

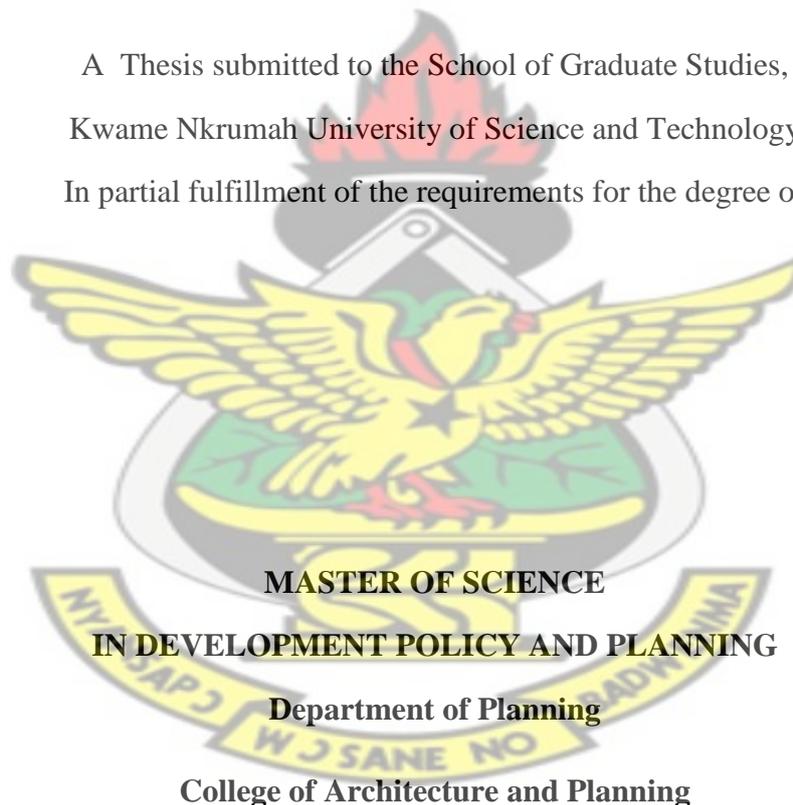
**ASSESSING THE PROSPECTS AND CHALLENGES OF PUBLIC PRIVATE
PARTNERSHIP IN THE PROVISION OF PUBLIC TRANSPORT
SERVICES IN GHANA: A CASE STUDY OF METRO MASS TRANSIT
COMPANY LIMITED**

BY

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A Thesis submitted to the School of Graduate Studies,
Kwame Nkrumah University of Science and Technology
In partial fulfillment of the requirements for the degree of



JUNE, 2012

CERTIFICATION

I hereby declare that this submission is my own work, which is presented towards the award of MSc in Development Policy and Planning. The submission has not been any duplication of materials previously published by another person for the award of any other degree of the University. For those areas and content that has been included in the text, due recognition by way of acknowledgement has been duly made.

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ABSTRACT

In 1983, Ghana adopted the Economic Recovery Programme and its success was predicated on export-led growth. The tenets of the programme were based on the development of an open and liberalized economy, reduced state participation in trading activities, and a growing economy, which is private sector oriented. Recognizing the significant role of transportation in the socio-economic development of a country, the Government of Ghana established Omnibus Services Authority (OSA), City Express Services (CES) and the State Transport Corporation (STC) to assist in the mobility of people within Ghana. These state owned companies were not profitable even though the government continued to spend money on their operations. This led to the government's decision to diversify STC and the liquidation of OSA. However, the huge investment that is associated with public transport operation coupled with none immediate return often discourage many private organisations and individuals from entering into the business. Government therefore entered into partnership with the State Insurance Company (SIC), National Investment Bank (NIB), Ghana Oil Company (GOIL), Agriculture Development Bank (ADB), Prudential Bank Limited (PBL) and the Social Security and National Insurance Trust (SSNIT) to establish Metro Mass Transit Limited in 2003. Even though the objective for its establishment has been good, the numerous debts and none payment of dividends to shareholders since its operations has raised serious reservations with regard to its sustainability.

Using a total sample size of 273, comprising passengers, management, shareholders and key informants, it was revealed that the company encounters many challenges including revenue leakages, high budget on fuel, poor infrastructure at depots and terminals and non-payment of dividends to shareholders. In spite of the challenges, the company has better prospects since the affordability of fares, good sitting arrangements, high level of safety and reliability, high level of competence of drivers, availability in most parts of the country, among others continue to give it more comparative advantage.

It was therefore recommended that infrastructural development and physical facilities at the various depots and bus terminals be developed; electronic ticketing should be practised and enforced with proper monitoring and evaluation. Shareholding structure of the company should also be reassessed to ensure equity and fairness among shareholders.

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It is by mercy and blessings of the most high, most knowledgeable, sustainer of the universe and creations that I have been able to come out with this piece of work. May the Almighty Allah forever be praised for HIS guidance and sustenance.

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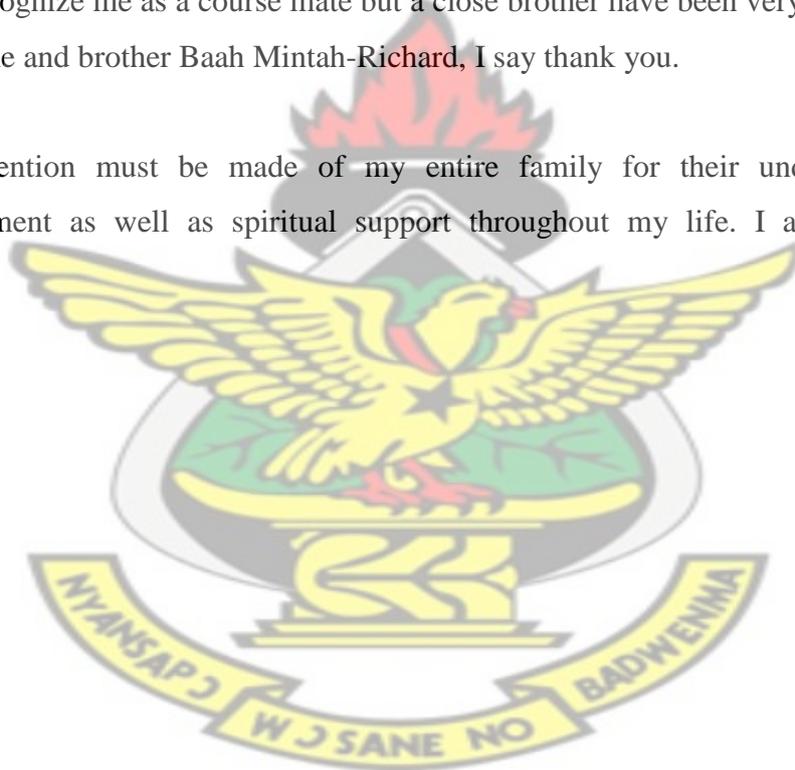


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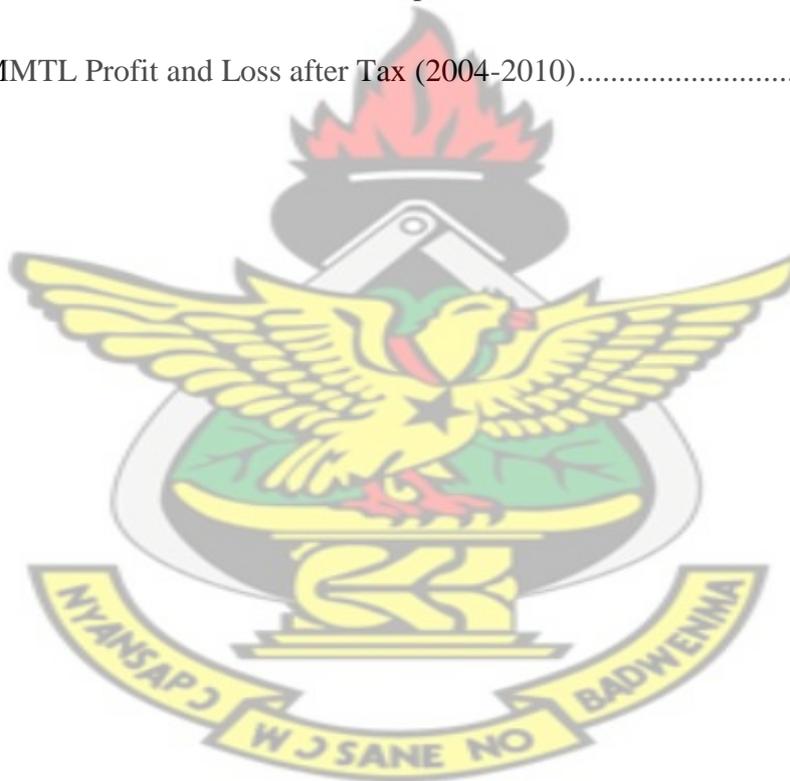


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ABBREVIATION AND ACRONYMS

ADB	Agricultural Development Bank
APTA	American Public Transportation Association
ASCE	American Society of Civil Engineers
BOO	Build – Operate Own
BOT	Build – Operate Transfer
CES	City Express Services
DIC	Divestiture Implementation Committee
GDP	Gross Domestic Product
GFP	Global Facilitation Partner
GoG	Government of Ghana
GOIL	Ghana Oil Company
GPRTU	Ghana Private Road Transport Union
HIPC	Heavily Indebted Poor Country
ISSER	Institute of Statistical, Social and Economic Research
Ltd	Limited
mi	mile
MMTL	Metro Mass Transit Limited
mph	Miles per hour
NEPAD	New Partnership for African Development
NIB	National Investment Bank
O.A	Opoku Agyeman
ODOT	Oregon Department of Transportation
OECD	Organization for Economic Co-operation and Development
OSA	Omnibus Services Authority
PBL	Prudential Bank Limited
PPP	Public Private Partnership
PRSIM	Planning, Research, Statistics and Information Management
SIC	State Insurance Company
SOE	State Owned Enterprise
SPSS	Statistical Package for the Social Sciences
SSNIT	Social Security and National Insurance Trust
STC	State Transport Corporation

TEA	Transportation Equity Act
TTI	Texas Transport Institute
UK	United Kingdom
UNF	United Nations Foundation
US	United States
UTP	Urban Transport Project
VAT	Valued Added Tax

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CHAPTER ONE

BACKGROUND TO THE STUDY

1.1 Introduction

Governments have been responsible for the provision of socio-economic infrastructure and services such as health, education, agriculture and roads in developing countries. The provision of transport services is an area that governments in developing countries make capital investment because of how it supports the other sectors of the economy.

The Government of Ghana has been the major provider of transport services during colonial and the immediate post-colonial era. The first public transport system which was predominantly rail was developed with the prime intention of transporting minerals and other raw materials to the ports for export. However, the first road transport services was provided by the Accra Town Council in 1927 and it was to provide services linking Accra to the mining and harbour towns (Metro Mass Transport Limited, 2006). During the last two decades, various public transport services were instituted by the Government to provide both urban and rural transport for its citizens. These transport services were entrusted in the care of State Owned Enterprises (SOEs) which operated as monopolies (Divestiture Implementation Committee, 2008).

Some of the transport services operated by government include the Omnibus Services Authority (OSA), City Express Services (CES) and the State Transport Corporation (STC). These state owned companies were not profitable while the government continued to spend money on their operations. The Government, therefore, diversified STC and CES (DIC, 2008) while OSA was liquidated (MMTL, 2006). This was because public sector institutions in Ghana like most developing countries, fail to deliver and sustain services entrusted in their care. In spite of this however, the financing (through subsidy) of these public services by the state increased its budget deficit over the past years (American Public Transportation Association, 2006). Coral (2007) has indicated that the cost of maintaining and undertaking necessary extensions of the coverage of these services is estimated at 7 percent of developing countries Gross Domestic Product (GDP). This explains why about three hundred and thirty-five SOEs have been diversified in Ghana between 1988 and 2003 (DIC, 2008).

As most public companies fail to sustain their service delivery, governments in developing countries have adopted a new strategy to the operation of public services like energy and more especially, transport services. In the 1990s, Public Private Partnership (PPP) was adopted as the main strategy to providing public services (Osborne cited in Ndandiko, 2006). The system allows government to partner with a private entity in the provision of public services like education, health and transport services. Both the private entity and the government play complementary roles in the financing and management of these services (United Nations Foundation, 2003). The decision by the Government of Ghana to partner with the private sector in the management of public services was to improve the profitability and efficiency of these State Owned Enterprises.

Even though the expected benefits from PPP in public service provision are high, their impacts have been measured below expectation in most developing countries. According to the United Nations Foundation (UNF, 2003), many of these partnerships fail or do not achieve their goals. This finding is supported by Ndandiko, (2006) who argues that PPPs have worsened public service delivery rather than improving their efficiency. They are more costly and because of the huge capital investments, private partners have to charge more to make profits. In the educational sector for instance, PPPs have contributed to lower standards in education since the private partners adopted cost cutting strategies to become profitable (Nordtveit, 2005 cited in Ndandiko, 2006).

This research therefore seeks to identify how PPPs in developing countries can be sustained to improve public transport service delivery. The role of transport services to the economy is so essential that government cannot leave its operation entirely to the private sector. However, since most of these SOEs hitherto lacked the capacity to remain profitable, the government adopted the PPP strategy to allow the private sector to play a key role in the service delivery. The New Partnership for African Development/ Organization for Economic Co-operation and Development Investment Initiative illustrates how PPPs could be beneficial and sustainable if alternative measures are taken. Between 1990 and 2003, about 2,750 projects were implemented using public-private partnerships in developing countries. Again, in Senegal, the PPP approach in the water supply resulted in a 20 percent increase in water supply and about 35 percent increase in water connection. This, however, was sustained due to political commitment and a year-long planning for the project (NEPAD/OECD, 2005).

1.2 Problem Statement

The public-private partnerships in developing countries have not been sustainable and public service delivery has not improved as expected. According to the United Nations Foundation (2003), many of the partnerships fail to live up to expectations. The failure of some of these projects are attributed to the lack of understanding of what a true partnership is and also the demands by governments for such services to maintain low prices for the general public. The minority stake of governments in the partnerships (PPPs) still allows for government to influence the operation and management of these organisations. This makes it difficult for the companies to have autonomy in decision making.

In the public State Transport Corporation (STC), the Government of Ghana owns about 20 percent shares while the Social Security and National Insurance Trust (SSNIT) owns the remaining 80 percent. The public (government) influence still brings some of the crisis the SOEs faced in the late 1980s. The problems regarding the ownership, management and decision-making still contributes to the unprofitability and subsequent collapse of these partnerships. In a similar vein, the government in 2003, partnered with the private sector to establish a Metro Mass Transit Limited (MMTL), a public transport company. The government owns 45 percent shares while the private sector owns the remaining 55 percent (MMTL, 2006).

Public-private partnerships are expected to invest in improving infrastructure, training staff and meeting social obligations to the public. Why then do these partnerships despite their good intentions, encounter some problems in the delivery of their services. Even though there are sectoral differences in the performance of PPPs, the problem of performance and sustainability cut across. Both STC and MMTL in Ghana continue to have management and logistics crises.

On the contrary, privately owned transport services continue to operate with relative success compared to the public-private owned entities. This phenomenon has, therefore, raised a lot of questions among the public as what could be the possible reason for the failure of the public-private transport services in the industry. As a result, questions as to whether the failure could be due to unrealistic fares, lack of regular maintenance of infrastructure, vehicles, staffing and mismanagement and many others have been asked

in order to understand the problem and find appropriate ways of strengthening these partnership arrangements.

1.3 Research Questions

Based on the introduction and the problem statement, the study seeks to find answers to the following questions:

1. What framework and structure do Public-Private Partnership transport operating firms use in their operations?
2. What are the challenges that confront the implementation of Public-Private Partnership in the provision of public transport service in Ghana?
3. What is the level of operational efficiency of Public-Private Partnership transport operating firms?
4. What policy recommendations can be made to help promote Public-Private Partnership within the transport industry in Ghana?

1.4 Objectives of the Study

The broad objective of the study is to assess the challenges and prospects associated with the implementation of public-private partnerships in the provision of public transport services in Ghana.

The Specific objectives are to:

1. Assess the operational framework and structure of Metro Mass Transit Limited
2. Assess the challenges and prospects of Metro Mass Transit Limited in the provision of public transport service delivery;
3. Assess the operational efficiency of Metro Mass Transit Limited
4. Propose policy recommendations for successful implementation of Public-Private Partnership within the transport industry in Ghana.

1.5 Scope of the Study

The study assessed the operations of PPPs in road transport sector service delivery within the last two decades. It examined PPPs in public transport service delivery with little

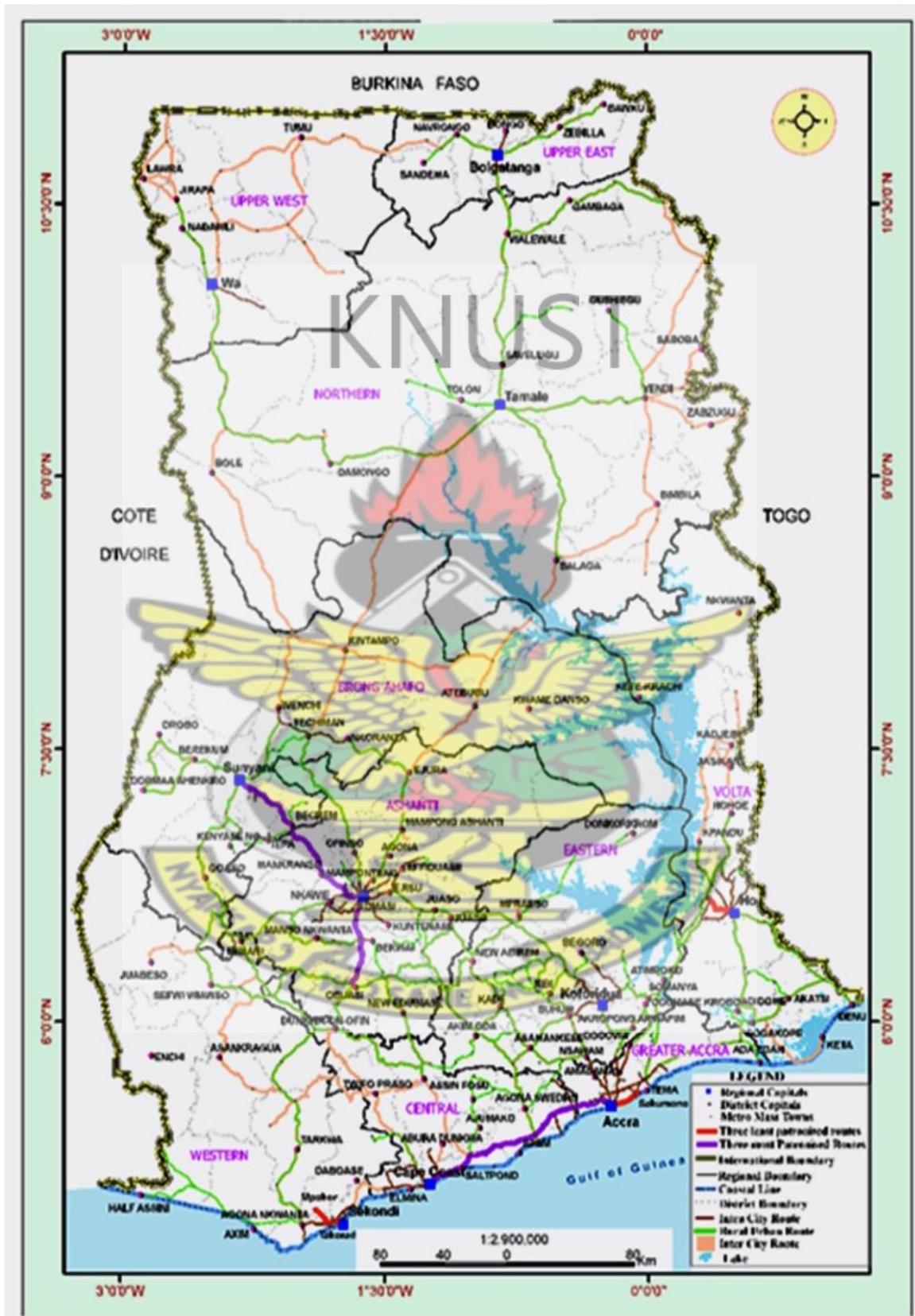
emphasis on transport infrastructure. The study spanned from the period when government started diversifying State Owned Enterprises to the private sector. Specifically, the prospects and challenges of MMTL were assessed within six operational areas.

As indicated in Figure 1, the routes involved were: Kumasi-Obuasi, Kumasi-Sunyani and Accra-Cape Coast (the most patronized routes) as well as Ho-Kpeve, Takoradi-Mpoha and Accra-Sakumuno (the least patronized routes). These routes are differentiated with two distinct colours in figure 1, thus the three least patronized routes are clearly indicated in red while the most patronized routes are shown in purple colour. The study covered the period of operation of MMTL from 2004 to 2010.

Kumasi is one of the largest commercial cities of Ghana and Cape Coast is one of the oldest settlements in Ghana with lots of tourist sites. Accra is the capital city of Ghana and the head quarters of many institutions in the country. Most high level official decisions are finalized in Accra. Sunyani is one of the 'Food baskets' of Ghana with recent mining discovery and exploration companies. There are similar characteristics between Sunyani and Obuasi with the latter being mainly a mining (Gold) area. Thus, apart from pure social reasons, commercial activities in these areas play a major role for people frequently travelling on these routes.

Movements of Ho-Kpeve and Takoradi-Mpoha fall within the MMTL's description of urban-rural or rural-urban routes. Communities in these rural settlements are predominately farmers with less frequency of travelling. Conversely, Accra-Sakumuno, though intra city (with expected high patronage) is affected by regular traffic congestions which reduce frequency of bus movements.

Figure 1: Route Map of MMTL Indicating the Six Study Areas



Source: Centre for Remote Sensing and Geographic Information Service, 2010

1.6 Significance of the Study

Public transport is a major support service to the overall development of the country and government cannot leave it entirely in the hands of the private sector. In spite of this however, the State Owned Enterprises have not been profitable and therefore the government's partnership with the private sector. This subsequent partnership has not achieved the desired objectives. This implies that there are some fundamentals that both the public and private sector institutions get wrong and this is why the study seeks to critically assess the challenges associated with implementation of the PPP in transport service delivery, particularly, the operations of MMTL.

The study intends to identify the lapses in the implementation of PPP over the years and make policy recommendations for future design and implementation of future public-private partnerships for the transport services. It will also contribute to the current debate on why PPPs have failed in different sectors and in different countries.

