

**FACTORS AFFECTING ROAD TRANSPORT MANAGEMENT IN KAMPALA
CAPITAL CITY AUTHORITY, UGANDA.**

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DECLARATION

I, Charles Mugabi declare that, this research is my original work and has never been submitted to any other University or Institution for any academic award.

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APPROVAL

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DEDICATION

I dedicate this work to my beloved children for their psychological support all through this course. Also, to my dear parents, sisters and brother whose tireless efforts and love enabled me to go through my education.

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TABLE OF CONTENT

Declaration.....	ii
Approval.....	iii
Dedication.....	iv
Acknowledgement.....	v
Table Of Content.....	vi
List of Figures.....	xi
List of Acronyms.....	xii

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	8
1.3 Purpose of the Study.....	9
1.4 Objectives of the Study.....	9
1.5 Research Questions.....	10
1.6 Hypotheses of the Study.....	10
1.7 Conceptual framework of factors for Transport Management.....	10
1.8 Justification of the Study.....	11
1.9 Scope of the Study.....	12
1.10 Significance of the Study.....	12
1.11 Definition of key terms.....	13
1.12 Conclusion.....	14

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction.....	15
2.1 Theoretical Review.....	15
2.2 Influence of policy factors and Transport Management.....	17
2.3 How resource management factors influence Transport Management.....	23

2.4 How planning factors influence Transport Management.....	26
2.5 Literature review Summary.....	28

CHAPTER THREE: METHODOLOGY

3.0 Introduction.....	30
3.1 Research Design.....	30
3.2 Study Population.....	30
3.3 Sample Size and Selection.....	31
3.4 Sampling Methods.....	31
3.5 Data Collection Methods.....	32
3.5.1 Quantitative methods.....	32
3.5.2 Qualitative Methods.....	32
3.6 Data collection Instruments.....	33
3.6.1 Questionnaires.....	33
3.6.2 Interview Guide.....	33
3.6.3 Document review checklist.....	34
3.7 Validity and Reliability.....	34
3.7.2 Reliability.....	35
3.8 Procedure for data Collection.....	35
3.9 Data Management and Analysis.....	35
3.9.1 Quantitative data.....	36
3.9.2 Qualitative data.....	36
3.11 Conclusion.....	37

CHAPTER FOUR: PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction.....	38
4.2 Response rate.....	39
4.3 Background Information.....	39

4.3.1 Education Level.....	40
4.3.2 Age of Respondents	41
4.4 The influence of policy factors on transport management in KCCA.	41
4.4.1 Interview Results	Error! Bookmark not defined.
4.4.2 Descriptive results	42
4.4.3 Hypothesis one: Relationship between policy factors and transport management in KCCA.	44
4.4.3.1 Regression analysis	48
4.5 Examine the influence of planning factors on transport management in KCCA.	49
4.5.1 Interview Results	51
4.5.2 Descriptive Results	49
4.5.3 Hypothesis Two: Relationship between planning factors and transport management in KCCA.	53
4.5.3.1 Regression analysis	54
4.6 Influence of resource management factors on transport management in Kampala City (KCCA).	55
4.6.1 Interview Results	58
4.6.2 Descriptive Results	55
4.6.3 Hypothesis Three: Resource management factors significantly and transport management in Kampala City.	58
4.6.3.1 Regression Analysis.....	60

CHAPTER FIVE:SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction.....	62
5.2 Summary of Findings	62
5.3 Discussion of Findings.....	63
5.3.1 Policy factors on transport Management.....	63
5.3.2 Planning factors on transport management in Kampala Capital City.	65
5.3.3 Resource management factors on transport management.	68
5.3.4 Chapter Summary	70

5.4 Conclusions.....	71
5.5 Recommendations	73
Reference	75
Appendix I: Questionnaire for Respondents.....	79
Appendix II: Interview Guide for traffic officers and some Road Users.....	84
Appendix III: Document Review Check List	85

LIST OF TABLES

Table 1: Number of participants per category.....	31
Table 2: Summary of study response rates	39
Table 3: Gender of Respondent.....	40
Table 4: Education Level.....	40
Table 5: Policy factors on transport Management in Kampala Capital City Authority.....	42
Table 6: Correlation between Policy factors and Transport Management.....	47
Table 7: A single regression analysis policy factors and transport management.....	48
Table 8: Policy factors on Transport Management in KCCA.....	49
Table 9: Correlation between planning factors and transport management.....	53
Table 10: A single regression analysis planning factors and transport management.	54
Table 11: Descriptive results on resource management factors	55
Table 12: Correlation between resource management factors transport management	59
Table 13: A single regression analysis resource management and transport management.	60

