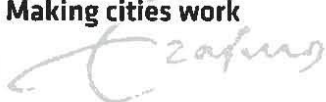


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Thesis

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**Infrastructure investment and land value
capture: A case study of Ejisu-Juaben
Municipal Assembly, Ghana**

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Supervisor: Larry C. Walters (Prof.)

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Summary

Urbanization of towns and cities within the past decades has become a matter of concern in both academic and political circles. With an estimation of seventy-five percent of the global population living in towns and cities by 2025, the onus lays on the local governments the world over to generate enough revenue to provide infrastructure and services to cater for the urbanites.

Local governments in Ghana for that matter the Ejisu-Juaben Municipal Assembly (EJMA) rely mainly on inter-governmental transfers as the District Assembly Common Fund and District Development Funds which are not regular inflows for the provision of public infrastructure for the Municipality. This therefore means that internal sources of revenue such as property rate, ground rent and other non-land related revenue need to be effectively mobilized to help alleviate the challenges of revenue for the municipality.

The objective of this research was to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent within the municipality as a result of the development of the Boankra Inland Port (BIP). Property rate and ground rent were chosen because assessment of property rate in Ghana is based on buildings alone using the Depreciated Replacement Cost (DRC) Method which does not make it an efficient value capture tool therefore ground rent was included to consider the extent of value capture from the BIP development within the municipality for this research.

To achieve the objective, the main research question “to what extent is the Ejisu-Juaben Municipal Assembly generating internal revenue from property rate and ground rent as a result of the development of the Boankra Inland Port” was asked. A range of literature based on the main concepts like urbanization, infrastructure, land value capture, property rate, and ground rent were reviewed from which a conceptual framework was developed and operationalised.

The case study strategy was adopted to facilitate answering the main research question. The data sources were primary, secondary and primary-secondary data. While the data collection methods included semi-structured interview guides which was used to solicit in-depth knowledge about the study from purposively selected key actors from the study area. Additionally, observations were made and through the use of stratified and simple random sampling methods, closed-ended and open questionnaires were administered to property owners within the municipality.

The research findings and analysis indicated that the EJMA witnessed increased rate of urbanization as indicated by the population and housing stock data with land and property values increasing after the development of the BIP. Furthermore reassessment for property rating and ground rent purposes had not been done. In addition, the municipality was having challenges with the collection of revenue for both land instruments.

The customary stool land tenure found to be operational in the municipality meant that the municipality was entitled to only 55 percent of the total revenue collected from ground rent hence, the inability for ground rent to contribute more towards the IGF of the EJMA. As such, property rate contribution towards the IGF was more than the ground rent contribution though the Valuation List had not been updated.

Further discovery indicated that after 2012, the EJMA was allowed to use not more than 45 percent of the IGF for public infrastructure provision. As such up 2015, 2 sets of a 4-bedroom teacher’s accommodation, a 14-seater water closet toilet and an Accident and Emergency Unit had been built for the municipality.

Recommendations were proposed with regards to how revenue generation for the EJMA could be enhanced through measures as a revision of the laws governing both instruments, out sourcing revenue collection to ensure efficiency of the collection mechanism and to publicize projects funded by property rate and ground rent to encourage the tax compliance of the inhabitants.

Keywords

Ejisu-Juaben Municipal Assembly, Property rate, Ground rent, Infrastructure and Internal revenue

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Lastly, and most importantly, my heartfelt thanks to my family, especially my husband, Dr. Charles Akomea Bonsu, my sister, Mrs Helen Nti and to my children: Stacey, Theola, Candice-Nora and Kevin. I couldn't have gotten through this without your prayers, support, and encouragement. God Bless you all.

Dedication

This work has been dedicated to my husband, Dr. Charles Akomea Bonsu and to my children: Stacey, Theola, Candice-Nora and Kevin.

Foreword

The thesis, 'Infrastructure Investment and Land Value Capture' has had its emergence just about the right time when most developing countries are struggling to finance the provision of urban infrastructure to cater for the ever increasing urban towns and cities. Increased urbanization has necessitated the need for local governments to provide infrastructure and services like roads, schools, hospitals, markets potable water and electricity among many others for the urbanites. Ghana where the researcher has case studied has decentralized the responsibilities for the provision of urban infrastructure through the establishment of Metropolitan, Municipal and District Assemblies (MMDA's) at the local government level.

The MMDA are however faced with challenges of resources to provide the various infrastructures. In Ghana for that matter the Ejisu-Juaben Municipal Assembly (EJMA) rely mainly on inter-governmental transfers such as the District Assembly Common Fund and District Development Funds which are not regular inflows for the provision of public infrastructure for the Municipality. This therefore requires that internal sources of revenue such as property rate, ground rent and other non-land related revenue need to be effectively mobilized to help alleviate the challenges of revenue for the municipality.

It is against this background that the researcher has revised a range of literature with regards to infrastructure provision and value capture through the use of various land instruments. However for the purpose of this thesis, the concentration was on the use of property rate and ground rent as sources of generating internal revenue for the EJMA. With much enthusiasm this piece of work has been developed to its present state.

The researcher has identified gaps and made recommendations to help the EJMA mobilize enough revenue from property rate and ground rent to supplement the inter-governmental transfers from the central government towards urban infrastructure. It is hoped that these recommendations will be emulated by other MMDAs in their quest to generate internal revenue to support infrastructure provision in Ghana and other parts of the world.

The author wishes you enjoy this piece of work.

Abbreviations

BIP	Boankra Inland Port
CEPACs	Certificates of Potential Additional Construction
DACF	District Assembly Common Fund
DDF	District Development Fund
DRC	Depreciated Replacement Cost
EJMA	Ejisu-Juaben Municipal Assembly
GSS	Ghana Statistical Service
IGF	Internally Generated Fund
LVT	Land Value Tax
MMDAs	Metropolitan, Municipal and District Assemblies
OASL	Office of the Administrator of Stool Lands
OECD	Organization for Economic Co-operation and Development
PVLMD	Public and Vested Lands Management Division
RO	Rating Officer
UDG	Urban Development Grant

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Chapter 1: Introduction

1.1 Background

The upsurge of urbanization has become a universal reality to the extent that migration of people into cities and towns has led to the natural growth of many cities and statistically resulting in half of the global population residing in cities, towns and urban areas for the first time. Estimates indicate that by 2050, approximately seventy-five percent of the global population will be residing within cities and towns (United Nations, 2014). This scenario leads to increasing pressure on urban technical and infrastructure systems.

The increase in demand for services as a result of urbanization requires local or municipal governments to ensure that they are economically viable to deliver quality and efficient services to the urbanites. In view of this predicted urban challenge, governments and regional bodies have found it prudent to increasingly devise policies and strategies to address the problems. This has resulted in the intense pressure on governments to increase the revenue base to meet rising demands in social services and infrastructure (UN-Habitat, 2009).

In contrast, local governments are very circumspect in increasing taxes to meet needs of their population. The reason being that many municipalities do not want individuals and firms to relocate from their jurisdictions for reasons of having to pay high taxes which will reduce the profit margins of their businesses (Serageldin, Bassett, et al., 2008). Thus, the two opposing ends have presented very difficult situations for local governments all over the world to deliver on their mandates over the last twenty to thirty years.

Dating back to the 1980s, lots of countries have adopted and put in place policies to decentralize to a large extent the delivery of public services and as well address poverty issues all in a bid to spread governance responsibility across scales (Ingram and Hong, 2008). As such, Canada is cited as a typical example within the Organization for Economic Co-operation and Development (OECD) countries that has adopted such a policy. Again, in developing countries, Tanzania, Nigeria and Ghana are typical examples of such countries that adopted this policy of decentralization by empowering the local governments in the provision of public services. Ghana achieves this goal of decentralization through the enactment of the Local Government Act, 1993 (Act 462).

It is however the case that, regardless of the reasons for decentralizing governance responsibility, the revenues that local governments have at their disposal are not commensurate with their increased responsibility of delivering public service especially in most developing countries. In spite of this challenge, a few Nordic countries can be singled out where local governments benefit from large and elastic tax bases hence are able to easily adopt such policies (Bird, 2010).

Less developed countries in Africa and parts of Asia where estimates indicate that urban population growth is likely to triple, local governments face even greater challenges increasing their revenue base because they have very few sources of revenue on their own and lack the necessary incentive to generate internal revenues (Dirie, 2005). In some instances, local governments have not been proactive to fully exploit revenue potentials available within their jurisdiction. Most especially where infrastructure projects have been undertaken by the central government and have led to remarkable increases in land and property values. Very little consideration has been given the concept of land value capture which is potentially a source of public financing for infrastructure. It would then be appropriate if such local governments are able to use the concept of land value capture to tap the increments that have evolved from the development of the infrastructure to generate the needed revenue to finance the public services and infrastructure.

The concept of value capture as advocated by Vancouver Action Plan urges public bodies to recapture part of unearned increment in the value of land resulting from probable land use modification, a public infrastructure development or changes in growth patterns within a particular location (UN-Habitat, 1976). It would therefore not be out of context if local governments used the tools of land value capture such as property rate, land leasing, betterment, development exactions among others for generating revenue locally. For instance on the international front, local governments in countries like China, Hong Kong and India through the concept of land value capture have been able to generate internally generated revenue to finance many infrastructure projects (Peterson, 2008)

Within Sub-Saharan Africa, Ghana can be cited as a characteristic example of a country with difficulties in raising internally generated revenue. The World Bank estimates that the country requires between 10 to 12 percent of Gross Domestic Product (GDP) to meet its infrastructure gap within the next 10 years (Estache, Antonio, et al., 2007). This estimation seems to suggest that as a matter of urgency, Metropolitan, Municipal, District Assemblies (MMDAs) need to be circumspect to service delivery and financing of local investments to meet the challenges associated with urbanization (Farvacque-Vitkovic, Raghunath, et al., 2008).

It is in this regard that the MMDAs in an attempt to generate local revenue, seek to make use of all available sources at their disposal. It is important to indicate however that, in Ghana the land related sources of revenue such as property rates¹ and ground rent have so far proven to be regular sources of generating local revenue than the other sources due to the immobile nature of land and buildings. However, according to Nixon, Cambers, et al. (2015), though property rate remains a high potential revenue source for local governments, this tax is difficult to administer and collect most especially where the Rating Authority is unable to undertake revaluation of properties in addition to poor administrative procedures. That notwithstanding, ground rent also has its challenges based on the type of land tenure being practiced as well as administrative procedures.

In the bid to improve the general well-being of their citizens through infrastructure delivery and to reduce the gap as estimated by the World Bank, local authorities in Ghana have undertaken many development projects. One of such developments is the establishment of the only Inland Port in Ghana (Boankra) that was necessitated because the two current sea shore harbours- Tema and Takoradi which not only serve the nation, but other landlocked neighbouring countries like Mali, Niger and Bukina Faso, had the freight capacity of the Ports being over stretched. Evidence of this is seen when in the last 10 years, Tema's container volumes has increased by 64 percent, that is 305,868 Twenty-foot Equivalent Units in 2003 to 841,989 Twenty-foot Equivalent Units in 2013, as reported in the Port statistics (Egan, 2014). Furthermore, the challenge of congestion at the nation's ports especially Tema, sometimes caused by containers waiting longer hours for customs clearance was perceived to be curtailed with a fully functional inland port.

According to Obeng (2013), the impact of such an infrastructure has also led to urbanization and increased property developments within the jurisdiction of the infrastructure and therefore leading to the tendency of influencing the local economy. Such scenarios unfortunately have not been given the needed attention by local authorities as a 'gold mine' for capturing value increments in land and property values using the available land value capture tools. Comparably in other countries such as the United States, Britain, Colombia and

¹ Property rate is the same as property tax and for this research both names will be used interchangeably referring to the same thing.

Australia among others, with the development of an infrastructure various land value capture tools such as betterment charges, developer exactions, tax increment financing among others have been used to tap the additional value increments for further public infrastructure provision. Ideally it would not be out of context for local governments in developing countries could import such rich examples though there are bound to be variations to the implementation process.

1.2 Problem Statement

Developing countries across the world of which Ghana is not an exception has witnessed rapid urbanisation over the past decades with some countries expected to record an urbanisation rate as high as 63 percent by 2025(United Nations, 2007). According to the UN Report, it is estimated that Ghana's rate of urbanisation by 2010 will be approximately 52 percent hence recommended the need for policy makers to adopt a proactive attitude to handling the situation.

It is in the light of the UN's recommendation; the central government has embraced the policy of decentralisation by empowering Metropolitan Municipal and District Assemblies (MMDAs) in the Ghana through the Local Government Act, Act 462 to be responsible for the effective planning, development and administration of the MMDAs. To achieve these functions, additional powers have been granted to the MMDAs to enable the generation of internal revenue through various sources as spelt out in Section 86 of Act 462 which include among others revenue from property tax, ground rent, betterment charge, market tolls, development charge, royalties and building permit fees to fund development projects within their jurisdiction.

The ability of the MMDAs to raise enough internally generated funds is of much importance in order to minimize the over dependence on the intergovernmental receipts, grants and donations from the central government and other philanthropist organisations or individuals. In most cases these transfers have not been received promptly hence affecting the efficiency of the MMDAs to operate effectively. The Ejisu- Juaben Municipal Assembly (EJMA) in the Ashanti Region of Ghana is cited as being no exception to this predicament.

The EJMA's proximity to the Kumasi Metropolis (the second largest city in Ghana), has won the opportunity of having the only Inland Port in Ghana constructed in Boankra within the municipality. The construction of the Boankra Inland Port in 2010 among other factors has resulted in increased rate of urbanization and its associated challenges within the Municipality.

The 2012 Municipal Annual Report indicated that the municipality had challenges with provision of sanitation and waste facilities, inadequate portable water supply as well as shortage in the provision of educational facilities such as classrooms, libraries accommodation for teachers among others. According to the Report, 43.4 percent of the households engage in dumping solid waste in the streets due to lack of waste collection or disposal sites, percent of households do not have toilet facilities, 41 percent of the households lack portable drinking water, while only 6 out of the 20 communities within the municipality has some form of accommodation for teaching staff (Ejisu-Juaben, 2014)

Again, in 2013, the Ashanti Regional Coordinating Council reported that the EJMA was identified among the municipalities within the Ashanti Region of Ghana with poor health care infrastructure. The Report emphatically stated that the Municipal Hospital had out lived its bed capacity by 45 percent which required immediate attention (Ashanti Regional Coordinating Council, 2014).

In the midst of these challenges, it is imperative that the EJMA is able to adequately exploit and generate internally generated funds to supplement the irregular inflows of inter governmental transfers, donations and grants.

The construction of the inland port at Boankra in 2010 encouraged the increased urbanisation which has resulted in subsequent increase in land and properties acquisition within the municipality.

The sequence of events within the EJMA, has sparked the interest of the researcher to explain the extent to which the Municipal Assembly is using property rate and land leasing as land value capture instruments to capture property rates and ground rents to generate internally generated funds for the rapidly urbanizing Municipality as a result of the development of the Boankra Inland Port infrastructure project.

1.3 Research Objective

In relation to the problem statement, the prime objective of this research is to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent as land value capture instruments as a result of the development of the Boankra Inland Port infrastructure project

1.4 Provisional Research Question

To what extent is the Ejisu-Juaben Municipal Assembly generating internal revenue from property rate and ground rent as a result of the development of the Boankra Inland Port project?

1.4.1 Specific Questions

- What is the change in the property and land values in the Ejisu-Juaben Municipality due to development of the Boankra Inland Port?
- What is the procedure for assessing and capturing² property rate and ground rents in the EJMA?
- How has the revenue generation from the property rate and ground rent of the EJMA been influenced by the development of the Boankra Inland Port infrastructure?
- To what extent does the revenue generated from property rate and ground rent finance public infrastructure and maintenance?

1.5 Significance of the Study

Urbanization with its associated responsibilities for local governments in spite of the absence of enough local revenue has necessitated the need for local and municipal governments to seek for various sources of income apart from the intergovernmental transfers, grants and loans.

The study aims at contributing and giving a better understanding of whether the development of the Boankra Inland Port and the increased the rate of urbanization is influencing land and property values within the municipality. In addition, the research will investigate and analyse international experience on how property rate and ground rent is used as land value capture tool to generate revenue and how Ejisu–Juaben municipality can also use it to capture value as internal revenue with regards its relevance to policy, academia and the society.

Results of the study are intended to help policy makers understand the requirements needed to ensure value increases arising from development projects are properly captured through

² Capturing as used in this context refers to the collection mechanism

property rates and ground rents to increase local revenue generation for the municipality. In addition how the society can also benefit from the revenue while academically, the research will also seek to add to exiting knowledge on property rates and ground rent.

1.6 Scope and Limitations

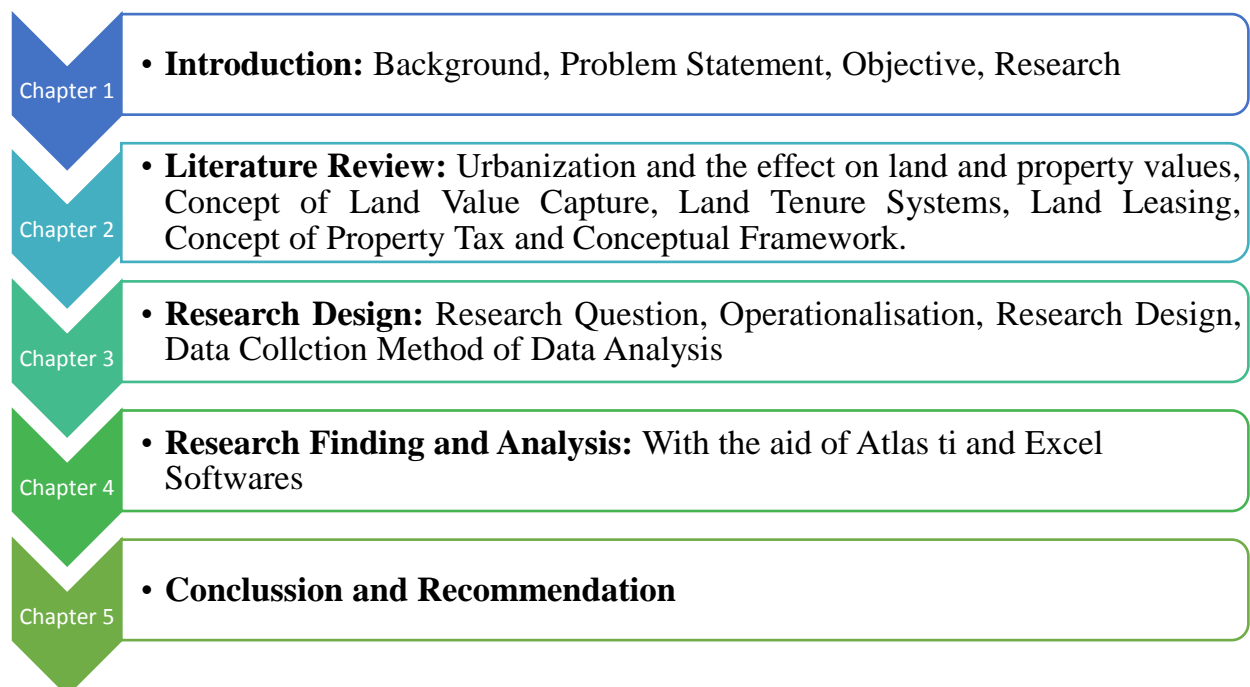
The research focused theoretically around land value capture, impact of infrastructure development, property rate ground rent with respect to stool lands with respect to how they can be used as instruments to generate internal revenue for local government for the provision and maintenance of public infrastructure. Geographically, the focus is in Ejisu-Juaben municipality of Ghana. The sample group focused on property and land owners within the study area as well as the various institutional heads in relation to the study at the municipal level. To ascertain changes in land and property values, the study concentrated on the Boankra and Owne Towns within the EJMA due to time and resource constraint.

Limitations that affected this research included the fact that the development of the Boankra Inland Port is being undertaken in Phases. Therefore the research is limited to the existing infrastructure and the impacts on land and property values in relation to the revenue generation from property rate and ground rent. For the purpose of this research premiums were not considered since premiums are paid to the Chiefs and not the Municipality. In addition the actual derivations of the ground rent formula are beyond the scope of this research, the research will only quote and explain how it is used for ground rent assessment. During the survey not much industrial property owners were administered with questionnaire due to the personal lack of interest in partaking in the survey.

1.7 Organisation of the Study

The research is planned to follow the structure as shown below in figure 1.

Figure 1: Organisation of the Study



Source: Author (2016)

Chapter 2: Literature Review / Theory

2.0 Introduction

This chapter entails a review of theoretical literature of concepts including urbanization, infrastructure and the impact on land and property values, land value capture, land tenure, land leasing and property rate. In addition, the chapter will seek to examine authors' opinion on how property rate and ground rent from land leasing can be considered as land value capture instruments in the form of opinions, arguments or debates propounded.

For the purpose of this research, in reviewing literature on infrastructure, the researcher will focus on transport infrastructure since the inland port infrastructures are uncommon; there is very scanty information about them. However, once the inland port infrastructure is provided, obviously transportation network will be developed to connect the port facility.

2.1 Urbanization and the Effect on Land and Property Values

Urbanization in its general meaning refers to the situation where there is population change or movement from rural life setting to city life setting. Various reasons may be attributed for the movement. Among the various reasons, a few could be cited as being economic, social or political which may vary from countries, cities or even to the lowest level, among towns and neighbourhoods (Otto, 2008). To confirm this, studies have indicated that by the year 2025, two-thirds of the global population would be inhabitants in city centres (United Nations, 2014).

Additionally, Cobbinah et. al. (2015) and Smith and Gihring (2006) explain that for some countries the effects of urbanization would be more favourable in terms of political, physical, economic and social benefits while others would have to struggle to match up to the demands associated with urbanization. As to whether this assertion holds, Cobbinah et. al. indicate further that the level of resource endowment for countries around the world are totally different and as such could account for the disparities. Cobbinah et. al. (2015) and

Smith and Gihring (2006) further indicate that in areas of increased urbanisation, there is also an associated increase in the provision of infrastructure and services to cater for the needs of the urbanites and land and property values tend to increase due to increases in demand for land and property and the presence of infrastructure and services. As to whether this assertion holds for the EJMA, this research will seek to find.

However in the view of other authors like Sandroni (2011) and Hong (2013), land and property values do not only increase due to provision of public infrastructure and other services but also due to change in land use, increase in demand for land and property coupled with shortage in the supply of land when land is being held for speculative purposes, changes in regulations, political reasons etcetera. Sandroni further cites the example of Sao Paulo, Brazil where CEPACs are sold to developers in order to increase Floor Area Ratio (FAR) due to shortage in the supply of land. In this vein that only developers who can afford to buy the CEPACs at the public auction-(which tends to be highly competitive) are those that benefit from the additional FAR.

Though this may be a sort of solution to increasing supply of land and properties, does that mean land and property values will be reduced because supply is increased? Most especially for most transition, developing countries and municipalities of which EJMA is no exception? It is in this vein that the writers advocate the governments and property rating authorities should ensure that additional value increases as a result of any of the factors that increase land and property values as mentioned above are effectively and efficiently captured using

any of the land value capture instruments. The revenues thus generated from value increments could then be used for municipal infrastructure provision.

2.1.1 Impact of Infrastructure on Land and Property Values

According Smith and Gihring (2006), Perdomo, Mendoza, et al (2007) and Walters (2012), vast amount of empirical studies revealed the development of infrastructure (especially transport infrastructure) is likely to have impacts on both land and property values located within the radius of the investment with a typical case being the Transmilenio road in Colombia. The authors further indicated that a review of over 85 researches on infrastructure and its effect on land and property values formed the basis of the Price Waterhouse Coopers Document for the Property council in New South Wales. Could this same argument hold for other MMDAs of which the EJMA is no exception especially when in the past decade has witnessed the construction of infrastructure projects?

Furthermore, a range of authors also confirmed that land and property values are positively influenced with provision of public infrastructural projects. Examples of this assertion included increase in property values from 4.2 to 7.9 percent in the US after the establishment of a Metro system, in Spain property values increased by 1.8 percent following the provision of an urban rail system. Seoul, Korea and Beijing also witness dramatic increases in property values ever recorded as demand for properties within very close range to the transit rail system increased immediately after the completion of the investment (Leggett and Bockstael, 2000; Bhatta and Drennan, 2003; Mikelbank, 2004; Taylor and Brown, 2006; Ayongu , 2007; Moreno and Lopez -Bazo, 2007; Canning and Pedroni, 2008; Carroll, 2008; Walters, 2012 and Mathur and Smith, 2013).

However, in Sao Paulo it was revealed that the Rodoanel investment resulted in the western side of the road network having land values increase while the eastern side had land values decreased (Maciel, 2009). In other studies Leggett and Bockstael (2000) and Roberts, et. al. (2011) illustrated apart from transport infrastructure, provision of high quality water in Maryland, US also caused increased land values in areas close to the water treatment plant.

In contrast to arguments by the previous authors, Braden, Feng, et al. (2011) and Lim and Missios (2007) argue that public infrastructure could impact negatively on land and property values due to the nature and influence of the infrastructure. For instance landfill sites cause stigmatization of the location while ports (both inland and sea) attract other industries and their activities cause pollution of air, water and the environment.

In a study by Newman (2012), it was revealed that between 1990 and 2000, areas located three miles around ports and associated industries in Los Angeles and San Bernardino Counties though offered employment, had the value of land and property to fall due to the negative impacts of the facilities. In another instance, it was proven that an inland port investment in Texas resulted in increased land values which lead to increased revenue through property taxes with an amount of \$22 million generated in 2011 (City of Worth, 2012). As to which of the impacts inland ports has on land and property values, is the focus of this research.

In spite of the negative impacts caused by some investments, environmental regulations being enforced within the last few decades are meant to ensure that such negative impacts to the environment are reduced if not eliminated completely (Armeni, Evar, et. al., 2012)

2.2 Concept of Land Value Capture

To appreciate the land value capture concept, it is vital that the basis for which land values are established in the property market is understood. In the 17th century theorist like Ricardo,

Mill and Von Thunen under land and location theory indicated that land values may be determined by the market- through the combination of the of demand and supply, principle of highest and best use – where most optimal land uses command higher land prices, and thirdly fixity in the nature of supply of land where more land cannot be created hence influencing the value of land (Hubacek and van den Bergh, 2006). After land values have been established, what then follows is how the increment in the value of the land due to communal activity for example infrastructure provision, change in land use or regulation can be captured; this leads the discussion to land value capture as a concept.

The idea of land value capture emphasized per the Vancouver Action Plan (UN-Habitat, 1976), states “*the unearned increment resulting from the rise in land values resulting from change in use of land, from public investment or decision or due to the general growth of the community must be subject to appropriate recapture by public bodies (the community)...*” (UN-Habitat, 1976, 30; Smolka and Amborski, 2000 ; Walters, 2012). Within the eighteenth and nineteenth centuries, classical economist like Adam Smith, Henry George and John Stuart Mill advanced proposals for the possibility of public authorities to capture partially or fully any increment in land values that did not arise due to actions of the individual landowner in the form of taxes, fees in- kind or any other fiscal means for the benefit of the community (Ismail, 2012; Feinstein, 2012). George’s ideas were however criticized by several writers based on the fact that a 100% tax on land would result in the capital value of the land being equal to zero.

As such, writers like Dye and England (2009), Alterman (2012) , Booth (2012) and Feinstein (2012) in response to George’s proposal highlighted that it is not only public actions that cause land values to increase but also the increases could be due to actions by a private landowner. For instance, were land developers acquire large tracts of land at the urban fringes, ensure that it is well serviced for development, lands values close to such vicinities would be increased through the actions of the developer. It is based on such premises that the writers argued for partial and not full value capture.

Again Smolka (2013) and Mathur and Smith (2013), also indicated that the value increment in land that is captured by the community should however be used to provide urban infrastructure such as schools, fire protection, roads etcetera as is being practiced in countries like China, Bogota and the United States. In addition, the writers stressed on the essence of the local government having the administrative capacity levy and collect the tax.

From most literature on land value capture, authors have considered the purpose of land value capture as being an instrument to recover cost of providing infrastructure, as a land tax and as a tax to help regulate land uses in an efficient manner, but quite unfortunately, this perception defeats the vision of Mill and the UN’s Vancouver Action Plan for the public having a portion of the land value increment resulting from public action (Walters, 2012).

2.2.1 Land Value Capture Mechanisms

A range of mechanisms for capturing land value increments such as betterment charge, development exaction, property rate, tax increment financing, land leasing and impact fees among others. However, a few will be discussed briefly in addition to property rate and land leasing which are the focuses in this research as follows below.

