter focused on the research questions and discussed how these questions were or were not answered by the research.

To understand this paper and further put it into perspective, this chapter presented findings gathered from the survey and interviews which were intended to tell the story of the Kwabenya (Abuom) – Kitase road and discuss the problems the current state of the road poses to the local economy, determine how repairing the road can boost the local economy, identify other innovative strategies apart from reliance on government to construct the road and recommend approaches for managing the road once it is constructed.

This chapter thus formed the central emphasis of the research and consequently made deductions based on previous chapters as well as data collected from the field.

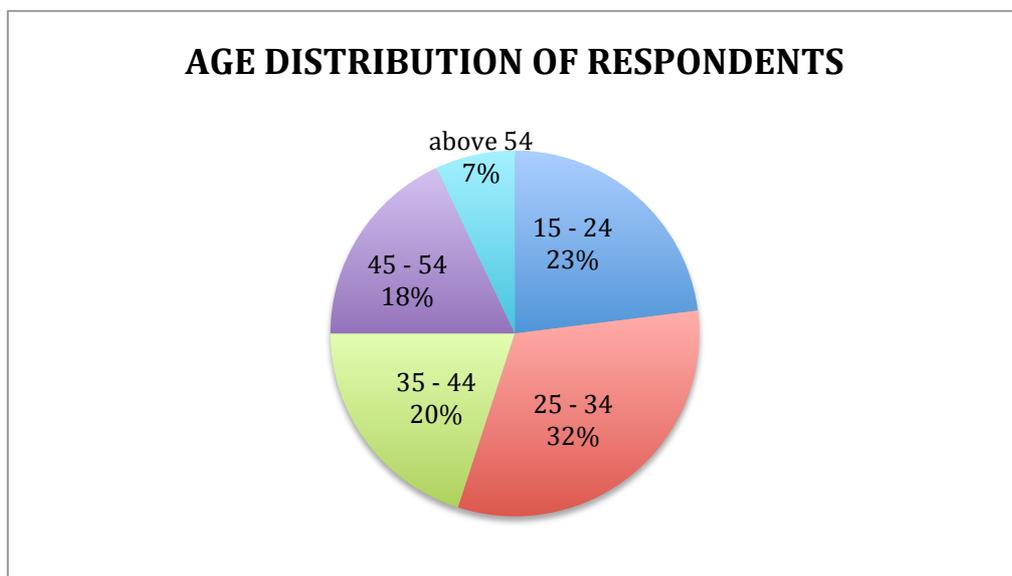
### Socio-Demographic Characteristics Of Respondents

#### *Age Distribution*

Data obtained from respondents revealed that the 25 – 34 year group constituted 32% of respondents and was the highest number of respondents, followed by the 15 - 24 year group with 23% of respondents. It was also recorded that the 35 - 44 year group made up 20% of the respondents and the 45 - 54 year group made up 18%. The lowest number of respondents was the above 54-year group, which constituted 7% of respondents. From the pattern that emerged, it can be said that

respondents of the research were rather youthful in nature. If this characteristic was a relative indication of the age distribution of the Kwabenya – Kitase area, it will mean that a youthful population could influence the potential impact of a road construction on the area. Figure 4.1 shows the breakdown of the age distribution of respondents, both inhabitants and non-inhabitants.

Figure 4.1 Age Distributions of Respondents



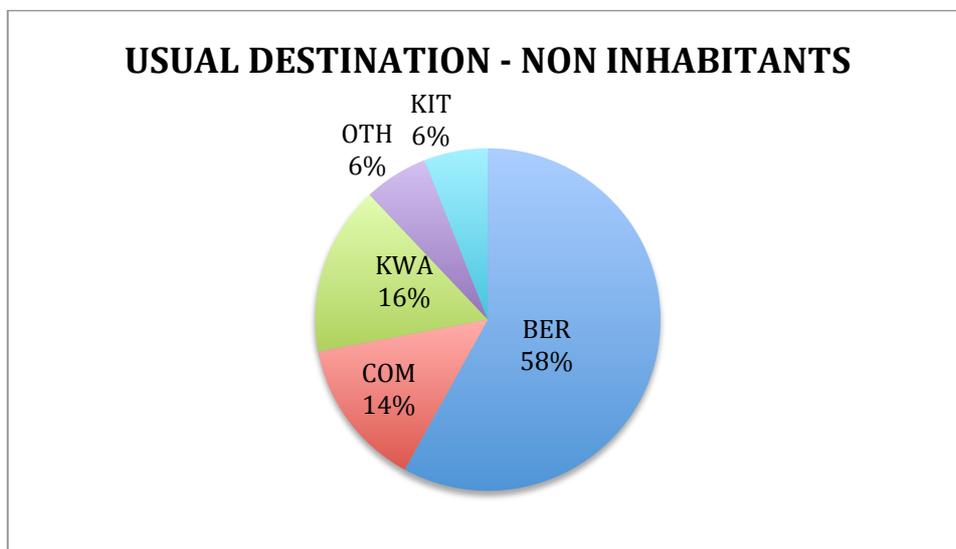
Source: Field Data

#### *Usual Destinations of Non-Inhabitant Respondents*

Usual destination here referred to the common places users of the road made their trips or visited in their use of the Kwabenya – Kitase road. Data collected on the usual destination of non-inhabitant respondents showed Berekuso as the usual destination of 58% of respondents. This accentuates what is previously mentioned in earlier chapters that with the relocation of Ashesi University College from its previous Labone campus to its current campus in Berekuso, the Kwabenya- Kitase road is enjoying more traffic than before.