LIST OF FIGURES

Figure 1: Conceptual showing Framework factors that affect transport management11

Figure 2: Age of Respondent.....41

LIST OF ACRONYMS

ITS	:	Intelligence transport Systems
KCCA	:	Kampala Capital City Authority
SPSS	:	Statistical Package for Social Scientists
TDM	:	Transport Demand Management
UBOA	:	Uganda Bus Owners Association
UNRA	:	Uganda National Roads Authority
UTODA	:	Uganda tax operators and drivers association

ABSTRACT

The study examined factors that affecting road transport management in Kampala Capital City Authority. It was guided by three research objectives which were; to examine the influence of policy, planning and resource management factors on transport management in Kampala Capital City Authority. The study used a cross sectional survey design with both qualitative and quantitative results. The study population involved Uganda transport board members, traffic officers and KCCA directorate of physical planning employees. Data was collected using questionnaires and interviews. In data analysis means were obtained to show the central tendency of responses, also correlations and regressions to show the magnitude of effect the independent variables have on the dependent variable. Study findings revealed that policy factors have a positive significant relationship with the transport management ($r=.743$, $p=.000$) in Kampala City with coefficient of determination $R^2=0.552$ which shows that 55.2% variation in transport management is explained by changes policy factors. Hence any changes in policy factors would lead to 56.7% chance change in the transport services in Kampala City. Findings also revealed that planning factors significantly affect transport management in Kampala city ($r=.730$, $p=.000$) with a coefficient of determination R^2 of .533 that indicates 53.4% chance change in transport management is explained planning factors at KCCA. Also it was found out that the is a positive significant relationship between resource management factors and the transport management at KCCA ($r=.707$, $p=.000$) with a regression coefficient determination of .500 meaning that 50% chance change in transport management is explained by changes in resource management at KCCA. It was therefore concluded that KCCA has a lot of road transport management and road expansion policies on paper but their actual implementation is not well done, the authority collects a lot of revenue from various sources, but these resources are not effectively used. It is therefore recommended that policies to reduce on the traffic should be effectively implemented especially the bicycle policy, road expansion should be emphasized by different stakeholders, planning should be channeled through a consultant to effectively carry such plans and all KCCA projects and also carry out all evaluations with a committee comprising of senior citizens and other stakeholders need to be set up to oversee and manage the disbursement of funds.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The impetus to carry out this research arose from the continuous irregularities existing in the transport management in Uganda with a lot of traffic jam that continue to face Kampala Capital City Road. The road Transport in Uganda urban centers are highly congested with all sorts of non-motorized to motorized vessels. This puts a lot of pressure on most roads that require a proper management structure or system in place hence the research.

The aim of this study was to examine factors that affecting road transport management in Kampala capital City. The research was structured into five chapters. Chapter one presents the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, hypotheses, conceptual framework, scope of the study, justification of the study, significance of the study and definition of terms and concepts. The next chapter explores the literature on the subject, chapter three describes the methodology, chapter four presents findings and chapter five presents discussion, conclusions and recommendations.

1.1 Background to the Study

The background to the study provides an over view to the study. It presents the historical perspective of road transport management, theoretical background provides a guiding theoretical view and shows some of the aspects that empirically explain transport management, conceptual background explains concepts used in the study where as the contextual background provides the extent to which some factors have influenced management of transport in Kampala capital City.

1.1.1 Historical Background

Transport management holds a long standing tradition that stretches from the 19th and 20th centuries. Transport management has a comparatively long tradition of transport debate, policy-making and planning and its general management. Interest in transport and traffic management resulted partly from the 20th century industrialization, when most towns grew rapidly. Traffic flow in most town centers rose uncontrollably 1970s. As in many other European cities and towns at that time it was the plan to build more and bigger roads in, and around, the city centre in order to solve the problems of increasing car traffic (Hansen, 1999).

In recent years transport management has gained importance in European metropolitan areas as a way of addressing the complex urban transport problems and improving the effectiveness of traffic systems management. It is a demand oriented approach to passenger and freight transport involves new partnerships and set of tools to support and encourage changes in attitude and behavior in both more sustainable modes of transport and alternatives to travel. A central idea in the development of the transport management practice is the integrated approach to transport planning and policy making with emphases on accessibility alongside mobility and on the potential of soft measures to enhance the effectiveness of hard measures (Gunnarsson, 2003).