(a) Betterment Charges/Taxes

The concept of betterment charge according to Medda (2012), Booth (2012) and Walters (2012) is a one-time tax levied to capture land value increment using from the implementation of a public investment. In addition, Borreroet, al. (2011), Peterson (2008) and Ismail (2012) further explain that investments are usually used to fund transport, irrigation

projects, culinary water systems, wastewater treatment facilities among others and the intension of the tax is to shift the burden of the cost to the beneficiaries of the infrastructure. In an example of roads constructed in Bogota in 2007, an amount of US\$900 million was captured from 1.5 percent of the urban lands.

Furthermore, Smolka and Amborski (2000), Bird and Slack (2004), Enoch (2005), Day (2005) and Medda (2012) also noted that the betterment charge existed as far back as 1562 in Portugal and 1662 in England. In addition, it is one of the most efficient forms of taxation in robust property market however; there should be efficient and well established administrative mechanisms to ensure its effectiveness. Where the betterment charge is overused, it may have the tendency to become unpopular as pertains in Mexico.

In further studies on betterment charges, Borrero et, al. (2011) and Walters (2012) indicated that for betterment charges to be implemented the following conditions should exist: (1) 'financed developments need to be in response to the actual needs of the recipients, (2) there should be a political intention to undertake and administer the development and (3) institutionally the ability to execute the projects should also exist'.

In another version, Day (2005) in Walters (2012) also advanced the following conditions for the implementation of a betterment charge: (1) 'a measurable impact on land values, (2) specific recipients, (3) a public method to execute the levy, and (4) the political willingness to execute the levy'. However in response to the conditions, Booth (2012) indicated that it is not easy to quantify how the infrastructure would impact on the land values, neither is it easy to determine the affected lands that had to pay the betterment levy.

It follows therefore from the different opinions expressed about the pre- conditions for the implementation of betterment charges that though it is a straight forward approach, its implementation can be tricky and in addition there should be the political willingness to implement and sustain it.

(b)Tax Increment Financing (TIF)

According to Feinstein (2012), Tax Increment Financing (TIF) tax as per the name is a tax that is used to capture property rate increment resulting due to an upward change in land values due to the development of a public infrastructure within the particular jurisdiction within which the TIF operates usually referred to as the tax increment area. Again, the writers reveal that revenue generated through the TIF are used to defray loans or bonds used to provide the public infrastructure and give the example of the Minneapolis Neighbourhood Revitalization Program in 1989 which was fully funded through revenue generated from TIF bonds.

Additionally, Anderson (2012) emphasized that the TIF used for urban upgrading or redevelopment of blighted vicinities as well as serving as an incentive to private investment. According to the author, in order to entice private participation in urban redevelopment, the TIF operates by using monetary attractions like tax exemptions, tax holidays or tax deterrents. However the success of the TIF as land value mechanism will depend on how well the private investor copes with the strict and complex laws guiding the mechanism especially in those countries where the laws exist. The question therefore is the extent to which developing countries that needs urban upgrading and redevelopment projects will be able to use this tool if the laws are stringent and the developers cannot meet up with the laws in spite of the fact that it could have been a very useful tool?

(c) Development Exactions/Fees

Development exaction is a one-time fee charged to a developer usually by municipal governments to defray expenses the impact the development will have on existing infrastructure such as access roads, sewer, portable drinking water and electricity utilities. In the opinion of Evan-Cowley (2006), Peterson (2008) and Alterman (2012), the development exaction requires that the land owner shares the land value increment with the society by providing the infrastructure directly and handing it over to the local government. Furthermore, Evan-Cowley (2006) further explains that the development exaction could take various forms such as Dedication, Tap Fee, Fees-in-lieu, Linkage Fee and Impact Fee depending on the conditions pertaining. Development exaction as a land value capture mechanism is commonly used in the United States especially in States with rapid growth in urbanization.

2.3 Infrastructure Financing through Land Value Capture

Infrastructure financing with the use of land value capture mechanisms have come in handy for most developed and developing countries where main stream government expenditures on the provision of public infrastructure and services are reaching sky rocketing heights (Peterson,2008). The most common mechanisms that have been used include land leasing, sale of development rights, development exactions, property rates and betterment charges.

Sandroni (2009) cites the example of Faria Lima, Agua Espraiada and Sao Paulo in Brazil, where through the sale of development rights (CEPACs), an amount of US\$812 million was raised as initial capital for infrastructure projects. In the UK, the Jubilee line in London and the Tyne and Wear Metro in Newcastle were partly funded through land and property based taxes in the proportions of 25 percent and 17 percent respectively (Smith and Gihring, 2006; Wetzel, 2006; Medda and Modelewska, 2011). While in Egypt, through the use of developer exactions, an investment worth US\$ 1.5 billion had to be provided by developers in exchange for a portion of the desert lands. Hong (2013) further gives the instance of China where most of the public infrastructures are provided from the premium and land rent out of land sales and leasing processes.

In spite of the forgoing argument for the use of land value capture instruments to provide public infrastructure, other authors also argue that it should be possible that the operation and maintenance of the infrastructure should also be considered. For instance, Rioja (2013), Sierra (2013) and Ingram and Brandt (2013), indicate that since the initial cost of providing urban developments are quite expensive, in order to ensure the sustainability of the development, policy makers should also endeavour to ensure that funds are also earmarked for the operation and maintenance of such projects.

In respect to concern about maintenance of public infrastructure such as roads for example, Rioja further indicates that in the World Bank Report (2007) countries like Zambia and Ghana which established road funds for maintenance of roads, are heading towards successfully maintaining and improving the sustainability of some of the roads built through the use of revenue from property and land based taxes together with other sources of funds. While a country like Peru among a lot more are still straggling with maintaining their road infrastructure.

It is in this vein that local governments or taxing authorities in as much as they seek to capture land and property value increments should not only think of investing in providing services and public infrastructure but also ensure that enough provision is made for the sustaining services and the infrastructure.

Financing infrastructure through land leasing as a land value capture instrument, an understanding of how land generates revenue in the form of premiums or ground rent, requires an explanation of the various form of land tenure that are in existence around the world and developing countries especially in Ghana as the focus of the research.

2.4 Land Tenure Systems

The term land tenure in the opinion Payne (2000) maybe the manner of how one owns or holds land or the form of interaction that exist between a group of people and land or any of the proceeds arising from the land. Similarly, land tenure could be explained as a collection of rights which one person or number of individuals own with regards to land, in terms of the right to hold it, to utilize it, to build on it, to inherit and to bequeath land (Durand-Lasserve and Selod, 2007). Further, Payne explains that land tenure especially in developing countries range from being informal to formal tenure that are governed by laws, rules and regulations within the various countries of operation. These laws, rules and regulations are often very cumbersome as has been confirmed by Hong and Bourassa (2003) as being ‘intractable’ due to the political, economic and social attachments to land which invariable tends to have an effect on the land and property market. The forms of tenure described by Payne include: Customary tenure, Private tenure, Public tenure, Religious tenure and the non-formal tenure categories.

(i) Customary Tenure

Within this type of tenure, all lands are held and governed by customary laws and regulations with absolute title to the land entrusted in traditional leaders who may be a chief, a clan or family head or a priest. Land under this type of ownership is considered sacred and regarded as being for the present as well as generations yet to be born. As such, it is therefore the duty of the leader to ensure that land is administered in the most sustainable manner so that the unborn can also benefit for that land heritage. Lands under this form of tenure are leased in return for token payments like ‘drink money’, cattle or cola. However literature has revealed that the token payments being referred to as drink money, currently can be equated to the open market price for the said land which is the premium(Asiama, 2006).Additionally apart from this payment, the lessee has an obligation to pay annual ground rents which is a land tax to the Taxing Authority within the country. According to Payne (2000), this type of tenure is found in the Middle East, Melanesia but also very predominate in Africa countries like Kenya, Malawi, Zambia, Zimbabwe as well as Ghana which has 80 percent of the land held under customary tenure.

(ii) Private Tenure

Beneficiaries of this type of tenure enjoy a quasi freehold title to the land and have the right to use it without any restrictions in terms of selling, gifting, transferring it or using it as a co-lateral to secure mortgages. In addition, it is the duty of the freeholder with the private tenure to pay tax and any other liabilities associated with the land to the appropriate authority (Panye, 2000). In developing countries this type of tenure is found predominately in city centres as historically it was modelled to be a right enjoyed by colonial inhabitants. However the down side of this system is that it is not easily assessable by the less affluent in society. Examples could be found in USA, Netherlands and Ghana. Payne (2000) further indicates that in some African countries public land tenure systems are currently being gradually converted to private land tenure and cites Rwanda as an example of such countries.

(iii) Public Tenure

This type of tenure is a form of public land leasing where all the lands are entrusted to the central government without any restrictions regarding the use of the land. Such lands are usually for public use and individuals as well as developers could through public auction or by private treaty granted lease land for public or private provided the use is in conformance with the zoning or planning regulations (Payne, 2000). Since the government is the owner of land under this form of tenure, premiums and land tax liabilities for example ground rent is levied and collected by the government. In addition the government gets other revenues from lease renewals which are not fixed amounts but assessed on the current value of the land per the time of the renewal of the lease (Hong and Bourassa, 2003). Examples of public land tenure are found in Hong Kong, China, Russia, Netherlands and Ghana.

(iv) Religious Tenure

This type of land ownership is mostly found in Islamic cities as Bagdad and Mecca where lands are held for various religious reasons and in addition are regulated by Islamic laws, rules and regulations. Payne (2000p3) explains further that there are sub-categories and purposes of the religious tenure which include: (a) '*Waqf* for lands kept for God, (b) *Mulk* for private lands governed by Islamic laws and regulations, (c) *Min* for lands held by the state and protected by law and (d) *Musha* for lands held by the community'.

(v) Non-Formal Tenure Categories

The type of interest in land under this form of tenure though exist in nature is not formally recognized by any law, rule or regulation. Tenure under this category consist among others un-regularized squatting, illegal sub-divisions on legally owned lands as well as informal forms of land rentals. Examples could be found in Calcutta and in the slum areas of Sao Paulo where tenants sublet rooms to other tenants, who intend also sublet beds all have some form of right (Payne, 2000)

From the discussion above about the forms of land ownership and land rights, an understanding of the obligations of the various titles with regards to the payment of ground rent and property tax can be further established by explaining the various forms of land leasing and how these obligations apply.

2.5 Land Leasing

Land leasing in whatever form it takes cannot be possibly executed without referencing the type of land tenure from which the lease is created. It is in this vein that Payne (2000) infer that land leasing and land tenure depend on each other and any political policy that affects land tenure tend to have an impact on the land market.

With regard to land and property market, Payne (2000) identified amidst many other forms tenures discussed in section 2.4 the most prominent ones are; the freehold, freehold ground rent and leasehold tenure. The freehold tenure according to the author entrust in its holder absolute use and control of the land which also enables the holder to create a lesser interest such as a leasehold interest (in terms of occupational right, develop and enjoy proceeds of the land) out of the freehold tenure. In addition, the freehold interest could be used as a collateral security for mortgages. It is also worthy of note that the freehold tenure could be held privately or publicly by the government as in Hong Kong, China, Tanzania while in Netherlands the government owns portions on the land under freehold tenure.

In countries like China and Hong Kong where the government holds freehold interest in all lands, leases are granted to individuals or developers through private treaty or at public auctions for a stated term in return for an initial premium payment and annual land rent³ for the duration of a maximum of 50 years. The lease may be renewed upon expiration but at the current market price for the land as a renewal premium. The government is able to capture land value from the renewal process where there has been infrastructure provided or the land has been improved (Hong, 2013). Hong, (2016) indicates that revenue from land leasing in 2009 was the second largest at 16 percent of the total revenue in Hong Kong.

Secondly, Payne (2000) describes the freehold ground rent tenure as a form of long term, almost in perpetuity leasehold where the lessee pays ground rent annually. This type of leasehold though not very popular, it is common with agricultural lands where the ground rent paid is very minimal and also industrial estates where the government policy aims at promoting industrialization.

Leasehold tenure is a form of ownership in land that has a lesser form of security of tenure compared to the freehold tenure. The leasehold tenure has a fixed duration of between 50 to 99 years though in some countries such as in the Netherlands, the lease duration is not less than 6 years. Hong and Bourassa (2003) further emphasized that the basis of the lease could take different forms since political and legal frameworks are not the same across countries. Within the duration of the lease, the lessee creates a sub-lease out of the interest of the lease though the sub lease should be short in duration than what the main or parent lease has. In addition, rules, regulations and covenants that govern the contract which are explicitly stated in the lease contract and indirectly affect any other lesser lease that emanates from the main lease. During the term of the lease, the lessee is under obligation to pay ground rent annually (Hong and Bourassa, 2003; Hong, 2013).

According to Hong (2013), though lease can last as long as 99 years as pertains in most developing countries, Hong is of the view that to capture land value increments resulting from public action, it is better that leases agreements with provision for adjustments to reflect current market trends are made for shorter durations and in order to generate revenue sources for further infrastructure provision.

2.5.1 Determination of the Premium and Ground Rent

Initial lease arrangements involve two major payments: 'premium system and a land rent system' (Hong, 2013). The premium is the one-time payment of a bulk sum that is paid by the lessee to the freeholder in order to secure the occupation of the land till the expiry of the lease while the ground rent is the payment made by the lessee during the usage of the land which is paid annually. The author also indicates that though there are two main payments as the norm, there are other countries that do not adhere to the premium system but rather what is required of the lessee is an annual ground rent. Ukraine, Russia, Poland and Finland are examples of such countries.

In the works of Needham (2003) and Wyatt (2007), the premium arrived at is usually dependent greatly on the value the land will sell for on the open market which arrived at through the interaction of demand and supply for land and the highest and best use principle, auction or through negotiation between the parties involved. In the event where the land is for commercial use, the negotiation could be based on a calculation of the present value of the summation of expected annual rental value for the land over the period under consideration.

³The land rent in the public land leasing system in China and Hong Kong is the same as the ground rent being referred to in this research

The ground rent on the other hand is calculated on the bases of the use value or commercial value of the land which is much lesser than the economic value. According to De Soto (2000), Neutze (2003) and Dye and Merriman (2006), the economic value of the land is the price of the land in consideration with the most efficient use in the land market and the commercial value, how much the land would be currently rented in the land market. In addition, Needham (2003), indicates the ground rent can be arrived at through mutual consensus between the freeholder and the leaseholder to arrive at a reasonable land value to which a discount factor, equivalent to the interest rate on the capital is applied to determine the exact ground rate payable. The table 1 below illustrates the calculation of ground rent in the Netherlands using the residual method of valuation.

Table 1: Summary of Ground Rent Calculation

Type of land and method of payment	Premium	Ground Rent
Undeveloped land (Q)	Current market value of the land (Q)	$\frac{Q}{\text{Discount factor}}$
Developed land (Land and improvement value = R)	Current market value of R	
Developed land (Improvement value = S)	Current market value of S	
Land rent	Current market value of R – Current market value of S = T	$\frac{T}{\text{Discount factor}}$

Source: Needham, 2003

2.5.2 Land Value Capture from Land Leasing

Studies from various authors have indicated that land leasing in whatever form it takes can be relied on as a good land value capture tool. This according to the authors as population increases and demand for land, infrastructure and other services also increases, land value increments are also expected (Hong and Bourassa, 2003; Feinstein, 2012).

In further studies, Hong and Bourassa (2003) and Anderson (2012) also aver that though all the forms of land leasing have the ability to capture land value increments the prominent type of land leasing for land value capture is public land leasing where the government owns all lands and leases it. According to them with public land leasing the initial premium and annul rents are paid to the same source (the government since the freehold title lies with the government) unlike other forms of freehold systems such as customary, private or religious freehold where premium may be paid to the freeholder and ground rent paid to the government. Examples countries where premium and ground rent are paid to the same source include Hong Kong, China, Australia and the Netherland (in areas where the government owns the land). In Britain, US, Kenya and Ghana⁴, premium is paid to the freeholder and ground rent to the government.

In addition, with the public land leasing the various forms of generating revenue which could capture land value increments apart from the initial premium (which could be either through

⁴Article 267 (6) of the 1992 Constitution of Ghana provides that ground rent is divide according to the various percentages:

- (a) 25% to the stool through the traditional authority to maintain the stool (administrative purposes);
- (b) 20% to the traditional leader; and
- (c) 55% to the MMDAs (local government), in the area of jurisdiction where the stool lands are.

public auction, administrative allocation or by negotiation) include application for lease modification and lease renewals. Hong (2013) further asserts that when an application for a lease modification is made, the new premium is based on the change of use and if there has been any infrastructure provision then the land value capture could be applied in such instance. This then tends to be a confirmation of Deng (2003) assertion that an average of 50 percent of China's income between 2004 and 2008 was from leasing of public lands

Contrary to Hong's explanation, Walters (2011) is of the opinion that in instances of lease modification and lease renewals, when the new premiums are based on provision of infrastructure or services then the premium becomes more of a betterment charge. Instances could be found in China and Canberra where lands change from agricultural use to industrial or sometimes from residential to commercial use. In the case of Canberra an applicant would have to pay 50 percent in addition to the premium as a result in the increment in the land value (Hong, 2013) .

From the views of various authors concerning land leasing as a land value capture mechanism, the inference is that, though land values could increase with infrastructure investments, the ability to capture the increment would largely depend on the type of land leasing being practiced, the strength of the administrative agency running the land leasing system as well as the government policy goals regarding land leasing. For instance if the land leasing policy is to encourage industrial or commercial growth, then in such instances the premium may be very minimal while tax exemptions for ground rent may be allowed. In other instances where the government policy is to reserve land for public use or environmental protection, occupants of such lands may end up paying virtually nothing in the form of premium or ground rents (Hong, 2013).

2.6 Concept of Property Rate

The concept of property rate deals with process of all the political, legal and administrative processes related with taxation of property as discussed below.

2.6.1 Definition of Property Rate

Property rate according to various authors refer to a recurrent tax liability levied on land, immovable improvements on land or on only improvements (McCluskey, et, al., 2013). In another version, Abbott (2008) and Plimmer (2013 p192) refer to property rate as a 'tax imposed on the value, 'deemed value or against the income arising from property...' According to (Walters, 2012), this assessed tax is levied annually but its payment could either be a one-time payment or an arranged payment basis within the tax year. Additionally, Bahl, Martinez-Vasquez, et al. (2008) and Norregaard (2013) also explain that property tax could include a tax on inheritance and transfer of property as pertains in Germany, Greece, Korea and the Netherlands. On the contrary countries like Luxembourg, Switzerland and Norway rather impose property taxes on personal worth. From the various authors, the inference is that property rate is not limited to a levy on land or improvements alone but could be extend to include others stamp duty, personal worth or capital gains tax.

2.6.2 Elements of Property Rate/ Tax Identity

Various authors have indicated that the process of arriving at the property rate involves both policy making and administrative processes. Under the policy making process is definition of the tax base as well as arriving at the tax rate.⁵ Administratively, the process entails the

⁵ Setting of the tax rate depends on which level of government has been given the mandate to set the tax rate.

coverage ratio definition, assessment and the collection of the property rate. Walters (2011) summarizes the steps with the two processes as the 'tax identity' and discussed below.

(a) Setting the Property Rate

Generally, the notion has been that State functions seeking to maintain a vibrant and stable economy, generate and distribute income and state security should be the reserve of the central government in order that there is fairness. However, in line with the correspondence theory and the theory of subsidiarity, this notion might not hold since the principles seeks that expenditure assignments and provision of services are to be linked to the level of government directly providing services to the beneficiaries who in turn may have vast preferences. It is in this vein that Zorn (2013) and Cornia (2013) argue that the local government should also have some level of autonomy which may lead to fiscal decentralization. The author further indicates the due to the advantages and disadvantages of fiscal decentralization it is a difficult task for the central government to delegate powers.

Additionally, Zorn (2013), Brunori, D. (2007) and McCluskey, Cornia, et al. (2013) think that in determining which taxes can fall within the domain of the local government, the central government should ensure that taxes to be levied will be adequate, correspond to the expenditure of the local government, that the tax can be administered efficiently and fairly as well as the local government being able to fix the tax rate. A typical example is in Britain where individual boroughs are allowed by law to set and collect council tax⁶ to raise local revenue for their expenditure

In another instance, Oates (2008) and Slack (2013) indicate that a local tax is one in that the taxing authority has the mandate to figure out the tax base, indicate the tax rate, collect and keep the revenue for local use. It is only by this means that the local government can be autonomous and accountable for revenue from the tax together with how it is spent. Furthermore, Connolly, Brunori, et al. (2010) and Franzsen and McCluskey (2013) emphasized that in countries where there are different tiers of government, the different tiers of government should be mandated to set tax rates using variable tax rates that would raise enough local revenue to match the services meant to provided by each tier if the services vary for the different tiers. This in the opinion of Connolly, Brunori, et al. (2010) would promote the need for local fiscal decentralization for local governments in order to avoid property rate being used as tool for limiting the powers of local governments and increasing central government control.

Evidence from literature show that whiles in countries like Chile, Thailand, Tunisia and Latvia, the local government have no discretion in setting property rates, others such as Kenya, South Africa, Tanzania and Argentina, local governments have absolute discretion in setting property rate. Other countries like Hungary, Colombia and the Philippines however, have some level of local discretion but with limits indicated according to the central government. In Germany the main tax administrator for the central government is the länder whiles in Indonesia, the devolution reform in 2010 concerning property taxation is an example of how local governments are authorized to fix tax rates in accordance to the provisions of the central governments laws (Ebel and Taliencio, 2005; Benito and et, 2010; Kelly, 2013; McCluskey, Cornia, et al., 2013).

Kitchen (2013) and other authors advocate for local governments to be allowed to set the property rates. Reasons for this could be that the needs of the community are best known by the local government or that the inability for the local government to satisfy the needs of its

⁶ Property rate in Britain is referred to as Council tax.

electorates may have political consequences for the local government during elections. Walters and Kelly (2013) are also of the opinion that property rate setting for ‘theory and international best practice’ should be the duty of both tiers government. The central government sets a range of rate and allows the local governments fix the applicable rate in the limits set so as to make both levels of government accountable to the electorates as in the context of Kenya and many other countries.

(b) Defining the Tax Base

By definition, the tax base is the ‘variable designated by the government strategy as to what qualifies or is exempt from tax’ (Kelly, 2013 p143). By this definition, the implication is that it is the responsibility of the government to decide:

- Whether to assess the property rate on only land, only on buildings/ improvements or land and buildings/ improvements (both)
- Whether the amount of the tax to be assessed will depend on the current value of the property, how much the property is rented out for on yearly basis or depends on the characteristics of the property as may be documented in the fiscal cadastre
- Who bears the property rate as well as properties that will either be completely or partially exempted from the tax

For governments to successfully implement an effective and efficient property rate system, it is prudent that the tax base is explicitly defined and backed by law. In this regard that those countries like South Africa, Kenya, Ghana, and Indonesia among others which are unitary states have their property tax base defined explicitly in the constitution and laws of the respective countries. In the Ghanaian context for instance, Section 96(9) of the Local Government Act 462, of the 1992 Constitution stipulates the tax base for property rating for the entire country is the building. Also, federal states like USA, Canada and Nigeria have laws defining the property tax base stated within the federal or state laws that govern the various states.

Although a number of studies have revealed that the base for levying property rate in most countries around the world is based on immovable property,⁷ Franzsen and McCluskey (2013) also reckon that in a few States in the USA and Georgia taxation is levied on movable or personal property⁸. Bahl and Wallace (2010) and McCluskey, Cornia, et al. (2013) are however of the view that the use of immovable property has the potential to increase the tax base because of its static nature coupled with the level of exemptions granted by laws within the country.

Following from this, Walters (2011) is of the opinion that a high degree of exemptions have the tendency to reduce the tax base and hence affect revenue generation. The extent to which this assertion holds in most developing countries for which Ghana is no exemption is worth considering. Once the tax base has been defined, it is the next is to choose which of the base is the most appropriate to be used by considering a range of factors outlined next.

(c) Choice of the Property Rate Base

Authors such as Franzsen and McCluskey (2013) opine that the particular tax base chosen by any country may depend on the historical or cultural lineage, political setup regarding taxation, conditions prevailing in the property market as well as how effective and efficiently the

⁷For this study, immovable property here refers to land or buildings/ improvements and will be used interchangeably.

⁸ For purposes of this research this aspect is beyond the scope of study and will not be considered further

property tax can be implemented. For example commonwealth countries like Jamaica, Trinidad, New Zealand, India and Nigeria initially had their property rate administration base on the British system of property rating using the Annual Rental Value (ARV). However with time, some of these countries have engaged in tax reforms hence changed the manner in which property tax is administered. Typical examples of some of the countries that have had tax reforms include New Zealand changed from the ARV to using only land as a tax base, while Jamaica also changed from the use of both land and buildings to using only land and ignoring the buildings as a method of assessing property rate Rosegard, 1998; Lyons and McCluskey, 1999; Bahl, Martinez-Vasquez, et al., 2008 and Bahl and Wallace, 2010).

In addition, McCluskey, Cornia, et al.(2013) think that the property rate base can determine the manner in which the tax rate is arrived at. That is by applying either the capital-value or the annual value approach to the property rate base to arrive at the taxable value of the property. The writers further indicate that the property rate base could be land alone, land and improvement or improvements alone.

(i) Tax Base as Land

As propounded by Bird and Slack (2007) and Bourassa (2009), the genesis of using land as a tax base can be traced back to thousands of years in countries like Egypt, Babylon, Persia and China. However, during the 18th century Henry George advocated for the use a single tax on land to recoup unearned increment in land that arose as a result of any public action since the tax on land would result in economic and efficient use of land. From that time onwards, land was then considered as a base for property taxation. Walters (2011) in his writing refers to taxation based on land as Land Value Tax (LVT).

Advocates for using land as a base are of the view that LVT is basically the only tax that is unable to distort the land market, it helps to reduce the incidence of landowners holding on to land for speculative purposes (which may lead to leapfrog developments and sprawling of cities) and also where exemptions for taxation are limited, using land as a tax base increases the tax base which minimizes the burden of tax for households (Song and Zenou, 2006; Walters, 2011; Deskins and Fox, 2010). This assertion by the authors to an extent confirms (De Soto 2000) earlier opinion that since the physical nature of land does not change coupled with its immobile nature, it would be idle that land is used as a base for LVT.

However in spite of the forgoing arguments in favour of the use of land as a tax base, critics such as Bahl (1998) and Franzsen and McCluskey (2013) also argue that it is not straight forward to split the value of land from the building components most especially in well built up areas. This may lead to the land value being compromised which consequently affects the final land value and tax assessed on the land. In addition the benefit principle may also be violated since vacant lands do not place burden on public services for which the revenue generated from the LPT is used to provide or maintain.

(ii) Improvements as a Tax Base

The use of improvements as a base entails the use of the value of the improvement excluding the land price and as much as possible, all land attributes. This however is not a straight forward assessment since buildings are attached to land hence difficult to isolate land from improvements.

Walters (2011) point of view is that it is not out of proportion to use an improvement as a tax base because in his opinion, beneficiaries of the public goods provided using the property tax should be the ones to pay for those services and not the unimproved land that places very little demand on the public services. In this case, the property rate may be linked to the beneficiary principle and hence the tax becomes more of a benefit tax.

In addition, Franzsen and McCluskey (2013) and McCluskey, Cornia, et al. (2013) also support this line of argument that in, countries where land is politically or culturally owned and therefore can only be taxed when leased out for example in China and Hong Kong, improvements then come in handy as a base for taxation. Typical examples of using improvements as tax base can be found in Ghana and Tanzania. Hence may be one of the reasons for why the property tax base is on improvements and not land. The writes go on further to state that the use of improvements as a tax base is a good bases especially in countries where the property market is not very vibrant.

Amidst all the argument in favour for the use of improvement as a tax base lies criticism that by taxing improvements, property owners or developers are discouraged form improving their property for fear of having to pay more tax (Walters, 2011). The extent to which this applies for all countries is another thing all together. In a research conducted by Addo (2010), the opinion was that majority of Ghanaians pride themselves with mansions and would spend large amounts if not all of their life savings in erecting edifices. According to Addo, at the time of construction the property owner gives very little thought for taxes and or liabilities that follow after completion of the property. The argument here is that is it that the property owners ignorant of the property rate laws? , whether there are weak systems in terms of enforcement of laws and regulations or is it just to be able to boast of being able to build a mason in their life time? Such questions hopefully at the end of the study should be answered. In addition to the criticisms, Franzsen and McCluskey (2005) further adds that it is complicated, takes a lot of time and costly to use improvements as a tax base since a lot of data is needed for the calculation of property values.

(iii) Land and Buildings as a Tax Base

Using land and buildings as a tax base is a system that is used in most industrialized countries where either a fixed or split-rate tax is used together with the current value of both land and the building to arrive at tax payable for that property. This type of tax is denoted by different names depending on the country. For instance, in the USA it is the split-rate tax, differential rating in South Africa and composite rating in Namibia.