Kwabinya was a usual destination of 16% of non-inhabitant respondents. Comet was the third most popular usual destination with 14% of non-inhabitant respondents. Kitase had 6% of non-inhabitant respondents naming it as usual destination. Some non-inhabitant respondents named other destinations, particularly Aburi and Akropong, as the reason for their use of the road. Figure 4.2 displays a breakdown of the usual destinations of non-inhabitant respondents.

Figure 4.2 Usual Destinations Of Non-Inhabitant Respondents

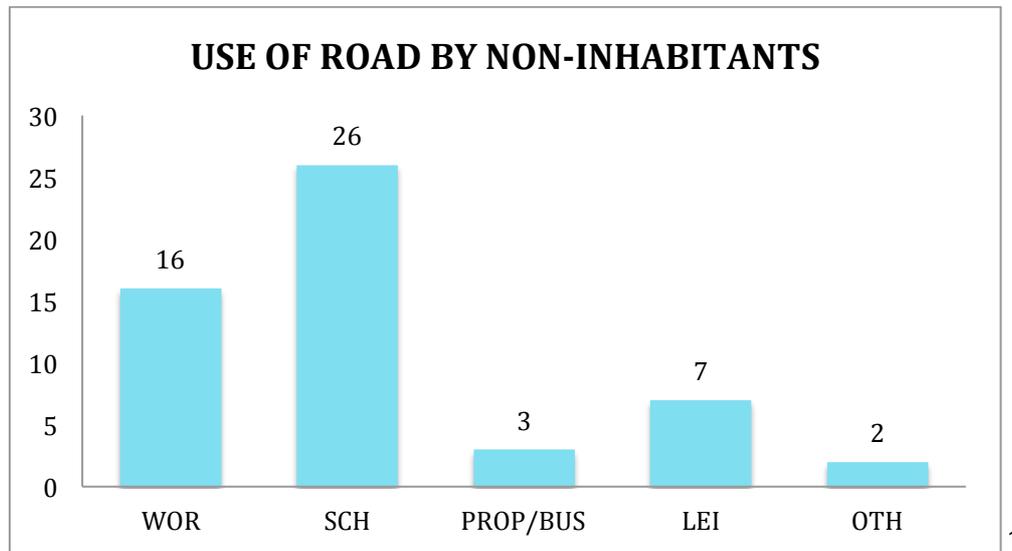


Source: Field Data

#### *Uses Of The Road By Non-Inhabitant Respondents*

The uses of the road by non-inhabitant respondents were also investigated. Of the 50 non-inhabitant respondents, 16 non-inhabitant respondents attributed their use of the road to work, 26 attributed their use to school, 3 had businesses and properties in the area thus their use of the road, 7 attributed their use to leisure activities such as visiting friends and recreational centres, and 2 attributed their use to other reasons. These responses were however not mutually exclusive. Figure 4.3 shows the use of the road by non-inhabitant respondents.

Figure 4.3 Use Of The Road By Non-Inhabitant Respondents



Source: Field Data

#### Telling The Story of the Kwabenya – Kitase Road

According to most respondents, particularly inhabitants of the Kwabenya – Kitase area, the road under this study has existed and been in use for over a decade. The road which is a 13.3 kilometre road is an inter district road that links the Ga District in the Greater Accra Region to the Akwapim South District in the Eastern Region. The road, for many years served as a detour to commuters travelling from Accra to the Akwapim range and vice versa, who wished to avoid the Adenta to Aburi scarp.

In 2003, the Kwabenya – Kitase road was included in the budget for that fiscal year and the construction of the road was awarded on contract. However, in April 2003, the scope of work was reviewed from feeder roads standard to trunk roads standard. This involved the increasing of the width of the road from 8.5 metres to

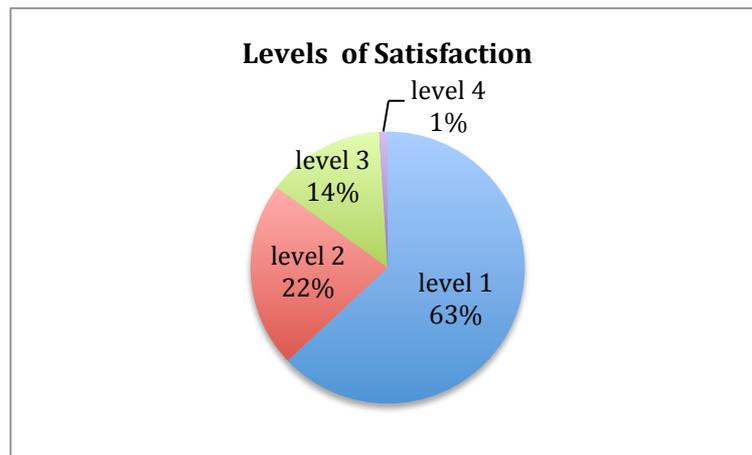
<sup>1</sup> See Appendix 1.1 for key to Fig 4.3

10 metres, the carriageway, from 6 metres to 7.32 metres and an increase in the thickness of the pavement.