Transport management issues are critically embedded in everyday life. For this reason ways of addressing such issues are almost always highly contentious. In many developed nations in recent times, land-use trends alongside the opportunities offered by past road construction efforts and the mass availability of private cars have led to the breaking of traditional relationships between home, work, leisure and the environment. In response to increased communications possibilities, people have changed the way they live and this has lead to increased expectations

over the potentialities of personal travel thus call for transport demand management (TDM). The consequences of these changing geographies and sociologies of mobility are two-fold: first, increasing demand for travel throughout Europe, particularly by car, a trend no country has managed to arrest; second, the knock-on consequences of increasing travel demand on cities, local environments, social networks and ecological conditions (Vigar, 2002).

In most Sub-Saharan countries transport management has been addressed in recent times as most of the towns have started experiencing heavy traffic pressure on road infrastructure. This has prompted most governments to come up with policies and plans on how transport in urban areas can be managed.

In Kampala, transport facilities takes care of less than 10% of the urban people and 90% who walk and cycle does not have adequate facilities. The little space left is taken up by vendor and also full of open man halls. The main transport system in the great Kampala (metropolitan) is largely covered by public transport, predominately 14-seat-minibuses (Matatus) and motor cycles (locally known as BodaBoda) (Uganda Revenue Authority, 2010).

The TLB is responsible for regulating the use of public transport vehicles, the private omnibuses and goods vehicles by issuing PSV (Public Service Vehicle) licenses after carrying out technical inspection of vehicles. In practice, TLB does not have the necessary resources (equipment and staff) to appropriately accomplish its objectives (The World Bank, 2002). Technical control is limited to visual inspection of vehicles and the number of vehicles and their allocation to public transport routes is decided without reference to transport planning process. There is no data on the scale and characteristics of urban transport demand and there is a need for strategic studies on urban transport planning and the organization of public transport services. The Directorate of Transport of the Ministry of Works, Housing and Communications, has historically had insufficient financial and human resources to address key activities. Resource allocation over the years has not only been inadequate but also biased. Infrastructure maintenance and development

have been allocated a disproportionate amount of both financial and human resources (The World Bank, 2002).

This imbalance in resource allocation has led to a relative backlog of institutional capacity building for planning, regulating and monitoring of transport services compared to road infrastructure organization (Sohail, Maunder & Cavill, 2010). The institutional capacities have not expanded as fast as the change of ownership experienced in the transport market (from public to private suppliers). Thus, the policy, planning and regulatory functions of Ministries have been marginalized and yet they are responsible for the safe and proper use of transport management infrastructure and services.

In Kampala the capital city of Uganda road transport infrastructure is faced by a significant number of challenges with weak road usage & enforcement of traffic regulations, infrastructure very low road capacity and lack of an integrated and affordable public transport system, lack of facilities for pedestrians & cyclists, traffic management, public transport and parking management. The city is characterized by heavy and chaotic traffic Jam. Kampala's traffic jams delays people to arrive at their destinations, and costs the economy shs. 500m (150,000 euro) every day. For instance, during peak hours given that half of the 375,324 vehicles registered in 2008 are in Kampala, and each uses a minimum of one ltr of petrol in traffic jam every day, at shs. 3500 (1.2 Euro) per ltr, this translates into losses of more than sh500m (150.000 euro) per day. According to the State of Environment Report for Uganda (2008), the city experiences jams because of the huge rise in motorization which is not been accompanied by planned infrastructure facilities. This has largely contributed to a number of consequences in form of increased road traffic accidents in the great metropolitan area. Whereby in the year 2010 24,000 road accidents were reported, 39% of the fatalities are pedestrians, 32% Passengers, 29% others which include motor cyclists, pedal cyclist and drivers, this is one of the highest in the world.

1.1.2 Theoretical background

The Kerner (1999) Three-Phase Traffic Theory will guide this study. This is a qualitative theory based on common spatiotemporal features of measured (empirical) congested traffic patterns. This is largely determined by network infrastructure and highway bottleneck types, weather, percentage of long vehicles, other road conditions, and vehicle technology in various countries.

The study was also guided by Serge & Victor, (2009) Deterministic and Stochastic Queuing Theory. In queuing theory helps to keep track of the numbers of vehicles in a queue. A queue starts whenever the flow to a bottleneck is larger than the bottleneck capacity, where the cars form a virtual queue. The outflow of the queue is given by the infrastructure (it is the outflow capacity of the bottleneck, whereas the inflow is the flow towards the bottleneck. The number of vehicles in the queue represents the change in the number of vehicles in the queue likely to evolve in this way until the queue has completely disappeared.