The mode of assessment of the tax could take the form where a capital value system is applied on the current price of land as well as the annual rental value system for the revenue from the building as in countries like Japan, Kenya and Namibia (Franzsen and McCluskey, 2013). In addition, McCluskey, Bell, et al. (2010) argues that when both land and buildings are used as the tax base, it enlarges the tax base so that the tax burden for tax payers becomes less which makes it in a way more likely to be acceptable for the tax payer. Walters (2011) in supports of the idea of using land and buildings and further indicates that in the instance where both land and buildings are used, there is usually access to lots of market data which tends to be much reliable than data that involves only the use of land or only buildings.

However in spite of the forgoing support for the use of both land and building as a tax base, writers such as Franzsen and McCluskey (2005), Bourassa (2009), Franzsen (2010), Bahl and Wallace (2010) and Franzsen and McCluskey (2013) also argue that the approach involves expensive valuation processes in order to arrive at reasonable and acceptable tax values. In addition, Walters (2011) further indicate that the use of this system as a tax base has the tendency to discourage investments, requires more detailed information and also involves administrative challenges as to which of the components to be included or exempted if the need be as in instances where there are political or social consideration to be made.

The forgoing arguments from various writers about the choice of the tax base for the purposes of property rating, seems to suggest that the choice of the type of base largely

depends on the motive of the government and the taxing authority. For instance, to avert the possession of land for speculative purposes or to ensure constant revenue generation from property rate due to the immobile nature of land, a tax on land may be the ideal tax base.

Conversely, where the taxing authority or government uses buildings by taxing buildings based on the capital value, rental value or even using building characteristics then there will be the need to build a data base, preferably computerised in the form of a fiscal cadastre which could be a useful tool for future revaluations. It should be noted that in spite of the intentions of governments for choosing the appropriate tax base it is also important to highlight that the government also has the liberty to grant exemptions for tax payment obligations (McCluskey, et al., 2013).

The types of exemptions could be in the form of: complete, reduced/partial, deferred payments or credits against other taxes/fees (Franzsen, 2010; Walters, 2011). Usually properties exempted include: assets of the state, schools, hospitals, religious buildings, properties for the aged, disabled or veterans, commercial properties within enterprise zones and many others. However, Franzsen and McCluskey (2005) and Kelly, (2013) indicate that in a country such as South Africa government property is tax either full or at a reduced rate, in Malawi taxes on government property is at 50 percent and Namibia at 80 percent of the entire property value of the government. Walters (2011) further indicates that some countries for example the USA and Canada a form of compensation to local governments but not really an exemption offered in the form of Payment in Lieu of Taxes. Based on the level of exemption for any particular country, it is ideal that the coverage ratio of the country is adequate so as to maximise as much as possible revenue from property rate.

(d) Coverage Ratio

Kelly (2013) explains that the coverage ratio as the ability to capture the number of properties that qualify to be taxed in the valuation roll or fiscal cadastre, divided by the overall number of properties that qualify to be taxed within a particular coverage area at the same time measuring the accuracy of the fiscal cadastre data.

The coverage ratio according to the author enables the determination of the efficacy of fiscal cadastres, personnel ability to include all relevant property details using visual inspections, secondary data, and/or self declared information. In addition effort is made in ensuring the correct application of legally approved exemptions, reductions and tax relief policies are implemented. The second explanation of the author confirms Deskins and Fox, (2010) opinion regarding the importance of the taxing authority being administratively efficient in the compilation of the property tax roll by using both visual field surveys and secondary data on properties from different department as a form of confirmation for the information gathered from the field survey as well as ensuring that only those properties legally exempted from tax payments are excluded from the fiscal cadastre.

Additionally, Bird and Slack (2007) opine that identification of property for tax purpose in transition and developing countries is generally difficult as information is usually not complete or up to date. And cite the instance of Kenya where the fiscal cadastre contains only between 20 to 70 percent of the taxable properties registered. They further indicate that in other countries the data base is fragmented according to the various departments found in the country. In support of their opinion, De Soto (2000) also emphasizes that the right information is difficult to come across especially when needed for official purposes such as for taxation which is unpopular and everyone would like to avoid. De Cesare (2012) and McCluskey and Franzsen (2016) also re-echo the idea that studies have proven that developing countries have property coverage ratio ranging between 40 to 80 percent and

highlights the need to be proactive in order to capture a higher percentage of properties which will result in increased tax base and hence reduce the burden of property rate on the tax payer.

Studies suggest that apart from the taxing authority undertaking field survey to capture properties to be included in the fiscal cadastre, the government could also outsource the building and maintenance of the cadastre to a third party while occasionally monitoring to ensure the information given is accurate. Alternatively, self declaration of property information by owners of land and improvements could also help in the building of the fiscal cadastre in the view that where there has been changes in land use the new information given by the property owners helps in updating previous data (Bahl, Martinez-Vasquez, et al., 2008; Walters, 2011). An example is in the case of Bangalore where self declaration of property data proved to be very successful.

In spite of the arguments for self declaration and out sourcing the building of the fiscal cadastre, Bahl, Martinez-Vasquez, et al. (2008) also thinks that the process can be time consuming and bureaucratic which may have implications on the tax system in terms of the ability of the taxing authority being able to send out tax demand notice on time. In another instance to avoid all the complications associated with ensuring a good coverage ratio, Mikesell (2013) and De Cesare (2012) also advocate that the central government should be involved in building if possible a computerised and reliable fiscal cadastre to ensure equity and authenticity of the final cadastre. In furtherance, Franzsen (2010) and Dornfest (2012) also advocate for comprehensive and frequent revaluation to capture current trends of development.

From the studies of various writers above, it worth noting that the formation and updating of a fiscal cadastre to reflect current features and land uses is an important element in the property rating process and hence requires due attention and diligence.

(e) Valuation of Property Rate

For the purposes of valuation of land or improvements for property rating it is important that the valuation ratio for the country is established. The Valuation Ratio (VR) by explanation is how much a property is worth as per assessment (when depreciation has been applied), divided by in the actual value of the properties found on the fiscal cadastre' (Kelly, 2013). In addition, the author further emphasizes on the need of establishing the valuation ratio especially in instances where the rate payable are valued using any of the market base approaches as it helps to avoid discrepancies and contention in arriving at the tax payable for individual properties.

Studies undertaken by many researchers have revealed that in most developing countries the valuation ratio is generally between 30 to 40 percent. This figure therefore seems to suggest that the level of accuracy in terms of property rate assessment leaves much to be desired. The researchers further attributed the lack of expertise, financial and political reasons for low range of the valuation ratio (Bird and Slack, 2004 ; De Cesare, 2012).

Since the prime purpose for valuation of a rateable property is to establish the actual rate payable, during the valuation process the principles of highest and best use as well as current use value should be considered especially for properties whose total value are determine through the traditional market approach.

Eckert (1990) and Franzsen and McCluskey (2013) are of the view that the most efficient use of a property at a particular location helps to confirm its value in terms of how much the property would be offered for or bought with regards to its location and other attributes. However it should be noted that the reliance on the highest and best use principle in arriving

at the value may not entirely reliable since the principle relies heavily on forecasting which may be erroneous.

Franzsen and McCluskey (2013) further explains that the current use value helps to confirm the value of the property when the assessment depends on the current use of the property as at time of valuation and not for an anticipated use that may arise as a result of planning or zoning reforms. Instances which consider the current use value valuation could be found in Britain when commercial properties are being value using the average rental value approach and also in the USA when agricultural lands are valued.

Apart from considering the highest and best use and the current use value approaches during valuation, property rates could be assessed based on either the market or the non-market approach or the annual rental value approach. Within the market based approach, property valuation could be undertaken using cost, income or sales comparison methods. While with the non-market approach, valuation could be done using the flat charge, area-based, banding or the cadastral/formula value methods (Eckert, 1990; Franzsen and McCluskey, 2013; Bell, Brunori, et al., 2010; Mikesell, 2011). Other authors further emphasized that irrespective of the method being applied it is important that the assessor has adequate information about the property market and should have ample knowledge of the most suitable method to use for each category of properties (Adair, et al., 2004; Franzsen and McCluskey, 2013).

Assessment of land and improvement could be done using the Annual Rental Value (ARV), the split-rate system or the unimproved/site value system (Kitchen, 2013). The ARV is used in scenarios where there is ample information on rental values of similar properties that have been recently rented with regard to the time or date of the tax assessment. Hong Kong and Singapore are noted for the use of the ARV because of the functional rental market of those countries on the other hand the UK uses the ARV for only non-residential properties.

On the other hand, New Zealand, South Africa, Kenya, Namibia and Swaziland are noted for the use of the split system of LPT assessment where different rates are applied. For instance, Namibia applies higher rates on unused land than improved land to discourage the holding of unused land. Under this method, the value of the physical nature of the land without any alterations is what is considered (Franzsen and McCluskey, 2013).

On the contrary, Franzsen (2010), Dornfest (2012) and McCluskey, et al. (2013) are of the view that not only is market information a necessity but also fiscal cadastre should be reliable, assessors should be competent and the valuing authority should have the political backing of the government. Evidently, the ultimate goal in valuation for the purposes of property rating is to arrive at a fair market value of properties and to avoid revenue losses as has been happening in most developing countries such as Brazil, Ghana, Uganda and Malaysia. The collection of property rate after the assessment procedure is another excise that should be give equally due attention by the Rating Authority.

(f) Collection of Property Rate

The billing and collection of property rate according to Kitchen (2013) and Mikesell (2013) is that it is an administrative and not a policy making role hence should be limited and performed by the local taxing authority as pertains in Ontario in Canada, Philippines, Hungary, Greece, Switzerland and the Netherlands. In addition, the writers argue the local government has the advantage of being familiar with the local conditions in terms reasons for low collection ratios and non compliance and hence can develop and implement systems which would make the collection process easier and less expensive.

Furthermore, the authors suggest that there should a form of co-administration for property rating where the central and local government are involved in valuation and collection

process as is being practiced in countries like UK, Germany, Colombia Turkey and New Zealand. However if this is the case, then the concept of fiscal decentralization as advocated by Oates (2008) and Slack (2013) is likely to be defeated since the central government would still have some degree of autonomy in the taxation process. It is worth noting that in the Ghanaian context, valuation and collection of the property rate is by local government-District Assembly. This therefore fulfils the local government's autonomy with respect to property rating granted the Local Government Act, (Act 462).

In contrast to the views expressed above, Mikesell (2013) advocate that the collection function for property rates should be vested in the central government for the purposes of effective monitoring, transparency and accountability. An example of this system is that practiced in Russia where the Central Ministry of Taxation is tasked with the responsible of collecting all taxes within the country.

Aside the debate of which level of government is the issue of how the tax will be collected and enforced. Studies indicate that whereas in OECD countries the collection and enforcement rate is almost a 100 percent, developing countries have a collection as well as enforcement rate of between 30 to 60 percent (Bird and Slack, 2004 ; Kelly, 2013). Again, emphasizes was made that the ability to increase collection rates, would extensively depend on understanding the reasons for default and non-compliance and then make possible suggestions in order improve enforcement for collection of property rates. From this notion the indication is that property rate collection should be accorded equal attention as given to any of the steps within the property rate tax identity to ensure that the maximum revenue that can be generated is captured (Kelly, 2013).

2.7 Property Rate as a Land Value Capture Instrument

Property rate imposed on land, improvements, or both land and improvement according to various researches is one of the renowned methods through which value increments resulting from public action as postulated by Henry George could be tapped for the benefit of the community. Additionally, researchers are of the opinion that property rates help to encourage the efficient use of land thereby increasing land values for purposes of tax as well as help to reduce distortions in the property market (Dye and England, 2009 ; McCluskey and Trinh, 2013).

Furthermore, Walters (2011) indicates that property rate becomes a good land value capture instrument when both land and improvement forms the tax base and a split rate is used in the valuation process but with a heavier tax on land than the improvement. According to the writer land is fixed in nature, visible, not easily destroyed (only in rear cases of natural disasters) and the value of land appreciates with the investment of an infrastructure. However, when only the improvement is tax, the property tax fails to be a land value capture instrument but rather more of a cost recovery instrument since the revenue generated just caters for the infrastructure provided ((Franzsen and McCluskey, 2013)

It follows that for property rate to effectively capture land values, the fiscal cadastre should be updated to reflect current land values resulting from investment by the public, change in land use, new zoning regulations among others. The valuation process should cater for the value increment considering the market value of the property; collection rate should be high enough to capture the value increase while sanctioning defaulters in the bid to increase the property rate revenue (Walters, 2011)

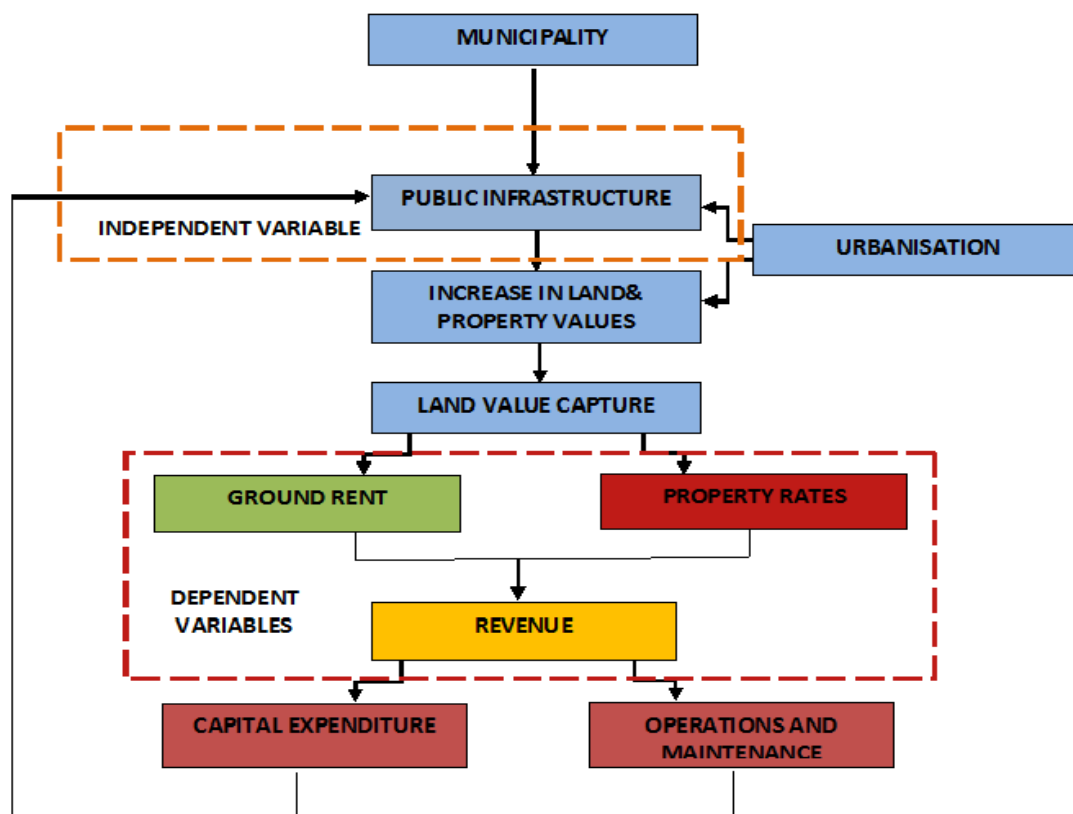
2.8 Conceptual Framework

With the review of literature from a variety of sources, the conceptual framework below summarizes the views of the various authors in terms of the linkage between the various concepts considered in this research. It was revealed the urbanization necessitates the need for governments to meet the needs of the neighbourhood by providing infrastructure. In addition, increase in urbanization results in increase demand for land and property, while infrastructure provision in most instances reviewed, leads to increased land and property values.

Various writers according to the review of literature are of the opinion that once land and property values increase usually as a result of an action by the government, though individual activities could also cause land and property values to increase, it should be fair for the community through the concept of land value capture can share in the value increment using various instruments.

For this research, attention is given to the use of property rate and land leasing (ground rent) as instruments of land value capture for generating revenue for the local government. The revenue generated is used in the provision of public infrastructure and services for the benefit of the general public. Furthermore, it was revealed that in the provision of public infrastructure, provisions should also be made for the maintenance of the infrastructure provided to ensure sustainability of the infrastructure provided. It is against this background the conceptual framework found in figure 2 below was developed.

Figure 2: Conceptual Framework



Source: Author's Construct (2016)

Chapter 3: Research Design and Methods

3.0 Introduction

This chapter gives a description of the research strategy and how the study was undertaken to meet the research objective in addition to answering the research question. The chapter includes a repetition of the research question, operationalisation of key variables, the research strategy, sampling method and procedure, data collection as well as the explanation of how data analysis was done.

3.1 Research Question(s)

Research questions from the provisional research questions remain unchanged but have been repeated and justified.

Main Research Question:

To what extent is the Ejisu-Juaben Municipal Assembly (EJMA) generating internal revenue from property rate and ground rent as a result of the development of the Boankra Inland Port?

Specific Questions:

- What is the change in the property and land values in the Ejisu-Juaben Municipality due to development of the Boankra Inland Port?

(Justification: This question seeks to explain whether there have been changes in terms of value increase or a reduction of land and property values within the EJMA as well as whether the change can or cannot be attributed to the Inland Port infrastructure.)

- What is the procedure for assessing and capturing property rate and ground rents in the EJMA?

(Justification: This question will investigate and describe how the valuation procedure of property rate and the assessment of ground rent are done and also ascertain the frequency at which each of them is revised to reflect the current values of property and land. And in addition describe collection mechanism in place to increase revenue generation for EJMA)

- How has the revenue generation from the property rate and ground rent of the EJMA been influenced by the development of the Boankra Inland Port infrastructure?

(Justification: This question will seek and explain how the revenue generation of the EJMA is being increased, reduced or there is no change in the revenue collected after the development of the Inland Port project. By comparing the budgeted revenue against the actual revenue collected for property and ground rent before after the development of the Inland Port infrastructure with the aim at answering the research question.

- To what extent does the revenue generated from property rate and ground rent finance public infrastructure and maintenance?

(Justification: This question will seek to explain how the revenue generated from property rate and ground rent is contributing as part of the internally generated revenue for the EJMA to be used to provide and maintain public infrastructure for the Municipality.

3.2 Operationalisation: Variables, Indicators

3.2.1 Definition of the Variables

Table 2: Definition of the Variables

Variable	Definition
Property rate	<p>A recurrent tax liability levied on land, immovable improvements on land or on only improvements (McCluskey, et, al., 2013).</p> <p>A tax imposed on the worth or any income that emanates from property (Abbott, 2008; McCluskey, et, al., 2013)</p> <p>Property rate is a tax on personal worth or inheritance and transfer of property (Bahl, Martinez-Vasquez, et al., 2008 ; Norregaard, 2013)</p> <p>In this study, adopted definition is a recurrent tax liability that is levied on the value of improvements(McCluskey, et, al., 2013)</p>
Ground rent	<p>Ground rent or land tax is the periodic payment for usage of the land which is paid annually during the duration of the lease (Hong, 2013).</p> <p>The ground rent is the economic or commercial rent of the land (De Soto, 2000; Neutze, 2003;Dye and Merriman 2006).</p> <p>Ground rent is an annual payment for the use of land arrived at through mutual consensus between the freeholder⁹tax authority and the leaseholder by applying a discount factor, equivalent to the interest rate on the capital to the land value to arrive at the exact ground ratepayable(Needham, 2003).</p> <p>In this study, the ground rent is defined as the yearly payment by a lessee for the use or occupation of land that is equivalent to discounted value of land by the application of a discount factor to the economic or commercial value of the land arrive at the exact amount payable(Hong, 2013; De Soto, 2000; Neutze, 2003; Dye and Merriman 2006; Needham, 2003)</p>
Land Value	<p>Land values are derived as a result of the activities that take place on the land (Alonso 1967; Muth 1969)</p> <p>Land value is the appraised sum that land can sold and bought at the time of the assessment between a willing buyer and a willing seller in an open market where both parties acted intelligently, cautiously and under no duress (Pagourtzi et, al. 2003, p385)</p> <p>Verhye (2009, p4) also explains ‘the market value of land as the agreed price that land could be sold under private contract between a willing seller and an arm’s- length buyer at the instance of it being valued’.</p> <p>In this study, land value is the price that land can be exchanged between a willing seller and willing buyer who act intelligently and carefully without any external pressure in an open market for the purposes of undertaking an activity on the land (Alonso 1967; Muth 1969; Pagourtzi et, al. 2003, p385; Verhye (2009, p4)</p>

Source: Authors construct (2016) showing the adopted definitions of the main variables for this research.

⁹ Freeholder in this instance is when the land belongs to the government and leased on a public lease basis

3.3 Operationalisation of Variables

Table 3: Operationalisation of Variables

Main research question: To what extent is the Ejisu-Juaben Municipal Assembly (EJMA) generating internal revenue from property rate and ground rent as a result of the development of the Boankra Inland Port?				
Concept	Variable	Indicators	Data source	Data collection method
Land and Property values	Quantum of change for land and property values	Land values before and after the development of the Boankra Inland Port	Valuers, Estate Brokers, OASL ¹⁰ , Traditional Leaders property owners, EJMA	<u>Primary data:</u> Semi Structured-Interview Questionnaire Observation
		Property values before and after the development of the Boankra Inland Port	Land and property owners	<u>Secondary data:</u> Records of land sales Records of property register Population and Housing Census records
Infrastructure	Inland Port	Ownership of the infrastructure	EJMA	<u>Primary data:</u> Semi Structured-Interview
		Coverage area/m ² of the Port compared to total land coverage of Boankra Auxiliary services provided	Land and property owners	<u>Secondary data:</u> Policy documents, Letters and correspondence, News papers, Online publications <u>Primary secondary data</u> Maps, Satellite Images
Ground rent	Institutional and legal framework arrangements regarding ground rent	Obligations of the Institutions Legal basis for collection of ground rent	Constitution of Ghana Relevant Statutes and Regulations regarding ground rent OASL	<u>Primary data:</u> Semi Structured- Interview Observation <u>Secondary data:</u> Documents and Statute review
	Land tenure	Customary and statutory provisions regulating land tenure Eligibility to pay ground rent	Constitution of Ghana Statutes Regulations National Land Policies on Land tenure Traditional Leaders	<u>Primary data:</u> Semi Structured <u>Secondary data:</u> Document and Statute review:
	Assessment of ground rent	Method and bases used to calculate the ground rent	OASL	<u>Primary data:</u> Semi- Structured Interview

¹⁰OASL is the abbreviation for Office of the Administrator of Stool Lands. The authority in charge assessing and collecting ground rent for stool lands.

		Frequency of assessment		<u>Secondary data:</u> Records and documents from the land register
	Collection of ground rent	Collection mechanisms/ structures Level of awareness of property owners	OASL Annual Budget of EJMA Land and property owners	<u>Primary data:</u> Semi- Structured Interview Questionnaire <u>Secondary data:</u> Budget and accounting records
Property rate	Institutional and legal framework arrangements regarding property rate	Obligation of the institution responsible for property rate Legal basis for setting the tax rate Tax bearer	Constitution of Ghana Statutes Regulations	<u>Primary data:</u> Semi- Structured Interview <u>Secondary data:</u> Documents and statute review
	Property rate base	Base for calculation of the property tax (land and/or improvement) Number of rateable properties (coverage ratio) Level of exemptions	Constitution of Ghana Statutes Regulations Land Valuation Division (LVD) Valuation List ¹¹	<u>Primary data:</u> Semi- Structured Interview Observation <u>Secondary data:</u> Documents and statutes review <u>Primary secondary data</u> Maps, GIS Cadastre
	Valuation/ assessment of property rate	Valuation procedure Frequency of revaluation of properties	Constitution of Ghana Statutes Regulations Land Valuation Division of Regional Lands Commission	<u>Primary data:</u> Semi- Structured Interview <u>Secondary data:</u> Documents and statutes review
	Collection of property rate	Collection mechanisms Efficiency of collection mechanism	Statute Regulations LVD Property Owners	<u>Primary data:</u> Semi- structured Interview Questionnaire <u>Secondary data:</u> Documents and records of revenue mobilization for property rate

¹¹ The valuation List is the same as the fiscal cadastre

Revenue	Revenue collection	Revenue mobilization mechanisms Revenue generated annually from property rate and ground rent before and after the Inland Port project Revenue collected as against budgeted revenue	Annual budget of EJMA OASL LVB	<u>Primary data:</u> Semi- Structured Interview Observation <u>Secondary data:</u> Documents and records of revenue from property rate and ground rent from the various institutions Budget Reports of EJMA
Public infrastructure	Revenues generated as against capital expenditure on public infrastructure	Total revenue for property rate and ground rent annually as a percentage of the IGF ¹² Total annual expenditure from the IGF on public infrastructure	Annual budget of EJMA Land and property owners	<u>Primary data:</u> Semi- Structured Interview Questionnaire <u>Secondary data:</u> Budget documents and records of EJMA. Letters and correspondence Contract documents

Source: Author's construct (2016) showing the operationalisation of variables to researchable indicators, sources of data and data collection methods employed.

3.4 Research Strategy

The chosen strategy for this study was the single-embedded case study method to enable the researcher answer the main research question as postulated by Blatter and Blume (2008). The choice of the single-embedded case study strategy was because it provided the researcher with empirical evidence into the phenomena or case being undertaken. Most especially when in reality the limit of the study and the context was not very clear. With the use of different sources of information as pertains with the case study approach, in-depth understanding of the research was hoped to be gained. As such the Ejisu-Juaben Municipality was the context chosen to ascertain the casual links between the BIP as a unique project and the relationship it may have on property rate and ground rent as land value capture tools as local revenue generation source for the provision of public infrastructure within the EJMA.

The case study approach the use of multiple data sources like primary data(interviews, questionnaires, observation), secondary (letters, Acts and Statutes) and other primary-secondary sources (maps) was considered to be the most appropriate strategy for gaining the required in-depth information and knowledge in an attempt to answering the 'how and other probing' questions in this study. In addition by adopting the case study method which allows for the use of multiple data sources, triangulation of data can be attained while also ensuring responses from various respondents are truly representative of reality. In this regard, the validity of the research is also enhanced to a great extent (Patton, 2001; Verschuren and Doorwaard, 2010; Van Thiel, 2014).

¹²IGF refers to the internally generated funds which comprises of revenue from property rate , ground rent and all non land related revenue indicated in Annex 7.

The study made use of explanatory form of analysis. The explanatory method sought to explain gave a clearer understanding of the study by ascertaining and explaining the processes involved with both property rate and ground rent computations, the changes in property and land values in relation to the effects on revenue generation capacity of the EJMA within the time frame of 2006 to 2015 which covers the period before and after the implementation of the Inland Port project and the extent to which the revenue was used to provide and maintain public infrastructure for the municipality. (Bryman,2004;Yin, 2008; Woodside, 2010).

To implement the chosen strategy, two locations Boankra and Onwe was selected to compare land values before and after the implementation of the Inland Port development. The choice of Onwe was based on the premise that the coverage area of both towns are of the same size of 950 acres and that there is no infrastructure as the Inland Port. As control factors for the choice of the locations, the 2010 Population and Housing Census of the Municipality indicated that there is evidence of land conversion from agriculture use to predominately residential and commercial uses with only a minimal number of light industrial uses as is happening in Boankra and Owne(GSS, 2014) in addition, other factors that are likely to influence land values such as location, demand and supply of land, zoning regulations was considered for in Onwe and Boankra.

3.4.1 Limitation of the Case Study Strategy

Notwithstanding that the case study strategy aids gaining in-depth knowledge and understanding for research purposes, the disadvantages of the case study strategy include difficulty in generalizing results to other locations because the case under study is only unique to the context being researched. In this regard, findings from this study can only apply to the case study area or in other locations that have similar infrastructure or characteristics. Additionally, since the usual form of presentation is narrative in nature, opponents of the case study method opine that there may be bias in the researcher's interpretation of result to favour the research opinion (Flyvbjerg, 2006; Verschuren and Doorwaard, 2010). The element of bias was addressed by reporting findings exactly as obtained from interviews and survey results. Other challenges related to the case study strategy include validity and reliability.

3.4.2 Validity and Reliability

Validity and reliability are both important things considered in any study if it is to meet high quality standards. Validity deals with the level of accuracy a variable is incorporated into a concept and how well the selected unit of measurement is able to measure the variable to arrive at a true reflection of what the research should result in (Bouma and Atkinson, 1999). Validity comprises internal validity is the degree to which one is able to measure what is intended to be measured and external validity, deals with how the results attained is generalized to a bigger scope.

To ensure validity, primary and secondary data sources were employed to ensure that in-depth information concerning the study is obtained from the related stakeholders and respondents within the study area. A well structured and designed questionnaire in terms of its clarity and simplicity was used together with a semi structured interview guide. To ensure that the required data was obtained, the responds was triangulated with secondary data to confirm the validity of the research (Zucker, 2009).