Additionally, the study seeks to identify the risk factors involved in the operation of transport service in the country and ascertains whether government should partner with the private sector or cede that responsibility to forces of demand and supply in the free market. Government investment in the transport industry is to oil the other sectors of the economy and to ensure accessibility of transport to the poor and excluded. The finding and recommendation of this study will subsequently inform policy makers on ways of improving and sustaining PPPs in this direction.

Accessibility, availability, safety and affordability of transport ease stress and reduce cost of transportation of goods and services. Thus, if the challenges of PPPs in transport service delivery are addressed, the cost of doing business and prices of goods and services will be reduced, thus contributing to enhancement of the standard of living of the general public. This is one of the areas that the outcome of this study will be beneficial.

The study will further provide civil society, individuals and groups who are involved in the promotion of efficiency public transport service delivery additional data for contextual analysis and decision making. Even though, studies in PPPs are numerous,

text for PPPs in transport service delivery needs to be enhanced .The study will produce a document that could be useful literature to other scholars intending to undertake research on PPPs in public transport service delivery.

1.7 Structure of the Study

The study is structured into five chapters. Chapter One covers the general introduction to the concepts of public-private partnerships, private sector initiative and the general approach to the study. This also gives a general overview of the study topic, the objectives of study, problem statement as well as the significance of the study.

Chapter Two reviews relevant literature related to PPPs and how they have been implemented in developing countries. This chapter also highlights the emerging trends in the operation of transport services in Ghana and how sustainable they have been. The reasons for the failure and success of some PPPs initiative in the developing world with emphasis on Ghana form part of this chapter.

The third chapter covers the research methodology. It entails the approach adopted in conducting the research. The sampling procedure, data collection and analysis are explained in this chapter.

Chapter Four covers the organisation and discussions of the findings from the data collected and also provides comprehensive analysis of these findings with the view to assessing the performance of operators of PPPs, especially MMTL. An evaluative discussion of the data collected and analysed has been done by drawing inferences from the facts.

The last chapter covers key findings, recommendations and conclusions resulting from the data analysed. The chapter presents the findings and the implications they could have in determining the design and implementation of PPPs in Ghana. Finally, recommendations that could inform policy formulation especially interventions related to public transport services which were identified are stated in this chapter.

CHAPTER TWO

PUBLIC PRIVATE PARTNERSHIP IN THE PROVISION OF PUBLIC TRANSPORT SERVICES

2.1 Introduction

Having established the issue and problem of public transport services in the previous chapter, this chapter presents the various concepts and terms related to the provision and management of public transport services and the determinants of public transport services. Other issues considered in the section are nature and dimension of public transport services, benefits in the provision of public transport services and stakeholders involved in the management of public transport services.

2.2 Definitions and Explanations of Terms

2.2.1 Public Transport Services

The primary function of transportation is to carry people and goods from an origin to a destination within the shortest possible time and at the least cost. Public transport service continues to be a high priority social obligation of governments throughout the world. In some jurisdictions, it is the prime responsibility of national governments, while in other localities it is a state or local government responsibility (Poku-Boansi, 2008).

According to World Bank (2009), the term “Public Transport Services” used to denote public transport, means operating on fully or partially exclusive tracks (rail or road), away from street traffic and thus subject to full or at least considerable managerial control by the operator. This allows the provision of high-capacity and high-quality services. Public Transport Service is driven by an already demonstrated potential for high-quality services and cost effectiveness, as well as by the difficulties encountered in developing new metros and other large-scale infrastructural projects.

Tahmasseby et al (2008) viewed public transport services from the design perspective. They stated that the design of public transport services is usually based on a deterministic point of view: It is assumed that all components of the system perform as planned. In reality, however, there are a large number of regular and irregular variations influencing

public transport services such as variation in demand, service operation, and infrastructure availability.

However, public transport services (also public transportation, public transit) is described as a shared passenger transportation service which are available for use by the general public, as distinct from modes such as Taxicab, car pooling which are not shared by strangers without private arrangement. Most public transport runs to a scheduled timetable with the most frequent services running to headway. Share taxi offered on-demand services in many parts of the world and some services will wait until the vehicle is full before it starts. Para transit is sometimes used in areas of low-demand and for people who need a door-to-door service (Dealem, 2001).

Based on the above definitions and explanations, public transport services can be defined as a system, which ensures efficient movement of passengers, goods and services from one location to another with minimum time and less cost. It therefore embodies all means of transport; road, rail, tram, water and air. However, for the purpose of this study, emphasis is placed on road transport service.

2.2.2 History of Public Transport Services

According to London Omnibus (2008), the development of public transport services can be traced to the 1500. Conveyances for public hire are as old as the first ferries, and the earliest public transport was water transport. On land, the means of transport was walking as people walked and on few occasions rode an animal. This form of transport is part of Greek mythology.

Some historical forms of public transport are the stage coach, traveling a fixed route from inn to inn, and the horse-drawn boat carrying paying passengers, which was a feature of canals from their 17th century origins. The omnibus, the first organized public transit system within a city, appears to have originated in Nantes, France, in 1826 and was introduced to London in July 1829 and gradually spread to the other part of the world (London Omnibus, 2008).

In Ghana, the issue of modern transportation has its history traced back to the construction of rail for commercial exploitation of gold minerals by colonial masters. This was followed by the creation of major roads linking major mineral producing areas to the ports. By 1927, the then Accra Town Council began the operation of public bus services in Kumasi, Sekondi-Takoradi and Accra (MMTL, 2006). As demand for transport services increased with time, government intervened by establishing bus companies such as the Omnibus Services Authority (OSA), State Transport Corporation (STC) and City Express Services (CES) with the prime aim of improving mobility of goods and people in the Country.

Apart from these formal organisations, the informal sector has also since 1980s been involved in running public transport services in the Ghanaian economy. Some of the popular ones have been those under the Ghana Private Road Transport Union (GPRTU), O.A Transport Services and the Progressive Transport Union. According to the Ministry of Transport (2007), the services provided by these private operators are usually poor. It further states that they are associated with long waiting, walking and travel times. Most of them, usually minibuses (trotro) are old and generally lack maintenance. However, more than seventy percent (70 percent) of motorized persons in the cities of Ghana depend on them as the means of transport.

In March 2003, the Metro Mass Transit Limited (MMTL) was incorporated as a Limited Liability Company under the Companies Code 1963, Act 179 to provide safe, affordable, efficient and reliable movement of commuters within metropolitan and municipal areas (MMTL, 2006). It is a public private partnership between government (owning 45 percent shares) and private organisations (owning 55 percent shares). By the end of 2008, MMTL operated a total fleet of 1,066 buses and had transported 173 million people across Ghana (Institute of Statistical, Social and Economic Research, 2009). It has been faced with low returns of investment compelling government to set a committee in 2010 to investigate its activities over the past years. The committee's report presented to the Minister of Transport, call on government to compel the management of MMTL to pay back some percentage of the amount spent in acquiring its buses (Daily Graphic, Tuesday, February 16, 2010).

From the historical background, it is evident that public private partnership in the provision of public transport services has been met with many challenges. What exactly these challenges are and what could be done to avert the situation has been the interest of this study.

2.2.3 Objectives of Public Transport Services

In line with the objectives of Ghana's Vision 2020, the key policy objective for the transport sector is to establish an efficient and modally complementary and integrated transport network for the movement of people and goods at least cost throughout the country. This general policy objective is further focused in the Gateway Programme, which identifies the important role of transport in Ghana's economic strategy of building its competitive advantage with the West African sub-region to attract industry and trade through utilizing external, as well as domestic resources and inputs, to service external markets (Kwakye and Fouracre, 1998). At the urban level, the Urban Transport Project (UTP) among other things seeks to ensure that the improvements in urban transport services are sustained, especially through institutional reforms, adoption of cost recovery measures and the application of regular maintenance practices.

Specifically, the objectives of the public transport services in Ghana are set out in the Transport Authority Act of 2008. In exercising its functions, the Authority seeks to achieve the following objectives:

- The development of an integrated transport system which contributes to environmental sustainability and social cohesion and promotes economic progress;
- The provision of a well-functioning, attractive, integrated and safe public transport system of services and networks for all users;
- Improved access to the transport system and, in particular, to public passenger transport services by persons with disabilities;
- Increased use of the public transport system and a reduction in the usage of private automobile;
- Regulated competition in the provision of licensed public bus passenger services in the public interest; and

- Maximizes efficiency and value for money, confirmed through benchmarking with other comparable public transport operations.

2.2.4 Modes of Public Transport Services

American Public Transport Association (2008) and International Association of Public Transport (2008) identified the following as the major modes of Public Transport Services:

Airline

An airline provides scheduled service with aircraft between airports. Air travel has high up to very high speeds, but incurs large waiting times prior and after travel, and is therefore only feasible over longer distances or in areas where lack of ground infrastructure makes other modes of transport impossible. Bush airlines work more similar to bus stops; an aircraft waits for passengers and takes off when the aircraft is full.

Bus and Coach Services

Bus services use buses on conventional roads to carrying numerous passengers on shorter journeys. Buses operate with low capacity, and can operate on conventional roads, with relatively inexpensive bus stops to serve passengers. Therefore buses are commonly used in smaller cities and towns, in rural areas as well for shuttle services supplementing in large cities. Coach services use coaches for longer distance transportation. The vehicles are normally equipped with more comfortable seating, a separate luggage compartment and possibly also a toilet, have higher standard, but a limited stopping pattern.

Ferry

A ferry is a boat or ship, used to carry (or ferry) passengers, and sometimes their vehicles, across a body of water. A foot-passenger ferry with many stops is sometimes called a water bus. Ferries form a part of the public transport systems of many waterside cities and islands, allowing direct transit between points at a capital cost much lower than bridges or tunnels, though at a lower speed.

Train and Tram

Passenger rail transport is the conveyance of passengers by means of wheeled vehicles specially designed to run along railways. Trains allow high capacity on short or long distance, but require track infrastructure and stations to be built. Urban rail transit consists of trams, light rail, rapid transit, people movers, commuter rail and funiculars.

Commuter rail is part of an urban area's public transport; it provides faster services to outer suburbs and neighboring towns and villages. Trains stop at all stations, that are located to serve a smaller suburban or town center. The stations are often being combined with shuttle bus or park and ride systems at each station. Frequency may be up to several times per hour, and commuter rail systems may either be part of the national railway, or operated by local transit agencies. Intercity rail is long-haul passenger services that connect multiple urban areas. They have few stops, and aim at high average speeds, typically only making one of a few stops per city. These services may also be international.

High-speed rail is passenger trains operating significantly faster than conventional rail, typically defined as at least 200 kilometers per hour (120 mph). The most predominant systems have been built in Europe and Japan, and offer long-distance rail journeys as quick as air travel. Light rail is a modern development of the tram, with dedicated right-of-way not shared with other traffic, step-free access and increased speed. A rapid transit Metro/Underground/Elevated railway operates in an urban area with high capacity and frequency, and grade separation from other traffic.

Personal Rapid Transit

Systems are able to transport large amounts of people quickly over short distances with little land use. Variations of rapid transit include people movers, small-scale light metro and the commuter rail hybrid. More than 160 cities have rapid transit systems, totaling more than 8,000 km (4,971 mi) of track and 7,000 stations. Twenty-five cities have systems under construction.

2.2.5 Determinants of Public Transport Services

Entry into the public transportation field in Ghana is unrestricted. Most services are offered by private operators and competition is keen despite the presence of two state-owned firms, City Express Bus Company Ltd and the Omnibus Services Authority. Both companies are un-subsidized and presently have been diversified and operated as a public private partnership venture (DIC, 2008). Another company, STC, has already been divested and now operates trucking services between the main urban centers (Ghana Investment Promotion Centre, 2006).

Poku-Boansi (2008) identified the factors that affect the demand for urban transport services in Ghana as follows:

Population of the community

Population is the most significant factor that affects the demand for urban transport services. This is supported by the fact that a study conducted in Kumasi metropolis of Ghana indicated that population contributes about 57.3 percent of the total variation in the demand for urban transport services in Kumasi.

Trip duration

Trip duration comes next, contributing about 10 percent to the total variability in demand. This is the time a passenger takes to undertake a journey from an origin to a destination. It involves the time the passenger spends in waiting for a vehicle, boarding time, journey time and walking time, if applicable.

Transport fares and employment status of the inhabitants

Transport fare and employment status contribute 6.1 and 1.6 percent respectively to the overall demand of urban transport services in the Kumasi metropolis. This implies that the employment status of the people couple with transportation cost affects and determines the demand of urban transport services.

2.3 Significance of Public Transport Services to Economic Growth

Developing city transport helps combat climate change. It also promotes the competitiveness of the urban regions and improves people's everyday lives. The subsequent subsections discussed the relevance of transport to development.

2.3.1 Environmental Benefits

A 2002 study by the Brookings Institution and the American Enterprise Institute found that public transportation in the U.S uses approximately half the fuel required by cars and light trucks. The study also agreed with Layton (2002) finding that private vehicles emit about 95 percent more carbon monoxide, 92 percent more volatile organic compounds and about twice as much carbon dioxide and nitrogen oxide than public vehicles for every passenger mile traveled.

A study in 2004 in Lancaster University concluded that a family of four in a modern car traveling from London to Edinburgh would be more efficient than traveling in a diesel-powered UK trains (Marston, 2004). The study showed that trains had failed to keep up with the advances that the automotive and aviation industries had made in improved fuel efficiency. A representative from Modern Railways magazine said “studies have shown that there is a strong inverse correlation between urban population density and energy consumption per capita, and that public transport could play a key role in increasing urban population densities, and thus reduce travel distances and fossil fuel consumption” (Newman and Kenworthy, 1999).

2.3.2 Going Green

Public Transport Service has been a key aspect of the Green initiative. The idea of going Green, which basically entails commissioning more eco-friendly systems, is essentially new. Gases emitted by automobiles have been cited as major contributors to the issues addressed in green initiatives (Barletta et al, 2008). Public Transportation allows cars to be removed from the road. This lowers gas emissions and traffic congestions. Influenced by the previous, the state of New Jersey released Getting to Work: Reconnecting Jobs with Transit. This initiative, as suggested by its title, attempts to relocate new jobs into areas with higher public transportation accessibility. The initiative cites the use of public

transportation as being a means of reducing traffic congestion, providing an economic boost to the areas of job relocation, and most importantly, contributing to a green environment by reducing Carbon Dioxide emissions (Barletta et al, 2008).

2.3.3 Efficient Use of Land (Space)

Urban space is a precious commodity and public transport consumes it more efficiently than a car dominant society, allowing cities to be built more compactly than if they were dependent on automobile transport (UITP, 2005). If public transport planning is at the core of urban planning, it will also force cities to be built more compactly to create efficient feeds into the stations and stops of transport (UITP, 2007). This will at the same time allow the creation of centers around the hubs, serving passengers' need for their daily commercial needs and public services. This approach significantly reduces sprawl.

2.3.4 Social Benefits

An important social role played by public transport service is to ensure that all members of society are able to travel, not just those with a driving license and access to an automobile which include groups such as the young, the old, the poor, those with medical conditions, and people banned from driving. Automobile dependency is a name given by policy makers to places where those without access to a private vehicle do not have access to independent mobility.

Above that, public transportation opens to its users the possibility of meeting other people, as no concentration is diverted from interacting with fellow-travelers due to any steering activities. Adding to the above-said, public transport becomes a location of inter-social encounters across all boundaries of social, ethnic and other types of affiliation (Litman, 1999).

2.3.5 Economic Benefits

Public transport allows transport at an economy of scale not available through private transport. Through stimulating public transport it is possible to reduce the total transport cost for the public. Time costs can also be reduced as cars removed from the road through public transit options translate to less congestion and faster speeds for remaining

motorists. Transit-oriented development can both improve the usefulness and efficiency of the public transit system as well as result in increased business for commercial developments (Litman, 1999).

Well-designed public transport systems can have a positive effect on real estate prices. The Hong Kong metro generates a profit by redeveloping land around its stations. Much public opposition to new transit construction can be based on the concern about the impact on neighborhoods of this new economic development. Few localities have the ability to seize and reassign development rights to a private transit operator, as Hong Kong has done. Increased land desirability has resulted around stations in places such as Washington D.C.

Investment in public transport also stimulates the economy locally, with between \$4 and \$9 of economic activity resulting from every dollar spent. According to London Omnibus (2008), many businesses rely on access to a transit system, particularly in cities and countries where access to cars is less widespread. It is further stated that businesses which require large amounts of people going to the same place may not be able to accommodate a large number of cars (concert venues, sport stadia, airports, exhibitions centers).

2.4 The Concept of Public Private Partnership

According to the Department of State Development (2002), Public Private Partnership is a risk-sharing relationship between the public and private sectors to deliver timely public infrastructure and services. With regard to this, Public Private Partnerships are viewed as the extension of what is now known as the 'new public management' agenda for changes in the way public services are provided. Shaw (2006) has observed Public Private Partnership in the area of purchasing and thus defined it as the arrangements for procuring goods and services by government through a joint venture with a private sector provider. Also, Public Private Partnership is viewed as the arrangement between public sector and a private sector party resulting in the private sector providing infrastructure and services that are traditionally delivered by the public sector or government (Price Waterhouse Coopers, 2002). A key element of Public Private Partnership is therefore the transfer of risk from the public partner to the private sector.

The concept of Public Private Partnership was acknowledged by Osborne (2000) as becoming an increasing characteristic in the delivery of public policies and services globally. This is because the public sector can no longer provide the needed funds for large investments; the private sector's financial base therefore fills the missing gap. However, the Canadian Council for Public Private Partnership (2002), viewed the concept of Public Private Partnership as a cooperative venture between the public and private sectors, built on the expertise of each partner, that best meets clearly define public needs through the appropriate allocation of resources, risks and rewards. Wendell (2002) emphasized the above explanation by examining Public Private Partnership as the relationships among government agencies and private or non-profit contractors that should be formed when dealing with services or products of highest complexity. In comparison to traditional contractor customer relationships, they require radical changes in the roles played by all partners.

Public Private Partnership, with inferences from the above definitions and explanations, can be defined as the collaborative efforts between two parties, usually the private partner and the government. It could involve the provision of infrastructural facilities and services for the public. However, the roles of the stakeholders differ depending on their interest. According to Global Facilitation Partner (2010), PPP is a venture between a government agency and one or more private companies in which the private party provides a public service or project and assumes either partial or full responsibility in the areas of financial, technical and operational risks (GFP, 2010).

Central to their view is the fact that PPPs have a form of collaboration between all the stakeholders involved, while it clearly outlines the role each group will provide for effective implementation. The main characteristic of a PPP, compared with the traditional approach to the provision of infrastructure, is that it bundles investment and service provision in a single long term contract. Transport service provision involves capital investment, expertise and revenue generation and therefore it stands to reason that partnering with the private sector will improve transport service delivery. Using PPP models, governments enter into partnerships (through contracts) with private sector players to improve service delivery. Public-Private Partnerships for transport delivery are meant to tap into a multiple of experience from both the public and private parties' while also mitigating the investment and management risks involved.

Since governments have failed to implement public service, they have adopted the PPP approach in the implementation of these services. In the UK, over \$26 billion in Public-Private Partnerships projects have been completed over the past 15 years (ODOT, 2006). The situation is not different in developing countries as well. PPPs have been very important in the construction of road projects where governments subcontract the private sector to invest and take charge of the operations of such projects.

In providing public road transport services, governments in developing countries have partnered private investors to revamp the state owned transport service that existed. In Ghana, all the public transport bus services have been diversified to inject private capital, management and operation into the public transport service (DIC, 2008). In transport specific projects, governments have partnered with private sector in the construction of road projects in developing countries. The public procurement Act, Act 662 outlines the tendering procedures for contracting road projects to the private sector.

Partnerships should be viewed as long-term mutually agreed relationships among the state, private sector and civil society towards achieving common policy objectives. The short term partnerships where government contracts a private firm to execute a transport project may not portray what a true public-private partnership should be (Boeuf, 2003). Boeuf however agrees with the UK Commission's definition of PPP as a risk-sharing relationship between the public and private sectors based upon a shared aspiration to bring about a desired public policy outcome.

2.4.1 Types of Public-Private Partnerships

Government Accounting Office (1999) explained some types of Public Private Partnerships as stated below:

- **Operations and Maintenance (O&M):** In this type of partnership, government contracts a private partner to provide and/or maintain a specific service. Under this arrangement, the public partner retains ownership and overall management of the public facility or system.
- **Operations, Maintenance & Management (OMM):** Government contracts a private partner to operate, maintain, and manage a facility or system providing a

service. Under this arrangement, the government retains ownership of the public facility or system, but the private partner may invest its own capital in the facility or system. Any private investment is carefully calculated in relation to its contributions to operational efficiencies and savings over the term of the contract. Generally, the longer the contract term, the greater the opportunity for increased private investment because there is more time available in which to recoup any investment and earn a reasonable return.

- **Design-Build (DB):** This arrangement allows the private partner to provide both design and construction of a project to the public. This type of partnership can reduce time, save money, provide stronger guarantees and allocate additional project risk to the private sector. It also reduces conflict by having a single entity responsible to the public owner for the design and construction. The public sector partner owns the assets and has the responsibility for the operation and maintenance.
- **Design-Build-Maintain (DBM):** A DBM is similar to a DB except the maintenance of the facility for some period of time becomes the responsibility of the private partner. The benefits are similar to the DB with maintenance risk being allocated to the private sector partner and the guarantee expanded to include maintenance. The public sector partner owns and operates the assets.
- **Design-Build-Operate (DBO):** A single contract is awarded for the design, construction, and operation of a capital improvement. Title to the facility remains with the government unless the project is a design/build/operate/ transfer or design/build/own/operate project. This method involves one contract for design with an architect or engineer, followed by a different contract with a builder for project construction, followed by the owner's taking over the project and operating it. A simple design-build approach creates a single point of responsibility for design and construction and can speed project completion by facilitating the overlap of the design and construction phases of the project. On a public project, the operations phase is normally handled by the public sector under a separate operations and maintenance agreement. Combining all three passes into a DBO approach maintains the continuity of private sector involvement and can facilitate private-sector financing of public projects supported by user fees generated during the operations phase.