The study, considered the Underlying Behavioral Theory, which can be based on characteristics of the flow (macroscopic) or individual drivers (microscopic behavior). In this theory the observed behavior of drivers, that is, headways, driving speeds and driving lane, is influenced by different factors, which can be related to the driver-vehicle combination (vehicle characteristics, driver experience, age, gender and so forth), the traffic conditions (average speeds, densities), infrastructure conditions (road conditions) and external situational influences (weather, driving regulations). In general, two types of driver tasks are distinguished: longitudinal tasks (acceleration, maintaining speed, and maintaining distance relative to the leading vehicle) and lateral tasks (lane changing, overtaking) (Minderhoud, 1999). The proper functioning of all these aspects are largely based on the policy, planning and resource management factors as managed by the key stake holders in the transport management industry.

1.1.3 Conceptual background

Transport management involves sustainable infrastructure investments and travel policies that serve multiple goals of economic development, environmental stewardship and social equity. (Dominic Spaethling, 2006). A sustainable transportation system has its goal service output and stewardship of the landscape and resource base, not simply the efficiency of the highway system. The objective of which is to maximize the use of the transportation system to achieve economic and related social and environmental goals, without sacrificing the ability of future generations to do so.

Factors that affect transport management vary from situation to situation policy factors that are dictated by government regulatory bodies in the transport sector. Also there are planning factors that largely address road management aspects by various personnel in various agencies to address transport management aspects. Resource management factors generally involve how resources of the institution are utilized to obtain effective results in transport planning process. Generally, Cook & Lawrie, (2004) explain that the transport management covers the management of traffic and transport services for all modes, covering both passenger and freight transport. This includes changing the way in which existing transport systems are used (particularly with respect to infrastructure) and the strategic and tactical management and control of traffic. Transport management measures are mainly divided into traffic information and control and improving public traffic flow. They also involve a wide range of approaches, including increases and reductions in network capacity, reallocations of that capacity, and changes in the operation of public transport, rail, air or waterborne transport. With an efficient

traffic management system the network operator can meet goals set by the politicians regarding traffic levels within the city centre, emission levels etc.

1.1.4 Contextual background

Transport management is a key aspect in any developing or developed economy, this comes amidst growing congestion in most cities. In many urban areas congestion has been increasing in its duration and intensity. On average, speeds in cities have been declining by about 5% per decade (EFTE, 2004) and the severity of congestion increases with city size (Dasgupta, 1993).

Strategy and transport policy are not always coordinated or integrated in time and in space. The importance of urban public transport in mobility policy is not always well understood or well developed. The urban public transport sector does not offer any unified image of the complementary transport modes available to the public. Road traffic managers, bus fleets and taxi operators have always been challenged to get real time information on road traffic conditions, locations and status of their resources and customers. As a result, they constantly face business challenges like. Real time access to traffic and fleet information, delays due to traffic congestions, other disruptions, provide a pleasing service experience to customers, optimize disparately located resources. Choosing a leading mobility partner enables you and your stakeholders to access real time, dynamic information ensuring a safer, efficient and convenient transport system.

The ideal well managed transport system in some countries looks at commute trip planning, parking management, guaranteed ride home service, pedestrian and bicycle planning, carpool and vanpool coordination, shuttle services and other transit improvements, transportation access guides, have in employer commute program consulting.

Transport management in Uganda remains a significant challenge to both public and private agencies since road transport remains significantly challenged with heavy traffic jam and unsensitized users. This has been a great challenge as the infrastructure in place can hardly sustain the pressure from traffic in place. The poor infrastructure in place especially the road network also significantly contributes to the poor management of the transport system in place.

Kampala Capital City Authority (KCCA) is a government parastatal that was established by the Kampala capital city Act of 2010. To provide for the development of Kampala Capital City and to provide for a Metropolitan Physical Planning Authority for Kampala among other functions The authority has the directorate of physical planning that is responsible for transport management in the city by ensuring that roads are in a good state, road side lights and street lights are in place, road markings are well put. In spite of all these functions the transport management in Kampala city has had very many challenges. A total of 788 people were killed and nearly 5,000 injured in the 6820 road traffic accidents recorded between January and June 2011 in Uganda (Police traffic report, 2011).