The review, at the time, was said to be necessary because the road was one that could serve as an alternative to the Tetteh Quarshie – Madina – Adenta – Aburi – Mamfe road and was the main route to Aburi during the reconstruction of the Tetteh Quarshie – Mamfe road. The review of the road was to result in an additional cost and reduction in the length of the road from 13.3 kilometres to 8 kilometres.

For many years, users of the Kwabenya – Kitase road have been unsatisfied with its state, particularly after its deterioration in 2008. According to them, the state of the road poses a myriad of problems ranging from health and respiratory problems to the constant repairing of their vehicles, among others. Respondents were asked to rate their levels of satisfaction with the current state of the road on a scale of 1 – 7, with 1 representing they are very strongly dissatisfied and 7, very strongly satisfied with the state of the road. Figure 4.4 is a breakdown of the respondents' levels of satisfaction with the current state of the road on a scale of 1 – 7.

Figure 4.4 Levels Of Satisfaction Of Respondents



Source: Field Data

Although the levels of satisfaction, was measured on a scale of 1 -7, none of the respondents had a satisfaction above level 4. Data collected from respondents showed that 63% were very strongly dissatisfied with the state of the road, indicated by level 1 of satisfaction on the scale. Also, 22% were strongly dissatisfied with the current state of the road indicated by level 2 of satisfaction. 14% of respondents answered they were dissatisfied with the current state of the road, indicated by level 3 of satisfaction. One respondent however expressed being neither satisfied nor unsatisfied with the current state of the road.

The research also gathered from respondents some problems the road posed to them. According to respondents, the major problems the state of the Kwabenya – Kitase currently posed to the local economy included:

- Dirt and dust from the road resulting in a rapid deterioration of property
- Expensive transportation due to the constant repair of both public and private vehicles
- Difficulty accessing public services such as health

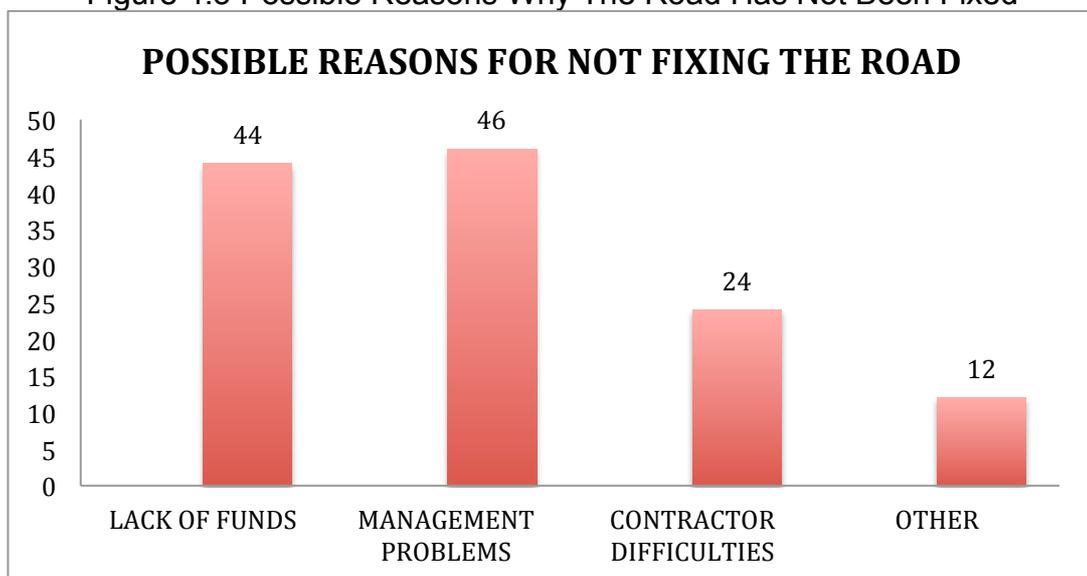
- High cost of living due to limited access to markets, convenience stores, among others
- Certain vital public services such as schools and health centres have not been established in the area due to dread of the road

### Practical And Theoretical Reasons Why The Road Has Not Been Fixed

#### *Practical Reasons*

Data collected also identified from respondents the possible practical reasons why the road has not been fixed. Responses from questionnaires revealed that, 46 respondents ascribed the state to management problems, 44 respondents ascribed it to the lack of funds while 24 respondents ascribed it to contractor difficulties. Other possible reasons that were given included leadership problems, politics, the discouraging will of the government, among others. Responses were however not mutually exclusive. Figure 4.5 shows respondents responses for why the road has not been fixed.

Figure 4.5 Possible Reasons Why The Road Has Not Been Fixed



Source: Field Data

These reasons were classified under Government side factors and Private market side factors.

Government side factors included the lack of funds, contractor difficulties, politics, the discouraging will of government, leadership and management problems. Private market side factor included the lack of funds, fear of inability to recoup the investment made and management problems.

### *Theoretical Reasons*

It has been established that roads are public goods, and thus, are expected to be provided by the government. However, for certain reason, governments in developing countries are unable to adequately provide them. Possible solutions to this problem include the private provision of roads or public-private partnerships to provide them. However, based on the theory of public goods, roads such as the Kwabenya – Kitase road, are undersupplied by the private market. This stems from the fact that private companies find it too costly to exclude non-payers from enjoying the benefits of the road.