- **Design-Build-Operate-Maintain (DBOM):** The design-build-operate-maintain (DBOM) model is an integrated partnership that combines the design and construction responsibilities of design-build procurements with operations and maintenance. These project components are procured from the private sector in a single contract with financing secured by the public sector. The public agency maintains ownership and retains a significant level of oversight of the operations through terms defined in the contract.
- **Design-Build-Finance-Operate-Maintain (DBFOM):** With the Design-Build-Finance-Operate-Maintain (DBFOM) approach, the responsibilities for designing, building, financing, operating and maintaining are bundled together and transferred to private sector partners. The commonality that cuts across all DBFOM projects is that they are either partly or wholly financed by debt leveraging revenue streams dedicated to the project. Direct user fees (tolls) are the most common revenue source. However, others ranging from lease payments to shadow tolls and vehicle registration fees. Future revenues are leveraged to issue bonds or other debt that provide funds for capital and project development costs. They are also often supplemented by public sector grants in the form of money or contributions in kind, such as right-of-way. In certain cases, private partners may be required to make equity investments as well. Value for money can be attained through life-cycle costing.
- **Design-Build-Finance-Operate-Maintain-Transfer (DBFOMT):** The Design-Build-Finance-Operate-Maintain-Transfer (DBFOMT) partnership model is the same as a DBFOM except that the private sector owns the asset until the end of the contract when the ownership is transferred to the public sector.
- **Build-Operate-Transfer (BOT):** The private partner builds a facility to the specifications agreed to by the public agency, operates the facility for a specified time period under a contract or franchise agreement with the agency, and then transfers the facility to the agency at the end of the specified period of time. In most cases, the private partner will also provide some, or all, of the financing for the facility, so the length of the contract or franchise must be sufficient to enable the private partner to realize a reasonable return on its investment through user charges. At the end of the franchise period, the public partner can assume operating responsibility for the facility, contract the operations to the original

franchise holder, or award a new contract or franchise to a new private partner. The BTO model is similar to the BOT model except that the transfer to the public owner takes place at the time that construction is completed, rather than at the end of the franchise period.

- **Build-Own-Operate (BOO):** The contractor constructs and operates a facility without transferring ownership to the public sector. Legal title to the facility remains in the private sector, and there is no obligation for the public sector to purchase the facility or take title. A BOO transaction may qualify for tax-exempt status as a service contract if all Internal Revenue Code requirements are satisfied.
- **Buy-Build-Operate (BBO):** A BBO is a form of asset sale that includes a rehabilitation or expansion of an existing facility. The government sells the asset to the private sector entity, which then makes the improvements necessary to operate the facility in a profitable manner.
- **Developer Finance:** The private party finances the construction or expansion of a public facility in exchange for the right to build residential housing, commercial stores, and/or industrial facilities at the site. The private developer contributes capital and may operate the facility under the oversight of the government. The developer gains the right to use the facility and may receive future income from user fees. While developers may in rare cases build a facility, more typically they are charged a fee or required to purchase capacity in an existing facility. This payment is used to expand or upgrade the facility. Developer financing arrangements are often called capacity credits, impact fees, or extractions. Developer financing may be voluntary or involuntary depending on the specific local circumstances.
- **Enhanced Use Leasing or Underutilized Asset (EUL):** An EUL is an asset management programme in the Department of Veterans Affairs (VA) that can include a variety of different leasing arrangements (e.g. lease/develop/operate, build/develop/operate). EULs enable the VA to long-term lease VA-controlled property to the private sector or other public entities for non-VA uses in return for receiving fair consideration (monetary or in-kind) that enhances VA's mission or programmes.

- **Lease-Develop-Operate or Build-Develop-Operate (LDO or BDO):** Under these partnerships arrangements, the private party leases or buys an existing facility from a public agency; invests its own capital to renovate, modernize, and/or expand the facility; and then operates it under a contract with the public agency.
- **Lease/Purchase:** A lease/purchase is an installment-purchase contract. Under this model, the private sector finances and builds a new facility, which it then leases to a public agency. The public agency makes scheduled lease payments to the private party. The public agency accrues equity in the facility with each payment. At the end of the lease term, the public agency owns the facility or purchases it at the cost of any remaining unpaid balance in the lease. Under this arrangement, the facility may be operated by either the public agency or the private developer during the term of the lease.
- **Sale/Leaseback:** This is a financial arrangement in which the owner of a facility sells it to another entity, and subsequently leases it back from the new owner. Both public and private entities may enter into sale/lease back arrangements for a variety of reasons. An innovative application of the sale/leaseback technique is the sale of a public facility to a public or private holding company for the purposes of limiting governmental liability under certain statutes. Under this arrangement, the government that sold the facility leases it back and continues to operate it.
- **Tax-Exempt Lease:** A public partner finances capital assets or facilities by borrowing funds from a private investor or financial institution. The private partner generally acquires title to the asset, but then transfers it to the public partner either at the beginning or end of the lease term. The portion of the lease payment used to pay interest on the capital investment is tax exempt under state and federal laws.
- **Turnkey:** A public agency contracts with a private investor/vendor to design and build a complete facility in accordance with specified performance standards and criteria agreed to between the agency and the vendor. The private developer commits to build the facility for a fixed price and absorbs the construction risk of meeting that price commitment. Generally, in a turnkey transaction, the private partners use fast-track construction techniques (such as design-build) and are not

bound by traditional public sector procurement regulations. This combination often enables the private partner to complete the facility in significantly less time and for less cost than could be accomplished under traditional construction techniques. In a turnkey transaction, financing and ownership of the facility can rest with either the public or private partner. For example, the public agency might provide the financing, with the attendant costs and risks. Alternatively, the private party might provide the financing capital, generally in exchange for a long-term contract to operate the facility.

In conclusion, PPPs involved some risk sharing, capital financing and management between the government and the private entity. The ODOT emphasizes that PPPs in general are developed and managed by the private sector but under the control of the government. The government also takes control and ownership of the venture (ODOT, 2006). These partnerships therefore help shift the burden of funding from one source by the government to a more diversified and low risk sources from the private capital markets (American Public Transportation Association, 2006).

2.4.2 Public Private Partnership as a Concept in Public Transport Service Provision.

Public Private Partnership include the various types of cooperation between the state and private firms with respect to the planning, implementing, financing and operation of hitherto state controlled projects. Long term cooperation and risk sharing between the partners are important features of the Public Private Partnership as it creates a sense of responsibility for private firms to ensure the success of projects (Dove, 2007).

According to Williams (2003), the following are the three principal reasons for the participation of private sector in so far exclusively state run services provision:

- i. Inadequate public funds that causes service provision bottlenecks and a creeping erosion of assets;
- ii. There is asserted gains in efficiency because of the participation of the private sector; and
- iii. A general attitude towards the reduction of the volume of public sectors' tasks (outsourcing to the private sector).

Relating it to governance, it can be stated that Public Private Partnership is a kind of hybrid organisation model with specific incentive and risk schemes. Public Private Partnership involves contracts for cooperation containing a large scope of activities (planning, construction, financing, operation, transfer) with a complex allocation of rights and options. The contractual agreements are of a mixed neoclassical or relational type (Macneil, 1978). Public transport services were traditionally financed by public sector funds, operation and maintenance.

Public Private Partnership has created new and different allocation responsibilities (Ministry of Transport, 2006). It allows government to share risk and financial burdens with the private partner, thus creating the potential for enhanced development of organisations and government investments. A well managed Public Private Partnership generally brings about Improved and expanded infrastructure services that would not be there otherwise, technology transfer, training of local personal and development of national capital markets, economic growth, competition and innovation, faster implementation of projects, which in turn improves efficiency. It also relieves government budget and borrowing, sets benchmark with which to judge the public sector's performance, creates better allocation of risk between the public and private sectors, improves service delivery and cost-effectiveness, increases investment in public infrastructure, ensures better use of assets and commercial approach to infrastructure provision and reduces political intervention. This is probably an effective system which can be adapted for delivering efficient public transport service.

2.4.3 Types of Public Private Partnerships in Public Transport Services

Dove (2007) outlined the following as the types of Public Private Partnerships that can be employed in the provision of public transport services:

- i. Financing models only transfer the funding of a project to private investors; design, construction and operation of the services still falls under the domain of the public. It must however be noted that this model is beneficial because government is usually able to refund at most favorable conditions and other efficiency gains

which cannot be realized privately because there is no such engagements in other tasks.

- ii. Additional benefits are related to the operation model commonly known as BOT model (Build-Operate Transfer). The private sector is responsible for financing, construction and operation in the provision of the service. The contractual agreement shows elements of rental and leasing contracts or mixed forms of contracts. With regard to this model, the ownership of the facility is transferred to the public sector or government at the end of the running period. In addition, under the operation model is the BOO model (Build-Operate- Own) which create a platform where private firms become owners of the service facility without time restriction. However, the government still plays the political role over the service by setting charges for the usage of the service.
- iii. Franchise models allow the private operators to set levy for the usage of the service on the users. The right to charge the user directly means that the private sector has to bear the utilization risk. This risk is however shifted to the public sector under the BOT-model.

The above types of Public Private Partnership are very effective and can therefore be employed to plan, design, execute, operate and maintain an infrastructural service.

2.4.4 History of Public Private Partnership in Ghana

In 1983, Ghana adopted the Economic Recovery Programme. The success of the programme was predicated on export-led growth. The tenets of the programme were based on the development of an open and liberalized economy, reduced state participation in trading activities, and a growing economy, which is private sector oriented (Kwakye and Fouracre, 1998). Therefore, while the state trading apparatus was being gradually and systematically wound down, active measures were taken to encourage private sector growth and development. An increasing awareness of the need to have the private sector participate in policy formulation led to the encouragement and emergence of private sector associations, which gave voice to private sector concerns (Dove, 2007).

The role of government in transport is changing, as government is becoming less of a provider of transport services and is now becoming more focused as a regulator and

controller, and on policy development and strategic planning. In addition, government is shifting towards a more rational regulation that allows for a more competitive environment and establishes favorable environment in which the private sector is encouraged to contribute the scarce capital and expertise that is so necessary for accommodating the transport sector substantial demand (Ministry of Transport, 2006).

2.5 Benefits of PPPs in Public Transport Services

The potential benefits of public private partnerships vary from one project to another and are largely dependent on the objective of the partnership. In a guide for implementing public private partnerships in Canada, the Ministry of Municipal Affairs (1999) outlines some of the potential benefits of PPPs for local governments as:

2.5.1 Cost Savings

The cost of implementing public transport services is shared between the government and private partners. The Ministry noted that local governments can realize cost savings in the operation and maintenance of public transport services. This is because private partners are able to apply economics of scale, innovative technology and efficiency and the procurement of public transport services.

2.5.2 Risk sharing

With public private partnerships, risk is shared between the local government and the private partners. Therefore, the risk of project failure is shared among all the stakeholders and not borne by the state alone. The Canadian Ministry of Municipal Affairs identified some of these risks as cost overruns, inability to meet schedules for service delivery, difficulty in complying with environmental and other regulations, or the risk that revenues may not be sufficient to pay operating and capital costs.

2.5.3 Efficiency in implementation

PPPs could lead to efficient implementation of public transport projects since each partner brings a different perspective to how the project should be implemented. The APTA (2006) observed that, a broad range of opportunities exist for the public sector –

local governments and transit authorities – to work constructively, creatively, and cost-efficiently with the private sector in carrying out the mission of providing public transportation. The combination of efforts from the private and public sectors will likely increase the efficiency and efficacy in public transport implementation. This also leads to the integration of the experience of private firms to complement what traditional public institutions can offer alone.

2.5.4 Economic Stimulant

Public private partnerships also help build the capacities of local private firms which stimulates the economy in terms of job creation (Canadian Ministry of Municipal Affairs, 1999). Public private partnerships also lead to accountability in public transport project/service implementation. There is oversight monitoring and evaluation to ensure that both sides are accountable (Ndandiko, 2006). A thriving accountable local government system boosts private sector investor confidence.

2.6 Challenges of PPPs in Public Transport Provision

Delivering projects through public-private partnership brings unique challenges, from securing the finance for public assets to formulating relationships that achieve the right balance between social and economic value. Our understanding of Administrative law and the regulations that govern the supply of public services in Belgium is invaluable to Belgian and international consortia keen to enter these markets. Their support has also helped public entities to secure the best value from private sector suppliers.

Partnerships are not painless. They often involve melding different cultures and always imply significant investments of time, and compromises. Nevertheless, when they work, they can generate better results for all parties (United Nations Foundation, 2003).

A PPP achieves the most efficient mix of these costs and is therefore superior to conventional methods of infrastructure provision when cost cutting increases social welfare. In some environments, cost cutting leads to lower service quality, and conventional provision should be preferred. Public private partnerships may be worse

than purely public or private service and may not be the best option for delivering a public service or project (Canadian Ministry of Municipal Affairs, 1999).

The social responsibility of government in ensuring equity in access to public services also hampers the implementation of Public-Private Partnerships. Governments try to exercise some form of fare control in PPPs to make sure the service is affordable to the people but this also makes it difficult for the private operators to make profits to sustain the venture. This is particularly challenging when the government has a majority shareholding status. The influence of “the social” factor usually compels governments to restrain PPPs in public transport service operation from charging higher prices for full cost recovery.

Another challenge to the implementation of public private partnerships is the institutional weaknesses that exist in both the public and private sector (Ndandiko, 2006). The Public Sector Reform Programme that was implemented by most African countries as part of the NEPAD programme was to address the institutional weakness in the public sector. The private sector also lacks the financial, technical and managerial aptitude to successfully implement projects in developing countries (Larbi, 1997 cited in Ndandiko, 2006). This makes it difficult for the two partners to sustainably implement public projects. Scarce resources can be channeled into projects that fail because the institutional framework failed to function.

2.7 Operation and Management of Public Transport Services

Operation and management of public transport services require a broad spectrum of policies and mechanisms, which are imperative in ensuring a successful and efficient transport service. These measures and processes are explained as follows:

2.7.1 Infrastructure for Public Transport Services

All public transport runs on infrastructure, on roads, rail, airways or seaways; all consist of interchanges and ways. The infrastructure can be shared with other modes of transport, freight and private transport, or it can be dedicated to public transport. The latter is especially true in cases where there are capacity problems for private transport. Investments in infrastructure are high, and make up a substantial part of the total costs in

systems that are expanding. Once built, the infrastructure will further require operation and maintenance costs, adding to the total costs of public transport. Sometimes governments subsidize infrastructure by providing it free of charge, just like is common with roads for automobiles (Nicole, 1991).

2.7.2 Schedules of Public Transport Services

According to Needle et al. (1997), all public transport must either operate after a predefined schedule, or operate at a sufficient frequency that travelers do not need to use a schedule to correspond with the services. Operators will publish timetables, often supplemented with maps and fare schemes to help travelers coordinate their travel. Public transport route planner online, sometimes combined with pre-sold tickets, help make planning task more user-friendly. To further aid travelers, operators often run at fixed times of the hour, so passengers only need to memorize the minutes past the hour the service leaves, and can apply that to any hour of the day.

Coordination between services at intersections is important to reduce the total travel time for passengers. This can be done by coordinating shuttle services with main routes, or by creating a fixed time (for instance twice per hour) when all bus and rail routes meet at a station and exchange passengers.

2.7.3 Financing Public Transport Services

The main sources of financing are ticket revenue, government subsidies and advertisement. The percentage of revenue from passenger charges is known as the fare box recovery ratio. A limited amount of income come from land development and rental income from stores and vendors, parking fees, and leasing tunnels and rights-of-way to carry fiber optic communication lines.

Ticket

Most, but not all, public transport required the purchase of a ticket to generate revenue for the operators. Tickets may either be bought in advance, at the time of the ride, or the carrier may allow both methods. Passengers may be issued with a paper ticket, metal or plastic token, or an electronic card (smart card, contactless smart card). Tickets may be

valid for a single (or return) trip or valid within a certain area for a period. The fare is based on the travel class, either as a function of the traveled distance, or based on a zone pricing. The tickets may have to be shown or checked automatically at the station platform or when boarding, or during the ride by a conductor.

Operators may choose to control all riders, allowing sale of the ticket at the time of ride. Alternatively, a proof-of-payment system allows riders to enter the vehicles without showing the ticket, but riders may or may not be controlled by a ticket controller; if the rider fails to show proof of payment, the operator may fine the rider at the magnitude of the fare. Multi-use tickets allow travel more than once. In addition to return tickets, this includes period cards allowing travel within a certain area (for instance month cards).

Period tickets may be for a particular route (in both directions), or for a whole network. A free travel pass allowing free and unlimited travel within a system is sometimes granted to particular social sectors, for example students, elderly, children, employees and the physically or mentally disabled. Zero-fare public transport services are funded in full by means other than collecting a fare from passengers, normally through heavy subsidy or commercial sponsorship by businesses. Several mid-size European cities and many smaller towns around the world have converted their entire bus networks to zero-fare. Local zero-fare shuttles or inner-city loops are far more common than city-wide systems (Nicole 1991).

Subsidies

Both local and national government may opt to subsidize public transport, of social, environmental or economic reasons. Key motivations are the need to provide transport to people who cannot afford or are physically or legally incapable of using an automobile, and to reduce congestion, land use and emissions of local air pollution and greenhouse gases. Other motives may be related to promote business and economic growth, or urban renewal in formerly deprived areas of the city. Some systems are owned and operated by a government agency; other transportation services may be commercial, but receive greater benefits from the government compared to a normal company (Needle et. al., 1997).

Subsidies may take the form of direct payments to unprofitable services, but also indirect subsidies are used. This may include allowing use of state-owned infrastructure without payment or for less than cost-price (may apply for railways and roads), to stimulate public transports economic competitiveness over private transport, that normally also has free infrastructure. Other subsidies include tax advantages (for instance aviation fuel is typically not taxed), bailouts if companies that are likely to collapse (often applied to airlines) and reduction of competition through licensing schemes (often applied to taxis and airlines). Private transport is normally subsidized indirectly through free roads and infrastructure (Needle et. al., 1997).

Some government officials believe that use of taxpayer capital to fund mass transit will ultimately save taxpayer money in other ways, and therefore, state-funded mass transit is a benefit to the taxpayer. Since lack of mass transit results in more traffic, pollution, and road construction to accommodate more vehicles, all costly to taxpayers, providing mass transit will therefore alleviate these costs (Layton, 2002).

2.7.4 Safety and Security of Public Transport Services

Expansion of public transportation systems is often opposed by critics who see them as vehicles for violent criminals and homeless persons to expand into new areas to which they would otherwise have to walk (Nicole, 1991). According to the Transportation Research Board (1997), violent crime is perceived as pandemic; personal security affects many peoples' decisions to use public transportation. Despite the occasional highly publicized incident, the vast majority of modern public transport systems is well designed and patrolled and generally has low crime rates.

Though public transit accidents attract far more publicity than car wrecks, public transport is much safer, due to far lower accident rates. Annually, public transit prevents 200,000 deaths, injuries, and accidents had equivalent trips been made by car. The National Road Safety Council (2008) estimates riding the bus as over 170 times safer than private car.

2.7.5 Institutions and Governance in Public Transport Services

Asian Development Bank (2009) identifies how institutional and governance arrangements can support sustainable urban transport policies and practices. This simple objective encompasses a multitude of challenges. The fact that every city has a unique character, history, and development experience complicates the search for broadly applicable solutions. Still, an approach leads to sustainable solutions in public transport services - albeit solutions that requires careful tailoring to local needs. The foundation of this approach is the creation or existence of a single city authority with powers over its commuter catchment area for strategic planning, transport, environmental protection, and substantial self-financing.

To be fully effective, transport solutions increasingly require a package of measures that include transport management, environmental upgrading, and public transport improvements. When the responsibility for these measures is vested in a single organisation, the measures can be implemented concurrently and major improvements become possible. While examples are limited, some cities are following this approach, most notably London. While the powers of the city authority structure proposed here are greater than those of existing structures, the city authority must still coordinate with the central government. The central government will always play a role in the management of major cities, local government units, and in some cases, major developers. To be most effective, the policy requires, first, that all three levels of government have the power to act, and second, that they act jointly across the city catchment area. Achieving this degree of integration requires purposeful action, which Public Private Partnership is paramount (Asian Development Bank, 2000).

Sustainable public transport service requires purpose, integration, and consistency in its planning and technocratic management activities. It also requires fiscal realism and the establishment of an effective civil service through structured human resource development programmes. The central government should create an enabling environment that promotes accountability, participation, predictability, and transparency. The central government also has the task of allocating responsibilities to various tiers of government and non government entities such as national, city and local government units, and the private sectors of the civil society (Asian Development Bank, 2009).

While legacy conditions may constrain the adoption of these principles, an institutional structure that reflects the themes of integration, sustainability, and pragmatism is essential. It is critical that cities create a citywide public transport services authority supported by appropriately resourced units explicitly charged with a full range of transport-related responsibilities. These units must work together toward strategically determined objectives echoed in municipal plans and in transport plans. Of equal importance are systems to monitor and evaluate institutional performance (Asian Development Bank, 2009).

2.8 Public Private Partnership and Public Transportation: a Sustainable Investment for the Future. A Case Study of the United States of America

In 2000, America's public transportation systems employed 350,000 workers to operate, maintain and manage all modes of transit. 50 percent of this workforce served as operators or conductors. In addition, 10,000-20,000 professionals worked under contract to public transportation systems or were employed by companies and government offices that support these systems. The public transportation fleet was comprised of 129,000 vehicles in active service with the majority, 58 percent being buses.

There were approximately 6,000 public transportation systems operating in the United States and Canada, with the majority of these agencies operating more than one type of service. Many agencies typically contract additional services with private operators, further increasing the number of total public transportation providers.

In 1999, public transportation vehicles used 856 million gallons of fossil fuels and 5.2 billion kilowatt-hours of electricity - which is less than 1 percent of all energy consumed in the U.S. Among fossil fuels, diesel ranks first and is used primarily by buses, but vehicles also use gasoline, compressed natural gas, propane, and liquefied natural gas. Heavy rail vehicles, as well as commuter rail (25 percent) and light rail (8 percent) consume most electricity (65 percent). While transit clearly benefits those who use it, even larger benefits accrue to all citizens in the form of economic development, reduced congestion, more livable communities and cleaner air.

2.8.1 Stimulates Economic Development

A transit coalition report, "Dollars & Sense: The Economic Case for Public Transportation in America," found that every dollar taxpayers invest in public transportation generates \$6 or more in economic returns. Every \$10 million in capital investment in public transportation yields \$30 million in increased sales. Every \$10 million in operating investment yields \$32 million in increased sales.

2.8.2 Creates Jobs

In addition to the 350,000 people directly employed by public transportation systems, thousands of others are employed in related support services (i.e., engineering, manufacturing, construction, retail, etc.). For every \$10 million invested in capital projects for public transportation, more than 300 jobs are created and a \$30 million gain in sales for business is realized.