1.2 Statement of the problem

Kampala capital city Authority has a directorate of physical planning that is responsible for the physical planning and management of traffic in Kampala city. This directorate is tasked to ensure that the city is organized so that development efforts do not exert pressure on the existing functioning infrastructures; the directorate takes care of the overall planning of Kampala city. In an effort to improve traffic in Kampala and ensure an efficient transport system, KCCA through this department, installed traffic lights on junctions, put road marks, demarcated parking for vehicles along the streets, put in place guidelines for all drivers to acquire driving permits and

also put in place traffic guides. All these were done to ensure that, traffic jam is reduced, road accidents as well as congestion and traffic offences are reduced in Kampala.

Despite putting these initiatives in place to manage and control poor road transport usage and traffic jam on Kampala City roads continue to be experienced. This is drawn from the fact that many road users continue to experience the worst forms of traffic congestion almost all day. According to Uganda Driving Standards Agency (2012) traffic Survey report, in Kampala, 70% of roads are a victim of heavy traffic jam at least 7 hours of a day, there is an average of 4 cases on traffic offenses of every 10 cases reported at police daily, 40% of roads in Kampala city are not used because they have a lot of potholes or are too dusty to use, 75% of main roads in the city have no traffic lights especially at night and 70% of roads in the city are not visibly marked to ensure safe driving at night. The continuation of such situation implies that more road and traffic challenges will continue to be faced and this could result into dire consequences like loss of lives in traffic accidents, slowed down economic activities as the result of poor management of traffic. Hence need for such a study that examined factors that affect transport management in Kampala Capital City.

1.3 Purpose of the study

The study examined factors that affect transport management in Kampala Capital City Authority (KCCA).

1.4 Objectives of the study

- 1 To examine the effect of policy factors on transport management in Kampala Capital City Authority (KCCA).
- 2 To examine the effect of planning factors on transport management in Kampala Capital City.

- 3 To examine the effect of resource management factors on transport management in Kampala City (KCCA).

1.5 Research questions

- 1 How do KCCAs transport management policy factors affect transport management in Kampala city?
- 2 How do KCCAs planning factors affect transport management in Kampala Capital City?
- 3 How do KCCAs resource management factors affect transport management in Kampala City?

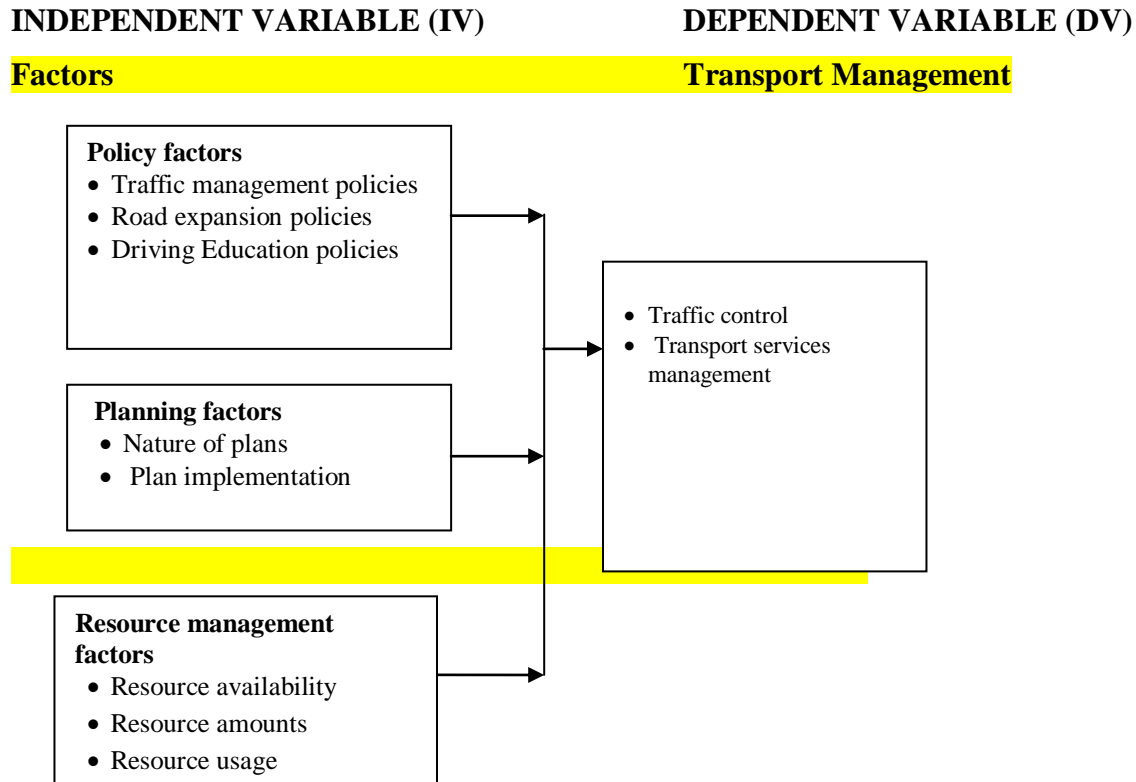
1.6 Hypotheses of the study

- 1 There is a positive significant relationship between policy factors and transport.
- 2 Planning factors significantly affect transport management.
- 3 Resource management factors significantly affect transport management.