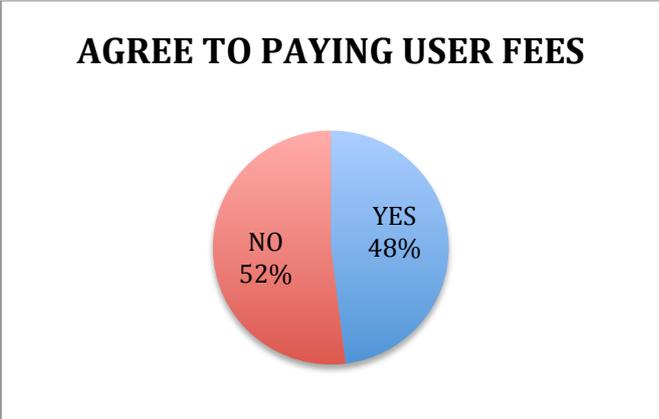
To prevent undersupply and reduce the costs of road construction, private companies have had to find ways of recouping the investment made. This is usually done by charging user fees, also referred to as road tolls for the use of the road. Private companies who wish to provide roads which require payment of tolls must develop cost – efficient, user friendly approaches to finance these roadways to allow for the individual users to pay the cost of the roadway, without unduly burdening them.

An interview with a representative of Comet Properties revealed the primary motivation for undertaking this project was the impact the construction would make on its current real estate construction business in the area as the company planned on expanding its current housing units as well as include other sectors in its operations. Comet Properties however, did not think it was going to underinvest in the road construction project, as it had a lot to gain in the proper construction of the road. This assertion falls contrary to economic opinions that the private market underinvested in its provision of a public good.

**Analysis of the Free Rider Problem:**

Respondents were asked whether or not they agreed to pay user fees (tolls) if the private company constructing the road chose to charge user fees for its use. Figure 4.6 shows respondents answers to whether or not they will agree to pay user fees.

Figure 4.6 Paying User Fees

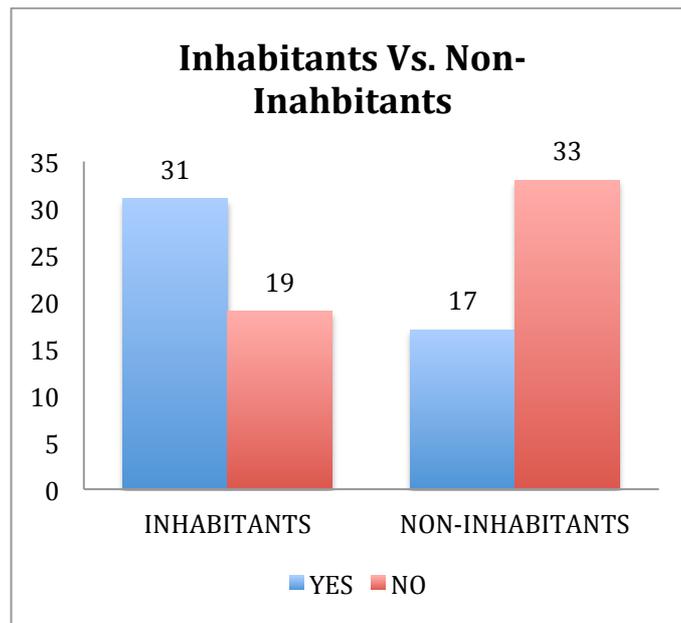


Source: Field Data

Responses revealed that 48% of respondents agreed to pay user fees if Comet Properties decided to charge user fees. 52% however disagreed to paying user fees.

A breakdown of the responses showed that more inhabitants agreed than disagreed while more non-inhabitants disagreed than agreed. This implied that inhabitant respondents were more welcoming to the idea of tolls than non-inhabitants, which is probably due to their more frequent use of the road and how a road construction directly benefits them, which according to the theory of public goods was likely to occur when individuals had a high demand for or interest in a public good. It also implied that inhabitant respondents were prepared to contribute their share to fixing the road. This, again reinforces the assumption that individuals who did not directly benefit from the provision of a public good will want to free ride. Figure 4.7 shows this information graphically.