Reliability in the opinion of Joppe (2000) is the ability to repeat the study and attaining same or similar results when a similar or the same approach is used. In another version Goswami (2011) and Sarmah and Hazarika (2012) also refer to reliability as the ability to achieve consistency or uniformity throughout a study using the same series of measurements for example questionnaires in another study. With case study research since data collection

formats usually makes use of open and to an extent informal data collection design such as observations, review of secondary information and interviews, issues of reliability could be a challenge in terms of bias on the part of the researcher (Nueman, 2006).

The issue of reliability was addressed by the use of a case study procedure where all steps, data and records was efficiently, accurately and adequately planned and recorded in the research log book. This enabled the process to be reviewed and checked later to ensure no detail is left out or overlooked to aid in the report writing process so that when the study is to be repeated the same results can be achieved. (Miles and Huberman, 1994; Yin, 2008; Van Thiel, 2014).

Generally during the research, the researcher experienced time constraints to conduct interviews at the various government offices as well as administering and collection of questionnaires and other vital data. Administrative procedures and the technical nature of the duties of officials caused challenges for the researcher in booking appointments for interviews. In addition, the researcher experienced challenges with getting access to confidential documents and information. Financial constraints to an extent also had an impact on the study

3.5 Data Collection Methods

It is important as part of this study to choose the most suitable data collection method to achieve the research objectives and questions as have been operationalised in table 3 above. The study used qualitative and quantitative methods by gathering data from primary, secondary and tertiary (primary-secondary) data sources. Yin (2005) submits that primary data sources could include interviews, questionnaires, personal observation of documents, maps and properties. The secondary data included data from existing surveys, academic journals, Laws and regulations (national and local), websites while the tertiary or primary-secondary data source included unpublished information such as GIS documents, census data, manuscripts or atlases.

To triangulate information gained through the interviews, data from the secondary sources (published and unpublished) and responds from survey were used.

3.5.1 Primary Data Sources

This kind of data consists of data that has not been modified or published. In this study, the primary data consisted of the use of data in the form of questionnaires and semi-structured interviews to collect information from the sampled respondents. Yin (2005), opines that a questionnaire is set of well structured questions that could be open or closed-ended administered to respondents to solicit their opinion about a study though the information gained may not be in-depth. The questionnaires were administered by the researcher at the offices and to the property owners after their permission had been sought.

Interviews were conducted to key stakeholders in the EJMA who have knowledge and information about the study to obtain in-depth information. A semi-structured interview guide designed based on the concepts, variables and indicators which will lead to answering the research objective and questions was used for the interviews. In order to interview respondents of the EJMA, advance appointments with the management were arranged. During the interview, the questions on the interview guide were asked in no particular order to enhance the flow of the interview while further probing questions that may not appear on the interview guide was also asked to gain access to in-depth information. Responses were written on the interview guide by the researcher and recorded in instances when the interviewee granted permission for an audio recording to ensure no detail is missed.

According to Yin (2005), an interview is communication between an interviewer and an interviewee with the aim of soliciting data, opinions and experiences of the interviewee with regards to a particular study. In another version, Gill, Stewart, et, al. (2008) also opine that interviews are generally used for social because it enables respondents give more in-depth information which results in the interviewer gaining access to more detailed information and discoveries than initially perceived.

Furthermore observations were made especially during the interviews and during the scrutinizing of the secondary data sources.

3.5.2 Secondary Data

Secondary data sources used as a compliment and authenticity check for the primary data collected included published information from scholarly literatures, journals, News paper articles, the Constitution, Acts, Reports, Letters and correspondence, record of land and property transactions, maps and satellite images of the EJMA was used to compliment the primary data collected. This corroborates the view of Van Thiel (2014) that secondary sources of data are documentary data obtained from published or documented data. Again, Stewart and Kamins (1993) assert that the use of secondary data gives the researcher an added advantage for gathering information as compared with using the only primary data but they also cautioned researchers to scrutinize and evaluate the secondary data prior to using it.

3.5.3 Sampling Technique

Sampling techniques adopted for the study included purposive sampling, snow ball approach and the survey method.

Purposive sampling was employed to identify 11 respondents for interview because the research requires critical responds from important actors within the EJMA to provide authentic and in-depth information for the study. The purposive selection was founded on perceived knowledge on the study, rank and years of experience on the job within the organization. Purposive sampling which is a non-probability sampling method according to Saunders (2003), allows the researcher through their judgment to discover and gain a deeper understanding regarding the study by choosing respondents who can offer information that suitably answer the research objective(s) and question(s).

Within the sample size of 11 respondents at the institutional level, Heads and Deputy Heads of Departments and Field staff were interviewed based on their level of knowledge concerning the study, skill and their years of experience which ranged between 7 to 22 years. At the traditional level, interviews were conducted with the Chief of Boankra who had occupied the Stool for 17 years and the Owne Chief together with his Linguist. The Owne Chief invited the Linguist because the Linguist knew more about the past than he (Chief) did since he had occupied the Stool for less than four (4) years while his Linguist had been there for 35 years.

The sample size was considered as being adequate for this study since it is in tune with the opinion of Teddlie and Yu (2007) who indicates that purposive sampling helps select a representative study population equipped with in-depth information when a case study approach is being used in research so that results can be generalized within the context of the research.

The Snow Ball approach due to their limited numbers and ability to locate within the Municipality as most of them are private enterprises and could only be easily located upon being introduced or directed by a fellow colleague. The two (2) Estate Brokers that were interviewed had been practicing in the municipality for 7 and 22 years while the Valuer had

been working for 9 years in the Assembly. Table 4 below shows a list of interviewees specifying their rank, years of experience and roles within the municipality. The rest as per the table were from the government institutions connected with the study within the municipality.

Table 4: List of Interviewees

Names of Sub-Groups	No. of Interviewees	Rank/Position	Years of Experience	Role/Function(s) within the EJMA
Office of the Administrator of Stool lands (OASL)	2	Deputy Lands Officer/Valuer	13	Responsible for the administration of Stool lands
		Principal Stool Lands Officer	11	
Land Valuation Division (LVD)	2	District Lands Officer/Valuer	9	Responsible for the Valuation of Property Rate and assessment of land and property values
		Chief Technical Officer	25	
Municipal Planning and Coordinating Unit (MPCU)	1	Assistant Development Planner	12	Responsible for the physical and development planning of the municipality
Budget/Accounts Department	1	Principal Budget Officer	11	Responsible budgets and accounts of EJMA
Valuers /Estate Brokers	2	Real Estate Agent	7	Real estate agency and valuation services
		Valuer/Real Estate	22	
Traditional Authorities	2	Chief of Boankra	6	Responsible for the traditional administration of the stool lands
		Chief Linguist of Owne	17	
Ghana Shippers Authority	1	Managing Director	35	Responsible for the management of the Boankra Inland Port
Total	11			

Source: Authors construct (2016) showing list of interviewees, ranks and summary of their roles.

In addition, a survey was conducted among 240 property owners with the intention of gathering primary data from property owners. The sample size calculator proposed by Spiegel and Stephens (2006) was used to select the sample size of 240 property owners to be administered with questionnaires. Stratified and random sampling was used to stratify and select the property owners according to the type of property as being industrial, commercial and residential as recorded in the Valuation List of EJMA. Ratios were apportioned to reflect the composition of the various types of properties as per the cadastre. Simple random sampling was employed to select the properties within the various strata in order to ensure that each property had an equal chance of being selected and also ensure that the entire geographic area within the area under consideration was covered during the administration of the questionnaire. Out of the 240 questionnaires administered 180 of the questionnaires were received which indicated a response rate of 75 percent. The property owners were above the

18 years of age which by the Laws of Ghana are eligible to own property and in addition had lived in the municipality for between 1 to 39 years.

3.6 Data Analysis Methods

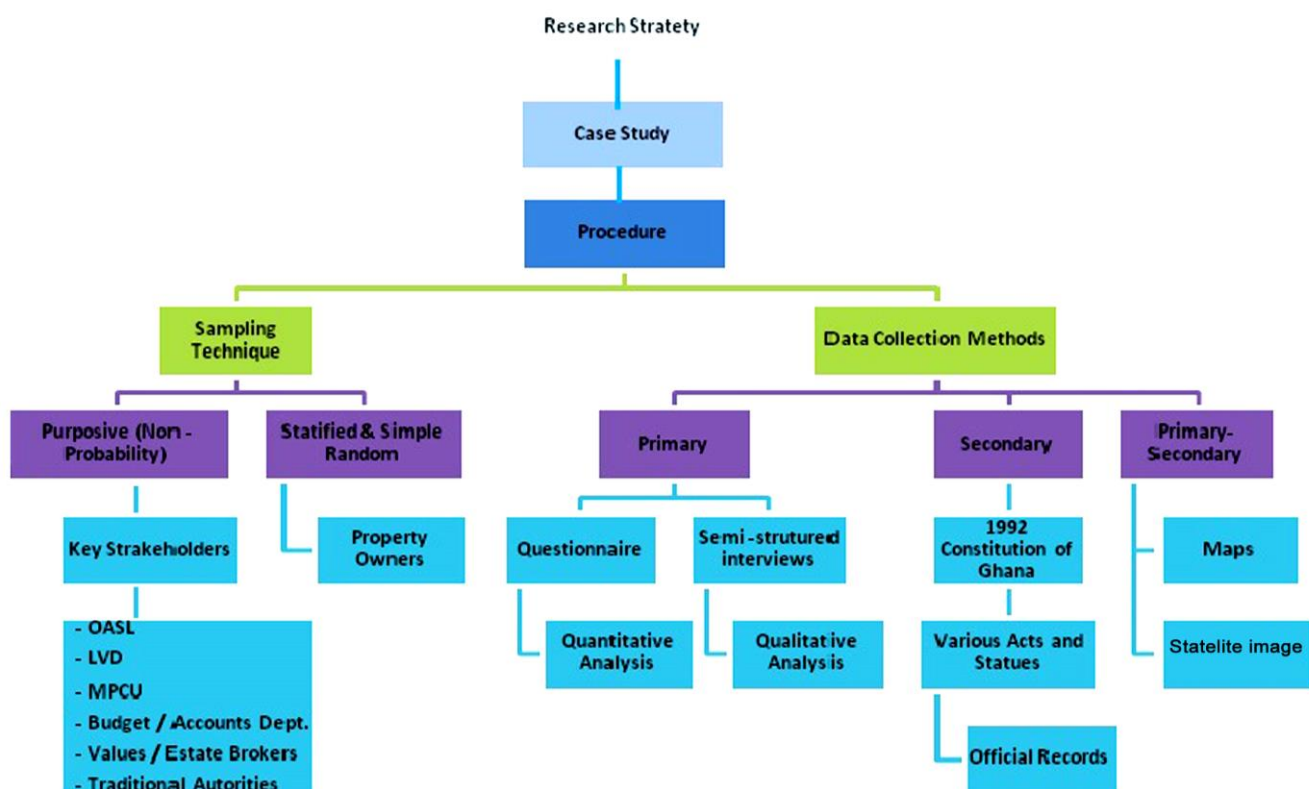
Analysis of the data was done through the use of explanatory analytical approach through conscientious examination and explanation of field data and information. The qualitative data analysis took the form of transcribing all the interviews and coding the responses with the aid of the Atlas-TI software so that inferences could be made from the responses. The code list created was based on the variables and further narrowed down to the indicators as seen in Annex 1 which indicates a sample of codes used for coding responds from the interviewees.

In addition, quantitative data analysis was done with the aid of the Microsoft Excel software to generate the graphs, percentages and frequency tables in order to give clear representation and understanding the data obtained from the field. The quantitative analysis was done based on the responses from the questionnaires, land and property data as well as revenue data obtained from the field.

3.7 Précis of Research Design and Methods

The research design and methods has been summarized in figure 3 below.

Figure 3: Précis of the Research Design and Methods



Source: Authors Construct, (2016) showing a Précis of Chapter 3.

Chapter 4: Research Findings

4.0 Introduction

This chapter entails research findings and analysis from semi-structured interviews of key experts at the various government departments and responds from the community level. At the department level respondents comprised of Directors, Head of Departments and Field Assistants. Within the community, responses from questionnaires during the survey among property owners has been triangulated with information from the interviews, observations and secondary data sources regarding the impact of the BIP on land and property values and the use of property rate and ground rent to generate internal revenue for the EJMA.

The structure of the chapter begins with table 5 showing a coded list of interviewees to help indentify responses from the various interviewees in addition to a concise portrayal of the surveyed population. This is followed by profile of the study area, then an analysis of the legal context regarding land tenure, land leasing and ground rent and property rates in Ghana. In the subsequent sections the analysis of empirical findings form information gathered from the various interviews, secondary data sources and personal observations of the variables as pertained in the operationalisation table will also be presented. The chapter ends with a summary of findings and analysis.

The key respondents for this study are represented according to codes R1 to R11 as shown in the table below. As shown in table 4, the respondents ranged from heads of departments to technicians depending on the level of experience, knowledge and information they had to offer. Key respondents for the interviews were selected at the local government level from offices and traditional set up within the EJMA who considered having in-depth knowledge and vital information for study as discussed in 3.5.6.

Table 5: Coded List of Interviewees

Respondent code #	Organization/Institution	Rank/Position
R1	OASL- Kumasi	Stool Lands Officer/Valuer
R2	OASL- Ejisu	Stool Lands Officer
R3	Land Valuation Division	Lands Officer/ Valuer
R4	Land Valuation Division	Technician
R5	Municipal Planning and Coordinating Unit (MPCU)	Development Planner
R6	EJMA-Accounts Unit	Budget Officer
R7	Estate Broker 1 – Ejisu	Real Estate Agent
R8	Estate Broker 2 - Ejisu	Valuer/ Real Estate Agent
R9	Ghana Shippers Authority- EJMA	Chief Officer
R10	Traditional Authority 1	Chief
R11	Traditional Authority 2	Chief Linguist

Source: Authors Construct, (2016) showing codes for interviewed respondents

Additionally to triangulate information from interviewees and secondary sources, a survey was conducted. The surveyed population from Boankra and Owne consisted of 180 property owners out of an anticipated 240 property owners which resulted in a response rate of 75 percent. For representative distribution of questionnaires, the proportion of properties for residential, commercial and industrial as found on the Valuation List was used as a bases as follows: 164 residential, 11 commercial and 5 industrial properties. The property owners were above 18 years old implying they had the legal right to own property and had lived in the municipality between ranges of a year to 39 years.

4.1 Profile of Study Area

Ghana as a nation within the West African sub-region has a population of 27,409,892 people with a growth rate of 2.25 % (United Nations, 2015). The nation has ten (10) regions of which the Greater Accra is the regional capital of Ghana followed by the Ashanti region within which the Ejisu-Juaben Municipality is located as shown below.

Figure 4: Map of Ejisu-Juaben in the Regional and National Context



Source: Google Earth (2016)

The Ejisu-Juaben Municipal Assembly (EJMA) was established in 2007 based on the LI (1890) in fulfilment of the decentralization policy in Ghana. Within this Municipal Assembly are seventy one (71) Assembly Members, two (2) Parliamentarians and a Municipal Chief Executive. The political and administrative authority is derived from the Local Government Act 1993, Act462.

As one of the 30 political and administrative districts in the Ashanti Region of Ghana, EJMA is centrally located within Latitude 1° 15' N and 1 ° 45' N and Longitude 6° 15' W and 7° 00' W sharing borders in the north and north west with Sekyere East and Kwabre East Districts, to the south are Bosomtwe and Asante-Akim South Districts, Asante-Akim North District in the east and the Kumasi Metropolitan Assembly to the west.

For more than a decade, the EJMA has witnessed rapid urbanization from rural to peri-urban status in the ratio of 65:35 percent. The Municipal has a population of 203,762 at a growth rate of 2.3 percent and a coverage area of approximately 637.20 km² which is about 10 percent of the total area of the Ashanti Region (Ejisu-Juaben Municipal Assembly, 2015). The 2010 Population and Housing Census indicated that the housing stock for the Municipality was 34,466 with an annual increment of 17 percent (Ghana Statistical Service, 2014). An interview with R5 indicated that

“the housing stock as 2015 was approximately 77,564 which is about three (3) percent of the housing stock in Ashanti Region. Out of this number 15 percent are uncompleted or improvised houses”.

The approximate number of housing stock seem to suggest that due to the presence of the Inland Port there has been a lot of investment in building properties within the municipality for rental purposes. Field investigations revealed that majority of the properties remain unoccupied because the property owners built in anticipation of renting the properties to workers of Port and auxiliary industries. However since the BIP project is not fully completed activities in and around the location are not brisk. The occupancy rate for the municipality could not be obtained by the researcher. The predominate source of employment about a decade and half ago was farming, fishing and Kente¹³ weaving. However the trend of employment is steadily changing to more of commercial and administrative forms of employment. The shift from agricultural activities could be partially attributed to the increasing demand for land and other purposes such as residential, commercial and industrial instead of farming.

Services and infrastructural provisions that are found with the Municipal area include a network of both major and feeder roads, District hospital, police and fire stations, first and second cycle educational institutions and the Spiritian Catholic University, banking and financial services, market, electricity and water services as well as sanitation and waste management services. The strategic location of the Municipal with the Ashanti Region and for that matter Ghana, has earned it the opportunity of the only inland port in Ghana being located in its jurisdiction. It is therefore imperative to consider infrastructure provision and the effects on land, property and revenue for the local government.

4.1.1 Infrastructure

Studies from authors like Evan-Cowley (2006), Borrero et, al. (2011) and Alterman among others have shown that, infrastructure provision is important for economic, political and social development. This is because an infrastructure has the potential to promote fortune and growth of a nation, wellness of the citizens and even the environment within which the infrastructure is located. It is for this reason that this research is focusing on the Boankra Inland Port within the EJMA in terms of the impact on the municipality's local revenue generation and how it is used to provide and maintain other infrastructure for the municipality

4.1.2 Brief Overview of the Boankra Inland Port

The development of the Boankra Inland Project (BIP) in the EJMA by the government of Ghana is in line with the Ghana Trade and Investment Gateway Program (GHATIG) had the primary objective of achieving rapid economic growth. This is to enhance the economy through transforming the Nation into a manufacturing and value-added processing hub, establishment of free trade and export processing zones and by liberalizing air and marine transport systems. In addition this will encourage neighbouring land-locked countries access to easy and reliable freight forwarding and clearing systems.

The BIP is located 27 Kilometres from Kumasi in the EJMA in the Ashanti Region along the Kumasi-Accra highway. It occupies approximately 400 acres/160 hectares with the Penema stream running through the site as seen in Annex 3 The site was acquired by the government under the auspices of the Ghana Ports and Harbour Authority and the Ghana Shippers Authority in line with the provisions of the Shippers Authority Enactment Decree 1974, (NRCD 245) for the development of the Inland Port.

¹³Kente is the local Ghanaian fabric.

During the interview it was revealed that the land on which the port is situated had been declared as a Government acquired land for future development, therefore those who were found to have encroached on the portion covered by the Inland Port were evicted without any compensation paid to them. Secondary information through correspondence and documents made available to the researcher confirmed that the BIP is governed by the Free Zone Act 1995, Act 504 which supports in addition to the Inland Port, and other light industrial or commercial activities that may be directly or indirectly connected with the Port in order to decongest the Country's Seaports.

The institutional framework for the BIP includes the Government of Ghana through the Ghana Ports and Harbours Authority and the Ghana Shippers Authority, the Free Zone Board (under the Ministry of Trade and Industry), the Ejisu Stool, EJMA, Customs Excise and Preventive Services, the Ghana Railway Authority and the Ministry of Finance. The roles and duties for the various entities range from the government being the owner through to the enforcement of legislations, permits, licenses, taxes and duties that may influence the Inland Port facility and its current and future associates.

The Inland Port facility is to be developed in three (3) major phases. The first phase of the development occupying 42 hectares between the Penema stream and the Kumasi-Accra Highway has been completed and is in use. It comprises the Administrative offices, storage facilities as well as the Custom Excise and Preventive Check Point as shown in Picture 1. The second phase which is under construction involves the extension of the railway line link for Tema and Tarkoradi Harbours to the Inland Port at Boankra. While the third phase will comprise of residential, commercial and light industrial estate for sale and rental purposes.

As part of social corporate responsibility of the BIP, during an interview, R9 indicated that

“two schools have been built for the Boankra and Hweriso communities, a library complex for Manhyia township. The Boankra, Hweriso, Etia and Manhyia townships have been connected to the National Electricity grid as well as the Mampong Water Station and in addition, the Boankra Township has been linked with telephone and internet services”.

Picture 1: Administration Block of the Boankra Inland Port



Source: Author, 2016

As a decentralised municipality, the EJMA should be in a position to provide public infrastructure and services for the inhabitants within the municipality. It is of essence that adequate revenue is mobilised for such functions. Hence an overview of the sources of revenue available to the municipality is presented next.

4.1.3 Overview of Revenue Sources for the Ejisu-Juaben Municipal Assembly

The EJMA has three (3) main sources of revenue namely; Internally Generated Funds (IGF), Transfers from the Central Government and Funds from Donations. The composition of the IGF is spelt out according to the Sixth Schedule of Act 462 as found in Annex 7 which describes the components of the IGF. Transfers from the Central Government comprises of the Basic and Special Transfers. The Basic Transfer is the District Assembly Common Fund (DACF) while the Special Transfers which are given to the Municipality for specific project comprise of the District Development Facility (DDF), Urban Development Grant (UDG) and Capacity Support Fund (CSF). The Funds from according to the Account, take the form of personal gifts and donation residents and organizations within the municipality as well as from foreign agencies. An example of such a donation is the Municipality's Street Naming and Addressing Project (SNAP) currently being undertaken that is being sponsored by the German Technical Cooperation Agency (GTZ). For purposes of this research, the Table 6 below shows the summary of the IGF for the EJMA from 2006 to 2015 as obtained from the Accounts Unit of the Municipality.

Table 6: Composition of Actual Amounts of the IGF of the EJMA (2006-2015)

Year	Property Rate and Ground Rent (US\$)	Non-Land Related (US\$)	IGF (US\$)
2006	16,981.00	62,392.00	79,373.00
2007	28,350.00	65,047.00	93,397.00
2008	36,388.00	65,047.00	101,435.00
2009	32,721.00	87,888.00	120,609.00
2010	44,900.00	60,003.00	104,903.00
2011	45,513.00	139,775.00	185,288.00
2012	46,907.00	112,327.00	159,234.00
2013	45,360.00	123,653.00	169,013.00
2014	68,093.00	130,089.00	198,182.00
2015	88,826.00	127,321.00	216,147.00

Source: Field Data, EJMA (2016) showing the composition of IGF for EJMA.

4.2 Legal Context

The legal context entails the laws and regulations related to land tenure and land leasing, ground rent and property rates in Ghana and for that matter the EJMA.

4.2.1 Land Tenure and Ground Rent in Ghana

In order to get a clear understanding of how ground rent assessment and collection is done within the study area, a brief précis of the land tenure systems pertaining in Ghana and EJMA precedes the discussion.

4.2.1.1 Land Tenure System in Ghana

The 1992 Constitution, Article 257(1) declares 'that all public lands are to be vested in the President as the custodian on behalf of the people of Ghana. Aside public lands being entrusted in the President, there are also lands that are held under customary tenure which

constitutes 80 percent of lands in the country while the remaining 20 percent are held under private or public tenure.

The customary land tenure is referred to as stool land when the land is located in the Southern part of Ghana and skin land when the land is located in the Northern part of Ghana. In both instances the lands are entrusted and managed by traditional leaders and his council of elders or by principal leaders of a Clan or Tribe. The study revealed that the whole of the Ejisu-Juaben municipality had lands held under the customary stool land tenure and therefore with the exception of the inhabitants who are heirs or have royal lineage to the stool about 85 percent of occupants of land in the municipality hold their title on leasehold basis. This seems to confirm the provision of section 267(5) of the 1992 Constitution which states that “*no interest in, or right over, any stool land shall be created or vested in any person or body of persons a freehold interest howsoever described*”

This provision above was substantiated by R11 that

“apart from purely family lands that belong to a particular clan or family that can be sold outright as a freehold interest in land which the laws allow, in our jurisdiction family lands are non-existent, by our traditional council rules no one is allowed to sell land entirely but rather grant a lease with a maximum term of 99 years less one day depending on the use to which the land is to be put”.

In instances where exist conflicts or mismanagement of lands within the customary land tenure, the land is vested in the State and referred to as vested land tenure. This type of tenure is managed on behalf of the tribe or clan by the Public and Vested Lands Management Department (PVLMD) of the Lands Commission with legal backing from the Administration of State Lands Act 1962 (Act 123). All benefits generated from such lands goes to the customary beneficiaries.

In addition, Public lands are lands acquired by the nation and entrusted to the President for the use of citizens as described State Lands Act 1962, (Act 125) and Article 257(2) of the 1992 Constitution of Ghana. A typical example of the Public land tenure is the form of land tenure on which the Boankra Inland Port draws its ownership.

Private land Tenure on the other hand has lands owned by individuals through gifts or inheritance. Family lands fall within the private tenure where lands are owned by particular families through inheritance, primer discovery or through gifts.

The family lands are managed solely by the families without any interference from the government or traditional authorities. This tends to confer allodial or unlimited title to lands held under such ownership.

Based on the various forms of land tenures found in Ghana, to appreciate land transactions and the associated obligations that are enforced, it is worth explaining the institutional framework and legal bases of land leasing in Ghana.

4.2.1.2 Institutional Framework Regarding Land Leasing

In Ghana according to the 1992 Constitution, institutions mandated to deal with land leasing through which ground rent can be assessed and charged include the Office of the Administrator of Stool Lands, Lands Commission, Town and Country Planning and the Traditional Land Secretariats. This mandate corroborates Hong and Bourassa (2003) assertion that the Constitution of a particular country decides which institutions should be in charge of land leasing and the administration. The Town and Country Planning department is responsible for the planning standards, regulations and preparation of layouts for lands that are to be leased. The Traditional land leaders are custodians of the land on behalf of the

people within their traditional domain, are responsible for granting the land with the concurrence of the Lands Commission, negotiate the premium to be paid by the potential lessee (the premium which in recent days is almost comparable to the ‘economic value’ of the land) as well as prepare and grant the Allocation Note which is produced for onward processing and issuance the Lease or Title Document.

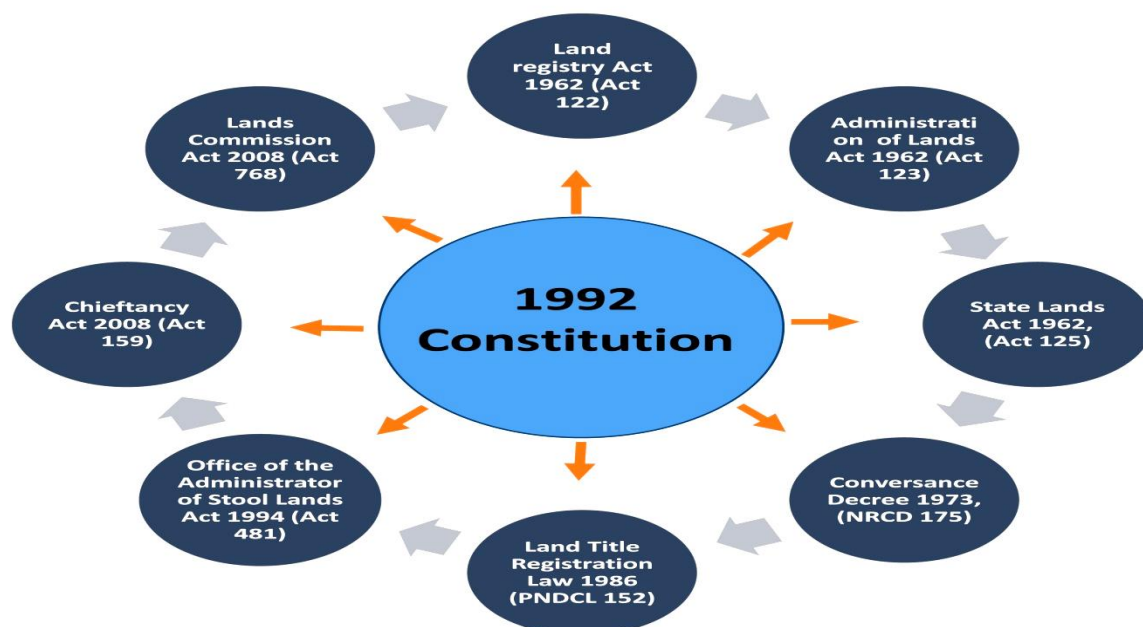
The Office of the Administrator of Stool Lands (OASL) is the official institution mandated to mobilize revenue from land through customary stool land leasing as per Section 17 subsection 1 of the Administration of Lands Act, 1962 as “*The revenue from lands subject to this Act shall be collected by the Administrator of Stool Lands, and for that purpose the rights to receive and the remedies to recover that revenue shall vest in the Administrator of Stool Lands and, subject to the exercise of a power of delegation conferred by this Act*”. This provision of the Act was confirmed by R1 as:

“Our Office by the Lands Act, 1962, Constitution and the Stool Lands Act 767 is the only government institution that has the mandate to levy and collect stool lands ground rent on behalf of the government unlike other institutions where levying and collection of revenue are done by different entities which makes the system cumbersome, expensive and difficult to monitor”.