1.7 Conceptual framework on the relationship between factors and Transport Management

The conceptual framework in figure one presents the independent and dependent variables. It is conceptualized that the factors in place significantly affect transport management in Kampala city. It is conceptualized that policy factors greatly affect the transport management in the city since an effectively managed transport situation largely depends on the nature of policies in place in regard to traffic management, road expansion policies and driving education. Also it is conceptualized that an effectively managed transport system is largely influenced by resource management process in place, therefore the availability of resources, the amounts of such resources and how they are used determines the effectiveness of transport system in the city. Planning factors also significantly affect transport management since the nature of plans in place

and whether such plans are implemented or not significantly influence effectiveness in the transport management process.



Source: Adopted and modified from Serge & Victor (2009)

Figure 1: Conceptual Framework on the relationship between factors and transport Management

1.8 Justification of the study

The study was justified by the fact that much as there are many transport management structures in place like ministry of works and transport, UNRA, KCCA continue to perform below average, irrespective of the heavy budget in the transport systems. A lot is budgeted but the actual implementation is always not reflected on ground and this affects transport management. This comes amidst efforts by various agencies and government to ensure that service delivery in government related agencies is improved. Therefore there is great need to examine how transport

system is managed for effective public service delivery. The study might help to draw attention to where weaknesses lie in ensuring that organizations consider monies worth when facilitating implementing projects that affect the transport sector. This study will therefore draw conclusions that might help in conducting trainings that impact on transport management. If the factors that affect transport management are discovered and appropriate recommendations made, these challenges may continue to exist and this may affect the quality of services to the people of Kampala.

1.9 Scope of the study

Geographically, the study was carried out in Kampala at Kampala capital city authority head offices and Uganda Driving Standards Agency. These offices have been chosen because they handle most of the tasks related transport management in the city and they are accessible to the researcher in the process of research.

Conceptually, the study looked at factors for transport management as an independent variable and transport management as a dependent variable and specifically looked at policy factors, resource management factors and planning factors. Hence the study was confined to the study objectives.

The study covered a period from 2010 to 2014 when the component of transport management in Kampala Capital City Authority was largely emphasized.

1.10 Significance of the study

The results of this study are expected to be of value to the following:

Employees: The findings of the study are likely to enlighten employees of the core aspects that play a significant role in transport management in order to have transport management process.

Administration ministry and authority levels: The information gathered in this study could be utilized by administration of ministry of works and transport as well as KCCA to know where the major weaknesses lie in facilitating the transport management process in terms of why despite the heavy investment transport management in the city is still a huge challenge.

Policy makers: As individuals charged with formulating policies especially at ministry of works and transport as well as KCCA, their understanding of the role of having a well managed transport system training remains a key task to them in order to improve service delivery in the organizations. Therefore, findings from this study may help them in formulation of better policies that encourage improvement. The policy makers may review their decisions on how best they can involve necessary bodies in the struggle to improve the transport systems in the process.

Researchers: The issues raised in this study are likely to lead to the involvement of various researchers in generating more knowledge from various perspectives. The findings of this study could form a basis for further research to those interested in finding more on factors that influence transport management.

1.11 Definition of key terms

Transport management in this study meant sustainable infrastructure investments and travel policies that serve multiple goals of economic development, environmental stewardship and social equity.

Policy factors basically look at modes of operating, managing, maintaining, and financing the transportation system so as to achieve other development objectives.

Transport planning factors are such used to foster involvement by all users of the system, such as the business community, community groups, environmental organizations, the traveling public, freight operators, and the general public, through a proactive public participation process conducted.

Resource management factors in this study will mean the way in which financial and non financial resources are used in the process of transport management in Kampala Capital City Authority so as to achieve the set development objectives.