2.8.3 Eases Traffic Congestion

Nearly half of all Americans believe traffic is a serious problem where they live. Most (57 percent) do not feel their commute will improve over the next three years, and nearly a quarter expect to spend more time commuting. According to the Texas Transportation Institute (TTI), car drivers spent more than 40 hours last year stuck in traffic in one-third of the cities studied. Half the drivers spent the same amount of time stuck in traffic as they did on vacation, according to the same TTI study. These findings apply to small, medium and large cities. Public transportation helps to alleviate our nation's crowded network of roads by providing transportation choices.

2.8.4 Improves Air Quality

Public transportation helps promote cleaner air by reducing automobile use, which can exacerbate smog and public health problems. Each year, public transportation use avoids the emission of more than 126 million pounds of hydrocarbons, a primary cause of smog, and 156 million pounds of nitrogen oxides, which can cause respiratory disease. For each mile traveled, transit vehicles emit fewer pollutants than by a single-passenger automobile. According to the Sierra Club, 7 of the 12 cities with the highest grades for low car and truck smoke per person (New York, Chicago, Los Angeles, San Diego, San

Francisco, Sacramento and Washington, DC) are located in the states that spend the most on clean transportation choices, demonstrating the power of public transit as a tool to combat air pollution.

2.8.5 Reduces Energy Consumption

Public transportation can significantly reduce dependency on gasoline, reducing auto fuel consumption by 1.5 billion gallons annually. For example, a person who commutes 60 miles each way daily could save an estimated 1,888 gallons of gasoline every year by switching from using a car to using public transportation.

Public transportation was funded through two main sources: capital funds and operating fees. Capital funds finance infrastructure needs such as new construction and rehabilitation of existing facilities. The federal government contributes 44 percent of these funds, but this portion can be as high as 80 percent for some projects. The balance is made up of a combination of state and local government funds, with states contributing 10 percent and local governments, 13 percent. In 1999, public transportation received a total of \$9 billion in capital funds from all sources. Operating funds provide income for operating expenses. Approximately 74 percent of these funds come from private sector sources. State and federal governments contribute 22 percent and 4 percent respectively. In 1999, an adult passenger paid an average of \$1.09 per base fare.

In fiscal year 2002, the fifth year of funding under the Transportation Equity Act for the 21st Century (TEA-21), the federal government invested \$6.7 billion in public transportation. Total public expenditures (federal, state and local) to operate, maintain and invest in public transit systems in the United States have totaled \$15.4 billion each year for the past four years, which is increasingly becoming a burden on government.

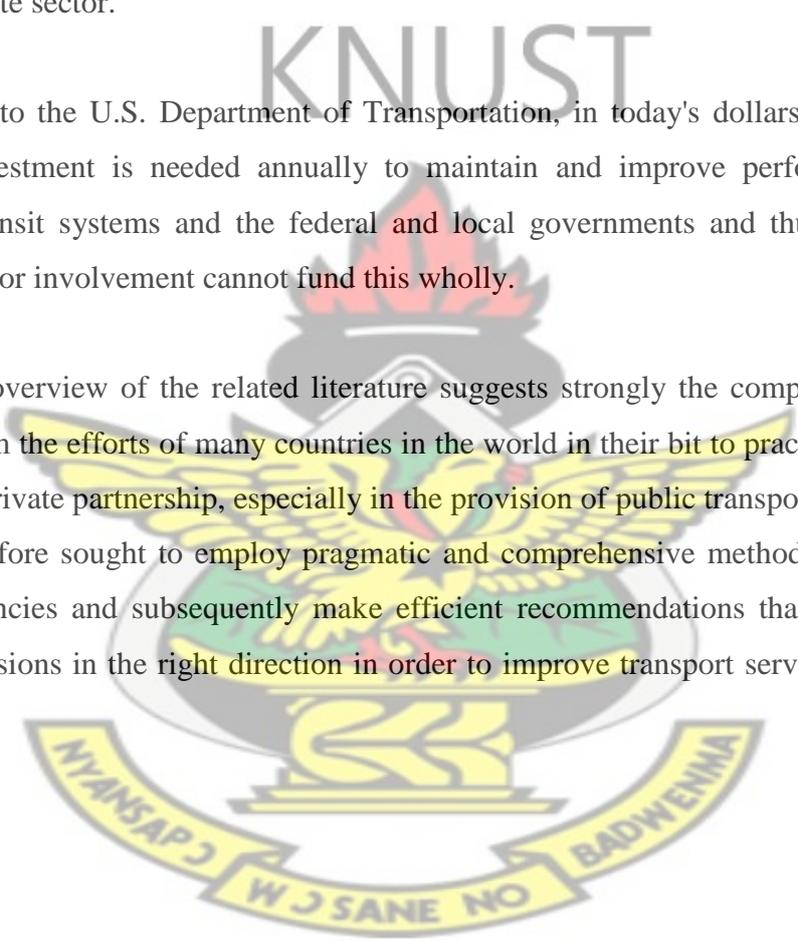
For 1999 capital expenses: facilities cost 52 percent; vehicles, 36 percent; and equipment and services, 12 percent. Of these categories, heavy rail expenses accounted for 30 percent; bus, 36 percent; commuter rail, 18 percent, and light rail, 11 percent. For 1999 operating expenses; salaries and wages cost 46 percent; benefits, 26 percent; purchased transportation, 12 percent; and fuel and supplies, 9 percent. Services, utilities, insurance

and other costs make up the balance. In 1999, public transportation spent \$20.5 billion on operating expenses.

Public transportation usage is expected to experience the sharpest growth of any form of transportation this decade. The American Society of Civil Engineers (ASCE) reports that improvements to transit bus and rail facilities are not keeping up with the strain placed on systems by increased ridership. ASCE says public transportation spending must increase by 41 percent just to maintain current conditions, which require the participation of the private sector.

According to the U.S. Department of Transportation, in today's dollars, \$17 billion in capital investment is needed annually to maintain and improve performance of the nation's transit systems and the federal and local governments and thus the need for private sector involvement cannot fund this wholly.

A critical overview of the related literature suggests strongly the complexity of issues arising from the efforts of many countries in the world in their bid to practice the theories of public private partnership, especially in the provision of public transport services. This study therefore sought to employ pragmatic and comprehensive methodology to assess the deficiencies and subsequently make efficient recommendations that will influence policy decisions in the right direction in order to improve transport service provision in Ghana.



CHAPTER THREE

RESEARCH APPROACH AND STUDY METHODOLOGY

3.1 Introduction

The issues discussed in the foregoing chapter offers a basic theoretical backdrop to the role of public-private partnership in the provision of public transport. This chapter outlines the issues related to putting these ideas into practice, within the context of the study area. The study combined both qualitative and quantitative techniques to gather information. Data representation was through graphs, charts and tables. The Statistical Package for the Social Sciences (SPSS, Version 16) and Microsoft Excel tools were used for processing and analyzing the data.

3.2 Research Design

The study employed the case study techniques in the research design. This approach was deemed appropriate as it provides a comprehensive framework for holistic and in-depth investigation into contemporary real life situations. With the emergence of numerous public private partnerships with similar characteristics it is possible to use a particular case in providing generalization. This design was selected over the others because of its effectiveness for assessing the prospects and challenges of an existing situation. It therefore helped to provide great depth of understanding of the policy framework, challenges and prospects of the Metro Mass Transit Limited in the provision of public transport services in some selected routes in Ghana.

3.3 Population and Sample

The population for the study was made up of all users of Metro Mass Transit Limited in the six case study routes. Also included were management of MMTL, shareholders of MMTL, officials of the Ministry of Transport, drivers, conductors, traffic managers of MMTL, transport experts and private transport operators.

3.4 Data Collection Procedure

The data was collected by the use of interviews conducted for management, shareholders and key informants. Questionnaires were used to solicit users' views. Some already collected data (Particularly organisational income and expenditure records) were also assessed. The questionnaires were structured and involved both opened and closed ended questions. The mode of administering the questionnaires was through personal interviews. In some circumstances, interview guides were used to assist in obtaining detailed data from institutions. The questionnaires were submitted to the relevant people in each department and their views collated. In some cases, the questionnaires were given to a group of people to go and answer with little guidance from the researcher. In the case of users, the questionnaires were conducted by the researcher with the support of colleagues at the various loading terminals. Conversely, the research made use of the observation method. The staff of both companies was keenly and secretly observed on how they went about their duties at the various stations.

3.4.1 Interviews

This was carried out by the use of structured questionnaire. Both the socio-demographic characteristics of users and information of their impressions on the services provided by the operators were obtained through these interviews. It was administered to all the 33 respondents apart from the users in the study. In using this method, specific closed-ended questions aimed at getting information that would enable indicators to be measured were asked. However, guided opened-ended questions were used for service managers, shareholders and key informants. In order to minimize demerits associated with this technique; several concentric skills were employed. These included:

- Testing the interview schedule beforehand for clarity and ensuring that questions cannot be misunderstood.
- Stating clearly what the purpose of the interview is.
- Assuring the interviewee that what is said will be treated in confidence.
- Asking permission from interviewee before taking notes or tape record the interview.
- Recording the exact words of the interviewee as far as possible.
- Keeping talking simultaneously with writing.

- Keeping the interview to the point.
- Covering the full schedule of questions.
- Watching for answers that are vague and probe for more information.
- Ensuring flexibility and noting down everything interesting that is said, even if it isn't on the schedule.
- Avoiding offending the interviewee in any way.
- Avoiding saying things that are judgmental.
- Avoiding interrupting in mid-sentence.

3.4.2 Key Informant interview

Some key informants were identified and interviewed about their opinion on the activities, performance and general impressions on the sustainability of the operations of MMTL. These personalities were sought from among managers in both the private and public sectors. It also included some drivers, conductors, traffic managers of MMTL and experts in transport management. They provided something of the “big picture” about the management and sustainability of the provision of public transport services.

3.4.3 Human Subjects Concern and Ethical Clearance

Written and verbal informed consent was sought from all interviewees before administering the interviews. The purpose of the study was explicitly explained to them to understand first. They were also given the assurance that their information was going to be treated confidentially and their identity would remain anonymous. They were further given the right to pull out of the study at any time that they chose to do so.

3.4.4 Sampling Technique

The purposive sampling, thus non-probability method was used to select six routes plied by the MMTL (See Figure 1). These routes were the three most patronized routes, specifically, Kumasi –Sunyani, Kumasi-Obuasi, and Accra-Cape Coast were selected. Whereas the rest were the three least patronized routes namely Circle- Sakomono, Ho-Kpeve and Takoradi-Mpohor. The patronage of these routes was determined by the number of passengers carried for the period of 2009/2010 and the amount of revenue

generated. After selecting these routes, the convenience sampling method was used to sample forty passengers from each route. This brought the total number of passengers included in the study to 240.

The purposive sampling method was further used to select five management staff of MMTL to be included in the study. It included officials of the operation unit, data and research unit, the human resources unit, finance section and the technical unit. The same method was used to select an officer in charge of Planning and Monitoring from the Ministry of Transport.

The convenience sampling method was also used to select one driver from each of the six routes. In addition, one assistant traffic manager, six conductors, three point officers, three professionals in transport administration and two private transport operators were selected by using the same method. All the seven major shareholders were also included in the study. All these respondents were put together to constitute the key informants.

The purposive sampling technique was the most appropriate because these categories of the staff were knowledgeable about the activities, operations and the constraints of the Metro Mass Transit Limited. Again, because of the difficulty of constructing an accurate sample frame for the users, convenience method was deemed necessary.

3.5 Research Subjects

The subjects of the research covered the major stakeholders in the operations and maintenance of transport agencies. These provided relevant information needed for the study.

3.5.1 Management of MMTL

MMTL workers especially the drivers, bus conductors, assistant traffic managers, the officers in charge of operations, data and research, human resource, finance and technical units were interviewed to understand their views about how operations of MMTL could be improved. Issues concerning ownership and financing were asked.

3.5.2 Ministry of Transport

The Government of Ghana through the Ministry of Transport is the major shareholder in the operations of MMTL. The study therefore interviewed the Director of Planning and Monitoring at the Ministry of Transport. The Director was interviewed to ascertain the impact of government's social responsibility on public-private transport services such as the MMTL and government's perception on the performance of MMTL so far as well as whether or not there exist commitment to continue to support MMTL in its operations.

3.5.3 Other MMTL Shareholders

Information on investments and returns, plans for sustainability and other vital issues were sought from the other shareholders of MMTL. In this case officials from State Insurance Company (SIC), National Investment Bank (NIB), Ghana Oil Company (GOIL), Agriculture Development Bank (ADB), Prudential Bank Limited (PBL) and the Social Security and National Insurance Trust (SSNIT) were interviewed.

3.5.4 Users of MMTL

Passengers of Metro Mass Transit Limited were also interviewed. These users were interviewed to get information regarding their perception on the challenges, prospects and the efficiency of MMTL transport service.

3.6 Information Required

Different categories of data were collected from MMTL as well as the passengers, transport experts, private transport users, shareholders, the Ministry of Transport and the staff of MMTL. The set of information elicited from these groups of respondents included the challenges, prospects and the efficiency and sustainability of Metro Mass Transit Limited.

3.7 Data Analysis

The data collected were first edited, coded and organised in a form that allowed easy entry and analysis by the computer. Some of the data from the field were reorganised in a form that made them amenable to quantitative research. The Statistical Package for the Social Sciences (SPSS, Version 16) and Microsoft Excel (2007) tools were used for data processing and analysis. The data were then grouped and described using tables, graphs, charts as well as frequencies and percentages.



CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

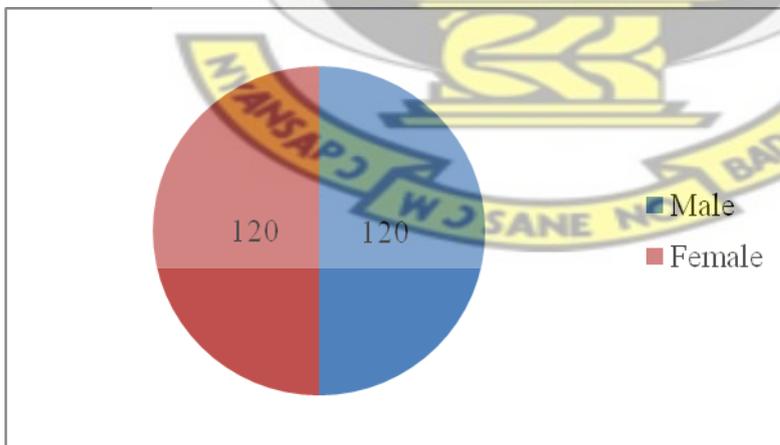
This chapter seeks to analyze the results of the study. It focuses on the background characteristics of respondents, the framework and structure that public-private partnership transport operating firms use in their operation, the challenges and prospects of MMTL and the efficiency and sustainability of MMTL transport services. To provide fair and consistent conclusions, interviewees' views have been mutually integrated in most discussions.

4.2 Background Characteristics of Respondents

This section describes the background characteristics of respondents. The characteristics of the respondents were analyzed in terms of sex and age.

4.2.1 Sex Distribution of Respondents

Figure 2: Sex Distribution of MMTL Transport Users



Source: Fieldwork, 2010

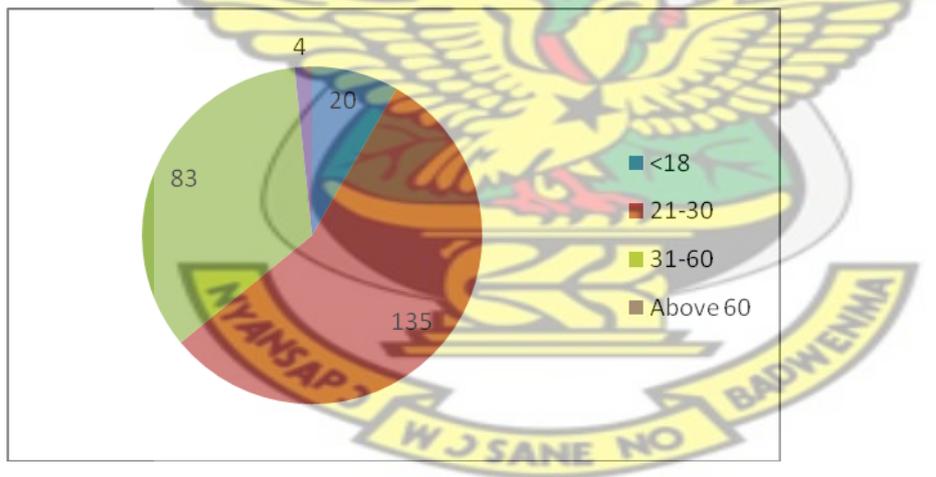
It is evident from Figure 2, shown above, that both males and females were given equal chance and opportunity to take part in the study. This is because out of the 240 users of

MMTL transport services selected, 120 (50 percent) were males whereas the others 120 (50 percent) were females. This was done to play down any biases that may arise because of differences in sex and to have a sample population that depicts that of the wider population of Ghana.

4.2.2 Age Distribution of MMTL Transport Users

It is indicative from Figure 3 that the majority, 56.2 percent of the users of MMTL transport were between the ages of 18-30 years while 34.6 percent of these users were within the age bracket of 31-60 years. Also, 7.5 percent were below 18 years of age whereas 1.7 percent of them were above 60 years of age. The finding indicates that all segments of the population, but the majority falling in the economic active group, patronize the services of MMTL. This may partly be explained by the fact that the service plays a crucial role in carrying people to their various places of work.

Figure 3: The Age Distribution of MMTL Users



Source: Fieldwork, 2010

4.3 Framework and Operational Structure of MMTL

4.3.1 Establishment of the Metro Mass Transit Limited

Following the commitment of government to the provision of social services in order to alleviate poverty and exclusion, particularly in rural areas, the mass transportation system was reintroduced in 2001 in the country. Under this agenda, the Government of

Ghana (GoG) through the then Ministry of Roads and Transport together with a number of stakeholders established MMTL with the mission of providing efficient, reliable, safe and affordable urban and mass transportation services to the people of Ghana on a sustainable basis. Even though the company started operations in Accra in October 2002 with services only in Kumasi, Sekondi/Takoradi and Tamale, a permanent management structure was later put in place to ensure its extension to other areas of the country. After operating on pilot basis with donated buses from Italy, MMTL was officially given a permanent organisational structure and fully incorporated as a public-private partnership company in 2003. Starting with only 75 buses in 2003, the company increased its fleet capacity to 1,111 by the end of 2010. Table 1 shows the type and distribution of buses among the 265 MMTL operational routes.

For operational purposes, these routes are divided into three categories and defined based on distance and operational areas as below:

- Intra City: Movement within a city and covering up to a distance of 0-39km.
- Inter Urban / Rural Urban: Movement from urban to urban or urban to rural or vice versa and covering up to a distance of 40-139km.
- Inter City: Movement from one city to the other and covering up to a distance of 140km and above.

Since the start of operation, MMTL has not been able to put its entire fleet onto the road. It is evident from Table 1, that in 2010, out of 1,111 buses (referred to as supply buses), only 624 (56.2percent) buses (referred to as operational buses) were actually put on road. The rest were faulty and therefore could not be used. This confirms the finding that the inability to have all buses on the road because of breakdowns is a key challenge of the company.

A further observation of Table 1 also makes it clear that the Yaxing (S. Decker) 1st Generation and Yaxing (D. Decker) 1st Generation were the worst affected since out of 217 and 69 only 6 and 8 respectively were operational. In the case of the VDL Neoplan and Jonckheere buses, out of 150, 213, 101, 150, 48 and 73 buses supplied in 2010, 131, 168, 60, 133, 41 and 24 respectively were operational. It could be said from the analysis that the VDL brand did better than the Yaxing ones in the period. This is because out of the 735 VDL buses supplied, as high as 557 (75.8percent) were

operational whereas only 14 (4.9percent) of the total of 286Yaxing buses which were supplied within the same period were in use.

Table 1: Fleet Size and Distribution in 2010

Service type	No. of Routes	No. of Buses	
		Supplied	Operational
Intra City	87	516	210
Inter Urban/Rural Urban	75	274	187
Inter City	103	321	227
Total	265	1,111	624
Bus Type	No. of Routes	No. of Buses	
		Supplied	Operational
Yaxing (S. Decker) 1 st Generation	8	217	6
Yaxing (D.Decker) 1 st Generation	6	69	8
Tata Commuter 1	26	90	53
VDL Neoplan Commuter 2	57	150	131
VDL Jonckheere Commuter 1	65	213	168
VDL Neoplan City 1	32	101	60
VDL Neoplan City 2	40	150	133
VDL Jonckheere City 1	10	48	41
VDL Neoplan Commuter 1	21	73	24
Total	265	1,111	624

Source: MMTL, 2010

4.3.2 Projected Fleet Size and Bus Acquisition Trend of MMTL

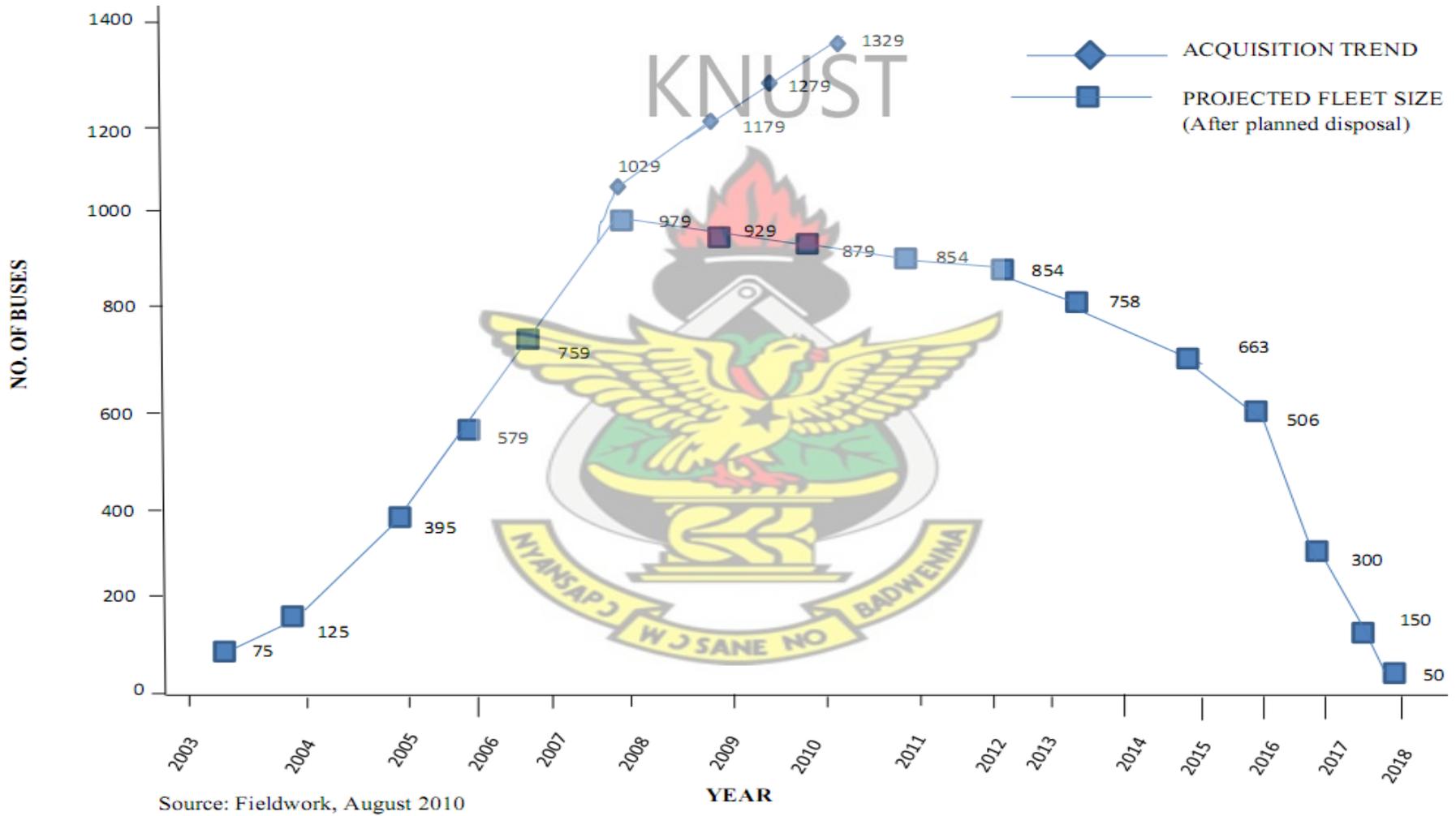
Metro Mass Transport Limited by 2010 operated with a total fleet of one thousand one hundred and eleven buses as stated in table 1. This consist of VDL/Neoplan buses from Holland, VDL Jonckheere buses from Belgium, Yaxing buses from China and Tata buses from India. The projected life span of these buses is four years for Yaxing buses, six years for Tata buses and eight years for VDL buses (MMTL, 2010).