4.2.1.3 Legal Basis for Ground Rent

The 1992 Ghanaian Constitution is the highest Law for the Country. In spite of this, additional Rules, Regulations, Orders as well as Common and Existing Laws are also given high recognition when dealing with ground rent as outlined in Article 11(1) of the 1992 Constitution. Figure 5 below shows a summary of the Laws, Acts and Statutes governing ground rent in Ghana

Figure 5: Various Laws, Acts and Statutes Governing Ground Rent in Ghana



Source: Author’s construct (2016) showing the legal basis for Ground Rent

The legal basis of Ground rent in Ghana draws its roots from the Land Registry Act of 1962, Act 122; Administration of Lands Act of 1962, Act 123; State Lands Act of 1962, Act 125; Conveyance Decree of 1973, National Redemption Council Decree 175; Land Title Registration Law of 1986, Peoples' National Defence Council Law 152; Office of the Administrator of Stool Lands Act 481 of 1994; Chieftaincy Act of 2008, Act 759 and the Lands Commission Act of 2008, Act 767.

Based on the Laws and Acts mentioned above, the EJMA, OASL together with the legal support from the Attorney-General's Department are able to levy and collect ground rent. In worse case scenarios with the aid of the Attorney-General's department ground rent defaulters are prosecuted at the Law Courts for the recovery of the arrears owed.

In addition, Article 267(2) of the 1992 Constitution also mandates the OASL to create a Stool Land Account for every stool; collect and account for revenue generated from lands to the beneficiaries; distribute the stool lands revenue according to the prescribed formula in clause 6 of Article 267 and to work in collaboration with the Lands Commission and the traditional authorities regarding all issues and information pertaining to stool lands. The formula per Article 267(6) for the distribution of the stool lands revenue is:

“Ten per cent of the revenue accruing from stool lands shall be paid to the office of Administrator of Stool Lands to cover administrative expenses; and the remaining revenue shall be disbursed in the following proportions –

- (a) Twenty-five percent (25%) to the stool through the traditional authority for the maintenance of the stool in keeping with its status;*
- (b) Twenty per cent (20%) to the traditional authority; and*
- (c) Fifty-five per cent (55%) to the District Assembly, within the area of authority of which the stool lands are situated.”*

Interview response from R2 indicated:

“that with all these Laws and Acts regarding ground rent, each one of them deals with only an aspect of the ground rent provisions. This has made implementation cumbersome, therefore the Government together with the Lands Commission through the Land Administration Project (LAP) has drafted a new Land Bill which will combine and deal totally with all the various laws and Acts concerning land leasing issues to make it efficient and effective when it is finally passed as a Law

4.2.1.4 Obligation of Ground Rent Payment

The obligation of ground rent payment is supported by Section 101(1) (2) of the Local Government Act, (Act 462). Official documents reviewed and interviews indicated that, once a lessee acquires title to a parcel of land and obtains a Lease document, as part of the obligations to be fulfilled within the document, the lessee is subjected to the payment of an annual ground rent. A breach of this obligation on the part of the lessee could end in the termination of the leasehold agreement between the Stool and the lessee.

In spite of the provision by Act 462, Land Registry Act, 1962 (Act 122) and Section 19 of the Land Title Registration Law 1986 (PNDC Law 152) which enjoins that all land transactions should be duly registered, it was observed that in reality there are some lessees that have their title to the land they hold not registered. This was confirmed from the survey that 30 percent of the property owners had not processed their land documents for registration while 5 percent of the property owner indicated they were still processing the Lease Document.

Evidence of such unregistered land transactions was highlighted by R10 and again through personal observation of counterfoil copies of Allocation Notes¹⁴ that had been given to lessees but could not be traced in the Lease Register at the Lands Commission. It is essential to note that assessment of ground rent cannot be done based on the use of an allocation note but rather a lease document. It becomes difficult for the OASL to trace and levy such lessees who by law should pay for use or occupancy of land because the poor addressing system existent in the country which makes it difficult to trace people with stated addresses.

Surprisingly field data revealed that property owners who held land title gifted from families or clans do not pay ground rent or any form of land tax to the municipality but rather dealt with the families or clans. According to an informant the families had freehold title to the land and therefore not obliged to pay ground rent. There was not much evidence to prove these exemptions and in instances where such forms of land tenure existed in the municipality. The inference is that the municipality in no small way tends to lose out on revenue from land in the form of ground rent from the Freehold and gifted lands.

Having explained the legal context of ground rent in Ghana, for the purpose of this study, the legal context of property rates also warrants an explanation. Based on the property rate identity review in chapter 2 the analysis as pertains in the EJMA is as discussed in the subsequent sub-sections.

4.2.2 Property Rates in Ghana

Property rate in Ghana is levied on properties deemed rateable in terms of its ability to be safely occupied. It is the view of this that improvised or uncompleted properties are considered as not being rateable. Statistics indicate that in Ghana 10.66 percent of the housing stock fall under such category. However for the EJMA it is indicated that approximately 15 percent of the housing stock is considered as not being rateable (Ghana Statistical Report, 2012).

4.2.2.1 Institutional Framework for Property Rate

The institutional framework for property rating in EJMA mainly entails the collaboration of the Municipal Assembly and the Lands Commission through the Land Valuation Division as prescribed by Article 245(b) of the 1992 Constitution of Ghana. In addition section 22(d) of the Lands Commission Act 2008 mandates the Lands Commission as the main institutions responsible for the valuation, levying property rate and maintaining the valuation list for rating purposes. The Town and Country Planning Department and the revenue office of the Accounts department also have very important roles to play to ensure that property rate cycle of assessment, levying and collection is complete.

According to section 96(8) of the Act 468, it is the responsibility of the MMDAs in consensus with the Minister for Lands to appoint competent public Valuers to undertake the valuation of all the properties with the area declared as a 'rateable area'. According to the Lands Commission Act 2008, Act 767, the Lands Valuation Division of the Lands Commission is the officially declared entity responsible to undertake the valuation exercise for the purposes of property rating as quoted from Section 22(d) *"The functions of the Land Valuation Division include preparation and maintenance of valuation list for rating purposes"*.

¹⁴An Allocation Note is a form of receipt given to lessees by Chiefs which indicates that there has been a land transaction between the Chief and a prospective lessee. It is this document that is used for the onward processing of the lease or title document

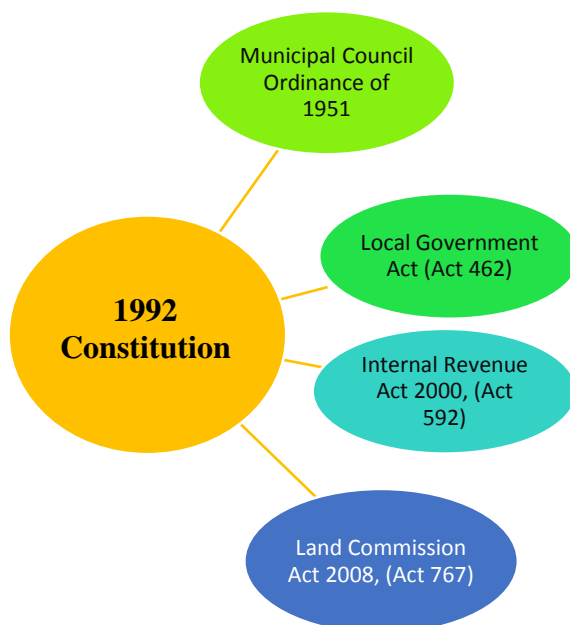
4.2.2.2 Legal Basis for Property Rate

In order to understand the legal basis of property rate in Ghana, a brief explanation of its evolution is that, before the independence of Ghana in 1957, property rate existed in the form of a 'window tax locally termed as *Ntowkra Tuo*'. The basis for property rate in those days was based on the number of windows that a building had then a basic rate which was arbitrarily determined by the rating assessment officers was multiplied and imposed on the property as the tax payable by the owner of the property. This method of property rate assessment raised a lot of concerns among property owners and later in order to avoid the payment of huge amounts of tax, the property owners started reducing the number of windows on their buildings which also resulted in health concerns among the occupants of the rooms.

It was therefore as result of these concerns that in 1951, the Municipal Council Ordinance 1951 was enacted to formally sanction the imposition of property rate on immovable property worth over six pounds as the annual rental value in the then four (4) main municipalities of Accra, Kumasi, Sekondi-Takoradi and Cape Coast. However after independence in 1957, with the assistance of the United Nations, a more appropriate form of valuation and rating of property was adopted by valuing immovable property on the basis of the replacement cost method rather than the annual rental value method. In addition recommendations were made not to include the land in the valuation process as the land was already being tax in the form of ground rent.

Later, Article 245(b) of the 1992 Constitution of Ghana and other Acts such as the Internal Revenue Act, 2000, Act 592; Local Government Act, 1993, Act 462 and the Lands Commission Act, 2008, Act 767 also gave the Metropolitan, Municipal, District Assemblies (MMDAs) the mandate to levy and collect property rate as is currently being done. The figure 6 below shows a summary of the legal basis for property rate.

Figure 6: Laws Governing Property Rate in Ghana



Source: Authors Construct from Field Data (2016) showing the legal bases for Property Rating in Ghana.

The Local Government Act, Act 462 in section 95(1) empowers MMDAs to declare an area or the whole district within its jurisdiction as a rateable area where property rate can be levied and revenue collected for use of the District Assembly

“A District Assembly shall make and levy sufficient rates to provide for the part of the total estimated expenditure to be incurred by it during the period in respect of which the rate is levied and which is to be met out of monies raised by rates”.

Furtherance to the provisions of Act 462, the MMDAs have the mandate to set the tax rate¹⁵ for their individual Districts. The researcher however learnt that though the municipality had the mandate to set the tax rate, the condition was that the central government sanctions and gazettes the proposed rate before it could be used. This finding was found to be contradictory with the opinion of Oates (2008), Slack (2013) Connolly, Brunori, et al. (2010) and Franzsen and McCluskey (2013) who advocate for fiscal autonomy of local governments. The tax rate approval process according to R6

“is very bureaucratic and time wasting therefore causes delays in our ability to generate demand notices on time”.

The calculation of the tax rate as shown in Formula 1 below, is done by considering the anticipated annual expenditure for the municipality, revenue from all other sources of internally generated revenue (with the exception of revenue from property rate) for the municipality for the year under consideration and the total value of all rateable properties on the valuation list. Depending on the usage and class the property is placed, a different tax rate is applied to the rateable value to obtain the rate payable.

Formula 1: Tax Rate Calculation

$\frac{\text{Total Annual Expenditure} - \text{Total Revenues from Non Property Rate Sources}}{\text{Total Rateable Values on the Valuation List}}$

Source: Author, (2016)

From the revenue and expenditure data made available to the researcher, it was observed that the expenditure of the municipality over the years always exceeded the total revenues from both land related (property rate and ground rent) and non property rate sources. However since the total rateable values remained unchanged, it meant that the tax rate always kept increasing with increasing total expenditure. For example in 2012, the total expenditure of US\$247,292.00 and total revenue from non property rate sources was US\$105,791.00 resulted in a difference of US\$141,501.00. This difference had to be divided by a total rateable value of US\$45,280,356.00 to arrive at a tax rate of US\$0.003125 which could have been lower if the total rateable value was higher than it is.

The situation illustrated above gives rise for the payment of higher property rate with fewer properties in Valuation List is the situation is currently than when more rateable properties are registered. As such the increment in the annual property rate revenue was basically as a result of increment in the tax rate.

Having established the legal bases for property rate it is also important to ascertain property rate base to which to which the rate will be administered in the next section.

¹⁵Tax rate as used in this context is the same as the rate impost. The rate impost is the specified amount applied to the depreciated replacement value of the property to arrive at the property rate payable.

4.2.2.3 Property Rate Base

According to review of literature by various writers, there are three main categories or bases on which property rate may be applied: buildings, land and land and buildings. In the EJMA, the property rate base is that of buildings as spelt out in Section 96 (6) of Act 462 and quoted as

“that property rate should be levied buildings, structures and other developments based on the replacement cost method”

During the review of official documents made available at the Lands Commission, it was gathered that Immovable Property Rate Amendment Regulations (LI 1049) and section 97(1) of the Internal Revenue Act 2000, (Act 592) also supports the levying of property rate on buildings. The provision of the Act 592 considers buildings either as permanent or temporary in nature. However during the interview with R4, it was explained that

“when the Act refers to permanent or temporary buildings, it is also left to the discretion of the valuing officer to determine the degree to which the building is temporal. This in a way gives some amount of ambiguity to this particular clause in the Act hence field staff in order not to create confusion are advised to stick as much as possible to the provisions of the Local Government Act which concentrates on immovable property as in general term where the property has been permanently fixed to the land”.

With the tax base of property rating in the EJMA being buildings only, an inspection of the Valuation List indicated that the number of rateable properties recorded as at 2005 when the last valuation excise was conducted was 20,053. This represented 72.12 percent of the total number of properties found in the municipality as at 2005. As indicated in 4.1 (profile of the study area), the estimated number of properties currently is 77,564. The indication therefore is that the Valuation List as at the time of inspection by the researcher represents approximately 25.85 percent of the total number of properties currently within the municipality.

Analyzing this situation, the researcher assumed that if out of the 77,564 properties, 15 percent are deemed as not rateable while the remaining 85 percent of them are rateable based records and documents of the other decentralized offices (Fire Service and Police) of the Municipality. Then ideally the total number of rateable properties on the Valuation List should be approximately 65,929. The difference between the current number of rateable properties on the list and the assumed number by the researcher if revaluation excise is done is 45,876 properties unregistered and assessed. This shows the extent to which the EJMA is losing out on revenue from property rate alone. This assumption of the researcher that explains the extent to which the municipality is losing revenue from property rate alone is confirmed with evidence from the high expenditure and the insufficient IGF figures obtained from the Accounts Department.

This seem to suggest that due to the use of only improvements, the extent to which the EJMA should have used property rate to capture value in spite of the increment in both property numbers and the associated property value change is not being achieved. The choice of the tax base by the EJMA does not corroborate with the studies of McCluskey, Bell, et al. (2010) and Walters (2011) concerning the need to generate more revenue by using both the land and the improvement but at different rate during the computation.

The use of improvement only as the tax base entails that some properties are exempted. This is further explained and analysed as follows.

4.2.2.4 Exemption of Properties

As part of the determination of the property tax base, Section 99 (1) of Act 462 provides that certain classes of properties are free from the payment of property rate. Based on this provision, an attempt was made to investigate the disparities that existed between the total number of rateable properties on the Valuation List and the total number of properties that were recorded in the municipality as at 2005. The inquiry was based on whether the municipality had additional exemptions apart from what the provisions of Section 99 (1) of Act 462 specified as quoted below or there was any special reason that could be assigned for the difference in numbers on the Valuation List. The response was that there were no additional exemptions apart from those spelt out in the Act 462 as follows:

“The following tenements are exempted from assessment and rating under this Act –

- a) all premises appropriated exclusively for the purpose of public worship and registered with the District Assembly;*
- b) cemeteries and burial grounds registered by the District Assembly;*
- c) charitable or public educational institutions registered with the District Assembly;*
- d) premises used as public hospitals and clinics; and*
- e) premises owned by diplomatic missions as may be approved by the Minister for Foreign Affairs.”*

It is however interesting to note that it was observed that properties records were found to be fragmented and manually recorded with some property details missing in addition to missing pages of the Valuation List. Per this observation the assertions of De Soto (2000) and Bird and Slack (2007) were confirmed that ‘in developing countries it is difficult to get data that are complete or updated especially for purposes of taxation which is unpopular and everyone would like to avoid’. It was in this vein that during the interview with R3, a passionate request was advanced for the computerization of the Valuation List for all municipalities though it was happening in some few municipalities of which the EJMA was not lucky to be a part of those municipalities.

The deduction for the difference in the total number of recorded rateable properties and the total number of properties as at 2005 could either be that those properties not on the Valuation List are part of the exempted properties, that they are improvised or uncompleted buildings that are not rateable or that the data was among the part of the missing pages of the Valuation List.

By establishing the type of properties that are exempt from property rate obligations, it is equally vital to establish who the onus of the payment of the property rate lies on. This will help the rating authorities to address the right for rate collection and the administration of sanction for non payment of the rates.

4.2.2.5 Tax Bearer

Another dimension investigated with regards to property rating in the municipality was the bearer of the property rate. Upon examination of the Local Government Act, Act 462 it was revealed that Section 96 (3) (a) of the said Act provides that the property rate is “*a rate payable by the owner of the premises within the district on the rateable value of the premises*”.

In spite of this provision, field information gathered indicated that in practice property owners who rented their properties to tenants on long term basis actually include the property rate payment liability as part of the Tenancy Agreement which is a contradiction to the provisions of Act 462. Further revelations confirmed this sort of contradiction to the provisions of the Act.

“About 25 percent of residential properties that had property rate in arrears were found to be properties having such arrangements. Since the municipality has no contract with such tenants, it becomes difficult to pursue such tenants legally for recovery of the property rate arrears hence the Assembly continues to lose revenue from property rates” (R3).

Again it was revealed that with the traditional form of inheritance practice in Ghana, it is common for a property to have multiple owners who inherited the property from the original owner. The problem that emanates is who then has the ultimate title to be held liable for the payment of the tax liabilities. Through personal observation, it was realized that record keeping for property rate within the Municipal Offices was not up to date; some properties did not have the full name of the owner, or further details that describes the property. In such instances if record keeping is efficient enough, it would be easy for the taxing authority to get access to whose records the property has been registered with and then address the property rate demand notice to the appropriate heir.

It is in this regard that it is also important to determine the base for levying the property rate in Ghana and for that matter the EJMA.

4.3 Land and Property Values

Studies have shown that land and property values on their own do not change but rather changes occur as a result of the influence of a range of factors. Among some of the factors are changes in demand, changes in land use, political reasons and provision of infrastructure just to mention a few (Smith and Gihring, 2006; Obeng, 2013; Hong, 2013 and Cobbinah et al., 2015). In this section an over view of results from field investigations on the effect of the development of the Boankra Inland Port in 2010 on land and property values will be discussed.

4.3.1 Land Values

To ascertain the quantum of change in land values within the EJMA, Land Experts, Estate Brokers, and Traditional Rulers within the Municipality were interviewed. Valuation reports, stamp duty certificates indicating land values¹⁶ transacted within the duration under study were also reviewed. The basis of comparison for both Towns was residential plot size of 0.23 acre to ensure standardisation. Available information traditional leaders indicated that averagely 40 plots of land are leased in a year. However it was difficult to ascertain validity of this information due to poor record keeping by the chiefs and the refusal of some lessees to register land transactions at the office of the Lands Commission within the municipality. For this study, an average land value obtained from the leases 25 plots out of the assumed 40 plots of land leased annually was adopted as the annual land value after inflation had been catered for.

To triangulate the data gained from the interviewees and the official documents, a survey was conducted among property owners who had been granted leasehold interest in land within the municipality specifically in the towns of Boankra and Owne. Data on land values gathered from the various sources is as presented in Table 7 below showing land values for the respective years are reflective of the open market prices of the various years under consideration at an exchange rate of GH¢3.60 to US\$1.00 as at July 2016.

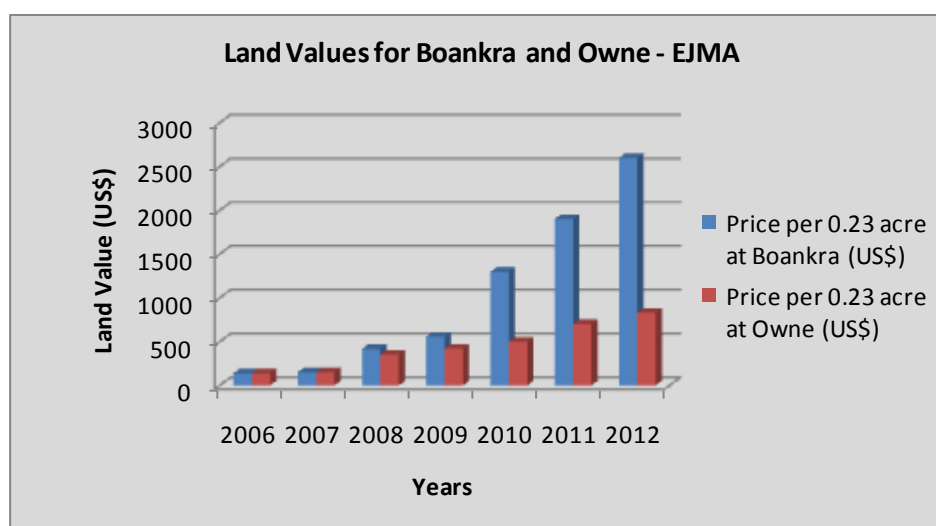
¹⁶All land values in the table are reflective of the open market value for the parcel of land as July 2016. Per the Inter-bank Exchange Rate, 1GH¢ is equivalent to US\$ 3.6 as at July, 2016. Table for the Average inflation rate over the period is found in Annex 2.

Table 7: Land Values for Boankra and Owne (2006-2015)

Year	Price per 0.23 acre at Boankra (US\$)	Price per M ² at Boankra (US\$)	Percentage change in price (%)	Price per 0.23 acre at Owne (US\$)	Price per M ² at Owne (US\$)	Percentage change in price (%)
2006	139.00	15.00	-	139.00	15.00	-
2007	150.00	27.00	80.0	150.00	27.00	80
2008	417.00	45.00	66.7	333.00	36.00	33.3
2009	556.00	60.00	33.3	417.00	45.00	25.0
2010	1,333.00	144.00	140.0	500.00	54.00	20.0
2011	1,944.00	209.00	45.8	694.00	75.00	38.9
2012	2,639.00	284.00	35.0	833.00	90.00	20.0
2013	2,778.00	299.00	5.3	1,278.00	138.00	53.3
2014	3,194.00	344.00	15.0	1,389.00	150.00	8.7
2015	3833.00	413.00	20.0	1,417.00	152.00	2.0

Source: Field Data, EJMA (2016) showing land values for Boankra and Owne.

Chart 1: Land Values for Boankra and Owne



Source: Field Data, EJMA (2016) showing land values for Boankra and Owne.

4.3.2 Analysis of the Land Values

Table 7 and Chart 1 reveal that land values in Boankra and Owne were the same between 2006 and 2007 at US\$139.00 and US\$150.00 respectively and thereafter in both towns the land values continued to increase. It is observed that between 2009 and 2010 when the first phase of the Inland Port was developed at Boankra, land values in the two locations exhibited vast differences. As such land values in Boankra increased sharply from US\$556.00 to US\$1,333.00 depicting a 140 percentage increase in price as compared to a 20 percentage increase in price from US\$417.00 to US\$500.00 in Owne within these same years.

According to R10,

“when the announcement and the sword cutting ceremony of the Port was made to confirm the government’s commitment to the project, there was a rush for land purchase within the township of Boankra by the inhabitants and non inhabitants with

the aim of either developing the land or reselling it at a later time for a higher price and this resulted in the sharp increase in land value within those years”.

Between 2011 and 2015, land values in both towns continued to increase from US\$1,944.00 to US\$3,833.00 in Boankra while in Owne the land value increased from US\$694.00 to US\$1,417.00 for the same plot size of 0.23 hectare. In the survey among property owners in the municipality, 100 percent of the property owners indicated that land values had increased over the decade with 84.5 percent of the surveyed respondents attributing the increase in land values in the Boankra Township to the presence of the BIP which had caused high demand for land.

Per the responses the inference is that based on the Laws on demand and supply for land; supply of land is fixed therefore if demand for land increases, then the price of the land also increases. The development of the BIP, and the associated increase in demand for land within the township caused the significant increases in land values in Boankra compared to Owne. Again this corroborates the studies of Mikelbank (2004), Taylor and Brown (2006), Walters (2012) and Mathur and Smith (2013) concerning the impact of infrastructure on land values.

However an analysis of the rate of increase in the land values in Boankra in spite of the influence of the Inland Port indicates that the rate of increase in land values between 2011 and 2013 reduced from 45.8 to 5.3 percent indicating that there could be other factors that could have influenced land values other than the Inland Port. This was actually confirmed by respondents during the field interview.

“2012 was an election year for the country and there was much uncertainty in the political environment which had an influence on the economic activities therefore people decided not to spend much” (R5).

Another opinion was that

“since the Port was at its initial stages of operation with only the administrative and customs check-point aspect in operation, the anticipation for brisk business had not been realized hence was not sending positive signals to other investors. This caused the rate at which land values were increasing not to be drastic unlike the previous years and rather people’s interest in buying land had shifted to other areas within the municipality yet the land prices in Boankra was still high than the other places”(R10).

From the information concerning the trend of land values within the EJMA, the researcher observed that irrespective of the other reasons given to explain the changes in the trend, there were no vacant plots especially within 3 kilometres of the BIP irrespective of the value for which the lands were selling for. This seem to confirm the claim of the Inland Port’s impact on land values as there was high demand for those lands, and most likely resulting in increased land values. With the impact of the BIP on land values, the research further considered the possible impact on property values as well in discussed in the next section.

4.3.3 Property Values

A range of literature has revealed that there is a multiplicity of factors that affects the value of a property in a given location. It is in this regard that this research sought to ascertain the cause of changes in property values before and after the development of the BIP at Boankra. To establish the actual cause for the change in property values, Owne was selected as another location that had no infrastructure (Inland Port) but then had all the other conditions that could likely affect property values similar to what pertained in Boankra.

For this study to standardise property values obtained, standard residential properties were considered. Field investigation with Valuers from the Lands Commission, private Estate Brokers and property owners within the Ejisu-Juaben Municipality indicate that on the average 8 properties under consideration are sold in a year within the study location. Average market or mortgage value obtained from the sale or a mortgage valuation which is exclusive of the land value of 6 properties yearly is adopted and present in the table 8 below. The sale or mortgaged value was considered because the methods of valuation for both purposes are the same. However for a mortgage after the property value is obtained there is an additional value calculated as the force sale value which was not of interest to the researcher for the purpose of this study.

Table 8: Property Values for Boankra and Owne

Year	Value of property in Boankra (US\$)	Percentage change in price (%)	Value of property in Owne (US\$)	Percentage change in price (%)
2006	11,944.00	-	11,944.00	-
2007	15,278.00	27.91	15,000.00	25.58
2008	16,667.00	9.09	16,667.00	11.11
2009	20,833.00	25.00	18,056.00	8.33
2010	27,778.00	33.00	18,889.00	4.62
2011	37,500.00	35.00	17,917.00	-5.15
2012	39,167.00	4.44	17,222.00	-3.88
2013	42,222.00	7.80	20,556.00	19.35
2014	45,833.00	8.55	22,222.00	8.11
2015	50,000.00	9.09	23,056.00	3.75

Source: Field Data, EJMA (2016) showing property values from 2006-2015

4.3.4 Analysis of the Property Values

From the Table 8 showing property values in Boankra and Owne, it is evident that before the construction of the BIP in 2010, property values for Boankra and Owne were the same in 2006 and 2008 for US\$11,944.00 and US\$16,667.00 respectively. In 2009, with the inception of the Port development, property values in Boankra increased sharply from 9.09 to 25 percent giving a property value of US\$20,833.00 while the property value for Owne decreased from 11.11 to 8.33 percent giving a property value of US\$16,667.00 in 2009.

Information gathered during the field interviews attributed increased property values to the construction of the BIP, feeder roads, electricity, portable water and telecommunication facilities which were hitherto absent but had now been provided for the Boankra community by the Port Authorities. According to R8,

“the port made the value of properties within the Boankra township and its environs to increase overnight with the amenities provided by the Port Authorities as compared to property values in the neighbouring towns of which Owne was no exception”.

This assertion by this interviewee was confirmed by 96 percent of the respondents of property owners who attributed the increase in property values to the presence of the BIP development. The views of the interviewees and property owners confirm the views of Smith and Gihring, 2006; Walters 2012 and Mathur and Smith, 2013) who opine that the development of an infrastructure is likely to impact on property values located especially within the radius of the investment.

From 2010 up until the first quarter of 2013, the entire Nation experienced harsh economic crises as a result of the energy challenge during those times coupled with the political change over in 2012, it was witnessed that property values in the Owne Township continued to fall further within that period. However in spite of the conditions that were prevalent, property values in Boankra continued to appreciate in value.