1.12 Conclusion

This chapter presents the background to the study which gives the general over view of transport management, the statement problem of the problem that exhibit the existing challenges in transport management, objectives, research questions and hypotheses as the guiding yardsticks of the study, conceptual framework and that explains the relationship among variables of the study, scope which defines the boundary of the study in terms content, geography and time.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents the review of literature related to the topic of study. The purpose of the review examines factors that affect transport management. From the perspective of the available relevant literature on transport management was used.

2.1 Theoretical review

The Three-Phase Traffic Theory introduced by Kerner (1999) guided this study. It is based on common spatiotemporal features of congested traffic patterns. These patterns differ from country to country determined by network infrastructure and highway bottleneck types, weather, percentage of long vehicles, other road conditions, and vehicle technology of which most these could be related to policy or planning in the transport demand management process. This theory also looks at a traffic phase and traffic state. A traffic phase is a traffic state considered in space and time that possesses some unique empirical spatiotemporal features.

The study used a Deterministic and Stochastic Queuing Theory by Serge & Victor, (2009). In this theory the number of vehicles in a queue matter significantly. The outflow of the queue is given by the infrastructure it is the outflow capacity of the bottleneck, whereas the inflow is the flow towards the bottleneck. The number of vehicles in the queue represents the change in the number of vehicles in the queue likely to evolve in this way until the queue has completely disappeared. Note that both the inflow and the capacity are time dependent in the description. For the inflow, this is due to the random distribution pattern of the arrival of the vehicles.

Vehicles can arrive in platoons or there can be large gaps in between two vehicles. The capacity is also fluctuating.

On the one hand, there are vehicle-to-vehicle fluctuations. For instance, some drivers have a shorter reaction time, hence a shorter headway leading to a higher capacity. On the other hand, a larger scale, the capacities will also depend on road or weather conditions (wet roads, night-time). The disadvantage of the queuing theory is that the queues have no spatial dimension, and they do not have a proper length either (they do not occupy space). Most of such aspects are largely influenced by the road transport policies in place that influence the planning of transport management in urban areas.

The underlying behavioral theory also guided the study. This theory is based on characteristics of the flow (macroscopic) or individual drivers (microscopic behavior). In this theory the observed behavior of drivers, that is, headways, driving speeds and driving lane, is influenced by different factors, which can be related to the driver-vehicle combination (vehicle characteristics, driver experience, age, gender and so forth), the traffic conditions (average speeds, densities), infrastructure conditions (road conditions) and external situational influences (weather, driving regulations). In general, two types of driver tasks are distinguished: longitudinal tasks (acceleration, maintaining speed, and maintaining distance relative to the leading vehicle) and lateral tasks (lane changing, overtaking) (Minderhoud, 1999).

A microscopic model provides a description of the movements of individual vehicles that are considered to be a result of the characteristics of drivers and vehicles, the interactions between driver vehicle elements, the road characteristics, external conditions, the traffic regulations and control. When the number of driver-vehicle units on the road is very small, the driver can freely

choose his speed given his preferences and abilities, the roadway conditions, curvature, prevailing speed limits and so forth. In any case, there will be little reason for the driver to adapt his speed to the other road users. Much of road users' behaviors are policy factors that require to be streamlined in with effective rules and regulations so as to manage the transport system

The target speed of the driver is the so-called free speed. In real life, the free speed will vary from one driver to another, but the free speed of a single driver will also change over time. Most microscopic models assume however that the free speeds have a constant value that is driver-specific. When traffic conditions deteriorate, drivers will no longer be able to choose the speed freely, since they will not always be able to overtake or pass a slower vehicle. The driver will need to adapt his speed to the prevailing traffic conditions, that is, the driver is following. Ahmed et al. (1996)

2.2 Policy factors and transport management.

Over the years, important progress has been made in terms of identifying and practically testing various policy measures to improve urban transport management. These measures come in various forms, such as investment for road or rapid transit system, pricing and tax policies, regulatory provisions, public subsidies, and public transport measures (World Bank, 2006). For obvious reasons, the practical feasibility and effectiveness of each of these measures depend upon the specific situation of a country or city. What is also important is to identify the appropriate mix of different measures and timing of their implementation so that they can produce synergistic effects. These measures, when implemented individually or in combination, interact with complex dynamics of urban transport system involving several feedback

mechanisms and often produce results that are different from intuitively expected (Tembele et al, 2008).

The discussion on policy importance of urban transport systems in metropolitan areas has gained a renewed importance with the increasing awareness of the economic and environmental impacts of mass automobile use (Banister, 2000; Ferreira and Cruz, 2009). Concerns about the limitations of transport infrastructure and the emergence of significant environmental externalities have strengthened the role of alternative transport modes in promoting more efficient and sustainable development (Kirchhoff, 1995; Litman, 1997; Murray, 2001).