The phenomenon of high rate of un-operational buses sets an unfavourable condition for high rate of bus disposal. However, taking into consideration government's objective of building an integrated multi-modal road transport system where all transport modes, aviation, railway, road and maritime co-operate to provide public transport service in a more effective way, MMTL needed to play a leading role in this process by building a formidable road transport network within and outside the big cities (MMTL, 2010). Thus, the strategic direction of MMTL was to increase its service coverage or operational areas in order to ensure a consistent improvement in the level of service on existing routes especially in the cities together with a steady expansion programmes. To this end, MMTL was to increase its operational routes from two hundred and sixty five to three hundred and forty five by the end of 2015. This expansion was expected to cover forty more districts which were yet to benefit from MMTL transport services.

Consequently, MMTL in its Medium Term Plan (2010-2013) indicated that by the end of 2019, the fleet size of the company would decrease to just 50 buses if nothing is being done about the situation. It was projected that the company will need 750 additional buses (amounting to GHC263 million) within the three year period. These comprise 340 buses to replace the ageing fleet and 410 buses for growth over the medium term period of 2010-2013 (MMTL, 2010). Details of the projected trend of fleet acquisition and fleet size for the medium term plan are shown in Figure 4.

This finding confirms the 138 (57.5percent) users' suggestions that government should provide more buses for MMTL since those on the route are inadequate. Government has continued to finance all the cost of purchasing new buses for the company since its establishment, a situation that contradicts the submission of Dove (2007) that in the Financing Model, public private partnership provides government the opportunity to transfer financing of projects to the private investor.

Figure 4: Bus Acquisition and Disposal



4.3.3 Strategic role of MMTL

MMTL has been established with the strategic role of supporting government pro-poor policy by:

- i. Charging lower fares thus making transport fares affordable to the poor.
- ii. Influencing and stabilising transport fares throughout the country.
- iii. Running on routes generally considered unattractive and unprofitable by private transport owners, in terms of the state of road and patronage
- iv. Implementing the Free Bus Ride for School Children in uniform up to Junior High School level.

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This role granted for MMTL is in line with the objectives of the Ghana Vision 2020, which among other things sought to establish an efficient and modal complementary and integrated transport network for the movement of people, and goods at least cost throughout the country. It also synchronizes with Litman (1999) assertion that public transport service is to ensure that all members of the society-young, old, poor and those banned from driving due to medical condition have access to automobile.

4.3.4 Policy Framework for the Operation and Financing of the MMTL

For effectiveness and efficiency of MMTL, an operational framework was established in January 2004 with the following objectives:

- i. To enable the MMTL to operate with a recognized organisational structure with the financial support of the Government and external sources to enable it acquire buses;
- ii. To establish a comprehensive policy framework for the operation and financing of MMTL;
- iii. To enable MMTL to access the ORET Concessional Facility from the government of Netherlands for the importation of 100 DAF/Neoplan Intra-city Buses;
- iv. For MMTL to officially takeover the assets (regional offices, bus terminals and mechanical workshops) of OSA to enable it to function smoothly; and
- v. For government to provide funds in the sum of about GHC4,140,000 for the payment of the liabilities of OSA that include OSA's existing creditors, loans from its bankers and severance payments.

The framework therefore outlined the conceptual policies and strategies that should underline the establishment and operation of the MMTL being sponsored by government through the then Ministry of Roads and Transport and now Ministry of Transport.

This has since establishment been adopted as the policy document by all institutions of government and shareholders involved in the implementation of the project.

4.3.5 Operational Framework

The basic operational principles underlying the operations of the MMTL have been as follows:

- i. The Company is expected to operate on sound commercial basis and at least break even;
- ii. That due to the high investment cost in urban mass transportation the world over compared to the financial returns on it, mass transportation is usually not a very attractive commercial business for the private sector. Because of this, the Government of Ghana will need to provide some level of subsidy/support to MMTL as it pertains in all other jurisdictions;
- iii. That at the appropriate time, preferably after the Company has stabilized within 3 to 5 years, private commercial transport operators or Mass Transport operators may be invited to join the company as shareholders; and
- iv. It is envisaged that within the agreed plan period of stabilization, it will be difficult to secure substantial private sector participation because of the social services objective of MMTL as an urban mass transportation system, even though it is expected to operate on commercial basis.

4.3.6 Shareholding Structure

Based upon the above principles and in spite of the constraints mentioned, the Ministry of Roads and Transport attracted four (4) financial institutions namely; SSNIT, NIB, SIC and Prudential Bank, later ADB and GOIL to participate in the MMTL as initial shareholders no matter how small their contributions may be in the light of the capital requirement of the company. This is in line with Government's policy of promoting Public Private Partnership. Under this arrangement, Ghana Government holds 45percent of the equity of MMTL whilst the financial institutions hold 55percent. With the initial

equity project capital of US\$6,000,000, the share holdings and board representation is as indicated in Table 2. Government has always appointed the board Chairman while the various shareholders appoint the rest of the board members.

Table 2: Shareholding Structure of MMTL

Project Capital= US\$ 6,000,000				
Shareholder	Amount Paid (US\$)	Number of Shares	Percentage Holding	Board Representation
GoG	2,700,000	270,000	45.00	3
ADB	1,000,000	100,000	16.67	1
SSNIT	690,000	69,000	11.50	1
NIB	560,000	56,000	9.33	1
SIC	350,000	35,000	5.83	1
PBL	100,000	10,000	1.67	1
GOIL	450,000	45,000	7.5	1
In Treasury	150,000	15,000	2.5	-
Total	6,000,000	600,000	100.00	9

Source: Ministry of Roads and Transport, 2004

Due to its social objectives, the expected returns from the operations of MMTL have been zero as compare to if these shareholders had invested their initial capitals into other commercial businesses. Even though it is the Government/MMTL's objective to charge cost recovery tariffs for all services in the country, the margins on such urban mass transport fares has not been as high as being currently charged by the private sector. For instance, the current fares being charged by MMTL is on the average between 15-20percent lower than the fares being charged by the minibuses (trotro) providing services on the same routes.

Though Metro Mass Transit limited has been registered as a limited liability Company with Government of Ghana and the above mentioned financial institutions as shareholders, share subscriptions are yet to be paid for. The Financial Institutions have indicated their inability to invest heavily in the company because of MMTL's failure to pay dividend to them since the initial investment.

4.3.7 Mechanism for Financing MMTL

The financing mechanism that has been adopted for the capitalization of the Company is through Government Support for the acquisition of buses with assistance from Development Partners. Since October 2002, the Italian Government has donated 198 out of 250 used buses they promised to Ghana. Additionally, government through Dutch Government concessionary financing package provided 175 DAF/Neoplan buses. Government through support from China under a Buyers Credit, and HIPC support also supplied additional 250 buses.

It is clear from the above submission that the financing approach for the acquisition of buses for the MMTL has been through Government support, external sources, namely Grant and Concessionary financing by Development Partners and also through Buyers/Suppliers' Credit facilities with Government Guarantees. The Shareholder Financial Institutions provided the working capital to finance the operations of the Company by way of their equity contributions and commercial loans. Specifically the equity contributions of the financial institutions were used to pay for the local cost of the buses (import duties, VAT, port charges, etc). By this arrangement and also based on the concept of cost recovery, MMTL was expected to generate enough funds from its operations to service the loans that was contracted from the Development Partners for the purchase of buses. It was expected that the recurrent expenditures of the Company would be met from its operations too.

This financial arrangement was to ensure that MMTL does not depend on the Government's Consolidated Fund to finance its operations. However, the study has established that government has continued to buy all the buses used by MMTL without receiving any financial returns.

4.3.8 Subsidy

The fundamental principle underlying the establishment of MMTL is that it is being sponsored by the Government to fulfill its social objective of ensuring availability of mass transportation to the people of Ghana. This is one means of oiling the economy for growth.

It may be borne in mind that left to the shareholders and Management alone, the Company will be competitive with the private sector operations. If Government decides as a policy to provide affordable transport services to the people, then MMTL Management will have to implement the Government's programme. However, in order to sustain its operations, the Company will have to pass on the difference in fares between what the Company would have charged (Economic Fares) to Government to refund as subsidy to top up revenue from MMTL's operations (Ministry of Roads and Transport, 2004).

In order for the Government to implement this policy of subsidy, it will need to know the quantum of subsidy to be given. Therefore, the Company has been responsible for the provision of estimates of the level of service and its cost implications to determine the quantum of subsidy that the government has to pay to the company. This may be converted into percentage terms or be based on any agreeable formula for Government to pay on regular basis (Ministry of Roads and Transport, 2004). The study established that this has not been done. MMTL has always on annual basis provided the cost incurred as a result of fare differential and free ride to school children but there have not been cash payment to them. It has not been clear whether that has been the payment government makes in terms of the purchases of buses to the company. As a social commitment, government continues to ensure that MMTL has more buses to operate even though there is no cash returns. This is what Poku-Boansi in his 2008 submission attested to that public transport continues to be a high priority social obligation of governments throughout the world.

4.3.9 Organisational Structure of MMTL

The company has its headquarters in Accra with Branch Offices in the Regional Capitals of Ghana where they operate. Starting from Greater Accra, Ashanti, Western and

Northern Regions, the company now operates in all the regions of Ghana with staff strength of 3,912, comprising 943 females and the rest being males.

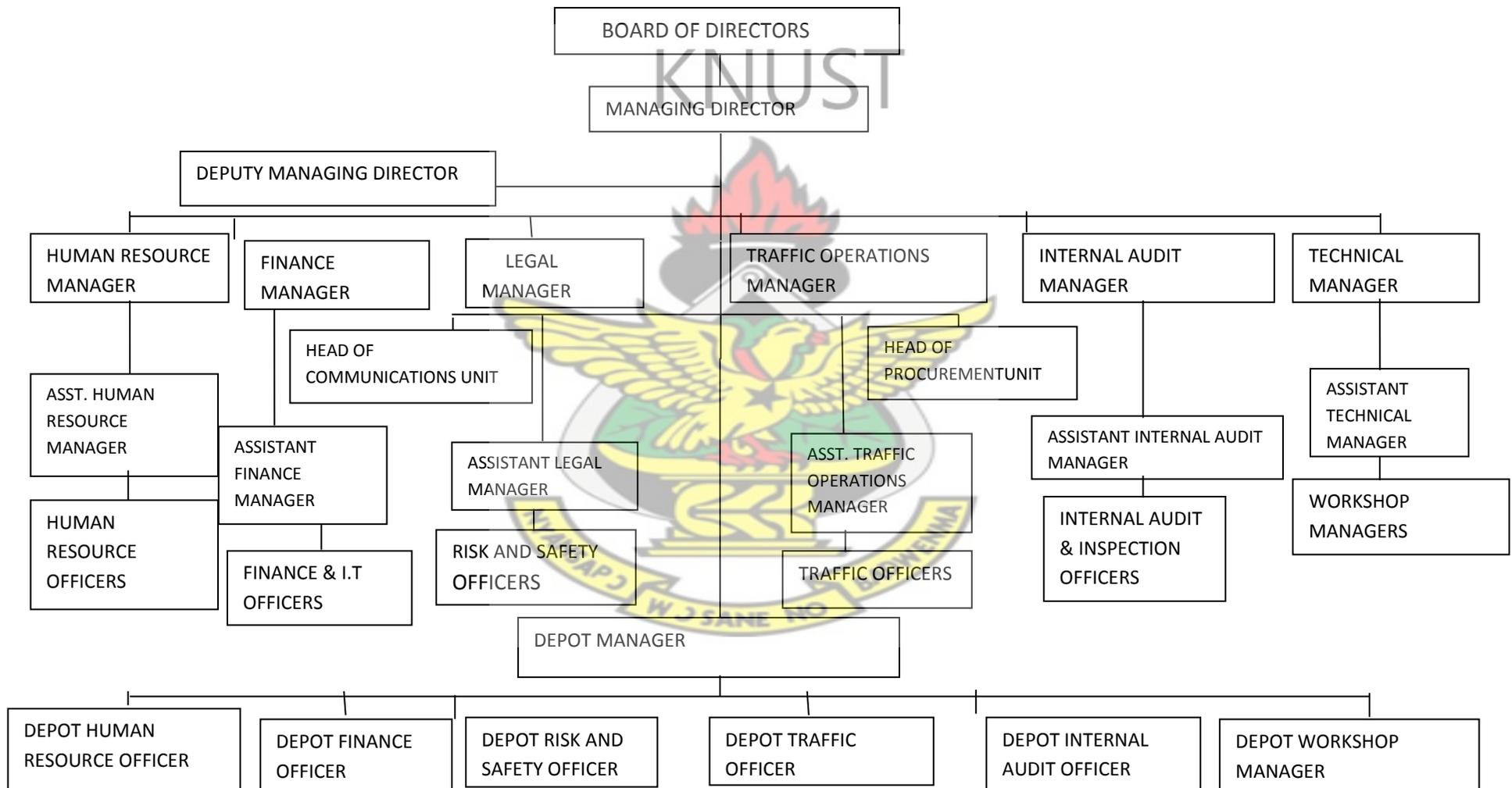
The employment level of MMTL is expected to increase even higher, especially when the projected 750 buses are purchased by the end of 2013. The company also provides indirect employment to Ghanaians by way of food vending, car washing, etc. It is clear from the discussion that even though the transport sector is a male dominated field, MMTL strives to integrate as many women as possible in its operations.

To ensure efficiency, the management of MMTL has designed an Organisational Structure to manage the Company at the Headquarters and in the Regions. Figure 5 shows the detail organisational structure which is currently being used.

As part of bilateral cooperation, some foreign nationals are providing technical assistance to the company.

According to Asian Development Bank (2009), to be fully effective, transport solutions increasingly require a package of measures that include transport management, environmental upgrading, and public transport improvement. It is believed that when the responsibility is vested in a single organisation, the measures can be implemented concurrently and major improvements become possible. In line with this submission, it can be said that the establishment of a clear management structure is a good step for the MMTL to achieve its objectives as one key informant, interviewed during the study, put it “An efficient transport management system ensures availability of buses at the desired time. This could be achieved by ensuring that buses are regularly maintained. Measures should be put in place to ensure that operational problems are addressed with minimal interruptions to the provision of services”. These issues are addressed as the organisational structure clearly defines the role of each sector of the company. The structure also provides effective basis and procedure for monitoring and evaluation.

Figure 5: Metro Mass Transit Limited Organisational Chart



Source: MMTL, 2010

4.3.10 Infrastructure of MMTL

The major infrastructure being used by the Company in addition to buses in each operational area includes:

- i) Office Premises;
- ii) Mechanical Engineering Workshop;
- iii) Parking Bays (Open Yards);
- iv) Bus Terminals; and
- v) Bus Stops.

These have been the assets of OSA, which have been restructured and integrated into MMTL. They are assets which were valued and placed in the balance sheet of MMTL as government's contribution for the capitalization of the company. An interview, with one shareholder indicated that part of the value of the assets of OSA was used to pay for Government's 45 percent equity holding.

4.4 Challenges Confronting MMTL

The study further sought to find out the challenges that confront MMTL in its delivery of transport services to the citizens of Ghana. In spite of the phenomenal contribution of MMTL transport services to the citizens of Ghana, it was found to be faced with some challenges. These challenges have been looked at from the point of view of Users, MMTL and Policy directive of government.

4.4.1 Challenges that confront MMTL (Users Views)

Some of the challenges from the users included: poor state of physical facilities at MMTL bus terminals, inadequate information of users on ticket, untimely movement of MMTL buses and the lack of entertainment facilities in their buses and terminals.

Poor state of physical facilities at MMTL bus terminals

The state of the physical facilities at MMTL bus terminals was one area the study sought to look at. Questions were, therefore, asked to elicit the views of users on these facilities. The findings are shown in Table 3.

Table 3: Poor state of physical facilities at the MMTL bus terminals

Rating	Frequency	Percent
Very Good	37	15.4
Good	33	13.8
Fair	13	5.4
Poor	62	25.8
Very Poor	95	39.6
Total	240	100.0

Source: Fieldwork, August 2010

It can be observed from Table 3 that 39.6 percent of the users responded that the facilities at the various terminals in the study areas were in a very poor state whereas 25.8 percent perceived the facilities at the terminals to be poor. About 13.8 percent and 15.4 percent responded that the physical facilities at the MMTL terminals were good and very good respectively. About 5.4 percent of the users however, saw the physical facilities to be fair.

Users who indicated that the physical facilities at the MMTL terminals were in very poor and poor states argued that the canopies at these terminals were not enough to shelter all the passengers. In addition, they stated that most of the seats at the terminals were spoilt and this sometimes results in most passengers standing in the sun and at the mercy of rains when waiting for buses.

Inadequate information of users on ticket

Users were asked whether the tickets they purchased from MMTL had their particulars or details such as their names, phone numbers, hometown, destinations among other things. Majority of the respondents, 92.5 percent indicated that the tickets did not contain their names, phone numbers, hometowns, destinations among others. However, 7.5 percent of them responded in the affirmative that the tickets they purchased had their names, phone numbers, hometowns, destinations and other vital details of them. What the ticket contained according to users were their serial numbers and the cost of the particular ticket. The implication is that passengers cannot be contacted in case of any emergency since their names, phone numbers, destinations and hometowns are not on the

tickets they purchase. This is one of the reasons why passengers find it difficult to obtain their luggage anytime they unintentionally leave their luggage in the buses or identified them anytime there is an accident involving the MMTL buses.

Untimely movement of MMTL buses

One of the qualities of a good transport service is the prompt movement of buses. The extent to which buses move according to schedule has been identified to be one of the hallmarks of a good transport system. In identifying the factors that affect the demand for urban transport services in Ghana, Poku-Boansi (2008) stated that trip duration contributes to about 10 percent of the total variability in transport service demand. He explained trip duration as the time a passenger takes to undertake a journey from an origin to a destination and that include time spent in waiting for a vehicle, boarding time, journey time and walking time, if applicable.

In this context, users were asked to indicate whether MMTL buses move according to schedule in their own estimation. The majority, 78.3 percent of the users of MMTL transport services indicated that the buses do not move according to schedule whereas 21.7 percent of the users responded in the affirmative that the buses move on schedule. Users were further asked how they determine if the buses move according to schedule or not since there is no officially accepted schedule for the buses. Users indicated that, most of the times the buses move only when they are full. This makes them stay at the terminal for a long period of time before they set off. Out of the 240 users included in the study, 87.9 percent indicated the buses had to wait until they were full before they started their journeys. About 12.1 percent however, indicated that the buses moved immediately they got on board. Those who indicated that the buses move on schedule further added that they had been lucky most of the time because they get to the terminal when the buses were about to set off. This means they did not spend much time at the terminal and for that matter perceive that the buses move on schedule.

The study further looked at the average time that users of the MMTL transport services spent at the various bus terminals before starting their journeys. It was evident from Table 4 that 42.1 percent of the users indicated that they spent 30 minutes at the bus terminals and bus stops before they started their journeys. About 25 percent of the users responded that they spent an hour at the terminal or the bus stops before they started their

journeys with another 25 percent indicating that they spent less than 30 minutes. About 4.2 percent of respondents also indicated that they spent more than 2 hours at the various terminals and bus stops before they started their journeys. This according to users makes the MMTL buses unreliable especially when the purpose of the journey requires some urgency and is time bound.

According to Needle et al. (1997), all public transport must either operate after a predefined schedule, or operate at a sufficient frequency that travelers do not need to use a schedule to correspond with the services. Operators will publish timetables, often supplemented with maps and fare schemes to help travelers coordinate their travel. Public transport route planner online, sometimes combined with pre-sold tickets, help make planning task more user-friendly. To further aid travelers, operators often run at fixed times of the hour, so passengers only need to memorize the minutes past the hour the service leaves, and can apply that to any hour of the day. Based on this submission, it can be concluded that MMTL must immediately find solution to this non-time specific scheduling situation if it really intends to increase its prospects in the transport industry.