Fig 4.7 Inhabitant Vs. Non-Inhabitant Responses To Paying User Fees



Source: Field Data

The mathematical inference can be referred to again here where

$Q$  = the total quantity of the public good

$Q_A$  = the quantity consumed by Comet Properties

$Q_B$  = the quantity consumed by non-inhabitant respondents

$Q_C$  = the quantity consumed by inhabitant respondents

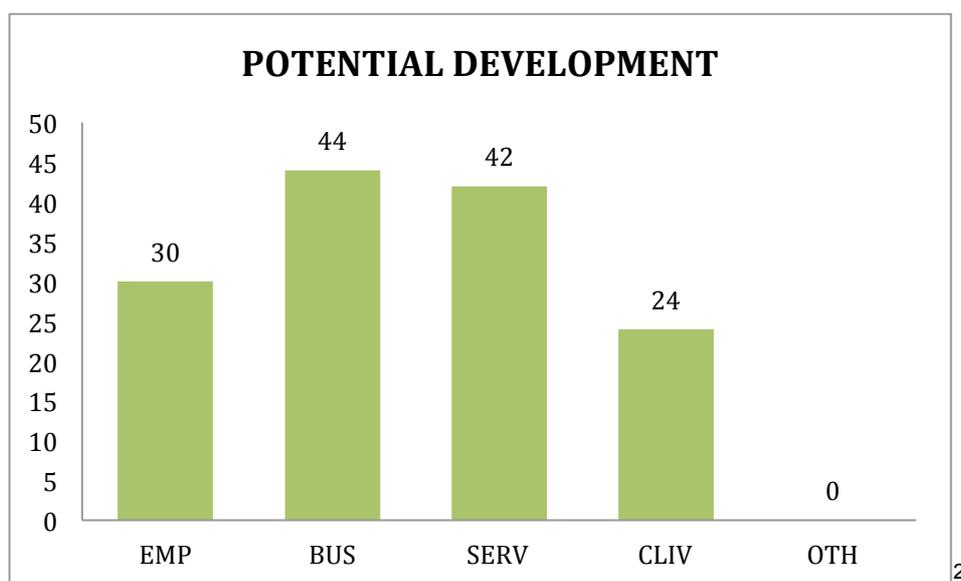
Which can be expressed as:  $Q = Q_A = Q_B = Q_C$

### Construction Of The Road And A Boost Of The Local Economy

#### *Potential Development*

As part of the research, respondents' opinions on how a good road will develop the Kwabenya – Kitase area was collected. 44 respondents believed a construction of the road will create more businesses within the Kwabenya – Kitase area. Some 42 respondents also believed a construction of the road will mean easy access to services such as health, education, among others. 30 respondents believed more employment opportunities would be created within the area if the road was constructed and 24 respondent believed cost of living will reduce after a construction of the road. These responses were however not mutually exclusive. Figure 4.8 indicates respondents' opinions on potential development and a boost of the local economy after the construction of the road.

Figure 4.8 Potential Developments After Road Construction



Source: Field Data

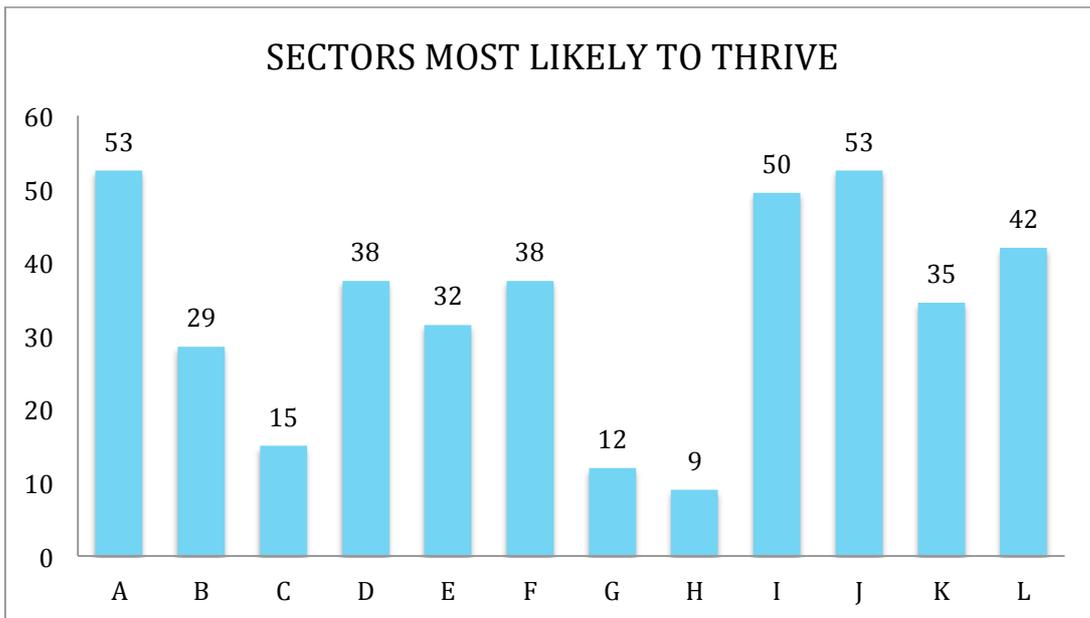
### *Sectors Likely To Thrive*

The research also garnered information from respondents on the industry sectors that they perceived as most likely to thrive and contribute significantly to the local economy in the event of a construction of the Kwabenya – Kitase road. 53 of 100 respondents considered agriculture as well as education as sectors that were likely to thrive and contribute significantly to the local economy. These responses are likely to be due the nature of the area as a highly agrarian one. 50 respondents thought real estate was a sector that was also likely to thrive and contribute significantly to the local economy. However, industry sectors such finance and insurance, ICT, as well as water supply, sewerage and waste were not highly considered by respondents as likely to thrive and contribute significantly

<sup>2</sup> See Appendix 1.3 for key to Fig 4.8

to the local economy. Figure 4.9 is a breakdown of respondents' opinions on the sectors most likely to thrive and contribute to the local economy.