Evidentially from the field data, there was a drastic drop in the rate at which the property values were increasing in term of percentages between 2011 and 2012 by 30.56 percent. And this was very significant in the property market within the period under study. However after the crises period, it is indicated that the property market improved in Boankra but a slow pace. The occurrence between 2010 and 2013 where property values were influenced by other factors other than just an infrastructure is confirmed by the studies of Sandroni (2009) and Hong (2013) who conceive that other factors as political, economic and speculation could also influence property values.

From the field work, it was learnt that in spite of the unfavourable political and economic climate for the Nation and for that matter the property market between 2010 to 2013, increases in property values in Boankra and its environs was influenced more by the presence of the Inland Port in terms of the anticipated prospects and other developments that came with the Port development. Increased urbanization because there was anticipation that new job opportunities were going to evolve with the presence of the Port, demand for better quality properties by the new entrants of the town and the amenities that had been provided as part of the Inland Port Project caused property value changes

Based on the findings and analyses, irrespective of the external factors (economic and political) the indication is that the influence of the BIP on property values cannot be underrated. It is therefore in this regard that the research further investigated more about the BIP through interviews with the relevant Stakeholders of the Inland Port.

4.4 Analysis of Ground Rent Administration in EJMA

Ground rent is the yearly amount of fee levied on land and payable by the holder of the land for its occupation and use. In Ghana, depending on the type of land tenure system in place, there are different offices mandated with the levying and collection of the ground rent. For instance while the Office of the Administrator of Stool Lands is solely responsible for land tenure under customary stool lands, the Public and Vested Lands Division of the Lands Commission is also responsible for the levying and collection of ground rent for all lands under state and vested forms of land tenure.

4.4.1 Assessment of Ground Rent

Ground rent is the fee paid yearly by possessors of leasehold and/or other impermanent interest in land for purposes of residential, commercial, industrial, religious or other uses. The ground rent is payable irrespective of whether the land has been develop or not. The amount of ground rent payable is stated in the lease document to which the lessor and the lessee negotiate and agree upon, Factors considered during the assessment of the amount of ground rent payable include:

- (a) The use to which the land is being put so that for example an industrial plot of land tends to command a higher rent than that of a residential plot.
- (b) The size (measurement) of the plot, in that a bigger plot size pays more ground rent than a relatively smaller plot.
- (c) The location, where the land is located in a well built environment with infrastructure and social amenities in good supply, then holders of lands in such are pay higher

ground rent that those with less of such facilities. In the categorization of the classes for ground rent payment, residential neighbourhoods are categorized as 1st, 2nd and 3rd Classes.

From observation of documents made available from the OASL, it was discovered that there are four (4) methods by which ground rent could be calculated;

- (1) The Comparative Method
- (2) The Residual Method
- (3) The Ground rent as a fraction of the current value of land, and
- (4) The Annual Equivalent Method

The EJMA was found to be using the Annual Equivalent Method for the computation of ground rent as illustrated below:

The method takes into account the amount of premium paid for the land as indicated in the leases. It is assumed that the premium ideally should be between 70 and 80 percent of the capital value of the land, a rate (depending on factors ‘a’ to ‘c’ mentioned above) is applied to the Premium to arrive at the Capital Value of the parcel land. (That is how much the land will sell for in the open market). R2 indicated that

“The capital value of the land is deduced because the premium indicated on the lease document is considered as an accumulated rent for the duration for the lease. Ideally, the premium is expected to be just a token amount but currently, some premiums appear to be even higher than the capital value of the lands especially for lands in prime locations that have high demand. For such high premium charges, there is very little our Office can do as we are not part of the land negotiation”.

The Capital value of the land is then divided by the Amount of \$1 per annum multiplier to obtain an Annual Equivalent value. With the Amount of \$1 per annum multiplier, the ‘n’ is the unexpired term of the lease the land as at the date of valuation while the rate ‘i’ per the formula is the prevailing interest rate for the Country.

The annual ground rent payable for a particular land is equal to the Annual Equivalent of the land. The researcher learnt that in practice, an adopted interest rate of approximately 7 percent is used for the calculation. This in essence therefore implies that in practice, the ground rent payable is not reflective of the occupation of the land. However there was not much evidence to prove this upon further investigation by the researcher. The formula for ground rent assessment is as shown in formula 2 below.

Formula 2: Ground Rent Assessment Formula

Capital value of a parcel of land = Premium/Proportion of the capital value land

$$\text{Annual Equivalent (AE)} = \frac{\text{Capital value of a parcel of land}}{\text{Amount of \$1}}$$

$$\text{Annual Equivalent (AE)} = \frac{\text{Capital value of a parcel of land}}{\frac{(1+i)^n - 1}{i}}$$

$$\text{Ground Rent payable} = \text{Annual Equivalent}$$

Source: Field Data, EJMA (2016) showing the Annual Equivalent formula

Per the formula above, assuming the premium paid for the same parcel of land 80 percent of the capital value is US\$5,556.00 and then the capital value of the plot is US\$6,944.00. At interest rate of 7 percent and unexpired lease terms of 40 and 45 years, the ground rent payable is US\$35.00 and US\$24.00 per annum so long as the capital value of the parcel of land is not revised.

Per this analysis, it is inferred that if two identical plots of land in terms of for instance size and usage have different lease term durations the owners of such land will end up paying different rates for the ground rent. This situation is likely to result in both horizontal and vertical equity in terms of ground rent payments and this seem to suggest that the motive of using ground rent as a land value capture tool to recoup increments in capital value in order to cater for the services provided to the land is not achieved.

However, in an instance where the ground rent is assessed using a rate base on an expected rate of return the possibility of inequality in rent payments is likely to be minimised if not eroded completely which could encourage the payment of ground rent in order to increase revenue. This is illustrated by this example: if the local government expects a 5 percent rate of return, then assuming the capital value of a 0.23 acre of land is US\$5,556.00 the ground rent payable by lessees with such land size should be $US\$5,556.00 \times 0.05 = US\278.00 per annum irrespective of the unexpired lease duration as pertains with the annual equivalent method used by the EJMA.

According to The State Lands Act (Act125), revision of ground rent assessment should be done periodically to cater for inflation and changes in land value over time. However rather unfortunately, the Act did not indicate the duration for the reassessment. Information gathered from the field indicated that in practice the reassessment of ground is based on the terms of agreement as indicated in the lease document. According to R1,

“the lease document usually indicates five (5) year duration for revision but in reality, the last time the office reviewed the ground rent for the EJMA was in 2010”.

Linking the process of ground rent assessment to the concept of land value capture, the EJMA can only capture the additional increase in land values emerging from the development of the BIP and the provision of associated amenities linked with the BIP development in the municipality if reassessment of the ground rent is done periodically as stated in the Laws. It is worth noting that, the influence of BIP on the factors (a)-(c) above can affect the assessment of ground rent.

For instance through the provision of the amenities, categorization of locations into 1st, 2nd and 3rd classes influences ground rent assessment in terms of the rates applied to the capital value of the land. The end result will then be the municipality's inability to recoup part of the benefit from the infrastructure that have been developed over the years, and which have resulted in the appreciation of land values as evident from the field data. Interviews with personnel of OASL indicated that since reassessment of ground rent has not been undertaken, the EJMA is losing out in revenue from ground rent in the form of land value capture because ground rent currently levied are not reflective of the current land values.

4.4.2 Level of Awareness of Property Owners

In the survey among 180 property owners within Boankra and Owne, 20 percent of respondents from both towns were not aware about ground rent. Reasons assigned for the lack of awareness was that they had never been educated or approached by anyone about the ground rent payment obligation. From the survey results, it was deduced that those who

claimed lack of awareness of the ground rent were people had lived in the municipality ranging from one (1) year to five (5) years. Apart from those without knowledge on ground rent, an additional 25 percent of the sampled population indicated their refusal to pay ground rent with the reason that the EJMA does not provide any infrastructure with the revenue collected.

An interview with R2 confirmed the claims made by property owners with regards to lack of awareness on ground rent.

“our revenue collectors who can be the first point of providing information on behalf of the office are out in the field during the daytime when most of the property owners are also out at work”.

From the above the inference is that refusal to pay ground rent is lack of knowledge or dissatisfaction on the part of property owners due to lack of evidence of what the revenue collected is put to. It is in this regard that the collection mechanisms for the EJMA were investigated to determine how efficient it was collecting ground rent from the remaining 55 percent of the property owners.

4.4.3 Collection of Ground Rent

The Office of the Administrator of Stool Lands Act, 1994 (Act 481) Section 2 (a) and (b) empowers the OASL as the sole organization mandated by law to set up a stool lands account and collect ground rent from customary stool lands as such the OASL has offices in all municipal assemblies in the country. On the other hand the Lands Commission Act 2008, (Act 767) section 23 (b) mandates the PVLMD of the Lands Commission to collect the ground rent from all vested lands at the local government level and within the municipalities. The ability of these Institutions to levy and effectively collect ground rent revenue could be a source of great relief for the municipality in terms of generating internally generated revenue for infrastructure provision and maintenance.

The collection mechanism for ground rent is done through the use of revenue collectors. The OASL has permanent staff for revenue collection and commissioned revenue collectors employed temporally and paid on commission bases. Peculiar to the OASL office in the EJMA, the collection mechanism for ground rent starts with the distribution of the Ground Rent Demand Notice and onward collection of the revenue from the property owners.

The fieldwork revealed that the OASL office in the EJMA is handicapped in terms of staff numbers therefore some of the tasks performed by workers have to be combined. One of such task is the distribution of the ground rent demand notice and the collection of ground rent revenue. However the office is reluctant to recruit commissioned revenue collectors to supplement the efforts of the existing staff due to the high cost involved in engaging their services.

To worsen the situation, the poor addressing system in Ghana and for that matter the EJMA makes the distribution of ground rent demand notice and collection mechanism adopted by the OASL difficult for the existing staff available. This accounts for the inefficiency in the collection mechanism as expressed by 75 percent of the property owners during the survey. In spite of the fact that the ground rent is collected by Revenue Collectors, the property owners also have the option of personally settling their Bills at the Revenue Section of the municipal assembly.

From the fieldwork, the researcher observed that the main challenges associated with ground rent collection included shortage of permanent revenue collectors and property owners apathetic attitude towards the payment of ground rent. In the light of these challenges the

ability of the EJMA to generate revenue from land leasing in the form of ground rent payment is ascertain and analysed in the subsequent section.

4.4.4 Revenue Generated from Ground Rent

Data on revenue for ground rent for the EJMA before the BIP (2006-2009) and after the development of the BIP (2011- 2015) was obtained from the OASL and the Revenue Section of the EJMA. This was triangulated with data from the Accounts Department of the EJMA to ensure the authenticity of the revenue figures obtained. The researcher was alerted that all the revenue figures of the retrospective years were reflective of the current value of the Ghanaian Currency with inflation catered for as a result of a new accounting system (SAGE) used by the Municipality computes all that automatically. However a copy of the Consumer Price Indices inbuilt in the Software used in the computation was obtained as shown in Annex 2 showing the consumer price Indices and average inflation rate in Ghana from 2006 to June 2016.

4.4.4.1 Ground Rent Revenue Collected as Against Budgeted Revenue

Table 9 below shows the data of revenue generation obtained for the EJMA from 2006 to 2015 that have been adjusted for inflation with an exchange rate of 1GH¢ to US\$3.60 as at July 2016. The revenue figures indicate that before the development of the Port in 2010, there was an increasing trend in revenue collected from the budgeted revenue from 2007 up until 2009. For instance, the amount of revenue collected against budgeted was exceeded by 5.13 percent in 2007, 10 percent in 2008 and 12.48 percent for 2009 respectively.

Table 9: Budgeted and Collected Revenue from Ground Rent (2006-2015)

Year	Budgeted Amount (US\$)	Collected Amount (US\$)	% of Budgeted Amount Collected
2006	1,944.44	1,756.00	90.32
2007	2,166.67	2,278.00	105.13
2008	2,777.78	3,056.00	110
2009	3,888.89	4,374.00	112.48
2010	6,944.44	10,739.00	154.64
2011	15,033.97	31,285.00	208.09
2012	27,777.78	25,415.00	91.50
2013	32,098.76	29,319.00	91.34
2014	38,888.89	23,904.00	61.47
2015	50,038.61	52,778.00	105.47

Source: Field Data, EJMA (2016) showing ground rent revenue budgeted and collected.

These excess collections according to R1

“because of shortage of revenue collection staff, we had to engage commissioned revenue collectors most of whom were unskilled casual workers therefore work tirelessly to ensure the collection of arrears from defaulters in order to increase in their remuneration. However after 2011 we could not employ their services again due to a directive from our Head Office not to engage the services of unskilled casual workers”.

Remarkably in 2011, the budgeted revenue was exceeded by 108 percent. Investigating, it was revealed that the BIP development had attracted the interest of a lot of people wanting to buy land and develop property in the municipality therefore land sales and lease registration increased considerably that year.,

“the lease documentation can only be completed upon the payment of the maiden ground rent indicated on the lease document, this in my opinion accounted for the sharp increase in the amount collected in 2011 when there was a rush for land in the Boankra Township. To corroborate the assertion above, observed records from the Lands Commission revealed that Deed registrations had increased considerably over the past seven (7) years (R2).

The period between 2012 and 2014 witnessed a reduced trend with regards to the amount of revenue collected as compared to what was collected in the previous years. For instance the reduction was very significant in 2014 when the amount of revenue collected against the budgeted fell by 38.53 percent. This decrease is attributed to the

“uncertainty that the nation was battling with during the political change over in 2012 and the economic crises as a result of the energy challenges experienced by the country during that period and its related effects” (R6).

With the number of ground rent defaulters from 2012 to 2014 years, the OASL embarked on a debt recovery program with the help of the Attorney Generals Department by instituting and prosecution of legal action against the debtors. This action resulted in the increase in the amount of revenue collected in 2015 exceeding the budget by 5.47percent.

From the analysis the inference is that the presence of the BIP has a positive impact on the generation of revenue from ground rent for the EJMA. The indication therefore is that ground rent as a land value capture tool has the potential of generating revenue for the municipality on condition that the peculiar challenges pertaining to the frequency of assessment and efficiency in the collection mechanism that emerged during the fieldwork are well catered for.

4.4.4.2 Revenue Generated Annually from Ground Rent to EJMA

With regards to the total amount of ground rent revenue collected annually within the EJMA, it is worth noting that only a proportion of it is kept and used by the municipality. This situation is due to the provisions of Article 267 (6) of the 1992 Constitution of Ghana. Per the proportions spelt out by the provision, ten (10) percent of the total amount collected is retained by the OASL (for administrative purposes). The remaining is considered as 100 percent out of which fifty-five (55) percent goes to the municipality and forth-five (45) percent goes to the Traditional Authority. The table 10 below indicates how much of ground rent is actually received by the EJMA per the provisions of the 1992 Constitution.

Table 10: Actual Amount of Revenue from Ground Rent Received by EJMA

Year	Collected Revenue (US\$)	Revenue due OASL (US\$)	Left Over Amount (US\$)	Revenue due EJMA (US\$)
2006	1,756.00	176.00	1,580.00	869.00
2007	2,278.00	228.00	2,050.00	1,128.00
2008	3,056.00	306.00	2,750.00	1,513.00
2009	4,374.00	437.00	3,937.00	2,165.00
2010	10,739.00	1,074.00	9,665.00	5,316.00
2011	31,285.00	3,129.00	28,156.00	15,486.00

2012	25,415.00	2,542.00	22,873.00	12,581.00
2013	29,319.00	2,932.00	26,387.00	14,513.00
2014	23,904.00	2,390.00	21,514.00	11,833.00
2015	52,778.00	5,278.00	47,500.00	26,125.00

Source: Field Data, EJMA (2016) showing ground rents received by EJMA from 2006-2015

4.5 Analysis of Property Rate Administration in EJMA

Property rate as indicated earlier also contributes revenue to the EJMA through the annual levying and collection of the rates. The sections that follow show analysis of property rate administration in terms of the assessment, coverage collection and the revenue generate from property rates within the municipality.

4.5.1 Assessment of Property Rate in the EJMA

As part of the responsibility of the EJMA to raise local revenue for infrastructure provision within the municipality, property rate has been identified by the municipality as one of the source of revenue. Revenue generation from property rate as indicated earlier is backed by Act 462. The Act provides that the assessment of the property rate payable by a property owner should be based on the Depreciated Replacement Cost (DRC) Method. The DRC method is used to determine the capital value of a property as if it were new on the land on which the property is located as at the date of valuation.

The prescribed processes as undertaken by the EJMA are as outlined below:

- The EJMA should publicly declare the municipality as a ‘valuation area’ through the media by either using electronic media, the most widely circulated Newspaper or any other means of communication depending the cost involved and how far the message can be communicated throughout the municipality. The services of the Land Valuation Division is then sought to continue with the process.
- In the event where there is an existing Master Plan of the Valuation Area, the Rating Officers (R.O.) undertakes a preliminary survey to get acquainted with the area by locating the boundaries of the Divisional Plans and the Block Plan. The Block Plan is the simplest map used by the R.O. on the field as each Block Plan contains not more than 30 properties with their sketches and location as they appear on site.
However, if there is no Master Plan for the Valuation Area, then the process of property rate assessment starts by having to contact the Town and Country Planning Department in the municipality for the Base Map of the entire area. The base map is then divided into Divisional and Block Plans according to the specifications of the Land Valuation Division.
- The actual assessment of the rateable properties starts with the R.O. with the help of the Field Notebook, recording the personal details of the property owner, sketching and measuring the external dimensions, noting the constructional details of the property in terms of the floor, walls, windows, doors, ceiling and roof. The category of the property is also indicated to aid R.O. when computing the property rate payable. In Annex 5, a copy of the categorization of rateable properties and the rates applicable to the categories are shown.

- In the office, all the data is transferred to a pre designed Software that contains, a property record sheet template as well as computed cost of construction per square meter for the various building components for the various building categories. The cost rates according to R1,

“the rates are obtained from the Architectural and Engineering Services Limit (AESL), the official institution for computing building and engineering cost rates for the government agencies”.

Each property data is recorded on a separate record sheet Annex 5 which shows a sample of a property record sheet and then later transferred onto the Valuation List after the rateable value has been computed.

Upon investigation as to how often the constructional cost rates are revised, the R1 further indicated that *“it is revised only when there is a revaluation of rateable properties”*. This revelation indicates that the rateable values of properties on the Valuation List are not reflective of the actual rateable value of the properties since the last revaluation excise was done in 2005. The likely implication is that the municipality is losing out on revenue which could have been gained upon the updating of the cost rate per meter square for the building components coupled with an efficient collection mechanism.

- To assess the replacement cost of the property, the total value obtained after the total area of the property has been multiplied by the cost per meter square for construction. To obtain the Depreciated Replacement Cost (DRC), as stipulated by Act 462, the maximum depreciation to cater for physical obsolescence that can be applied during the calculation of the rateable value of the subject property is twenty (25) percent of the replacement value. Table 11 below shows the maximum percentage of depreciation for the various building components of a property applied during the assessment of the rateable value of a property.

Table 11: Depreciation Percentages for Building Components

Component	Depreciation (%)
Floor	2.0
Walls	8.0
Windows & Doors	3.0
Ceiling	2.0
Roof	8.0
Painting & Décor	2.0
Total Depreciation	25.0

Source: Field Data (2016) shows the maximum depreciation applied to rateable properties

- The Provisional Valuation List is published by the Municipal Assembly for duration of three (3) weeks. This is done in order for the property owners to verify any discrepancies with respect to their details and in addition notify the Assembly of properties that have been omitted or added that should not have been added. Any

issues raised within this time period is addressed by a special Committee that is established based on the provisions of Section 103(1) and (3).

- After the expiration of the exhibition period, the concluding part of the assessment procedure, is to prepare the Property Rate Demand Notice by applying the tax rate to the rateable values of the properties according to the use and category of the property as they appear on the Final Valuation List as seen in Annex 6

The frequency of revaluation is not indicated in any of the Laws and Acts the established property rate. In this regard, information obtained from the various interviewees within the EJMA revealed that revaluation of property rate last occurred in 2005. However according to the Operational Manual of the Lands Commission revaluation of rateable properties should be undertaken every five (5) years subject to the availability of resource (Lands Commission, 2008). The main reason that was attributed for this occurrence of properties not revaluated concur with the criticism advanced by Franzsen and McCluskey (2005) regarding revaluation of improvements as complicated expensive to undertake hence affecting the frequency at which it is carried out. Evidence of such a situation is as happening in the EJMA which lacked funds for the revaluation excise.

In another version, officers of the Lands Commission indicated that the Office does not have the human capacity to undertake the revaluation excise. According to Deskins and Fox (2010), the Taxing Authority should be administratively efficient for compilation and updating of the property tax roll. The opinion of Deskins and Fox (2010) was however found to be absent by the researcher through personal observation during the fieldwork as the entire Municipal Office of the Land Valuation Division had total staff strength of four (4) personnel, out of which two (2) of them are due for retirement. Investigations through interviews revealed that since 2011, there have been no recruitments in the public sector in line with regulations instituted by the IMF to reduce salaries as part of the conditions of the Structural Adjustment Program for Ghana. As such, it was gathered that in the event that the Municipality decides to conduct a revaluation excise, Rating Officers from different Municipalities would be engaged to make the project successful.

4.5.2 Coverage of the Property Rate System in the EJMA

Field data indicated the approximate housing stock of the EJMA is 77,564. However inspection of the Valuation List contained a list of 20,053 properties that had been classified as being rateable properties. Assuming that 15 percent of the 77,564 properties are classified as exempted or not qualified to be rated as a result of it being improvised or uncompleted property, then it implies that the Valuation List should contain 65,929 properties. The implication under this circumstance is that the current Valuation List contains 30.42 percent of the actual number of properties that should have been on the Valuation List. This revelation confirms the assertion of Bird and Slack (2007) that in transition and developing countries, the coverage ratio of properties is between 20 to 70 percent.

The analysis above seem to suggest that all things being equal, the EJMA is losing the monetary equivalent of 69.58 percent of expected revenue from property rate if the Valuation List had been updated. The analysis for the loss of revenue will be valid on condition that all the properties not in the Valuation List on the average have the same value and that all taxes are collected. But the reality may be that the unvalued properties are newer, larger and more valuable than properties currently on the Valuation List and therefore the loss could be higher in monetary terms.

4.5.3 Collection of Property Rate

Collection of property rate is responsibility of the Revenue Section within the Accounts Department of the EJMA. Mechanisms employed for the collection of property rate revenue include the use of Revenue collectors employed by the municipality in accordance with provisions of Section 111 (2) of Act 462 and the personal payment system where property owners make direct payment to the Revenue Office of the EJMA. Interestingly, during interactions with the Accounts Officer, it was revealed to the researcher that since 2014, the Municipal Assembly had partnered with the Commercial Banks within the Municipality to enable property owners settle their Bills there. Surprisingly during interviews with some other officials within the other Offices, the impression the researcher got was that they were not aware of the arrangement with the Banks. However five (5) property owners indicated their knowledge and usage of the service.

Furthermore, both officials of the EJMA especially the revenue section and property owners were asked to rank the level of efficiency for the collection mechanisms for property rate revenue collection. R6 confessed

“since 2011 when the government ban on the public sector recruitment was instituted, our office has really suffered from staff shortages. Those who go on retirement or die are not replaced neither are new ones employed so we are really struggling to make things work”.

As a confirmation of this statement, it was realized that 80 percent of the property owners had also rated the collection mechanism as being least efficient. Contrary to this, 12 respondents representing 5.55 percent of the sampled population also rated the mechanism as being efficient.

From the views of the interviewees and majority of respondents, the inference from the analysis is that, inefficient collection mechanism is likely to have impacts on the EJMA's ability to effectively mobilize enough revenue from property rate. Hence, in the long run the ability to provide more infrastructure or maintenance services for the municipality can also be affected. Aside this, there was not much evidence to link the need for the employment of more staff as portrayed by interviewees to increases in property rate revenue.

4.5.4 Property Rate Revenue Collected as Against Budgeted Amount

Property rate revenue generated shown table 12 indicates fluctuations in the amount collected in comparison to the budgeted amount. Considering the annual proportion of property rate collected as against the annual budget from 2007 to 2009, the absolute amounts indicate increases. Analysis of the amount of revenue collected against the budgeted in percentage terms indicates the short falls for the respective years. For instance in 2007, the amount collected represented 98 percent of the budgeted amount. In addition 91 percent of the budgeted amount for 2009 was actually collected in spite of the fact that the monetary figure shows an increase. This seem to suggest that there was a decrease in the amount of revenue collected which could be attributed to payment defaults on the part of property owners.

In 2010 it was evident that the amount of property rate collected exceeded what was budgeted for by 8.94 percent. This was as a result of public education and awareness on property rate with regards the need for the property owners to honour their tax obligations to the municipality in order to increase the internal revenue. In this vein the sensitisation exercise by the EJMA was in line with what Peterson (2008) advocated for in terms awareness creation of the public regarding property rate in a literature reviewed on Financing Infrastructure through Land Value Capture. In spite of the public education, the revenue collected was 72.06 percent in 2011 and 57.30 percent in 2013 which was after the

development of the BIP. In 2014 and 2015, the percent of revenue collection increased due to EJMA's debt recovery strategy of taking legal action against property rate defaulters.

Reason attributed for the fluctuations in revenue generation by R6 were that,

“The development of BIP has resulted to increases in the number of properties developed in the municipality. However the municipality is not able to increase revenue from property rate due to lack of funds to conduct revaluation to include the new properties as well as revise the old property values on the Valuation list. In addition the enlisted property owners do not also pay their tax”.

This assertion is in agreement with Bird and Slack (2007), opinion that most fiscal cadastres contains only between 20 to 70 percent of the taxable properties in most developing countries which leads to reduced revenue from property rate.

Following from the assertion, as indicated in 4.5.2 (coverage ratio), to find how much would have been generated from an up dated Valuation List, the following assumptions are made: the method of assessing property rate is based on the Capital Value Method and not the DRC Method, the current Valuation List in 2015 contained 65,929 properties, rate impost is 0.003125, the current base rate is US\$22,933,440.00 (71,667/0.003125) or US\$1,143.64 per property and the missing properties have the same average value. The actual base would be US\$75,400,000.00 (1,143× 65,292). With this current tax base, the Municipality could either reduce the impost rate or increase their revenue substantially to the extent that assuming that instead of a collection rate of 87 percent, 70 percent of the property rate is collected the municipality will generate revenue of US\$ 165,000.00

In another opinion, the interviewee attributed the fluctuations in the property revenue generation to

“the difficulty in the enforcement of sanctions on rate defaulters as a result of manipulation and politicization of the system by the affluent in the society” (R1).

Table 12: Budgeted and Collected Revenue from Property Rate (2006-2015)

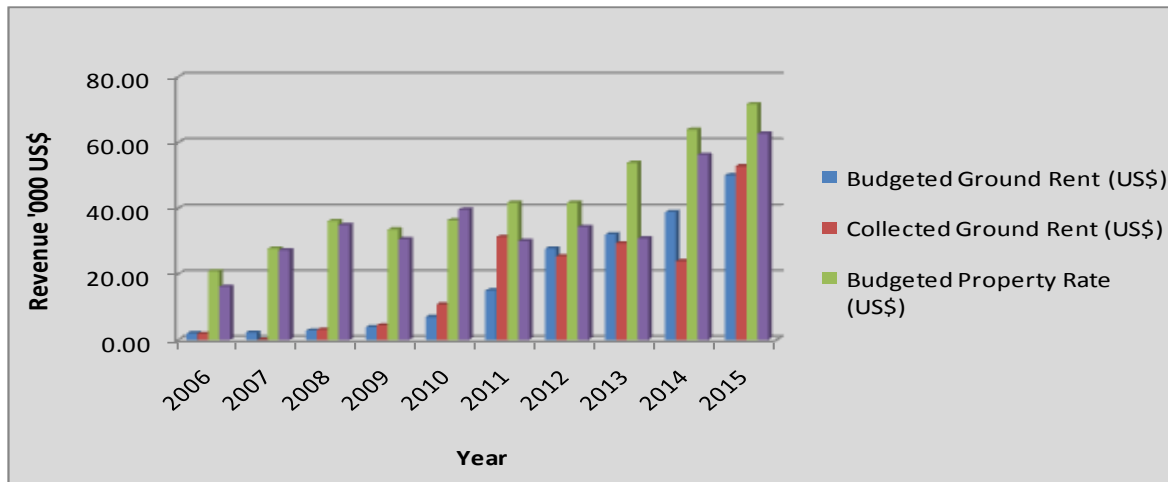
Year	Budgeted Amount (US\$)	Collected Amount (US\$)	% Collected from Budget Amount
2006	20,833.00	16,111.00	77.33
2007	27,778.00	27,222.00	98.00
2008	36,111.00	3,4875.00	96.58
2009	33,556.00	30,556.00	91.06
2010	36,333.00	39,583.00	108.94
2011	41,667.00	30,027.00	72.06
2012	41,667.00	34,326.00	76.85
2013	53,833.00	30,847.00	57.30
2014	63,889.00	56,260.00	88.06
2015	71,667.00	62,701.00	87.50

Source: Field Data, EJMA (2016) shows budgeted and collect Property Rates

4.5.5 Overview of Budgeted and collected Revenue for Property Rate and Ground Rent

Chart 2 gives an overview of a combined chart for Table 9 and Table 12 (the individual budgeted and collected revenue for property rate and ground rent) in the EJMA between 2006 and 2015 as discussed previously in 4.5.4.1 and 4.6.4

Chart 2: Budgeted and Collected Property and Ground Rent for EJMA (2006-2015)



Source: Field Data, EJMA (2016) shows Budgeted and Collected Property and Ground Rent for EJMA

Chart 2 above shows that the revenue collection for the municipality from 2006 to 2009 was impressive irrespective of the fact that not all targets were achieved within the period. The least achieved targeted percentage before the BIP development was 77.33 in 2006 while the maximum as 98 percent in 2007. In 2010 when BIP started operation, it is evident from the graph that revenue targets for both property rate and ground rent was exceeded. This according to R6

“was as a result administrative reforms by the new Municipal Head who had the goal of improving upon the performance of revenue generation in the Municipality more especially from what could be gained from the new Port development. However his goal was short lived due to financial and political influence”.