Table 4: Time spend at MMTL terminals by users

Time spend	Frequency	Percent
Less than 30 minutes	60	25.0
30 minutes	101	42.1
One hour	60	25.0
Two hours	9	3.8
More than two hours	10	4.2
Total	240	100.0

Source: Fieldwork, August 2010

Inadequate entertainment facilities on MMTL buses

On how the provision of entertainment facilities in buses affects the choice of transport by passengers, majority of users (77.9 percent) responded that the MMTL buses do not provide any entertainment facilities on their buses. However, 22.1 percent of the users of MMTL buses responded MMTL buses have entertainment facilities on them. Out of the 22.1 percent who indicated that MMTL buses had entertainment facilities on them, 98.1 percent cited radio as the entertainment facilities they have seen on the buses, but which has not been used.

Inadequate number of Buses

When users were asked to provide suggestions that could improve the operations of MMTL, 77.1 percent of them stated that MMTL needs to provide more buses on the road since they are always in long queues waiting for buses. Among this group of users, 88.6 percent were users of the three most patronage routes with the remaining 11.4 percent being on the Circle-Sakumono route. This finding confirms MMTL's own projection of the need to increase their fleet size by 750 buses in the next 3 years (MMTL, 2010).

4.4.2 Challenges that confront MMTL (Management View)

In the view of management, the company is faced with many challenges, which include revenue leakage; loss of revenue; high budget on fuel and unfavorable weather conditions affecting the life span of buses.

Revenue leakage

Data gathered from the officials of MMTL indicated that one of the major challenges that face them is revenue leakages. Revenue leakages according to them take several forms. One form is revenue leakage through **non-ticketing**. In these instance users are taken on board but are not given tickets while conductors collect their fares. What this means is that, the amount involved cannot be traced. Secondly, revenue leakage occurs because of **fake ticketing**. In this case, conductors and the drivers connive to make tickets that are not from MMTL, which they sell to the users. The amount involve here also cannot be traced by the MMTL. The third cause of revenue leakage according to the official report indicated **dead ticketing**. With dead ticketing as the name suggest implies tickets that are no longer in use by the company but still bear its identity, conductors sell such tickets to

unsuspecting users and certainly do not account for the proceeds to management. This has affected the MMTL operations over the years. Unfortunately, the study could not establish any relevant data that had made estimates on the amount of revenue leakage.

Revenue loss

Another challenge that bedevils MMTL transport services is loss of revenue. In this case, it is not as a result of revenue leakage but instance where the aged and school children are taken on board without paying fares, thus in fulfillment of the policy objective that established MMTL. For instance in 2006, the total number of passengers carried by MMTL stood at 54,987,355. Out of this number, school children constituted 6,345,841 (11.5 percent). This caused MMTL to loss revenue to the tune of GH¢1,840,035.58. This was not different from what happened in the following year, 2007. In 2007, out of 43,117,852 passengers carried by MMTL, 4,010,592 (9.3 percent) were school children, translating into a loss of GH¢1,432,220.68.

It is evident from the above presentation that giving school children free ride has a negative effect on MMTL's operation. Apart from loss of revenue because of giving school children free ride, MMTL as a policy are mandated to charge fares 15 percent less than those charged by the private operators. This has gone a long way to affect the revenue mobilization of the company. In the years 2006 and 2007, the revenue lost due to fare differential was GH¢12,186,771.78 and GH ¢9,909,148.51 respectively. This in the long run can have negative connotation on the general operation of MMTL if it not properly managed.

High budget on Fuel

Information gathered from the eleven key informants included in the study revealed that MMTL transport services spent much of its resources on fuel. This excessive spending on fuel emanated from several ways. Firstly, because MMTL has not acquired permanent stations in their areas of operations, especially on the routes, they are forced to put engines on until the buses are full before it can set off. In some cases, the engine will be on for about 30-60 minutes in particular stations before the bus finally takes off for its destination. The buses are also parked mostly in the depots and in most cases, they move to the points of loading in far distances without users on board. Yet there are also

instances they travel back empty from some destinations. This is especially so in Ho-Kpeve where the bus after sending users from the Ho market goes in the night and mostly comes back empty. According to management and 8 key informants even though it is difficult to estimate this cost, it is perceived to be almost the total fuel cost for a year. This consumption of fuel without income is referred to as **the dead mileage** by management.

Secondly, the quest to render transport services to all Ghanaians compels the company to use longer routes to their destinations. They normally run on routes generally considered unattractive and unprofitable by private transport owners, in terms of the state of road and patronage. This normally occurs in rural areas. Drivers are forced to pass through all villages to drop and pick passengers until they reach their final destinations. This tends to increase the amount they spend on fuel.

Thirdly, high fuel cost comes because of the issue of traffic. This normally occurs in the big towns and cities where there is much traffic. Engines of the buses would have to be on until the buses move out of the traffic finally. This phenomenon occurs on the Circle-Sakumono route: even though the patronage per trip is high, a lot of time is spent on traffic resulting in a higher cost of operation than the revenue obtained.

Poor infrastructure at depots and terminals

Poor infrastructural facilities at the terminal and depots of the MMTL transport services were identified as one of the challenges that the company faces. The facilities at the depots and terminals are inadequate and indeplorable state. In all the six routes involved in the study, users do not have seats to sit on while waiting for their buses to come. The buses also do not have garages to park. They are left on the terminals at the vagaries of the sun and rains. This further contributes to the destruction of the buses. Apart from the difficulty of capital, availability of land in the convenient loading stations has also been a problem since land is already in hot use. This compelled management to move Obuasi and Sunyani stations from the main lorry station in Kumasi back to the main depot. This has not be fine with users as a key informant puts it “they have to pay for their load to be carried from the main lorry station to the depot, some have even stop coming to use our buses”.

Incompatible condition of Buses

It was also found out from the key informants that the earlier buses that were brought into the country were not compatible with the environment of operation: the weather and road infrastructure of the country. Even some are overheated when they stay longer in traffic. This consequently resulted in frequent breakages of parts of the buses. In particular, the Yaxing buses that were imported from China are the most affected. They are out of the system now because of this problem. According to management, the VDL/Neoplan and Jonckheere buses brought from Italy are those doing well so far.

Non-payment of Dividends

The study further revealed that there is non-payment of dividends by the MMTL to its shareholders. It was gathered that since its establishment, MMTL has never paid any dividend to its shareholders. This serves as disincentive to shareholders as most of them according to the management have threatened to relinquish their status and were not prepared to make any further investment in the company. The government even though buys the buses for MMTL has not been paid any dividend. All the shareholders confirmed this during the interviews.

It can be concluded from the above that because of the problem of fare differential and free ride for school children, the level of revenue is affected negatively which makes their self-sustainability shaky. The fear is that any time there is over stress on government budget or a change in government policy towards the support of the institution, the sustainability might be a problem.

4.5 Prospects of MMTL Bus Services in Ghana

With its quest to make significant strides towards the realization of its vision of providing an affordable and sustainable bus services in the country, an attempt was made to find out the prospects of MMTL bus services in Ghana. The viewpoints of users, management and key informants as well as shareholders have been integrated in this discussion.

4.5.1 Prospects of MMTL in Ghana (Users View)

The prospects identified included issues on: overall MMTL transport services; MMTL transport fares; travel time of MMTL buses; sitting arrangements; comfort levels; long distance journey; attractiveness of MMTL buses; safety; reliability; nature of interaction between staff/personnel and users/passengers; prompt services of MMTL personnel to passengers; convenience; professional competence of MMTL drivers; efficiency and sustainability.

Users rating of overall MMTL transport services

Users were further asked to indicate or rate in general the services rendered by MMTL transport services. This was aimed at finding out the extent to which users were content or discontent with the overall performance of MMTL transport service to them. Table 5 presents the finding on the rating by users. The majority, 50.4 percent of the users responded that the overall services provided by the transport service provided MMTL were better. About 35 percent of the users indicated that the services rendered by MMTL transport services were much better. Further 4.2 percent of the users did not see any change in the services rendered by the MMTL over the year. About 7.5 percent, however, indicated that the services rendered by MMTL had deteriorated or were worst compared to the private operators. The remaining 2.9 percent of the users were indecisive in connection with the overall performance of MMTL.

Table 5: Users rating of overall MMTL transport services

Rating	Frequency	Percent
Much better	84	35.0
Better	121	50.4
Same	10	4.2
Worst	18	7.5
Don't know	7	2.9
Total	240	100.0

Source: Fieldwork, August 2010

Some of the reasons assigned with regard to the response that the services were much better and better than the other buses included: safety wise, security wise, convenience, relatively lower fares and luggage charges, trained drivers and other staff, various bus stops for passengers to stretch and buy food and other items. On the contrary users who indicated that the services were the same and even worst reiterated the following: buses were not many, delays at the terminals, inadequate seats at the terminals, they do not usually give the ticket their respective seat numbers which usually causes confusion among passengers, overloading, the buses stop many times when travelling.

MMTL transport Fares

Knowing customers perception about the fares charged by MMTL was considered important in identifying the challenges associated with the public-partnership in the provision of public transport services in Ghana. The study, therefore, investigated to find out how users of MMTL transport services perceive the transport fares.

Table 6: MMTL Transport Fares

Rating	Frequency	Percent
High	11	4.6
Very High	1	0.4
Moderate	172	71.7
Low	54	22.5
Don't know	2	0.8
Total	240	100.0

Source: Fieldwork, August 2010

As can be seen from Table 6, the majority (71.7 percent) of the respondents indicated that the fares charged by MMTL transport services were moderate while 22.5 percent said it was low. On the contrary, 4.6 percent and 0.4 percent of the users responded that the fares charged by MMTL transport services were high and very high respectively.

Users who indicated that the fares were low and moderate did so in comparing the fares they pay for MMTL and other transport services. For instance, the majority of such users indicated that the amount they paid with the MMTL buses were between 15-20 percent

lower than the amount they pay to other service providers. This implies that MMTL bus is cheaper for most urban transport service users and is likely to be a first option on their scale of preference.

Travel time of MMTL Buses

In an attempt to further unearth the quality of the services that MMTL transport services provide, users were asked to indicate their perception on the travel times of MMTL buses compared to other non-MMTL buses. It involves the time the passenger spends in waiting for a vehicle, boarding time and journey time (Poku-Boansi, 2008). Table 7 presents the findings on this item.

Table 7: Travel time of MMTL Buses

Rating	Frequency	Percent
Much better	81	33.8
Better	103	42.9
Same	19	7.9
Worst	24	10.0
Don't know	13	5.4
Total	240	100.0

Source: Fieldwork, August 2010

A group (42.9 percent) of the users as can be seen from Table 7 responded that the travel time of MMTL buses compared to other non-MMTL buses were better whilst 81 (33.8 percent) indicated that the travel time of MMTL buses were much better than private or other non-MMTL buses. 24 (10 percent) of the users indicated that the travel time of MMTL were worst compared to non-MMTL buses while 19 (7.9 percent) of the users did not observe any difference in the travel times between MMTL buses and non-MMTL buses. 13 (5.4 percent) of the users were indecisive.

Users indicated that the buses do not have well-outlined schedules but because of the road worthiness of the buses, one is assured that there would not be any interruption on the road emanating from the state of the buses. Whereas some users indicated that they had not taken note of the time they take to get to their destinations, from their estimations

the travel time of MMTL buses were much better than the other non-MMTL buses which frequently develop faults on the roads.

Users were further asked to indicate whether they were given times the buses were going to move by MMTL operators. Out of the total of 240 users of the MMTL buses services contacted, 198 (82.5 percent) responded that they had never been given such times before. The remaining which is 42 (17.5 percent) on the other hand indicated that at times they are prompted or given notices with regard to when the buses were going to leave. This revelation is not surprising as interaction with the managers of the MMTL bus service indicated they do have defined schedules but due to their determination for reducing fuel waste once a while wait until the bus is full. This is especially so with the long distance journeys and sometimes on the market days of some rural areas.

User rating of the sitting arrangements of MMTL buses

Ensuring that users are comfortable in buses is one quality that every transport service provider will strive very hard to achieve. Sitting arrangement of buses and for that matter how comfortable a passenger would be is an important determinant in assessing the quality of the services provided by such buses. Table 8 presents the finding on how users of MMTL buses perceive the sitting arrangements in the buses. Sitting arrangements was looked at in terms of the state of the seats and the spacing that are there between seats and among seats.

Table 8: User rating of the sitting arrangements of MMTL buses

Rating	Frequency	Percent
Much better	123	51.2
Better	89	37.1
Same	10	4.2
Worst	17	7.1
Don't know	1	.4
Total	240	100.0

Source: Fieldwork, August 2010

From the field survey, 51.2 percent of the users responded that the sitting arrangements in MMTL buses were much better compared to other non-MMTL buses while 37.1 percent indicated better. In spite of this however, about 7.1 percent of the respondents found the sitting arrangements in MMTL buses to be worse than non-MMTL buses.

The sitting arrangements usually translate into the level of comfort and the findings strongly correlated with how users felt. Data from the field survey revealed that 65.8 percent of the users felt physically comfortable anytime they boarded MMTL buses whereas 19.2 percent felt comfortable. Details are presented in Table 9.

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Table 9: Users' perception on Comfort level of the MMTL buses

Responses	Frequency	Percent
Strongly agree	46	19.2
Agree	158	65.8
Indecisive	3	1.3
Disagree	23	9.6
Strongly disagree	10	4.2
Total	240	100.0

Source: Fieldwork, August 2010.

Consolidating further findings on the issue of comfort, the study again sought to find out how convenient users found the operations of MMTL buses. Whilst the research views comfort in a form of convenience especially of the sitting arrangement, the issue of convenience has to do with users having enough and safe space for themselves and their luggage as well as their ability to always alight at their places of destination. Table 10 illustrates a greater proportion of the users, 48.3 percent agreed that they found the MMTL buses to be convenient than the other transport services with 20.8 percent of the users agreeing strongly to the statement. Exactly 13.8 percent of the users did not find the use of the MMTL buses services to be convenient with 7.1 percent disagreeing to the statement that the MMTL transport services is convenient than the other non-MMTL transport services in the study area. About 1.7 percent however remained indecisive.

Table 10: Users' perception on the convenience of the MMT buses

Response	Frequency	Percent
Strongly agree	50	20.8
Agree	116	48.3
Indecisive	4	1.7
Disagree	33	13.8
Strongly disagree	17	7.1
Total	240	100.0

Source: Fieldwork, August 2010

MMTL Buses and long distances journeys

An attempt was further made to find out the extent to which users found MMTL buses to be good and more suitable for long distances than other bus operators on the various routes that MMTL buses plied. Table 11 presents the findings. From the table, the majority, 61.3 percent of the users strongly agreed that MMTL buses were good enough and more suitable for long distance journeys than the other buses while 32.1 percent of the users agreed that MMTL buses were good enough for long distances. In addition, 6.7 percent of the users indicated that MMTL buses were not suitable and good for long journeys, 1.7 percent strongly disagreed while 0.8 percent remained indecisive.

Table 11: MMTL Buses and long distance journeys

Response	Frequency	Percent
Strongly agree	147	61.3
Agree	77	32.1
Indecisive	2	0.8
Disagree	10	6.7
Strongly disagree	4	1.7
Total	240	100.0

Source: Fieldwork, August 2010

Users who indicated that MMTL buses were good enough and suitable for long distances indicated that because the buses are spacious, one could stretch and even sleep over without offending the other seat mates. Again, users found MMTL buses good enough

for long distances because the buses after covering some distance stop for passengers to eat and stretch. They also believed that, since the drivers were well trained and the buses were usually in good shape they were good enough for long distance journeys.

Attractiveness of MMTL buses

The attractiveness of buses largely whets passengers' appetite in wanting to travel with such buses. Users were asked to indicate the extent to which they found MMTL buses attractive and appealing. The finding is presented in Table 12 below. From the table, it is discernible that a greater number of the users 67.5 percent agreed that the buses were appealing and attractive while 15.8 percent of the users strongly agreed that the buses were attractive and appealing to them. About 7.1 percent disagreed and 9.2 percent strongly disagreed with the statement that the MMTL buses were attractive and appealing. A user, 0.4 percent however remained indecisive as to whether the buses were attractive or not.

Users who indicated that MMTL buses were attractive and appealing said that the buses were all the time clean and neat. The seats were cleaned before users came on board. However, some users indicated that, the buses they board were usually dirty especially those buses that operate in rural areas. They added that these buses usually pick farmers and traders with their products which make the buses dirty and yet they are not cleaned after such use. This makes some of the buses unattractive and unappealing.

Table 12: Attractiveness of MMTL buses

Response	Frequency	Percent
Strongly disagree	22	9.2
Agree	162	67.5
Indecisive	1	0.4
Disagree	17	7.1
Strongly agree	38	15.8
Total	240	100.0

Source: Fieldwork, August 2010

Nature of interaction between staff/personnel and users/passengers

Staff and personnel attitude is an important component that may influence relationship with users or passengers. Users were asked about their perception of the interaction that the personnel of MMTL usually have with them: whether the personnel were civil and decent in their interaction with them. Table 13 summarizes the finding on the nature of interaction between personnel of MMTL and users. A sizeable number of the users, 45.4 percent, strongly agreed that the personnel of MMTL were decent and civil in their interactions with them whereas 26.3 percent of the users agreed that the personnel held decent and civil interactions with them. However, 15.8 percent and 7.5 percent strongly disagreed and disagreed respectively with the assertion that the personnel of MMTL have decent and civil interaction with them. Exactly 5.0 percent of the users were indecisive.

Table 13: Nature of interaction between personnel and users

Response	Frequency	Percent
Strongly agree	109	45.4
Agree	63	26.3
Indecisive	12	5.0
Disagree	18	7.5
Strongly disagree	38	15.8
Total	370	100.0

Source: Fieldwork, August 2010

Users who felt that the interaction of MMTL personnel with them was civil and decent, indicated that personnel interacted with them nicely when they make inquiries about the buses and their operations. In their opinion, because most of the personnel are natives of the areas they work, they seem to understand the people better. However, others indicated that some of the personnel did not respect them as passengers and talk to them rudely sometimes. In one tour observation, the researcher observed that a woman wanting to alight in one village was dropped in the next village instead because of the

prolonged argument with the conductor that she did not say she would alight early enough.

Prompt services of MMTL personnel to passengers

In the quest to identify the prospects and the challenges of MMTL, users were asked to indicate how the personnel of MMTL bus services respond to their needs promptly. Table 14 presents the findings on how prompt users are attended to. From the table, it is discernible that the majority, 29.2 percent of the users rated that the promptness of the personnel of MMTL to their needs was very good and 25.0 percent each said it was good and far better. About 9.2 percent of the users indicated that the promptness on the staff was poor whereas 7.9 percent of the passengers saw the level of promptness of the personnel to be excellent. Just 3.8 percent did not know whether or not the prompt services of personnel are within any of the measured parameters.

Table 14: Prompt services of MMTL personnel to passengers

Rating	Frequency	Percent
Excellent	19	7.9
Very good	70	29.2
Good	60	25.0
Fair	60	25.0
Poor	22	9.2
Don't know	9	3.8
Total	240	100.0

Source: Fieldwork, August 2010

Extent to which personnel show interest in the needs of users

Having personnel who are sensitive to the needs and the plight of passengers at any point in time is a good virtue that every personnel of transport services must possess. Most are the cases users fall sick, would want to respond to nature's call or there may be the case of theft in the bus. To what extent are personnel on board sensitive to these issues? Users

were asked to indicate the extent to which MMTL personnel show interest to such needs and how they are catered for by personnel. The finding revealed that in most cases personnel attend to such pressing needs of users as the majority, 83.3 percent of the users of MMTL transport services indicated that personnel attend to their needs while 16.3 percent of the respondents however, indicated that personnel most of the time do not come to their aid. For instance, if a passenger wanted to respond to nature's call or urinate and tells the drivers, they would not stop readily, they would travel for a considerable length before they would stop for the passenger to do whatever he/she wanted to do. At times, a passenger may fall sick while onboard and since most of the MMTL buses do not have first aid boxes they have to travel to the town where there is drug store or pharmacy before they buy drug for such an individual.

Users were further asked if the personnel of the MMTL bus service were consistently courteous with them as passengers. Most users, 82.9 percent indicated that the personnel of MMTL were consistently courteous to them. However, 17.1 percent of the users responded that the personnel of MMTL were not courteous to them. Users who indicated that the personnel of MMTL had continuously been courteous towards them added that the personnel talked to them nicely and politely any time they made inquiries about issues. Users who found the attitude of the personnel of MMTL not to be courteous indicated that there were times they wanted to make inquiry but the personnel did not give them attention. There were other instances according to the users that the personnel spoke to them rudely.

Users' perception on the safety of the MMTL buses

The study further investigated how the users of MMTL buses found the buses to be safe when on board. This is because most passengers patronize certain bus services but not others because of the level of safety guaranteed. The result obtained is presented in Table 15 below. From the table it can be seen that 47.5 percent of the users indicated that the level of safety with the MMTL buses is very high and 26.2 percent responded that they feel highly safe when they board MMTL buses while 22.1 percent reiterated that the safety level of MMTL buses was moderate. However, 1.2 percent of the users indicated that the safety level was poor whereas 2.9 percent of the users indicated that they were indecisive when it came to the safety levels of MMTL buses. This finding supports the

finding by the National Road Safety Council (2008) which estimates riding the public bus is over 170 times safer than other private cars.

Users rated the safety level of MMTL buses compared to the other buses to be high. They indicated that there were certain instances when armed robbers attacked buses on high ways. But little or no instance is reported of MMTL buses to the effect. In the case of accident too, much is often not heard when it comes to the use MMTL buses.

Table 15: Users' perception on the safety of the MMTL buses

Response	Frequency	Percent
Very high	114	47.5
High	63	26.2
Moderate	53	22.1
Poor	3	1.2
Don't know	7	2.9
Total	240	100.0

Source: Fieldwork, August 2010

Users' perception on the reliability of the MMTL buses

Users were further asked about how reliable they perceive the MMTL transport services. The results are shown in Table 16. From the table, it can be seen that greater proportion 49.6 percent of the users indicated that the reliability of the MMTL buses was much better than the other transport operators while 42.9 percent found MMTL transport services to be better than the other operators in the transport industry. About 5.0 percent of the users indicated that in terms of reliability, the MMTL buses are worst as compared to the others. Meanwhile 2.5 percent of the users remained indecisive with regard to the reliability of MMTL buses.