Figure 4.9 Sectors Most Likely To Thrive And Contribute Significantly To The Local Economy



Source: Field Data

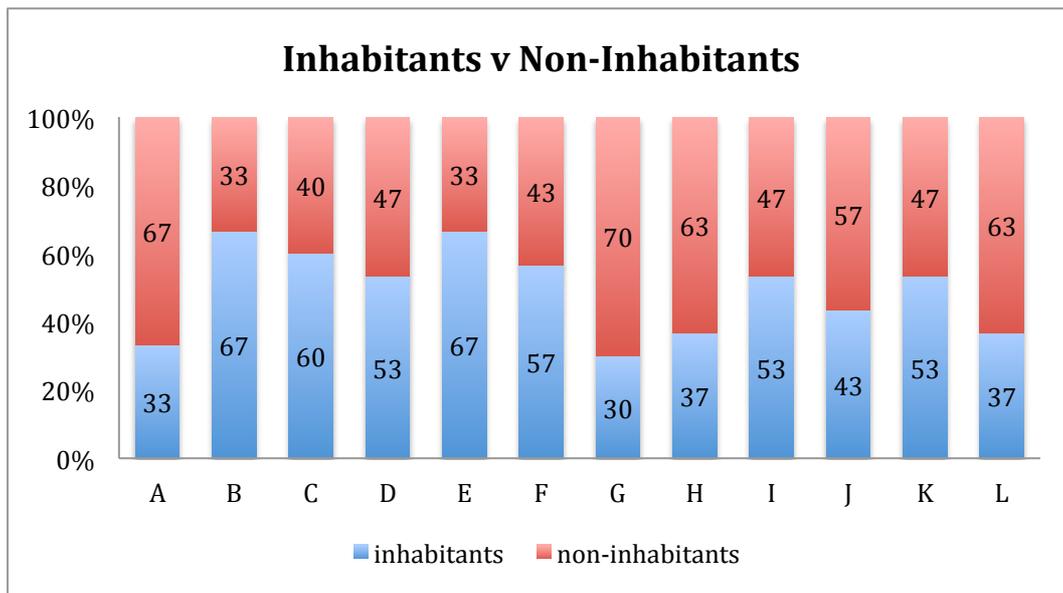
Responses from questionnaire indicated that sectors that were perceived as likely to thrive and significantly impact the local economy were agriculture, education, real estate and arts and entertainment, which were coded as sectors A, J, I and L respectively.

It was interesting however to note that over 60% of responses for agriculture, ICT, finance and insurance, and arts, entertainment and recreation, were chosen by non-inhabitant respondents. On the other hand, over 60% of the responses, that indicated manufacturing, and wholesale and retail as likely to thrive, was selected

<sup>3</sup> See Appendix 1.3 for key to Fig 4.9

by inhabitant respondents. Figure 4.10 analyses the percentage of total responses for inhabitant and non-inhabitant respondents with regards to the sectors that were perceived as most likely to thrive.

Figure 4.10 Inhabitant Vs. Non-Inhabitant Responses To Sectors Most Likely To Thrive



4

Source: Field Data

### Strategies For Managing The Road

As part of the research, respondents were asked to recommend strategies they believed would aid in sustaining the condition of the road once it was constructed. Most respondents recommended that the key way of managing the road is first, to properly construct it and avoid any shoddy work, as was the case a decade ago when the road was first constructed. Other popular responses included the establishment of a committee to manage the road, the practice of cleanliness and

<sup>4</sup> See Appendix 1.3 for key to Fig 4.9

good sanitation by the inhabitants of the road, especially by those along it, bi-annual maintenance works on the road, charges for the maintenance of the road, minimising the use heavy vehicles on the road, and creating a good drainage system along the road

The study indicated that the construction of the Kwabenya – Kitase road would have great impacts on the lives of inhabitants and non-inhabitants alike, as it would open up limitless opportunities thereby resulting in an overall development of the area. This substantiated the findings of Badejo (2009) that the importance of transportation on the socio-economic and political development cannot be overstressed.

## CHAPTER 5 - CONCLUSIONS AND RECOMMENDATIONS

As discussed earlier, this chapter envelops discussions and summarizes the findings of this research and its contribution to existing knowledge on the subject. The chapter also includes recommendations based on the research as well as suggestions for further studies. Limitations faced in the entire research process are also presented here.

### Conclusions

The rationale behind this study was to assess the potential impact of constructing the Kwabenya – Kitase road on the local economy. This was to be done by first telling the story of the Kwabenya (Abuom) – Kitase road and discuss the problems the current state of the road poses to the local economy, then, by explaining the theoretical basis for which public goods like the Kwabenya (Abuom) – Kitase road are difficult to produce and lastly to determine through interactions with relevant stakeholders, how repairing the road could boost the local economy. All of these objectives were met through the use of both primary and secondary data.

This research, first establishes that constructing the Kwabenya – Kitase road is very likely to boost the local economy in employment, increase businesses, create better accessibility to services and guarantee better living conditions.

A number of existing studies on the impacts of road construction on local economies have mainly focused on agriculture and increased accessibility as a benefactor of road construction. Inferences from data gathered identified that although agriculture was suggested as significantly being affected by a construction of the Kwabenya - Kitase road, the impacts of a road construction are

beyond agricultural improvements only. The study identified other major sectors to be affected as education, real estate, arts, entertainment and recreation, construction and hospitality. It further indicated that constructing the Kwabenya - Kitase road would increase employment, create avenues for businesses to thrive and facilitate mobility.