From 2010 onwards, the analysis shows the influence of the BIP on revenue generation. In 2011 and 2015, ground rent collection exceed target by 108.09 and 5.47 percent respectively as per the explanation given for especially 2011 in section 4.5.4.1. However property rate targets was never achieved throughout the entire period after 2010. The shortages in the collection of target amount were attributed to reasons aforementioned in section 4.6.4. From the analysis, the inference is that in spite of the presence of the BIP within the municipality, the revenue generation from ground rent and property rate has not been influenced much with the exception of 2011 and 2015. This is due to other reasons such as political and economic factors, inadequate collection staff; adamant property owners who refuse to pay their bills, among others as discovered during the fieldwork as discussed earlier.

4.6 EJMA Infrastructure Financed by the Internally Generated Revenue

Emanating from the provisions of Act 462, it is the responsibility of the EJMA to provide infrastructure for the inhabitants of the municipality. Resources for the execution of this function partly comes from inter governmental transfers, donations, internally generated funds among other. As such for the purpose of this research, it is important to establish how property rate and ground rent contributes to the IGF and the extent to which it is able to finance public infrastructure.

4.6.1 Property Rate and Ground Rent as a Proportion of Internally Generated Fund

The table 13 below depicts how the IGF of the EJMA of which property rate and ground rent is a proportion has fluctuating over the years under consideration.

Table 13: Proportion of Property Rate and Ground Rent as a Percentage of IGF

Year	IGF (US\$)	Property Rate (US\$)	Property Rate as a % of IGF	Ground Rent (US\$)	Ground Rent as a % of IGF
2006	79,373.00	16,111.00	20.30	869.00	1.20
2007	93,397.00	27,222.00	29.15	1,128.00	1.21
2008	101,435.00	34,875.00	30.90	1,513.00	1.34
2009	120,609.00	30,556.00	25.33	2,165.00	1.80
2010	117,403.00	39,583.00	33.72	5,316.00	4.53
2011	185,288.00	30,027.00	16.21	15,486.00	8.36
2012	159,234.00	34,326.00	21.56	12,581.00	7.90
2013	169,013.00	30,847.00	18.25	14,513.00	8.50
2014	198,182.00	56,260.00	28.39	11,833.00	6.00
2015	216,147.00	62,701.00	29.00	26,125.00	12.10

Source: Field Data (2016) 1US\$= GH¢3.60

Before the development of the BIP in 2010, the proportion of property rate to IGF was between 20 to 30 percent. In 2010 when the BIP started operating the percentage of property rate as a proportion of the IGF increased to 33.72 percent due to sensitization of the public about their obligation concerning property rate payment. The data obtained depicts a sharp drop to 16.21 percent in 2011 with further fluctuations up until 2013 in the proportions due to the unstable economic conditions of the country as earlier indicated. However, according to R6, “*the municipality embarked on a debt recovery program in 2014*”. This resulted in a gradual increase in the property rate revenue in the subsequent years as shown in the table below. The implication is that once property owners are reminded or educated on their obligation to pay their property rates, the municipality has the opportunity to increase property rate revenue.

With respect to ground rent as mentioned earlier, the percentage as a proportion of IGF before the development of the BIP was between 1.20 to 1.80 percent which is indicative of the number of land transactions during those years. In 2010 when the BIP started operation, there was a sharp increase in the percentage of revenue from ground rent to IGF from 4.53 to 12.10 percent in 2015. The sharp increase in ground rent revenue in 2011 confirmed the BIP’s influence on revenue generation through increased land acquisition irrespective the other external happenings during that year.

In spite of the increases within this period, there was a drop in the percentage in 2014 which was related to economic crises as aforementioned. To confirm reasons given for the decline in revenue, responds obtained from property owners indicated that, 25 percent of the sampled population admitted payment default with the reason that there is no evidence of what the tax payments made to the EJMA was used for in the form of infrastructure provision. It is in this

regard that the researcher further find out what the revenue from both property rate and ground rent were used for by the municipality.

4.6.2 Provision of Infrastructure Financed by IGF

Analysing from Table 13 above, it is evident that the revenue from property rate and ground rent do not constitute a greater part of the IGF for the EJMA. The implication therefore is that revenue from other sources other than land exhibited in Annex 7 showing the composition of IGF sources of revenue apart from land sources, constitute a greater part of the IGF.

Information from the Accounts Department indicated that prior to 2012; the IGF was used basically for the administrative purposes (stationary, office furniture, sitting allowance during meetings, office sanitation) as well as maintenance of office equipments and official vehicles for the various decentralized offices within the Municipality. In this regard, the infrastructural projects that were provided for was done through the use of the DAF. However since the disbursement of the DAF was not regular, yet the Municipality as part of their responsibilities had to provide the infrastructure services as stated in Act 462 and again as postulated by Serageldin, Bassett, et al.(2008), the Municipality in 2010 sought the approval of the Central Government and the Procurement Agency to be allowed to use part of the IGF for the provision of public infrastructure for the municipality.

The approval to use the IGF for infrastructure provision from personal observation of official documents was granted in the latter of part 2011. The approval clause was that not more than 45 percent of the IGF was to be used for provision of public infrastructure. This is because the Municipality had to use the DAF, DDF or the UG depending on which one of them was earmarked for a particular infrastructure to be provided. Further investigation revealed that the ability of a municipality to use portions of the IGF for such purposes was peculiar to only a few municipalities based on their special needs of which the EJMA was one of. Table 14 below shows a summary of the contribution of IGF in terms of Property Rate and Ground Rent toward the public infrastructure provided for the municipality between 2012 and 2015.

Table 14: Contribution of Property Rate and Ground Rent towards Public Infrastructure

Year	Infrastructure Provided	Total Expenditure Amount (US\$)	Contribution of IGF (US\$)	Contribution of Property rate and Ground Rent (US\$)
2012	4-Unit Teachers' Accommodation	133,333.33	53,333.33	46,906.79
2014	14-Seater Water Closet Public Toilet Facility	69,444.44	30,555.56	30,555.56
2015	Accident and Emergency Centre	222,222.22	997,222.22	88,826.20

Source: EJMA (2016) showing how IGF finances public infrastructure

In 2012, two sets of a 4-Unit Teachers' Accommodation were built for Akronwi and Achinakrom communities within the EJMA at total cost of US\$ 133,333.00 Out of this amount the contribution of property rate and ground rent revenue towards the project was US\$ 46,907.00, representing 2.84 percent the total cost for the project.

In 2014, health concerns were raised by the Municipal Health Directorate concerning the poor sanitary conditions and the associated health implications that was been reported in Manhyia community. As a result, a 14- seater water closet public toilet facility as in Picture 2 below was constructed in Manhyia within the EJMA at a total cost of US\$ 69,444.00. It was

realized that, the revenue from property rate alone for 2014 which was US\$56,260.35 catered for 81 percent of the total cost of the project

Again, the municipality in 2015 as part of the upgrading and expansion of the District Clinic because it had out grown the usage capacity, built an Accident and Emergency Centre at Ejisu as in Picture 2 at a cost of US\$ 222,222.00. Out of this amount, the contribution of property rate and ground rent revenue was US\$88,826.20 representing 40 percent of total cost of the Accident and Emergency Centre.

Picture 2: Public Infrastructure partly funded by IGF- EJMA



Source: Author (2016) showing public infrastructure provide partly funded through IGF in the EJMA.

The analysis above establishes that property rate and ground rent was able to contribute to the provision of the public infrastructural projects provided for through the use of part of the IGF. However, for property rate and ground rent to be able to fully cover cost of an infrastructure, it depends on the type of infrastructure being provided and the construction cost of the infrastructure. The ability to use property rate and ground rent as land value capture tools to generate internal revenue for the EJMA effectively to a great extent depends on the legal arrangements to allow the use of the IGF, regular revision of the fiscal cadastre as well as efficient collection mechanisms by the Taxing Authority (Franzsen, 2010; Dornfest, 2012 and Kelly, 2013).

4.7 Summary of the Chapter

From the presentation of data and analysis, it has been deduced that the Boankra Inland Port has had an impact on land and property values within the Ejisu-Juaben Municipal Assembly especially in the Boankra Township where the infrastructure is located than in other areas further away from the Boankra Inland Port which is evident from the land and property values from the Owne Township. The study also revealed that though land and property values have increased over the years under study, the Ejisu-Juaben Municipal Assembly has not been able to capture the increment in values by way of using property rate and ground rent as land value capture instruments due to administrative and financial constraints being encountered by the Ejisu-Juaben Municipal Assembly.

Regarding aspects of legal and institutional basis for the administration for both property rate and ground rent, it has been established that there are a range of Laws, Acts and Status that govern the entire processes entailed in the administration and collection of each of the taxes. Evidence gathered indicated that the Laws and regulations are adhered to especially with regards to the method of assessment and the disbursement of the ground rent among the various stakeholders.

Another emergent fact from the analysis shows that with the development of the Boankra Inland Port infrastructure in the Municipality since 2010, the targeted revenue generated from

property rate especially has never been achieved. The inability of Ejisu-Juaben Municipal Assembly to increase revenue from property rate is because of the absence of a revaluation excise since 2005. The implication is that the rateable values on the current Valuation List are not a true reflection of the rateable values of the properties. Again, since the Ejisu-Juaben Municipal Assembly is not entitled to the total ground rent revenue collected, the proportion of property rate and ground rent to the IGF is very minimal.

In conclusion, the analysis from the field interviews, survey, secondary data and personal observation, the responses expressed per this case study has shown that the Boankra Inland Port development had an impact on the land and property values, ground rent, property rate, revenue generation and public infrastructure provision. However revaluation of property rate and the revision of ground rent had not been undertaken since 2005 coupled with administration and collection challenges.

Chapter 5: Conclusions and Recommendations

5.1 Introduction

The prime objective of the research was to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent within the municipality as a result of the development of the infrastructure (BIP). In an attempt to achieve this objective, the researcher used the case study approach to ascertain the impact of the infrastructure on land and property values from which internal revenue could be generated in two locations Boankra and Owne. The case study approach was appropriate for the research as the infrastructure is a unique feature to the context of study. In addition, the assessment and collection methods for property rate and ground rent were ascertained and finally the revenue generation from property rate and ground rent and its use was investigated. It is hoped that the main research question will be answered by answering the sub-research questions in the following sections.

5.2 Conclusions

This chapter discusses the conclusions drawn from the analysis and presentations from the field data based on the conceptual variables established by linking to existing literature to answer the main research question. The conclusions and recommendations are based on the identified outcomes from the case study area.

5.2.1 What is the change in property and land values in the Ejisu-Juaben Municipality due to the development of the Boankra Inland Port?

The research findings and analysis showed increased urbanization in terms of population and housing stock data obtained from the EJMA. In addition, land and property values within the EJMA had increased after the BIP was developed in 2010. The evidence of increased land and property values was found especially in Boankra where the infrastructure is located as compared to the other locations such as Owne within the municipality. This finding can be compared to the literature reviewed on Perdomo, Mendoza, et al (2007) study in Colombia where the provision of the Transmilenio Bus Rapid System resulted in increased on land and property values.

Land and property values obtained from property owners, secondary data and key respondents were triangulated with values obtained from the Lands Commission. Lands Commission is a government authorized agency responsible for transactions involving land and property therefore the values confirmed from that were deemed to be authentic. Concluding from findings gathered from the field backed with supporting evidence, the development of the Inland Port infrastructure in the EJMA has had an impact on land and property values as a result of the development of auxiliary infrastructure and increased demand for properties and land amidst the fixed nature of supply for land and the rate at which property can be supplied within a time duration. In addition the impact is evident on urbanisation because more people have moved to the built up area because of the inland port development.

This conclusion affirms Smith and Girhring (2006) and Walters (2012) views concerning the impact of public infrastructure on land and property values in the international context can also apply to the context of this study. Again, Sandroni (2011) and Hong (2013) are of the opinion that the resultant positive effects of urbanization could impact on land and property values. Following from the views of the writers above, it is imperative that in the next section the assessment and collection mechanisms for property rate and ground rent are examined to ascertain if the value changes in land and property have been catered for in terms of the

assessment and capturing procedure of the additional increments resulting from the impact of the BIP.

5.2.2 What is the procedure for assessing and capturing property rate and ground rents in the Ejisu-Juaben Municipal Assembly?

Revelations and analysis regarding ground rent and property rate indicated that both forms of tax were adequately governed and enforced by an array of laws ranging from the 1992 Constitution of Ghana, a variety of Acts, Statutes and Operational Manuals of the various Institutions. This is in affirmation with Deskins and Fox (2010) opinion on the need for the need for by laws governing taxation and competent institutions to enforce these Laws.

The assessment criterion identified for ground rent was based on the annual equivalent method. This method considers the annual ground rent payable to be based on the use value of the land which is lower than the economic value of the land. It was also revealed that the method encouraged ground rent payable inequalities for similar plots of land but with different unexpired lease terms which should not be the case.

Further findings revealed that revision of ground rent payable had not been done since 2010. From the observations of the researcher, this could be attributed to the observed flaw in the aspects of the Laws regulating ground rent since the Laws were silent about the frequency of ground rent reassessment.

Challenges of non revision of ground rent periodically could be an underpinning for Hong (2013) opinion that land leasing should have shorter lease renewal clauses included in the lease document to avoid the likely occurrence of such a problem as has been happening in some other parts of the world as China and Hong Kong. In addition the short lease or renewal periods would rather aid in taking advantage of the increments in land values in between the lease renewals if the government intends to use land leasing effectively as a land value capture instrument.

Furthermore, inefficiency in the collection mechanism for ground rent due to shortage of staff numbers and administrative problems as gathered from the field interviews was confirmation from 75 percent of the property owners. The outcome of such challenges is the inability of the EJMA to mobilize the expected revenue from ground rent. Such occurrences in the EJMA corroborate the opinion Hong (2013) on the need for effective administrative systems to be in place in order to use land leasing effectively for revenue generation.

On the other hand, property rate assessment is based on the Depreciated Replacement Cost (DRC) Method with buildings as the tax base. The DRC method of assessing property values was found not the best approach for assessing property rate as assessment of depreciation was base on the discretion of the Rating Officer which could result in bias in the assessment procedure. In addition if the DRC method is to be used effectively, there should be enough information on construction cost. But the reality is that, the construction industry in most developing countries is not very transparent with declaring cost rates most especially if it is for taxation purposes.

It is this regard that the DRC method of assessing rateable properties has been found loathed by scholars such as Zodrow (2001), Slack (2010) and Sheffrin (2010). The opinion of these writers is that the construction cost which is basically influenced by cost of materials, labour cost among others may not match up with market values of land and property even if there is increased demand for property that will cause in property values.

Revelations indicated an absence of revaluation of properties since 2005. The implication for the lack of revaluation of properties on the existing Valuation List is that rateable values are

not reflective of the true rateable values of the properties. Reasons that may be assigned include among others improvements, renovations or additions may have been done to the properties thereby increasing the value since the properties were last valued. Changing market conditions could mean that the worth of a property in the market place is more than the replacement cost as it was previously. Hence lack of revaluation of such properties is likely to result in an under estimation of the value. New properties developed in the municipality since the last valuation excises were found not to have been included to the list. Apart from that, the Valuation List was found to have missing pages which indicated that record keeping was problem. In this regard, all those properties do not pay property rate which amounts to the loss of property rate revenue to the EJMA.

Furthermore, inefficiencies in the collection mechanism of property rate as well as weak enforcement of penalties on the defaulters within the municipality were identified as challenges to the collection mechanism for property rate within the EJMA. These occurrences unveiled at the EJMA fall short of the requirements postulated by Peterson (2008), Franzsen (2010), Walters (2011) and Dornfest (2012) in relation to prerequisites for property rate to be used effectively as a land value capture instrument.

Per the findings and analysis, it can be concluded that the assessment procedure and collection mechanisms are not aiding the municipality to effectively and efficiently use property rate and ground rent calculations and revenue capturing. But rather the methods encourage inequalities in assessment of the rates.

5.2.3 How has the revenue generation from the property rate and ground rent of the Ejisu-Juaben Municipal Assembly been influenced by the development of the Boankra Inland Port infrastructure?

The study revealed the inability for the EJMA receive the total revenue generated from ground rent was due to the customary stool land tenure system operating within the EJMA. This form of tenure falls within the forms of land tenures propounded by Payne (2000). However in Ghana, according to Act 462 this form of tenure allows the EJMA to receive only fifty-five (55) percent of the ground rent revenue while the traditional authority receives the remaining 45 percent.

Additionally, the traditional authorities receive all the premium and revenue from lease renewals which are based on negotiations as advocated by Needham (2003) and Wyatt (2007). The premium, revenue from lease renewals and 45 percent of the ground rent revenue kept by the traditional authority during interviews and observations revealed that, these revenues are not used for provision of any public infrastructure or service for the municipality. Rather it was purely used for the customary purposes such as maintenance of the stool and customary expenditure,

The implication therefore is that in spite of the BIP development which resulted in increased land transactions and land value increases, again the EJMA is unable to benefit from revenues accruing from premium and lease renewals which could increase the contribution of ground rent to the IGF. This arrangement contradicts the views of Hong and Bourassa (2003) and Anderson (2012) regarding land tenure and land value capture in term of the government's ability to benefit from premiums and lease renewals.

Furthermore, the findings and analysis indicated that before the BIP development the percentage contribution of property rate revenue toward the IGF was higher (a maximum of 30.90 percent in 2008) than after the Port development (maximum of 29 percent in 2015).

Based on the foregoing, it can be concluded that though the BIP impacted on property values, due to lack of revaluation of properties and administrative challenges, revenue generated

from property rate did not reflect the impact of the BIP on the property values. This confirms the assertion of Walters (2011) concerning the need to update the fiscal cadastre or encouragement of self declaration of self assessed property tax as successfully happened in Bangalore in order to use property rate to effectively capture incremental revenue. It should however be noted that comparatively, property rate contributed more to the IGF than the contribution of ground rent did to the IGF in spite of the lack of an updated Valuation List.

5.2.4 To what extent does the revenue generated from property rate and ground rent finance public infrastructure and maintenance?

Findings from the study indicated that prior to 2012 the IGF of which property rate and ground rent revenue constituted a part of was not used for provision of public infrastructure.

In 2011 after there had been a legal change in the procurement procedures for the EJMA, the municipality was allowed to use a proportion of not more than 45 percent of IGF towards the provision of public infrastructure. It was realised that for 2012 and 2015 property rate and ground rent revenue significantly contributed percentages of 2.84 and 40 to the total cost of the projects undertaken by the EJMA. While in 2014, revenue for property rate alone was enough to cater for 81 percent of the total cost of the public infrastructure provided. The analysis revealed a drastic change in the ability for property rate and ground rent to contribute towards the provision of public infrastructure. This change was as a result of the municipality's willingness to invest in public infrastructure hence called for a change in the procurement laws.

The ability of the EJMA to use not more than 45 percent of the internally generated revenue in the form of property rate and ground rent is in contradiction with the studies of Smith and Gihring (2006), Wetzel (2006) and Medda and Modelewska (2011) where cities like London and Newcastle were allowed to fully fund the Jubilee line and the Tyne and Wear Metro through the use of revenue from land related sources

It can be concluded that, property rate and ground rent was able to contribute to the provision of the public infrastructural projects provided for through the use of part of the IGF. However the extent to which property rate and ground revenue contributes towards the finance of a public infrastructure in the EJMA depend the political will and support, legal arrangements that allowed the use the IGF for public infrastructure, the nature of the infrastructure and construction cost involved for the particular project.

5.2.5 To what extent is the Ejisu-Juaben Municipal Assembly generating internal revenue from property rate and ground rent as a result of the development of the Boankra Inland Port?

From the analysis of the sub-research questions, it can be concluded that property rate and ground rent revenue ranged between 21 to 38 percent of the internal revenue generated in the Ejisu-Juaben Municipal Assembly from 2006 to 2010. The minimum revenue generated from property rate and ground rent was 21 percent of the IGF in 2006, and the maximum revenue was 38 percent of the IGF in 2010. After the development of the Boankra Inland Port, from 2011 to 2015, property rate and ground rent revenue generated also ranged between a minimum of 25 percent of the IGF in 2011 and a maximum of 41 percent of the IGF in 2015 which was also the highest percentage of revenue generated for the period under review of this research.

It can therefore be concluded that, the revenue generated from property rate and ground rent seems to fluctuate irrespective of the development of the Boankra Inland Port as budgeted revenues for the period between 2006 and 2015 are sometimes exceeded or not attained. This may be attributed to the challenges with regards to the assessment and collection of property

rate and ground rent as discussed in section 5.2.3 above. This conclusion corroborates the studies of Walters (2011) and Hong (2013) on the need for effective and efficient administrative procedures that govern property rate and ground rent administration and collection in order for property rate and ground rent to contribute to revenue of the central or local government.

5.3 Recommendations

Emerging from the presentation of findings, analysis and the conclusions drawn, the researcher identified some gaps with respect to the use of property rate and ground rent as land value capture instruments in generating internal revenue for the Ejisu-Juaben Municipal Assembly. As such the following recommendations have been proposed to enhance the future use of these instruments effectively for the municipality and beyond.

1. The national government through the Legislature should amend the Laws, Acts and Statutes governing and regulating property rate and ground rent to reflect the need for precise periods for reassessment of property rate and ground rent at.
2. As a step towards making the Local government less reliant on the Central government for all the resources to undertake the updating procedure, the local government should be given the mandate to perform the updating of the Valuation List function through their own resources and innovations as was successfully done in Somalia and Bangalore.
3. To improve the level of equity in the assessment of ground rent and hence encourage the payment of the rent which will lead to increased revenue, it is recommended that the current method of assessment using the annual equivalent method be revised to a more equitable method based on the capital value of land and anticipated yield but not unexpired term of the lease as pertains in the annual equivalent method to eliminate inequality of ground rent for the property owners.
4. To capture value increments on property values, it is recommended that the method of assessing property rate using the depreciated replacement cost method on buildings only be transitioned to the use of the market value approach as used in the assessment of the premium or 'drink money'. This should be done on a pilot bases using municipalities or regions and later transcended to cover the entire country.
5. To improve the revenue generation capacity of ground rent contribution towards the IGF of the municipality, it is recommended that the proportions as spelt out by the 1992 Constitution of Ghana is revised to increase the proportion of ground rent revenue received by the MMDAs.
6. Local Authorities should be legally tasked with specific responsibilities to provide public services such as providing or supporting the provision of portable water, waste and sanitation services, street lighting among others out of the share of the proportion of ground rent revenue that is assign to them as well as the benefits enjoyed for ground rent payment exemptions.
7. For an improvement in the level of efficiency for revenue collection for both land instruments, it is recommended that the government should outsource the revenue collection with well defined service level agreements.
8. As a pilot project within the Ejisu-Juaben municipality which could be extended to other municipalities a reward and tougher sanction scheme should be instituted to encourage the property rate and ground rent payment obligation by property owners. For instance receipt of certain benefits should be hinged on the production of a valid proof of payment receipts of both property rate and ground rent.

9. Public infrastructure developed through the use of property rate and ground rent should be made public to the inhabitants of the municipality in order to encourage the tax commitment of the inhabitants.

5.3.1 Recommendation for further studies

The findings of this study which was limited to the completed first phase of the BIP infrastructure and its current impact on the variables investigated has necessitated the need for further studies to be conducted when the BIP infrastructure has been completed. This will help further affirm or annul existing studies by other authors on public infrastructure provision and land value capture through the use of the property rate or ground rent (land leasing).

Secondly, the method of assessment for the property rate (DRC) could be further investigated in terms of its efficacy for property rating purposes.

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Annexes

Annex1: Interview Guides

ERASMUS UNIVERSITY, ROTTERDAM, THE NETHERLANDS
INSTITUTE FOR HOUSING AND DEVELOPMENT STUDIES (IHS)
MSc. URBAN MANAGEMENT AND DEVELOPMENT (UMD 12)

June/July 2016

Interview Guide for Office of the Administrator of Stool Lands- EJMA

Research Topic: "Infrastructure Investment and Land Value Capture: A Case Study of Ejisu-Juaben Municipal Assembly (EJMA), Ghana"

The objective of this research is to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent as land value capture instruments as a result of the development of the Boankra Inland Port infrastructure project. This Interview is intended to help gather information and data for academic purposes. All the information gathered will be strictly treated as highly confidential. The researcher appeals that you respond to the questions as sincerely as possible. Thank you for your time and cooperation.

General information:

Name of Institution/Organization:

Position/ Rank:

How long have you worked in this organization?

Part 1: Institutional and Legal Arrangements

1. Can you talk me through the institutional and legal arrangements for land leasing in Ghana?
2. Are there any specific Laws, Statutes or Regulation the back land leasing in Ghana?
3. How long have most of the Laws and Statutes been in place?
4. Which Institutions are mandated to enforce the Laws and Statutes?
5. In your estimation what can you say about the compliance of the Laws and Statutes?

	Very low	Low	Median	High	Very high
Level of compliance	1	2	3	4	5

6. Would you say that the enforcing Institutions have lived up to the Laws and Statutes

Part 2: Land Tenure and Land Values

7. What is the composition of the land tenure system in the Ejisu-Juaben Municipality?
8. Can you explain to me the procedure for land acquisition in this jurisdiction?
9. What are the legal or traditional provisions that regulate land leasing?
10. In your opinion do you think that land values have changed over the last 10 years?
Can you assign any reasons for that?
11. Is possible to get from you the land values from 2006 to 2015?

Part 3: Assessment and Collection of Ground Rent

12. What is the basis for determining the premium (land value) and ground rent?
13. Who takes the premium and ground rent?
14. What is the range of duration for the lease for the various land uses? (minimum and maximum)
15. What are the key factors that are considered in any potential ground rent assessment?
16. Can you talk me through the assessment process for ground rent?
17. How often is the re-assessment of properties done in order to update the land register?
18. In your estimation how do you involve property owners in the assessment process? In terms of addressing their concerns?
19. Are there any properties or individuals exempted from the payment of ground rent?
20. How often is the ground rent collected
21. Are you aware of the collection mechanisms adopted by the EJMA with respect to ground rent?
22. In your opinion how would you rate the efficiency of the revenue collection mechanism? ☐ ☐ ☐ ☐ ☐
Poor Fair Good Very good Excellent
23. Can you assign any reasons for your answer?

Part 4: Revenue

24. How is the revenue from ground rent disbursed?
25. Can I get data on revenue collected from ground rent from 2006 to 2015?
26. What is your opinion about the trend in the revenue collected as against what was budgeted for?
27. Can you explain the reasons for the trend?
28. In your estimation what do you think the revenue generated from ground rent is used for within the Municipality?

Thank you. Do you have any questions about this interview?

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INSTITUTE FOR HOUSING AND DEVELOPMENT STUDIES (IHS)
MSc. URBAN MANAGEMENT AND DEVELOPMENT (UMD 12)**

June/July 2016

Interview Guide for Lands Valuation Division - EJMA

Research Topic: "Infrastructure Investment and Land Value Capture: A Case Study of Ejisu-Juaben Municipal Assembly (EJMA), Ghana"

The objective of this research is to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent as land value capture instruments as a result of the development of the Boankra Inland Port infrastructure project. This Interview is intended to help gather information and data for academic purposes. All the information gathered will be strictly treated as highly as confidential. The researcher appeals that you respond to the questions as sincerely as possible. Thank you for your time and cooperation.

General information

Name of Institution/Organization:

Position/ Rank:

How long have you worked in this organization?