Table 16: Users' perception on the reliability of the MMTL buses

Rating	Frequency	Percent
Much better	119	49.6
Better	103	42.9
Worst	12	5.0
Don't know	6	2.5
Total	240	100.0

Source: Fieldwork, August 2010

Professional competence of MMTL drivers

The study further sought to find out the professional competence level of the MMTL drivers from the point of view of the users of the MMTL buses. The competence level of drivers of MMTL buses is an important determinant of the safety levels of users. As can be observed from Table 17, 42.5 percent of the users responded that the competence level of the drivers of MMTL buses was very good, 27.1 percent also indicated that the competence level of drivers was good while 9.2 percent of the users found the competence level of the drivers to be fair whereas 4.6 percent indicated the level of competence of drivers of MMTL buses were poor. On the extreme case, 16.7 percent of the users indicated that professional competence level of the drivers was excellent. They however indicated that for long distances they should be a conductor to assist the driver. In practice where the driver would have to come down to assist the users in off-loading their goods from the boat, they believed would be stressful to the driver and may affect safety of driving negatively.

Table 17: Professional competence of MMTL drivers

Rating	Frequency	Percent
Excellent	40	16.7
Very good	102	42.5
Good	65	27.1
Fair	22	9.2
Poor	11	4.6
Total	240	100.0

Source: Fieldwork, August 2010

The management of the MMTL bus services was also asked about the competence level of their drivers. The official report at their outfit indicated that before one is taken on as a driver the person must be able to read and write in the first place. The person should have appreciable years of experience as bus driver. After all these conditions are met, the selected ones are given comprehensive training in driving and other training due important to their roles as drivers. They also provide regular in-service training to their drivers. A speed limit of 80km/hr is also enforced and it is written on every bus as a caution for speeding. They further added that management have provided some contact telephone numbers in the buses which users can call at any time when any driver drives irresponsibly or carelessly. This put checks on the drivers as they move on the roads. In view of this they can to a large extent vouch for the professional competence of their drivers and which could also influence user's perception about the competence of drivers.

Efficiency of MMTL Operations

Users were asked to indicate the extent to which they agreed with the assertion that the MMTL transport services is efficient. The sustainability of the MMTL transport services will demand that the patronage of the services is very high among the citizenry. As can be seen from the discussion, the majority of the respondents have confidence in the MMTL transport services. The findings on the efficiency of the MMTL operations are presented in Table 18.

Table 18: Efficiency of MMTL Bus

Rating	Frequency	Percent
Strongly agree	95	39.6
Agree	110	45.8
Indecisive	10	4.2
Disagree	16	6.7
Strongly disagree	9	3.8
Total	240	100.0

Source: Fieldwork, August 2010

From the table, a greater proportion 45.8 percent agreed that the company's operations are efficient and 39.6 percent of the respondents strongly agreed with the assertion that the MMTL is efficient. On the contrary, 6.7 percent and 3.8 percent of the users disagreed and strongly disagreed with the statement that the MMTL is efficient. And 4.2 percent of the users responded that they were indecisive with regard to the efficiency of the MMTL transport services.

Users who agreed and strongly agreed to the assertion that MMTL is efficient indicated that judging from the increased patronage of the MMTL transport services by the populace, one could foresee that the MMTL was sustainable if the right financial, administrative and operational approaches are adopted. In the year 2004, the total number of passengers carried by the MMTL was 15,950,101. This number, however, doubled in 2010 as 34,445,170 were carried by the MMTL (ISSER, 2009) indicating that the service is sustainable if the current trend of affairs should continue. The high patronage meant that the market size for the MMTL transport services is on the increase and for that matter the onus will be on the operators or providers to expand their services and the number of buses to reap the market benefits for the sustainability of the service. However, basing on the premise of the poor management practices, inadequate number of buses to carry the users and also the fares charged by the MMTL make it seem inefficient and which may subsequently affect sustainability. Furthermore, it is necessary to state that a good number of buses were spoilt and have been kept in their garages due to the absence of spare parts and other materials to repair them. It can therefore be observed, according to figure 4 that the number of buses that were on the road some

years ago has reduced significantly over the years. This further confirms the finding by MMTL (2010) that about 340 buses are needed to replace the ageing fleet over the medium term period of 2010-2013.

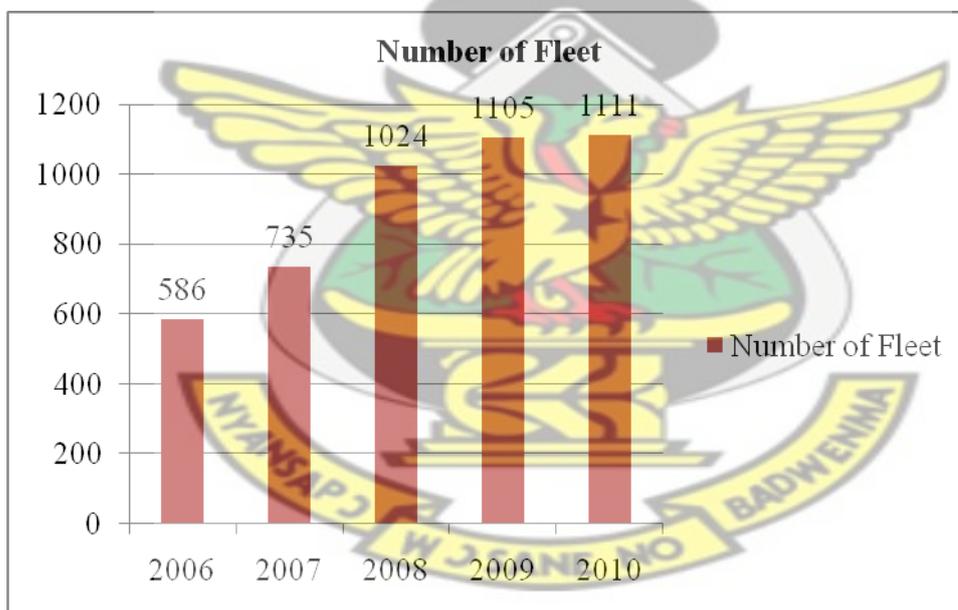
4.6 Efficiency and Sustainability of the MMTL

The efficiency and sustainability of MMTL was looked at in the areas of the number of fleet and the profitability and have been discussed in the following subsection.

4.6.1 Number of fleet

In connection with efficiency, it was evident from the data gathered from the management of the MMTL that the number of fleet has kept on increasing over the period 2004-2010. The increases in the number of fleet can be seen in Figure 6.

Figure 6: Trend in the number of fleet of MMTL (2006-2010)

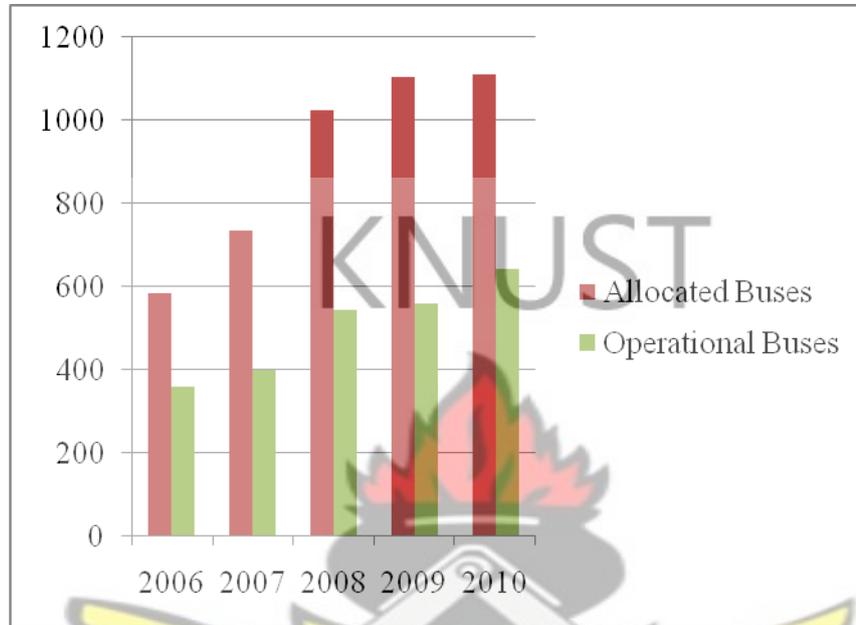


Source: Planning, Research, Statistics and Information Management of MMTL, 2010

It can be observed from the figure that the number of fleet of MMTL had showed a steady increase over the years. In the year 2006, MMTL had 586 buses but this figure increased to 735 in 2007. In 2008 and 2009, the fleet went up to 1,024 and 1,105 and by December 2010, it had reached its present number of 1,111. The study further revealed that out of the 1,111 buses that MMTL had at its disposal, not all were in operation.

Figure 7 presents the details concerning the number of buses that the MMTL had at its disposal and those that were operational between 2006 and 2010.

Figure 7: Trend in MMTL Allocated and Operational fleet



Source: PRSIM, MMTL, 2011

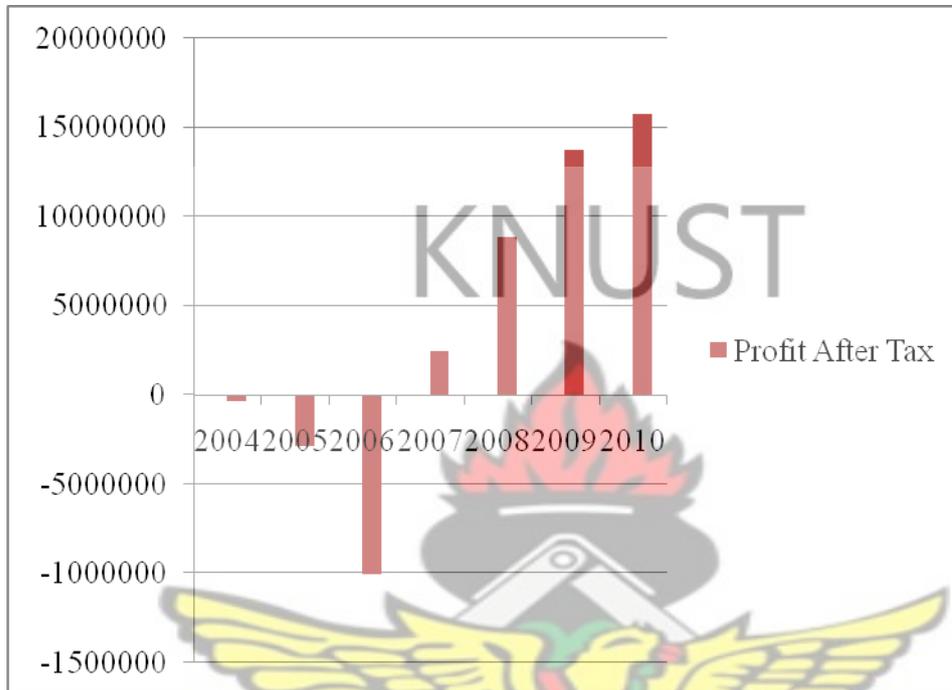
It is evident from Figure 7 that the number of fleet of the MMTL had over the five year period, 2006-2010 increased steadily but not all were operational. In 2006, out of the total of 586 buses, 359 were operational whereas the remaining 227 representing 38.7 percent were not in operation. In 2007, 735 busses were allocated to the MMTL with 400 being operational. This was not different in the years 2008, 2009 and 2010. This situation goes a long way to negatively affect the efficiency, overall operations of the MMTL transport service and sustainability of the service.

4.6.2 Revenue Mobilisation

Management even though conceded that there had been problems of revenue loss and leakages; there has been some level of successes in profitability. Coming from a negative cash flow from operating activities of GH¢2,970,925 in 2007, an improvement can be seen in 2008 and 2009 of GH¢8,063,408 and GH¢9,843,557 respectively as an indication that the current service structure being used under the cross-subsidization concept could have helped in the company's financial sustainable operations. From the Figure 8, it is

discernible that in the early years of its establishment, the MMTL recorded losses. The MMTL losses for the years 2004, 2005 and 2006 were GH¢368,726 GH¢286,054 and GH¢10,055,752 respectively.

Figure 8: MMTL Profit and Loss after Tax (2004-2010)



Source: MMTL, 2010

However, the subsequent year saw the MMTL enjoying a marginal level of profit. Nonetheless; it does not merit payment of dividends to shareholders, considering the fact that MMTL had not paid dividends to shareholders since the start of operation. As can be seen from Figure 5, MMTL recorded profit of GH¢2,498,027 in 2007 and GH¢8,888,085 in 2008. In 2009, MMTL made a profit of GH¢13,733,030 whereas in 2010 a profit of GH¢15,732,097 was realized by the MMTL. The realization of profit in the year 2007 may be partly due to the reduction in the number of ride granted to school children which reduced from 6,345,841 in 2006 to 4,010,592 in 2007. In addition, it may be partly due to a reduction in loss of revenue due to fare differential which also decreased from GH¢12,186,771.8 in 2006 to GH¢9,909,148.51 in 2007. Informants also mentioned proper monitoring and evaluation as a contributory factor to this success. The issue of “mystery guest” which was introduced has helped to reduce the fraud of ticketing in the system. This has helped in checking revenue leakages and other negative auxiliary activities.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents an account of the summary of the study, conclusions that have been arrived and recommendations. Also presented in this chapter are areas for further research.

5.2 Summary of Findings

The main findings of the study were as follows:

1. The major challenges that passengers or users of MMTL transport services faced included: poor state of physical facilities at the MMTL bus terminals and depots; inadequate information of users on tickets; untimely movement of MMTL buses; and absence of entertainment facilities on MMTL buses.
2. MMTL is faced with the following challenges in their quest to provide affordable and sustainable transport services to the populace: revenue leakages; loss of revenue; high budget on fuel; poor infrastructure at depots and terminals; unfavourable weather conditions in Ghana for the buses and non-payment of dividends to shareholders.
3. The study revealed that there are many prospects that are there for MMTL which can be harness to its advantage. These prospect as revealed by the study included: affordable MMTL transport fares; sitting arrangements; comfort; attractiveness of MMTL buses; safety; reliability; nature of interaction between staff/personnel and users; prompt services of MMTL personnel to passengers; convenience; professional competence of MMTL drivers; efficiency and sustainability.
4. The study further revealed that in terms of efficiency and sustainability of MMTL, the number of fleet kept on increasing year after year. It must however be mentioned that it was not all the buses allocated/available to the company that were operational. For instance in 2010 out of the 1,111 buses allocated, only 624 representing 56.2 percent were operating while the rest were not operational.
5. In terms of the profitability, it was found out that in the early years of its establishment, which is 2004, 2005 and 2006 MMTL experienced losses of

GH¢368,726, GH¢286,054 and GH¢10,055,752 respectively. However the trend changed in the subsequent years as there was a movement from a loss of GH¢10,055,752 in 2006 to a profit of GH¢2,498,027 in 2007. The subsequent years, that is 2008, 2009 and 2010 all saw MMTL recording profits after tax. However, the profit made so far is not adequate for internal operations as such MMTL has not been able to pay any outstanding dividends to its shareholders. This situation as revealed by the study may be partly due to good monitoring and evaluation practices, reduction in the number of ride granted to school children and reduction in loss of revenue due to fare differentials. This positive development could easily guarantee a high level of sustainability if the trend is sustained.

5.3 Recommendations

With reference to the research findings, the following policy recommendations are made:

1. Efforts should be made by the Metro Mass Transit Limited to boost the infrastructural development and physical facilities at their various terminals and depot throughout the country. Terminals should be built in areas where there are not.
2. It is further recommended that the tickets of the MMTL buses should be made to include vital information about the passengers. Such vital information that should be considered on the ticket should include user name, telephone number, hometown and destination. This will help in identification in case of any development that will require this information.
3. Pragmatic measures should further be put in place to check revenue leakages due to dead ticketing, none ticketing and fake ticketing. This will go a long way to improve upon the revenue mobilization by the MMTL and thereby increasing their profit margin. The MMTL can also resort to selling tickets in advance and electronic ticketing to check revenue leakage. The “Operation Show Your Ticket” and “Mystery gust” should also be strengthened.
4. In terms of profitability, it is highly recommended that all effort must be put in place to check any act that tend to affect the profitability level of MMTL. There should be proper monitoring and evaluation and other efforts that can help boost the profitability level of the company.

5. Furthermore, efforts must be made to pay the dividends due shareholders. This will help in improving the capacity level of the company. Failure to do this may result in the withdrawal of shareholders from the company. For instance, the government procures the buses to the company but has not received any dividends. Any government who see this venture as unprofitable will be tempted to withdraw its stake from it and this will be a big blow to the company. In order to address this, it would be necessary for the government to allow the company to charge relatively realistic fares to realize enough profit in order to pay dividends to its shareholders.
6. From the study, it was revealed that apart from the initial investment for which other shareholders besides government had contributed, no single shareholder has made any capital investment since then. Government has continuously purchase buses to augment the fleet situation. It is therefore recommended that the shareholding structure of the company be reassessed. This will consequently let each of the shareholders know their shareholding status to contribute effectively to the development of the company. It will ensure fair distribution of dividends among shareholders.
7. Again, it is recommended that the government should make clear annual budgetary allocations for the fare differentials and the free ride given to school children. This will make the company more sustainable. In this way, the company will be in the position to acquire the buses by itself without over relying on the government. The continuous reliance on government for the supply of buses can have serious negative consequence on the national budgets and this may not be unacceptable to all succeeding governments.
8. The MMTL buses are generally known to run on routes considered unattractive and unprofitable by private transport owners, in terms of the state of road and patronage. The government should therefore put measures in place to rehabilitate and construct feeder roads in these rural areas to curtail the problems associated with the MMTL buses plying on these roads.

5.4 Conclusion

It can be concluded from this study that the introduction of the Metro Mass Transit system in Ghana has numerous evident gains in terms of improving the current public transport supply. Nevertheless, some challenges have been identified that limit the contribution of the company in its endeavour towards providing reliable and sustainable transport services to the people of Ghana. Prominent among the challenges are: poor state of physical facilities at the MMTL bus terminals and depots; inadequate information of users on tickets; revenue leakages; loss of revenue; high budget on fuel; poor infrastructure at depots and terminals; and non-payment of dividends to shareholders.

Findings from the study indicate that, largely, the Metro Mass Transit Limited has some inherent prospects as conceded by the users of the MMTL transport service. The prospects according to the users include: affordable MMTL transport fares; travel time of MMTL buses; sitting arrangements; comfort; attractiveness of MMTL buses; safety; reliability; nature of interaction between staff/personnel and users/passengers; professional competence of MMTL drivers; and efficiency and sustainability.

In terms of its efficiency and sustainability, it can be concluded from the study that the number of fleet acquired by MMTL over the years kept on increasing year after year even though not all the allocations were operational. The positive trend in its profitability also shows how promising MMTL is in its efficiency and for that matter its sustainability in the long run.

5.5 Areas for Further Research

The following areas have been identified for further research:

- Feasibility and effects of the Bus Rapid Transport (BRT) Project on the operations of MMTL.
- The actual financial cost of waste fuel on dead mileage and its impact on the sustainability of MMTL.
- Total government investment on MMTL and its impact on poverty reduction.
- The current Shareholding structure of MMTL

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APPENDICES

Appendix 1: Questionnaire for users of MMTL Transport Services

PERSONAL DATA OF RESPONDENT

A) AGE

- a) Age under 18 b) Age 18-30 c) Age 31-60 d) Age above 60

B) GENDER

- a) Female b) Male

1. Are the physical facilities on the MMTL bus Terminals good and visually appealing?

- a) Yes b) No

2. Do tickets have enough information about you (e.g. Name, Phone number, hometown etc)? a) Yes b) No

3. On occasions when you travelled with MMTL, did the buses move according to schedule times? a) Yes b) No

3a. If yes, what are the schedules

4. When you board MMTL bus, do they wait until the bus is full before starting the journey? a) Yes b) No

5. What is the average waiting time before the start of a journey?

- a) Less than 30 minutes b) 30 minutes c) one hour d) two hours e) more than two hour

6. Do MMTL buses also provide entertainment (Radio, Television, Movies etc) as you travel? a) Yes b) No.

6a. How does the provision of entertainment affect your choice of transport for a journey?

.....
.....
.....

7. What kind of entertainment facility do you find in the MMTL Buses?

- a) Radio b) Video c) Television d) Others

8. How will you rate the overall services provided on MMTL Buses compared to other bus operators on this route?

- a) Much Better b) Better c) Same d) Worst e) Don't Know

8a. Why

9. How will you rate the fares charge by MMTL?

- a) Low b) Moderate c) High d) Very High e) Don't Know

9a. Why

10. How will you describe the travel time of MMTL buses compared to other bus operators on this route? a) Much Better b) Better c) Same d) Worst e) Don't Know

10a. Why

11. Do the operators usually tell passengers the exact travel times?

- a) Yes b) No

12. How will you rate the sitting arrangement in the bus (neatness, space etc) compared to other transport operators on the same routes?

- a) Much Better b) Better c) Same d) Worst e) Don't Know

13. To what extent do you agree with the assertion that you feel comfortable when they board MMTL buses? a) Strongly agreed b) Agreed c) Indecisive d) Disagreed e) Strongly disagreed

14. MMTL buses are good enough for long distance travel compared to other bus operators on this route. a) Strongly agreed b) Agreed c) Indecisive d) Disagreed e) Strongly disagreed

14a. please, give reasons for the answer to question 14 above in this space provided below:

.....
.....
.....