There seemed to be a gap in literature however, with respect to the negative impacts that road construction is likely to pose on local economies. Responses from data showed that although there was a general expectation for the improvement of the road, some inhabitant respondents were concerned that the influx of major companies into the area, after a road construction, is likely to wipe them out of business. Also there was the concern that the influx of businesses is likely to drastically diminish arable land for construction and commercial purposes. This is actually a cause for national concern, as, in recent times, arable lands have been destroyed for construction and commercial purposes. This will consequently reduce food production in predominantly farming communities such as the Berekuso – Kitase area.

### Recommendations

This paper recommends that as the good is a public good and there is thus the public enjoyment of the good, local community participation should be increased in constructing the Kwabenya – Kitase road. This may include, but is not limited to, community meetings, to ensure a proper level of planning and the direct participation of inhabitants in constructing the road. This will also ensure that the road is in the necessary condition to encourage businesses to thrive.

Secondly, this research recommends there is the need to set up a maintenance culture in order to sustain the benefits of the road. This should include the provision of a proper drainage system and controlling the movement of heavy vehicles along the road

This paper also recommends that before the completion of the road, a town planning authority set up in order to put adequate development control mechanisms in place. Also to regulate the use of land, particularly arable land, within the area due to the anticipated increase in demand for residential and commercial land use. This town planning authority will enforce regulations in order for there to be a balance in the land allocated for various uses. This is in response to inhabitants, fearing that arable land will be significantly diminished

Finally, the Kwabenya – Kitase road must be constructed, either by the government, the private sector or through a public/private partnership: a well-constructed road will go a long way to curb the negative effects the road currently poses to its stakeholders

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## APPENDICES

### Section A

#### Appendix 1.1

WOR	WORK
SCH	SCHOOL
PROP / BUS	PROPERTY / BUSINESS
LEI	LEISURE
OTH	OTHERS

#### Appendix 1.2

EMP	EMPLOYMENT
BUS	BUSINESS
SERV	SERVICES
CLIV	COST OF LIVING
OTH	OTHERS

### Appendix 1.3

<b>SECTOR</b>	<b>CODE</b>
<b>AGRICULTURE</b>	<b>A</b>
<b>MANUFACTURING</b>	<b>B</b>
<b>H2O SUPPLY, SEWERAGE, WASTE MANAGEMENT</b>	<b>C</b>
<b>CONSTRUCTION</b>	<b>D</b>
<b>WHOLESALE &amp; RETAIL TRADE</b>	<b>E</b>
<b>HOSPITALITY</b>	<b>F</b>
<b>ICT</b>	<b>G</b>
<b>FINANCE &amp; INSURANCE</b>	<b>H</b>
<b>REAL ESTATE</b>	<b>I</b>
<b>EDUCATION</b>	<b>J</b>
<b>HEALTH &amp; SOCIAL WRK</b>	<b>K</b>
<b>ARTS &amp; ENTERTAINMENT</b>	<b>L</b>

### SECTION B

#### Appendix 2.1

##### Questionnaire for Inhabitants

1. How old are you?  
(    )    15 -24 years  
(    )    25 – 34 years  
(    )    35 – 44 years  
(    )    45 – 54 years  
(    )    Above 54 years  
(    )    Other

If other please indicate .....

2. Where do you live?

- (     )     ADB
- (     )     Bank
- (     )     Berekuso
- (     )     Comet
- (     )     Kitase
- (     )     Kwabenya
- (     )     Other

If other please indicate .....

3. How long have you lived here?

- (     )     Less than six months
- (     )     Less than a year
- (     )     More than a year
- (     )     More than two years
- (     )     More than five years
- (     )     More than ten years
- (     )     Other

If other please indicate .....

4. What do you do for a living?

- (     )     Professional
- (     )     Technician
- (     )     Clerical Support worker
- (     )     Sales and service
- (     )     Skilled agricultural, forestry and fishery
- (     )     Craft and related trade
- (     )     Plant and machine operators
- (     )     Unemployed
- (     )     Other

If other please indicate .....

5. Where do you work?

- (    )    ADB
- (    )    Bank
- (    )    Berekuso
- (    )    Comet
- (    )    Kitase
- (    )    Kwabenya
- (    )    Other

If other please indicate .....

6. How satisfied are you with the state of the road (Circle the number that best fits your satisfaction)

DISSATISFIED			NEUTRAL	SATISFIED		
1	2	3	4	5	6	7
VERY STRONGLY DISSATISFIED	STRONGLY DISSATISFIED	DISSATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SATISFIED	STRONGLY SATISFIED	VERY STRONGLY SATISFIED

7. What do you think about the state of the road?

.....

8. What do you know about the history of the road?

.....

9. Why do you think it has not been fixed for this long?

- (    )    Lack of funds
- (    )    Management problems
- (    )    Contractor difficulties
- (    )    Other

If other please indicate .....

10. What problem does the road pose for you?

.....

11. Do you have a business here? Yes / No

If yes:

What is the effect of the road on it?

.....

12. Do you own property here? Yes / No

If yes:

What is the effect of the road on it?