Part 1: Institutional Arrangements for Property Rate

- 1 What are the institutional arrangements for property rating In Ghana?
- 2 What are the Laws, Statutes or Regulation the back land leasing in Ghana?
- 3 Which Institutions are mandated to enforce the laws and statutes?
- 4 In your estimation what can you say about the level of compliance of the Laws and Statutes?

	Very low	Low	Median	High	Very high
Level of compliance	1	2	3	4	5

- 5 Would you say that the enforcing Institutions have lived up to the Laws and Statutes

Part 2: Assessment of Property Rate

- 6 Who has the prerogative for setting the property rate?
- 7 As per the current practice with respect to question 6, in your opinion do you think there is the need for a change?
- 8 Can you explain how the tax rate is arrived at?
- 9 How often is it revised?
- 10 What is the tax base for assessing property rate?
- 11 As per the Statistical Service Report of 2012, there is 170 percent increment in properties within the municipality. Can you say same is reflective of your current valuation roll?
- 12 (a) If yes what might have influenced such efficiency.
(b) If no what might be the main hindrance?
- 13 Is the increment in the number of properties reflected in the value of the properties as well?
- 14 Can you attribute any factors for this?
- 15 Can you furnish me with data on the property values from 2006 to 2015?
- 16 In the assessment of the property rate which of the method(s) is/are applied.
- 17 Can you talk me through the assessment process of arriving at the rateable value?
- 18 How often is the updating of the valuation roll done?
- 19 Is the said update solely attained from revaluation?
- 20 In your opinion who bears the property rate burden?
- 21 As per section 99(1) of the Local Government Act, '*religious premises, cemeteries and burial grounds, educational and charitable institutions, health facilities registered with the Assembly as well as premises owned by diplomatic missions with the approval of the Minister for Foreign Affairs*' are exempted from payment of property rate Are there any other that are not listed that are exempted from property rate within the municipality?

Part 3: Collection Mechanism of Property Rate

- 22 Are you aware of the collection mechanisms adopted by the EJMA with respect to property rate?
- 23 What is your view about the collection mechanism?
- 24 What is the level of awareness for the payment of property rate by property owners?
Poor ☐ Fair ☐ Good ☐ Very good ☐ Excellent ☐
- 25 Can you say the level of awareness correlates with the extent of payment?
- 26 Can you provide me with data on revenue collected from property rate from 2006 to 2015?
- 27 Can you explain the reasons for the trend?
- 28 Are there any provisions specifying what property rate proceeds are to be used for?
 - (a) If yes what is its intended use?
 - (b) If no what are the proceeds put to?

Thank you. Do you have any questions about this interview?

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MSc. URBAN MANAGEMENT AND DEVELOPMENT (UMD 12)**

June/July 2016

Interview Guide for the Municipal Planning and Coordinating Unit - EJMA

Research Topic: "Infrastructure Investment and Land Value Capture: A Case Study of Ejisu-Juaben Municipal Assembly (EJMA), Ghana"

The objective of this research is to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent as land value capture instruments as a result of the development of the Boankra Inland Port infrastructure project. This Interview is intended to help gather information and data for academic purposes. All the information gathered will be strictly treated as highly confidential. The researcher appeals that you respond to the questions as sincerely as possible. Thank you for your time and cooperation.

General information

Name of Institution/Organization:

Position/ Rank:

How long have you worked in this organization?

Part 1: Impact of the Inland Port on Land and Property Values

1. What are the roles and responsibilities of your department?
2. Can you explain the department's involvement in the development of the Boankra Inland Port?
3. What is your opinion about the impact of the Inland Port development on property values?
4. What is your opinion about the impact of the Inland Port development on land values?

Part 2: Impact of the Inland Port on Revenue

5. How has the revenue generation in terms of property rate been influenced with the development of the Inland Port?

6. How has the revenue generation in terms of ground rent been influenced with the development of the Inland Port?
7. Are there any measures by the Municipality to capture any increases in property rate and ground rent that may have occurred within the past 5 years (2010 to 2015)?
8. Apart from property rate and ground rent can you enlighten me on the other sources of revenue for the Municipality?
9. How is the revenue disbursed within the municipality?

Part 3: Infrastructure Provision

10. What kind of infrastructure is provided using the revenue from property rate and ground rent?
11. Would you say that the revenue from property rate and ground rent are enough to finance the infrastructure projects?
12. Are there any other sources of revenue that complement how much is generated from property rate and ground rent for the provision and maintenance of infrastructure?
13. Can you provide me with data on the revenue and expenditure between 2006 and 2015?
14. What is your opinion about the trend of the revenue and expenditure between 2006 and 2015?

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June/July 2016**

Interview Guide for Accounts and Budget Office - EJMA

Research Topic: "Infrastructure Investment and Land Value Capture: A Case Study of Ejisu-Juaben Municipal Assembly (EJMA), Ghana"

The objective of this research is to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent as land value capture instruments as a result of the development of the Boankra Inland Port infrastructure project. This Interview is intended to help gather information and data for academic purposes. All the information gathered will be strictly treated as highly confidential. The researcher appeals that you respond to the questions as sincerely as possible. Thank you for your time and cooperation.

General information:

Name of Organization

Rank/Position

How long have you been working with this Organization?

Interview questions:

1. What are the sources of revenue for the Municipality?
2. Can you talk me through how the external sources of revenue are calculated and allocated to the municipality? (*Central government transfers, grants, donations*)
3. How much the Inland Port contributes in terms of revenue to the Municipality?

4. In your opinion how would you assess the revenue mobilization mechanisms for property rate and ground rent?

Least Efficient	Less Efficient	Efficient	More Efficient	Most Efficient
1	2	3	4	5

5. What reasons can you attribute for your answer to question 4?
6. How much revenue did property rate contribute to the total revenue between 2006 and 2015?
7. How much revenue did ground rent contribute to the total revenue between 2006 and 2015?
8. Can you provide me with data on revenue budgeted as against what was collected from property rate and ground rent from 2006 to 2015?
9. In your opinion can assign reasons for the trend in the revenue collected from ground rent and property rate?
10. What does the municipality use the revenue from property rate and ground rent for?
11. Is the revenue generated from property rate and ground rent enough to finance infrastructure development and maintenance?
12. Apart from revenue from property rate and ground rent, which other sources of revenue are used to complement the cost of infrastructure provision and maintenance by the Municipality?
13. Is it possible to get data on revenue and expenditure from 2006 to 2015?

Thank you. Do you have any additional comments?

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June/July 2016

Interview Guide for the Traditional Leaders - EJMA

Research Topic: "Infrastructure Investment and Land Value Capture: A Case Study of Ejisu-Juaben Municipal Assembly (EJMA), Ghana"

The objective of this research is to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent as land value capture instruments as a result of the development of the Boankra Inland Port infrastructure project. This Interview is intended to help gather information and data for academic purposes. All the information gathered will be strictly treated as highly confidential. The researcher appeals that you respond to the questions as sincerely as possible. Thank you for your time and cooperation.

General information

Name of Stool:

Position/ Rank:

How long have you occupied the stool?

1. What is the total land size in terms of acres within your jurisdiction?
2. What is the process of acquiring land for prospective allottee?

3. What type of interest can a prospective allottee acquire within your jurisdiction?
4. Do you think the amount of rights granted has an impact on the value of the land?
5. Can you explain the criteria at arriving at the land value/ premium? (*for example a plot size of 0.23 acres*)
6. At what use value does the Stool grant the lease?
7. Who are the beneficiaries of the premium and ground rent paid for the land?
8. What are the monies from the premium and ground rent used for?
9. In your estimation would you say there have been changes in land values between 2006 and 2015?
10. What can you attribute those changes to?
11. Is it possible to give me land values for the period between 2006 and 2015?
12. In your opinion what do you think the proportion of the revenue generated from land in terms of ground rent and property rate are used for by the Municipal Assembly?

For the Traditional leader of Boankra these additional questions will be asked.

1. How much land does the Boankra Inland Port occupy?
2. Who is/are the owner(s) of the Boankra Inland Port?
3. Through which medium was the land acquired? (*Private treaty, power of eminent domain*)
4. Where there any expectations from you and to a large extent the settlers (migrants) as far as the Inland Port's impact were concerned?
5. (a) *If yes*, Can you elaborate on such expectations?
(b) *If no*, Can you elaborate on the misfortunes?

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June/July 2016

Interview Guide for Valuers and Estate Brokers - EJMA

Research Topic: "Infrastructure Investment and Land Value Capture: A Case Study of Ejisu-Juaben Municipal Assembly (EJMA), Ghana"

The objective of this research is to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent as land value capture instruments as a result of the development of the Boankra Inland Port infrastructure project. This Interview is intended to help gather information and data for academic purposes. All the information gathered will be strictly treated as highly confidential. The researcher appeals that you respond to the questions as sincerely as possible. Thank you for your time and cooperation.

General information:

Name of Organization

Rank/Position

How long have you been working with this Organization?

Interview questions:

1. How much (GH¢) is a parcel of land measuring 0.23 acres (100ft x 100ft) granted for the following land uses: Residential, Commercial, Industrial and Agriculture

2. From your experience what key indicators are values of land in this catchment area based on?
3. In your opinion, at what use value does the Stool grant leases for the various land uses?
4. How much does the Stool collect as premium for residential, commercial, industrial and agricultural land? Has there been a change in the premium?
5. Who are the beneficiaries of the premium?
6. Can you talk me through what the premium is used for?
7. What has been the trend in land values between 2006 and 2015?
8. In your opinion what do you think has accounted for this trend?
9. Can you provide me with data on the land values?
10. In your perspective how would you measure the rate of property development between 2006 and 2015? Using the scale below:

Rate of property development	Very slow 1	Slow 2	Median 3	Rapid 4	Very Rapid 5
------------------------------	----------------	-----------	-------------	------------	-----------------

11. Can you attribute any reasons to the rate of property developments?
12. In your opinion do you think that the rate of development corresponds with property values?
13. Can you provide me with data of property values within the Boankra and Onwe between 2006 and 2015?
14. Are you aware of any provisions in place specifying what the revenues from property rate and ground rent are to be used for by the municipal assembly?
15. (a) If yes what are the intended uses?
(b) If no, what are the proceeds used for?

Thank you. Do you have any additional comments?

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June/July 2016**

Questionnaire for property owners - EJMA

Research Topic: "Infrastructure Investment and Land Value Capture: A Case Study of Ejisu-Juaben Municipal Assembly (EJMA), Ghana"

The objective of this research is to explain the extent to which the EJMA is generating internal revenue from property rate and ground rent as land value capture instruments as a result of the development of the Boankra Inland Port infrastructure project. This Interview is intended to help gather information and data for academic purposes. All the information gathered will be strictly treated as highly confidential. The researcher appeals that you respond to the questions as sincerely as possible. Thank you for your time and cooperation.

Instructions:

- (a) Kindly tick the option(s) that apply to your answer for the alternatives provided.
- (b) Where there are no option(s), please provide your responses in the space(s) provided.

- Age: Gender: Male ☐ Female ☐
1. Are you the owner of this property? Yes ☐ No ☐
 2. What is the property used for? Residential ☐ Commercial ☐ Industrial ☐ Other ☐
 3. How long have you owned this property?
0-3years ☐ 4-6years ☐ 7-9 years ☐ 10-12 years ☐ 13 years and more ☐
 4. What is the size of your plot? Less than 0.23 acres ☐ 0.23 acres ☐ More than 0.23 acres ☐ Other
 5. How did you acquire your land? Gift ☐ Inheritance ☐ Lease ☐ Assignment ☐ Other
 6. What kind of interest do you have in the land? Freehold ☐ Leasehold ☐ Other
 7. If a leasehold interest, how many years was the lease granted for?
 8. How much premium was paid for the land?
 9. Do you have a Lease Document as prove of Title to your land? Yes ☐ No ☐
Processing the Document ☐ Other (Please specify).....
 10. How much is a plot of land for leasing currently granted for?
 11. Can you attribute it to any of the following reasons?
Increased demand for land ☐ Proximity to the city ☐ Presence of the Inland Port
Other
 12. In your opinion has there been a change in property values within the Municipality within the last 10 years? ☐ Yes ☐
 13. If no what could be the cause? Slow rate of development within the municipality ☐
Insecure nature of the municipality ☐ Fear of environmental effects due to the presence of the Inland Port ☐ Other
 14. If yes what could be the cause? Increased demand for land ☐ Proximity to the city ☐
Presence of the Inland Port ☐ Other
 15. Do you pay ground rent? Yes ☐ No ☐
 16. If yes do you know how the ground rent is calculated? Yes ☐ No ☐
 17. How often do you receive a ground rent demand notice? Monthly ☐ Bi-annually ☐
Annually ☐ Hardly receive a demand notice ☐
 18. How often do you pay the ground rent? Monthly ☐ Bi-annually ☐ Annually ☐
Never ☐

19. How is the ground rent payment made? At a payment point at the Assembly ☐ected
by Revenue collectors ☐

20. Do you know of any other collection mechanism for ground rent?

21. How would you rank the collection mechanism for the ground rent? Indicate with the scale of 1 to 5 below:

Least Efficient	Less Efficient	Efficient	More Efficient	Most Efficient
1	2	3	4	5

22. Which of the following do you think the Municipality uses the revenue from ground rent to provide? Indicate by ticking the appropriate answer

- (a) Educational Facilities ☐
- (b) Health Facilities ☐
- (c) Roads ☐
- (d) Electricity ☐
- (e) Water supply ☐
- (f) Street lights ☐
- (g) Market ☐
- (h) Waste and Sanitation ☐
- (i) None of the above ☐

23. Do you pay property rate? Yes ☐ No ☐

24. If yes do you know how the property rate is calculated? Yes ☐No ☐

25. Has there been a change in the amount of property rate you usually pay? Yes ☐ No ☐

26. Can you attribute it to any reason?

27. How often do you pay the property? Monthly ☐-annually ☐nnuallyOt☐....

28. How is the payment made? At a payment point at the Assembly ☐ected by Revenue collectors ☐

29. Do you know of any other collection mechanism for property rate?

30. What is your opinion about the collection mechanism for the property rate? Indicate with the scale of 1 to 5 below:

Least Efficient	Less Efficient	Efficient	More Efficient	Most Efficient
1	2	3	4	5

31. Which of the following do you think the Municipality uses the revenue from property rate and ground rent to provide? Indicate by ticking the appropriate answer

- (a) Educational Facilities ☐
- (b) Health Facilities ☐
- (c) Roads ☐
- (d) Electricity ☐

- (e) Water supply ☐
- (f) Street lights ☐
- (g) Market ☐
- (h) Waste and Sanitation ☐
- (i) None of the above ☐

Thank you. Do you have any additional comments?

Annex 2: Code List

Code-Filter: All

HU: Thesis

File: [C:\Users\BEVERLY\Documents\Scientific Software\ATLAsTi\TextBank\Thesis work.hpr7]

Edited by: Super

Date/Time: 2016-08-01 17:20:29

Assessment of Ground Rent

Calculation of Property rate

Collection mechanism for Ground Rent

Compliance

Inland Port infrastructure

Land values

Legal basis for Ground Rent

Legal basis for Property Rate

Level of awareness

Property Rate exemptions

Property rate revenue

Property Values

Revaluation of Property rate

Use of IGF revenue

Statutory and legal provisions for land tenure

Use of Property rate revenue

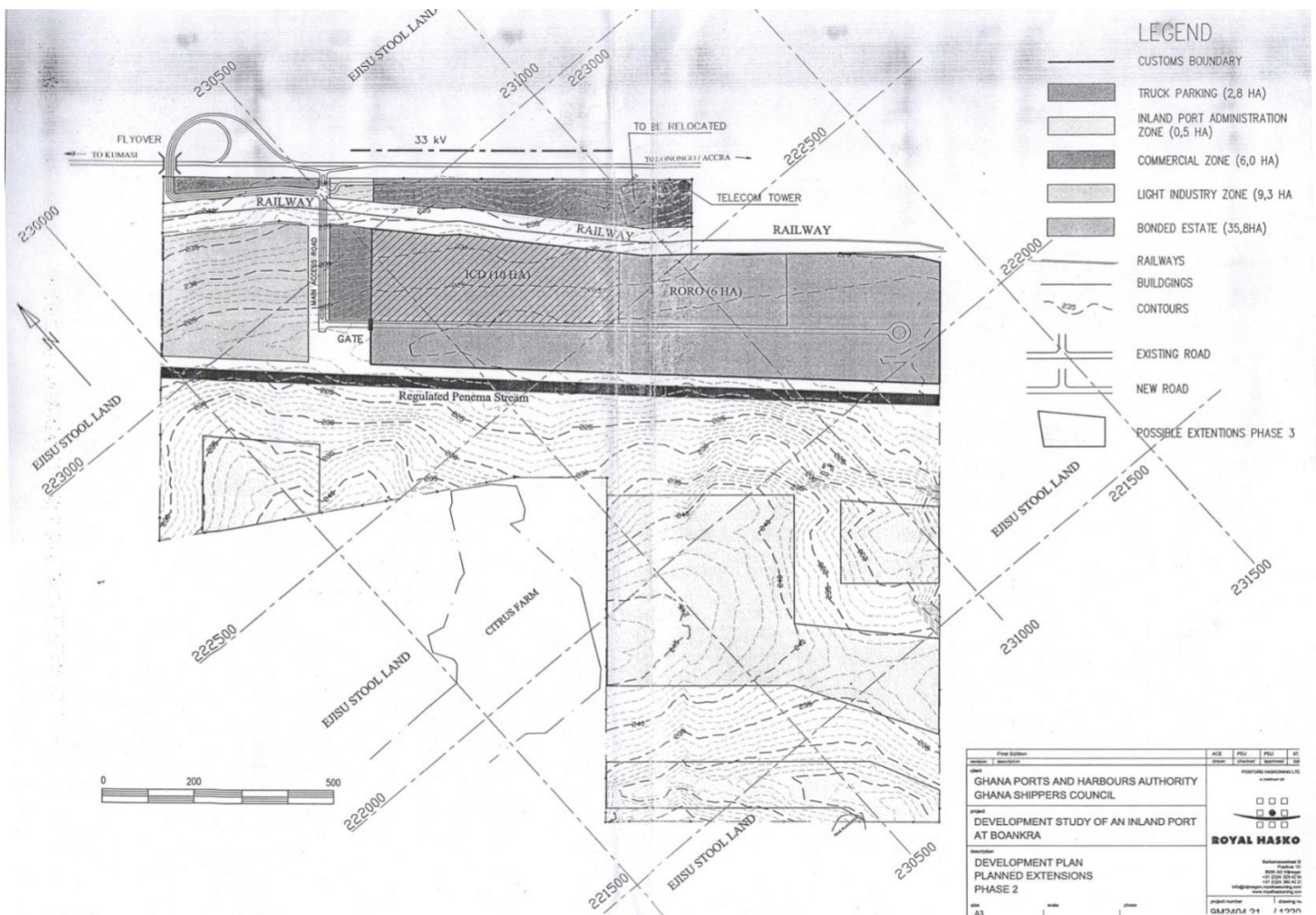
Annex 3: Consumer Price Indices and Average Inflation Rate in Ghana from 2006 to June 2016

Year	Average Price Index	Average Inflation Rate	Inflation Factor
2006	457.86	10.90	0.94932
2007	218.73	10.73	1.98715
2008	254.88	16.46	1.70538
2009	303.94	19.30	1.43011
2010	336.48	10.80	1.29177

2011	365.86	8.73	1.18810
2012	394.35	9.21	1.08825
2013	111.61	13.50	1.00010
2014	128.90	15.45	1.00000
2015	173.13	18.55	1.10000
June 2016	151.00	18.78	1.80000

Source: Bank of Ghana (2016) and Ghana Statistical Service (2015)

Annex 4: Site Plan of the Boankra Inland Port



Source: Field Data (2016)

Annex 5: Category and Cost Rate for Assessing Properties in EJMA

Cost Rate for Assessment Properties in EJMA (2005-2016)				
Category	Type of Property	Use	Average Basic Rate(GHC/m ²)	Average Basic Rate(US\$/m ²)
A	Wattle & Daub	Residential	25.00	6.90
B	Mud Swiss	Residential	30.67	8.50
C	Sandcrete Block (Simple type of building)	Residential	37.40	10.40
D	Sandcrete Block (Bungalow type of building)	Residential	42.50	11.80
E	Commercial (Purpose Built)	Commercial	32.50	9.00
F	Offices & Hotels	Commercial	61.90	17.20
G	Industrial Workshops, Warehouses or Factories	Industrial	43.50	12.10

Source: EJMA (2016) *1US\$=GH¢3.60 as at July 2016

Annex 6: Sample of the Property Record Sheet- EJMA

PROPERTY RECORD SHEET- EJISU-JUABEN DISTRICT ASSEMBLY

Property: 9/3/1	Zoning: R3	P.U.C: RP		
Council No: Ta 17	V.L No: EJ09003001			
Occupier: Atongo Baba				
Area Zone: Third Class Residential		Date Of INSP.	10/07/03	
Use: Residential		Date Of Val.:	17/06/05	
Category: B Swish/Landcrete				
Main Building Construction	Description	-	Quality	Depr.
Floors	Cement Screed on		5.00	3.00
	Rammed Earth			
Walls	Landcrete Blocks		20.00	8.00
	Rendered			
Doors	Panel		6.00	0.00
Windows	Jalousies			0.00
Ceilings			6.00	0.00
Roof	Cable With CIS		0.00	6.00
Drainage			28.00	0.00
Water Supply			0.00	0.00

Electricity		0.00	0.00
General Finishing	Fair	0.00	0.00
Remark	Age about 40yrs cracks on walls and		
leakages on roof		65.00	17.00

Measurement	Length	Width	Area	Rate	Amount
Basement	0.00	0.00	0.00	0.00	0.00
Ground Floor	1.00	24.27	24.27	30.67	742.66
GF Verandah	8.06	1.50	12.09	17.80	215.20
First Floor	0.00	0.00	0.00	0.00	0.00
FF Verandah	0.00	0.00	0.00	0.00	0.00
Second Floor	0.00	0.00	0.00	0.00	0.00
SF Verandah	0.00	0.00	0.00	0.00	0.00
Other Floors	0.00	0.00	0.00	0.00	0.00
Of Verandah	0.00	0.00	0.00	0.00	0.00
Outbuild-1	0.00	0.00	0.00	0.00	0.00
OB Verandah	0.00	0.00	0.00	0.00	0.00
REPLACEMENT COST (RC)					957.86
REPLACEMENT COST (RC) @ 65.00%					622.61
Other items	0.00	0.00	0.00	0.00	0.00
Fence Wall	0.00	0.00	0.00	0.00	0.00
Pavement	0.00	0.00	0.00	0.00	0.00
Swim-Pool	0.00	0.00	0.00	0.00	0.00
					0.00
Valuation Offr.	George O. Boye	Total Replacement Cost (TC)			622.61
Checked by	Alex Owusu	Less/Depreciation @ 17.00% TC			105.84
Council	EJD	Depreciation Replacement Cost			516.77
Suburb	Owne	Plant & Machinery			
Rateable Value Adopted					517.00

Source Field Data (2016)

Annex 7: Sample of Valuation List – EJMA

VALUATION LIST

EISU-JUABEN DISTRICT

**AREA EJISU-JUABEN DISTRICT ASSEMBLY –
ONWI**

(ALL PROPERTIES)

**VALUATION DATE:
17/06/03**

DIVISION: 09

BLOCK 006

Valuation List No.	Property Number	Street or Suburb	Area Zoned	Use Code	Owners Name	No. of Props.	Rateable Value
EJ09006001	OW 35	ONWI	R 3	RP	Osei Kofi		33,137.00
EJ09006002	OW 36	ONWI	R 3	RP	Yaw Donkor		37,568.00
EJ09006003	OW 37	ONWI	R 3	RP	KwakuDwemoh		43,834.00
EJ09006004	OW 39	ONWI	R 3	RP	AkosuaKyerewa		34,083.00

EJ09006005	OW 214	ONWI	R 3	RP	Yaw Boakye	40,988.00
EJ09006006	OW 46A	ONWI	R 3	RP	AmmaBoakyewa	33,350.00
EJ09006007	OW 46	ONWI	R 3	RP	KwakuAddae	43,466.00
EJ09006008	OW 45	ONWI	R 3	RP	KwabenaAntwi	23,965.00
EJ09006009	OW 44	ONWI	R 3	RP	AdwoaFordjour	36,963.00
EJ09006010	OW 43	ONWI	R 3	RP	AkosuaNantie	25,790.00
EJ09006011	OW 42	ONWI	R 3	RP	AmmaSerwaa	25,837.00
EJ09006012	OW 41	ONWI	R 3	RP	KwakuAgyei	43,095.00
EJ09006013	OW 40	ONWI	R 3	RP	KwadwoWiafe	33,011.00
EJ09006014	OW 48	ONWI	R 3	RP	K. Nkwantabisa	22,224.00
EJ09006015	OW 55	ONWI	R 3	RP	Osei Yaw	53,432.00
EJ09006016	OW 56	ONWI	R 3	RP	KwabenaOheneb	25,505.00
EJ09006017	OW 57	ONWI	R 3	RP	AbenaKwabena	39,263.00
EJ09006018	OW 57 A	ONWI	R 3	RP	Akosua Bema	33,588.00
EJ09006019	OW 50	ONWI	R 3	RP	KwasiNkansah	45,468.00
EJ09006020	OW 58	ONWI	R 3	RP	Kwame Dom	23,420.00
EJ09006022	OW 51	ONWI	R 3	RP	KwasiAgyemang	24,474.00
EJ09006023	OW 52	ONWI	R 3	RP	KwasiAgyemang	23,700.00
EJ09006024	OW 59	ONWI	R 3	RP	KwasiAddai	33,275.00
EJ09006025	OW 53	ONWI	R 3	RP	KwakuBoateng	38,203.00
EJ09006026	OW 54	ONWI	R 3	RP	Kofi Amponsah	43,753.00

Subtotal for Block- 006:

20697,987.00

Annex 8: Internal Revenue Sources

Local Government Act, 1993 ACT 462

SIXTH SCHEDULE - [Section 86]

Revenue of Local Government Bodies

1. Entertainments duty under the Entertainments Duty Act, 1962 (Act 150).
2. Casino revenue under the Casino Revenue Tax Act, 1973, (NRCD 200)
3. Betting tax under the Betting Tax Act, 1965 (Act 268).
4. Income Tax (Registration of Trade, Business, Profession or Vocation) Law, 1986, (PNDCL156)
5. Gambling tax under the Gambling Machines Act, 1973 (NRCD 174)
6. Rates and levies:

Levies on crops other than cocoa, coffee, cotton and Shea.

7. Fees:

- (i) Cattle pounds;
- (ii) Conservancy;
- (iii) Slaughter houses;
- (iv) Market dues;
- (v) Market stalls/stores;
- (vi) Lorry park dues;
- (vii) Advertisements;
- (viii) Trading;
- (ix) Kiosks;
- (x) Restoration of conservancy service;
- (xi) Graveyard receipts;
- (xii) Bread bakers;
- (xiii) Chop bars;
- (xiv) Corn mills;
- (xv) Dressing stations.

8. Licences:

- (i) Dog licences;
- (ii) Hawkers;
- (iii) Extension of hours;
- (iv) Hotels and restaurants;
- (v) Beer and wine sellers;
- (vi) Petroleum installations;
- (vii) Palm-wine Sellers;
- (viii) Akpeteshie distillers/sellers;
- (ix) Herbalists;
- (x) Taxi cabs;
- (xi) Lorry parts overseers;
- (xi!) Taxi drivers (driving licence);
- (xiii) Self-employed artisans;
- (xiv) Fishing tolls;
- (xv) Births and deaths.

9. Taxes chargeable on the income of the following categories of self-employed persons:

- (a) Spare parts dealers;
- (b) Chemical sellers;

- (c) Tailors and dressmakers;
- (d) Sandcrete blocks manufacturers;
- (e) Musical spinners;
- (j) Radio and television repairers;
- (g) Gold and silver smiths;
- (h) Drinking bar operators;
- (i) Professional photographers;
- (j) Chop bar keepers and cooked food sellers;
- (k) Butchers;
- (l) Refrigeration and air conditioning workshop owners;
- (m) Hairdressers;
- (n) Garage owners;
- (o) Video operators;
- (p) Corn mill owners;
- (q) Co-operative distillers;
- (r) Scrap dealers;
- (s) Livestock breeders and traders;
- (t) Traders;
- (u) Liquor sellers.

10. Miscellaneous:

- (i) Town hall/community centre receipts;
- (ii) District hearse hiring;
- (iii) Dislodging of latrines;
- (iv) Hire of bulldozers/grader;
- (v) Collection of sand/gravel/stone;
- (vi) Slot machines;
- (vii) Stool land revenue;
- (viii) Toilet Receipts.