15. MMTL Buses look attractive /appealing.

- a) Strongly agreed b) Agreed c) Indecisive d) Disagreed e) Strongly disagreed

16. The personnel of MMTL are decent and Civil in their interaction with passengers.a) Strongly agreed b) Agreed c) Indecisive d) Disagreed e) Strongly disagreed

17. How will you rate MMTL personnel prompt services to passengers?

- a) Poor b) Fair c) Good d) Very Good e) Excellent f) Don't Know

18. When passengers have a need (natures call, sick, stealing etc), do the personnel show a sincere interest in solving the problem? a) Yes b) No

19. Are the personnel consistently courteous with passengers? a) Yes b) No

20. How will you describe the level of safety when travelling with MMT?

- a) Low b) Moderate c) High d) Very High e) Don't Know

21. What is the level of reliability of MMTL buses reaching its destination?

a) Much Better b) Better c) Worst d) Don't Know

22. The operating hours of MMTL is convenient to me as a passenger.

a) Strongly agreed b) Agreed c) Indecisive d) Disagreed e) Strongly disagreed

23. What is your level of confidence in the professional competence of drivers of MMTL?

a) Poor b) Fair c) Good d) Very Good e) Excellent

24. To what extent do you agree that the operation of MMT is efficient and sustainable?

a) Strongly disagrees b) Disagree c) Agree d) Strongly agree e) Indecisive

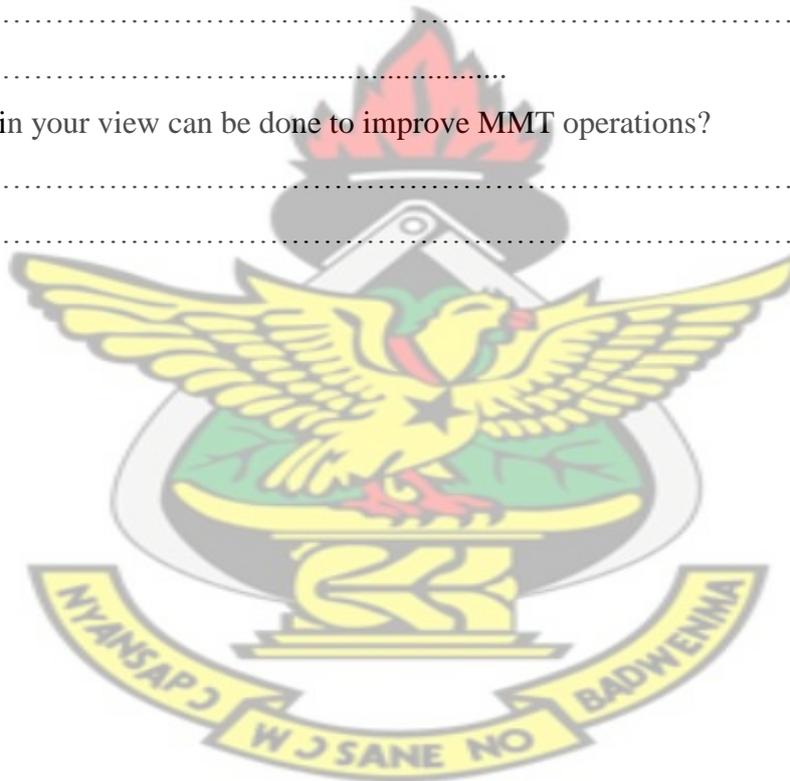
24a. please, give reasons for the answer to question 24 above in this space provided below:

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.....
.....
.....

25. What in your view can be done to improve MMT operations?

.....
.....



Appendix 2: Interview for Management of MMTL

SECTION A

1. When was the company established?
2. What is the number of employees in the company? Female...Male...
3. How is the company operating? a) Private b) Public c) Public-Private Partnership
4. If yes to 3C above, who are the partners?

.....

.....

.....

5. Kindly explain the role of each partner in the organization

.....

.....

.....

6. Does the company have organizational structure? a) Yes b) No
- 6b if yes, provide

Number of Fleet and Vehicle Maintenance

7. What is the number of fleet in your company?

Year	No. of Fleets
2004	
2005	
2006	
2007	
2008	
2009	
2010	

8. How many are currently broken down?

9 What is the total number of vehicles which are broken down beyond repairs?

.....

9. Total number of broken down vehicles

Year	No. of vehicles
2004	
2005	
2006	
2007	
2008	
2009	
2010	

11. What reasons will you assign for the frequent breakdown of vehicles?

.....

12. How often do you service your vehicles?

a) Once a month b) twice a month c) once a year d) more often

13. What is the total maintenance cost for all buses of MMT in a year?

Year	Maintenance Cost
2004	
2005	
2006	
2007	
2008	
2009	
2010	

14. How often do you buy new vehicles?
15. What is the average cost of purchasing a new bus?
16. How do you raise money/ funds to purchase new buses?

.....

.....

Passenger Carriage

17. What is the total number of passengers you carried for the year?

Year	Number of Passengers
2004	
2005	
2005	
2006	
2007	
2008	
2009	
2010	

SECTION B

18. Do you have a management team?
19. What is the size of the management team? Female.... Male.....
20. How many of those in the management team have degree or professional qualification?
21. How many of the management team members have degrees or professional qualification in transports management and administration?
22. Do you have board of directors?
23. If No, why?

.....

.....

24. How many board members do you have? Females..... Males
25. How many of the board members are outside your shareholding structure?
.....
26. How many of the board members are degree holders or professionals in transport management?
27. What is the composition of the board?
.....
.....
.....
28. How are the board members appointed?
.....
.....
29. Who appoints the board members?
.....
.....
30. What is the tenure of Office of the board and its members?
.....
.....
31. What are the functions of the board?
.....
.....
.....
32. Is there a policy for evaluating the performance of the board? a) Yes b) No
33. How is the evaluation done?
.....
.....
34. How often is the evaluation done?
.....
.....
35. Is there a policy for evaluating the performance of the CEO/Managing Director? a) Yes b) No
36. How is the evaluation done?
.....
.....

37. How often is the evaluation done?

.....
.....

38. How will you describe the effectiveness of the management in the discharge of its duties?

.....
.....

39. What are the challenges facing the management in the discharge of its duties?

.....
.....

40. What in your view can be done to improve the performance of management?

.....
.....

41. What is the arrangement/formula for the share of liabilities among partners of the company?

.....
.....

42. What is the arrangement/formula for the share of assets among partners of the company?

.....
.....

SECTION C

43. Please give an assessment of the roles of the partners of the company in terms of;

a) What they have done well

.....
.....

b) What they have not done well

.....
.....
44. What is the decision making process at the following levels of your organization?

- Vehicle Maintenance decisions

- Funding decisions

- Fares regulatory decisions

- Vehicle purchase

45. How is the company funded?

46. Is there an annual performance appraisal of the company? a) Yes b) No

47. If yes, how often is it done?

48. If No, why?

49. What have been the major findings of these appraisals and what has been done about them?

50. Does the company employ the services of an Auditor? a) Yes b) No

51. If yes how often do they audit the company?

52. If yes when was the last audit done and what were the major findings?

.....
.....
.....

53. If No, why?

.....
.....

54. How has the audited report been attended to?

.....
.....

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55. Does the company prepare annual reports? a) Yes b) No

56. If yes, kindly state some of the findings of the recent annual report and if no, then why?

.....
.....

57. Kindly state some of the key recommendations of the last annual report

.....
.....

58. Has the company been profitable over the years? a) Yes b) No

59. If yes, what reasons account for that?

.....
.....

60. If No, what reasons account for that?

.....
.....

61. Kindly provide your total revenue and expenditure for the company for the following years

Year	Total Revenue	Total Expenditure
2004		
2005		
2006		
2007		
2008		
2009		
2010		

62. Please list the major sources of revenue and total revenue for the company in 2009

Source of Revenue	Total Amount

SECTION D

63. How will you assess government role so far in the company? I.e. shareholder power, subsidy, taxes, policies, etc

a. As a shareholder

.....

b. In providing subsidy

.....

c. Tax levies

.....

d. Transport policies

.....

e. Others

.....
.....

64. Should the government continue to partner with the private sector in the provision of transport services to the public? Why?

.....
.....

65. Kindly provide your own general assessment /impression of the company's performance so far.

.....
.....

66. Do you have a social obligation policy? a) Yes b) No

67. If yes, kindly provide the main programmes/projects you have undertaken.

.....
.....
.....

68. If no, please state why

.....
.....

69. How much does it cost the company to perform this social obligation?

Year	Total Amount
2004	
2005	
2006	
2007	
2008	
2009	
2010	

70. Are some of these social obligations initiated by government?

a) Yes b) No

71. If yes to 70, please state them

.....

72. Who in the partnership pays this social obligation cost and how?

.....
.....

73. Have you faced any problems with regards to any payment of this cost? How and how was it solved?

.....
.....
.....

74. Does this have an effect on your operation? How?

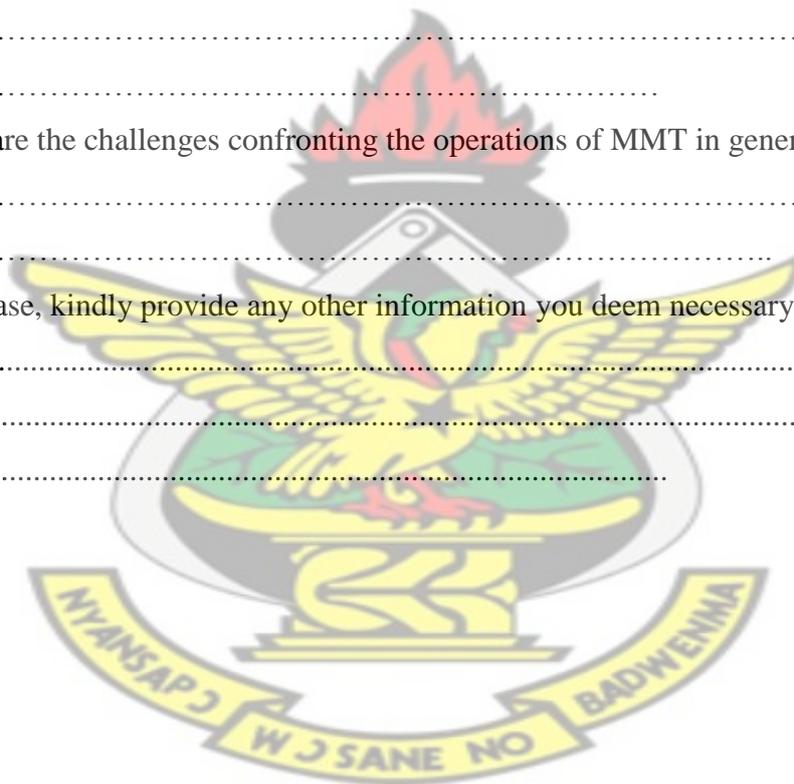
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75. What are the challenges confronting the operations of MMT in general?

.....
.....

76. Please, kindly provide any other information you deem necessary for this study.....

.....
.....



Appendix 3: Interview for Key Informants

1. What is the name of your company?

2. What in your view constitute efficient and effective transport service?
.....
.....
.....

3. What in your view are the best practices for efficient transport management?
.....
.....
.....

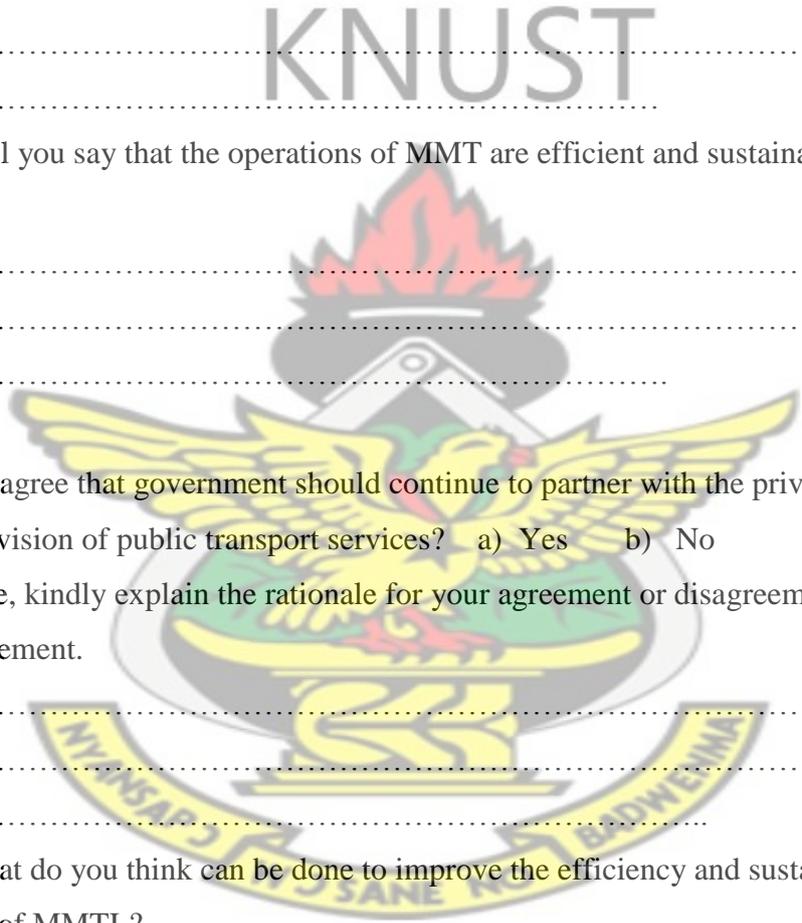
4. Will you say that the operations of MMT are efficient and sustainable? Please explain
.....
.....
.....

5. Do you agree that government should continue to partner with the private sector in the provision of public transport services? a) Yes b) No

5b. please, kindly explain the rationale for your agreement or disagreement with the statement.
.....
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.....

6. What do you think can be done to improve the efficiency and sustainability of the operations of MMTL?
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.....
.....

Thank you very much for taking time off your busy schedules to contribute to the success of this study.



Appendix 4: Interview Guide for Shareholders of MMTL

1. Name of Shareholder

2. What is/are your role(s) in the partnership?

.....

3. What gains/loss have you made so far as a shareholder of MMTL?

Year	Amount gained/lost made
2004	
2005	
2006	
2007	
2008	
2009	
2010	

4. Do you think the operation of the MMT is sustainable? Kindly give reasons for your answer.

.....

5. What are the challenges confronting the MMTL?

.....

6. Are there some government policies that impact positively on the operation of MMTL?

Kindly state these policies

.....

7. Are there some government policies that impact negatively on the operation of MMTL?

Kindly state these policies

.....
.....
.....

8. What policies will you recommend for the sustainability of MMT?

.....
.....

9. Have you ever thought of pulling out of the partnership? a) Yes b) No

9b. Why?

.....
.....

10. Kindly give your general assessment/impressions about the performance of the company so far.

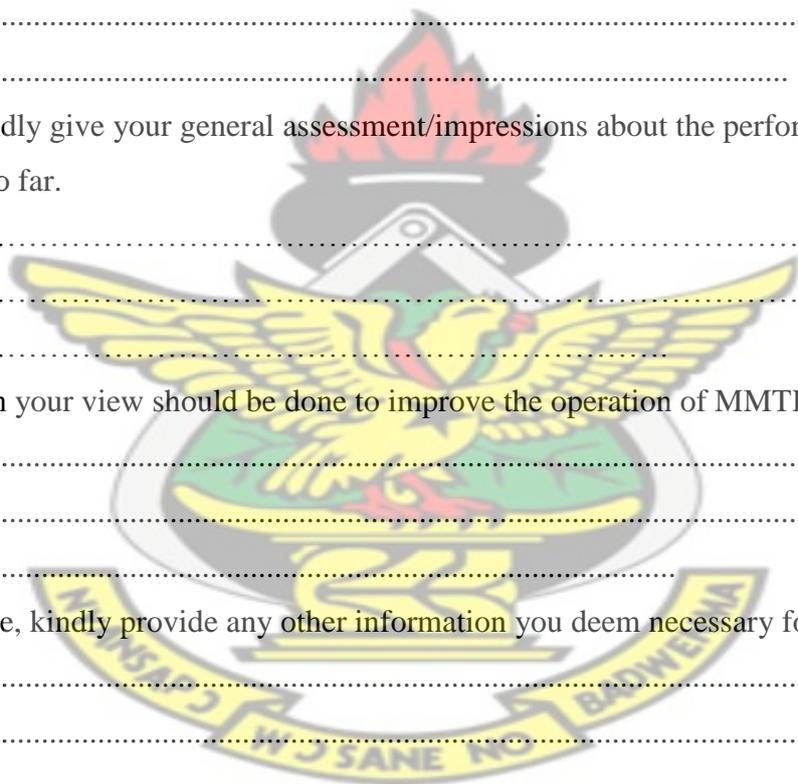
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11. What in your view should be done to improve the operation of MMTL?

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.....
.....

12. Please, kindly provide any other information you deem necessary for this study.

.....
.....
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Appendix 5: Interview Guide for Ministry of Transport

1. In which year did government enter into partnership with MMTL?

2. What is the role of government in the partnership with MMTL?
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3. What reasons necessitated this partnership agreement?
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.....

4. Has government got a representation on the MMTL board? Please, explain
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.....

5. What role does government play in the operations of MMT?
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6. Does government play any role in fixing fares of MMT? a) Yes b) No

7. What role does government play in MMT fares fixing?
.....
.....
.....

8. What gains does government make from the MMT partnership arrangement?
.....
.....
.....

9. Do you believe that government objective of entering into partnership with MMT has been achieved? a) Strongly agree b) Agree c) Neither agree or disagree d) Disagree e) Strongly disagree

10. What in your view could have accounted for the situation described in number 9 above?

.....
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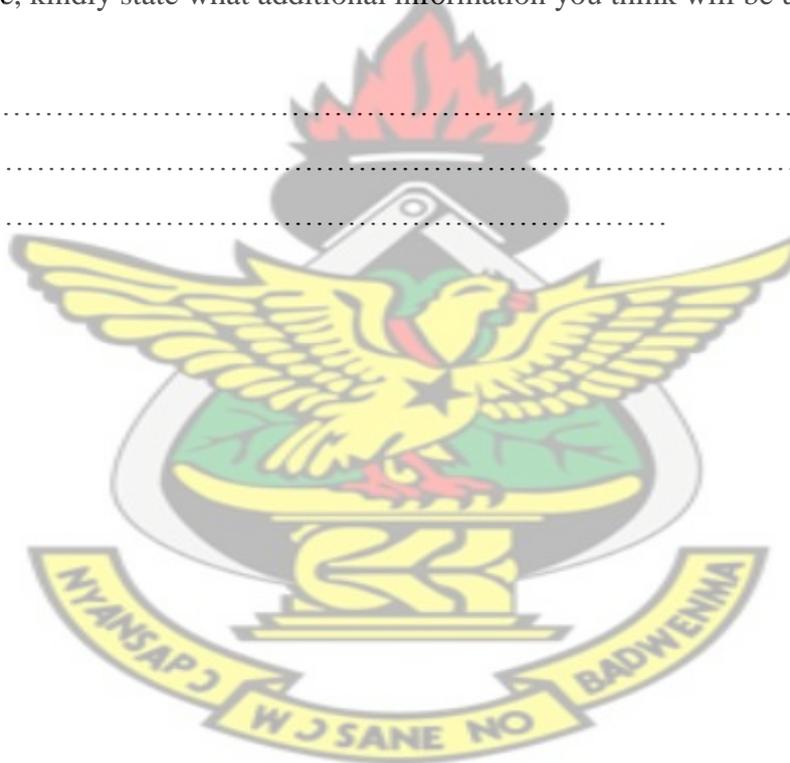
11. What plans has been put in place for ensuring the operational efficiency and sustainability of MMT?

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12. Please, kindly state what additional information you think will be useful to this study

.....
.....
.....



Appendix 6: Revenue Lost due to Fare differential and Free Ride for School Children in 2006

Depot	Revenue Lost Due to Fare Differential (c)	Number of Passengers Carried	Number of School Children Carried	Revenue Lost Due to Free Ride for School Children (c)
KANESHIE	23,337,730,000	20,128,892	3,115,123	5,394,022,242
LATERBIOKORSHIE	8,039,544,434	4,897,103	387,586	806,784,500
TEMA	1,025,994,900	1,516,894	350,794	705,543,000
CAPE COAST	1,320,537,000	1,568,060	129,048	491,375,500
SWEDRU	695,964,000	662,908	60,696	420,224,000
TAKORADI	6,592,096,500	3,529,599	1,219,896	6,691,709,837
HO	3,289,139,000	1,322,573	116,026	484,389,584
KOFORIDUA	12,096,799,000	4,358,359	364,988	1,036,803,000
AKIM ODA	228,382,000	114,914	3,848	23,135,000
KUMASI	38,331,343,506	11,178,949	395,750	1,091,878,474
SUNYANI	22,735,973,500	4,461,879	145,608	97,623,700
TAMALE	1,745,891,000	129,597	1,686	15,925,000
WA	2,321,666,000	1,071,293	49,229	1,090,224,000
BOLGATANGA	106,657,000	46,335	5,563	50,718,000
TOTAL	121,867,717,840	54,987,355	6,345,841	18,400,355,839

Appendix 7: Revenue Lost Due to Fare differential and Free Ride for School Children in 2007

Depot	Revenue Lost Due to Fare Differential (GH¢)	Total Number of Passengers Carried	Total Number of School Children Carried	Revenue Lost Due to Free Ride for School Children (GH¢)
ADENTA	108,796.38	1,212,146	78,158	17,605.95
KANESHIE	1,225,118.25	9,821,213	952,953	217,343.80
LATERBIOKORSHIE	715,001.21	4,273,188	111,392	29,783.60
TEMA	417,698.28	3,367,881	407,698	83,386.75
CAPE COAST	483,778.35	1,641,836	90,459	51,257.95
SWEDRU	163,044.90	1,142,535	45,705	37,979.64
TAKORADI	807,588.70	2,745,998	1,053,678	363,338.61
HO	478,363.54	1,404,455	63,543	47,300.42
KOFORIDUA	374,321.00	2,856,530	218,500	91,498.40
AKIM ODA	189,864.15	603,193	9,067	5,800.00
KUMASI	1,438,621.94	6,267,849	703,331	252,309.67
SUNYANI	2,632,730.20	5,349,544	209,085	146,116.28
TAMALE	421,497.70	855,030	10,499	14,196.40
WA	375,326.92	1,418,653	48,951	67,984.11
BOLGATANGA	77,396.99	157,801	7,573	6,319.10
TOTAL	9,909,148.51	43,117,852	4,010,592	1,432,220.68

Appendix 8: Revenue Lost Due to Fare Differential and free Ride for School Children in 2008

Depot	Revenue Lost Due to Fare Differential (GH¢)	Total Number of Passengers Carried	Total Number of School Children Carried	Revenue Lost Due to Free Ride for School Children (GH¢)
ADENTA	554,462.06	2,848,753	96,197	29,623.25
KANESHIE	1,247,158.85	5,401,534	570,712	119,072.20
LATERBIOKORSHIE	513,150.45	2,323,068	8,985	2,574.15
TEMA	373,804.47	985,948	129,814	44,207.96
CAPE COAST	1,101,535.10	1,485,735	16,864	10,632.30
SWEDRU	417,280.09	1,337,450	136,433	18,903.65
TAKORADI	1,162,856.70	2,223,682	487,173	213,187.50
HO	218,711.90	787,341	8,850	10,597.90
KOFORIDUA	579,286.50	1,414,431	76,738	39,395.30
AKIM ODA	958,146.15	1,494,391	172	351.60
KUMASI	2,862,289.17	6,867,467	152,831	103,671.85
SUNYANI	2,148,609.95	4,536,681	127,821	164,632.70
TAMALE	433,597.60	1,033,105	3,588	5,696.90
WA	295,654.90	423,938	17,284	42,993.70
BOLGATANGA	384,731.00	671,230	99	39.60
TOTAL	13,251,274.89	33,834,754	1,833,561	805,580.56