.....

13. How will a good road develop this area?

(    )    More employment opportunities

(    )    More businesses within the area

(    )    Easy access to services such as health, education, etc.

(    )    Lower cost of living

(    )    Other

If other please indicate .....

14. Do you agree to paying user fees if the road is constructed privately?

(    ) No                      (    ) Yes

15. What other strategies can be used for funding the road once it is constructed?

.....

16. What businesses within industries do you think will thrive in this area if the road is constructed?  
do you think will thrive in this area if the road is constructed?

(    )    Agriculture, forestry, fishing

(    )    Manufacturing

(    )    Water Supply, Sewerage, Waste Management

(    )    Construction

(    )    Wholesale and retail trade

(    )    Accommodation and Food Service

- (     )     Information and Communication
  - (     )     Financial and Insurance
  - (     )     Real Estate
  - (     )     Education
  - (     )     Human Health and Social Work
  - (     )     Arts, Entertainment and Recreation
  - (     )     Other
- If other please indicate .....

17. How can the road be maintained after it is constructed?

.....

**Appendix 2.2**  
Questionnaire for Non-Inhabitants

1. How old are you?
- (     )     15 -24 years
  - (     )     25 – 34 years
  - (     )     35 – 44 years
  - (     )     45 – 54 years
  - (     )     Above 54 years
  - (     )     Other
- If other please indicate .....

2. Where do you live?
- (     )     Kwabenya and its surroundings
  - (     )     Ashongman and its surroundings
  - (     )     Dome and its surroundings
  - (     )     Achimota and its surroundings
  - (     )     Legon and its surroundings
  - (     )     Other
- If other please indicate .....

3. Why do you use the road?

- (     )     Work
- (     )     School
- (     )     Property / Business
- (     )     Leisure
- (     )     Other

If other please indicate .....

4. How long have you been using the road?

- (     )     Less than six months
- (     )     Less than a year
- (     )     More than a year
- (     )     More than two years
- (     )     More than five years
- (     )     More than ten years
- (     )     Other

If other please indicate .....

5. Where is your usual destination in using the road?

- (     )     ADB
- (     )     Bank
- (     )     Berekuso
- (     )     Comet
- (     )     Kitase
- (     )     Kwabenya
- (     )     Other

If other please indicate .....

6. How satisfied are you with the road (Circle the number that best fits your satisfaction)

DISSATISFIED			NEUTRAL	SATISFIED		
1	2	3	4	5	6	7
VERY STRONGLY DISSATISFIED	STRONGLY DISSATISFIED	DISSATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SATISFIED	STRONGLY SATISFIED	VERY STRONGLY SATISFIED

7. What do you think about the state of the road?

.....

8. What do you know about the history of the road?

.....

9. Why do you think the road has not been fixed for this long?

- (     )     Lack of funds
- (     )     Management problems
- (     )     Contractor difficulties
- (     )     Other

If other please indicate .....

10. What problem does the road pose for you?

.....

11. Do you have a business here? Yes / No

If yes:

What is the effect of the road on it?

.....

12. Do you own property here? Yes / No

If yes:

What is the effect of the road on it?

.....

13. How will a good road develop this area?

- (     )     More employment opportunities
- (     )     More businesses within the area
- (     )     Easy access to services such as health, education, etc.
- (     )     Lower cost of living
- (     )     Other

If other please indicate .....

14. Do you agree to paying user fees if the road is constructed privately?

( ) No ( ) Yes

15. What other strategies can be used for funding the road once it is constructed?

.....

16. What businesses within institutions do you think will thrive in this area if the road is constructed? (Tick as many as applicable)

- ( ) Agriculture, forestry and fishing
- ( ) Manufacturing
- ( ) Water supply, Sewerage, Waste management
- ( ) Construction
- ( ) Wholesale and retail trade
- ( ) Accommodation and food service
- ( ) Information and Communication
- ( ) Financial and Insurance
- ( ) Real Estate
- ( ) Education
- ( ) Human Health and Social Work
- ( ) Arts, Entertainment and Recreation
- ( ) Other

If other please indicate .....

17. How can the road be maintained after it is constructed?

.....

**Appendix 2.3**

**Interview Guide: Highest Value Consumers (Institutions)**

1. How long has the institution existed?

- (     ) More than a year
- (     ) More than two years
- (     ) More than five years
- (     ) More than ten years
- (     ) Other

If other please indicate .....

2. How long has the institution been in this area?

- (     ) More than a year
- (     ) More than two years
- (     ) More than five years
- (     ) More than ten years
- (     ) Other

If other please indicate .....

3. Is the current state of the road a problem for the institution?

- (     ) No                      (     ) Yes

If yes, please indicate how .....

4. Does the institution have any plans concerning the road (grading, collaborating to fix it, etc)?

- (     ) No                      (     ) Yes

5. How will repairing the road benefit the institution?

.....

6. How will repairing the road boost the local economy?

.....

7. What other businesses are likely to thrive in this area?

## **Appendix 2.4**

### *Interview Guide: Stakeholders Responsible For The Road*

1. What are the primary functions of the ministry?
2. What are some factors that go into deciding which feeder roads should be constructed?
3. Who is in charge of allocating funding to the road?

What factors play into the allocation of funds for feeder roads?