Public transport systems have been revived as a key component of a broader strategy to mitigate the major economic and environmental problems related to the massive use of private automobiles. The existence of public transport companies, managed directly or indirectly by public authorities, may be cited as a significant example of efforts to promote a more environmentally friendly distribution of modes of transport.

There is absence of policy in urban areas. Strong transport management policies are more needed in urban areas than anywhere else. This borrowed from the fact that the complexities in urban infrastructure and the need for greater integration in providing, maintaining and managing urban public utilities require stronger transport policies (Turco, Arcusin. (2008). The political and bureaucratic set up has done little to introduce professionalism without which the planning and regulatory measures can only be inadequate, inefficient and at the most half-baked. It is essentially for these reasons that new threats are emerging in the shape of congestion and pollution. In other words, whatever the transport system, people will move, but the modes they

choose and the manner in which they travel will tend to be unsafe and inefficient without careful articulation and planning (Sathaye et al, 2009).

Proper policies in transport management in urban areas are a key route to development of such areas. Urban transportation is the single most important component instrumental in shaping urban development and urban living. While urban areas may be viewed as engines of growth, urban transport is, figuratively and literally, the wheel of that engine. The test of urban governance depends upon the quality of life the city or town offers. Since transport is one of the prime determinants of quality of life, it is for the government to articulate the need for mobility and facilitate it through an appropriate mechanism. In fact, the efficiency of cities greatly depends on the good policies and development of transport systems, as urban transport is a catalyst for overall development (Abbas & Bell, 2004).

Urban transportation problems in many cities are manifested in the form of congestion, delay, accidents, energy wastage, and pollution. All these have very heavy economic, social, and environmental costs. Therefore there is need for a sound urban transport policy. The major thrust of such an urban transport policy should include integrated planning, an optimum share between public and private modes, the choice of relevant technology for public transport systems, optimal use and management of available resources, restructuring of monetary and fiscal policy to encourage and promote public transport, and establishment of institutional arrangements, at all levels of governance, particularly at the city level, for planning, development, operation, management, and coordination of urban transport systems (Vasconcellos, 2011).

In transport management, an urban transport policy should encourage the need for developing green modes like bicycling, walking, through a provision of pedestrian paths and cycle tracks

especially in new development areas of larger cities and small and medium towns which should be integrated with the transport network. The application of Transport System Management strategy such as one-way systems, improvement of signals, traffic engineering improvement measures for road network, intersections, bus priority lanes, and suitable policies and development of intermediate passenger transport as a short-term measure should be introduced in all cities especially in metropolitan cities so that the existing road capacity and road user safety is increased (Vuchic, 2009). Road infrastructure improvement measures like new road alignments, a hierarchy of roads, a provision of service roads, by-passes, ring roads, bus bays, wide medians, intersection improvements, construction and repair of footpaths and roads, removal of encroachments, good surface drainage etc. should also be introduced at least in metropolitan cities. These can be considered as short- and medium-term measures. Very old vehicles in the city should be phased out and lead free fuel for all vehicles should be introduced as soon as possible (Gakenheimer, 2009).

Besides short- and medium-term measures, there is a need to have long-term measures as well, involving technology upgrades and introduction of a high speed, high capacity public transport system particularly along high-density traffic corridors. Governments should increase the capacity of existing bus services through bus priority measures, such as exclusive bus ways and better road access. In some cases, of course, capital-intensive investments, such as elevated highways or rapid rail systems, may be the best approach. However, there should be careful appraisal of all capital-intensive projects before implementing them. In addition, there should be a determined effort to develop alternative pollution free fuels in the long run (Bruggeman, 2009).

Transport management in developing countries is a critical aspect that require significant amount of keenness among the administrators. Cities of today are able to learn from others' policy successes and failures, allowing them to choose the policies that make the most sense for their situation. What is different for developing country cities of today is that their economies and populations are growing at much faster rates than was the case for cities in the now-developed world. Therefore, it is crucial that transportation and land use planning institutions in developing cities coordinate their efforts to reach common goals. Perhaps the most important strategy and highest priority in responding to transportation and environmental challenges is to strengthen local institutions, particularly in urban areas. The speed with which many of these developing country cities are moving toward development is unprecedented; strong, coordinated planning institutions are all the more necessary to guide them (Zyryanov & Sanamov, 2007).

Policies on transport demand management is seen as a key strategy for reducing the multiple costs associated with car use, i.e. car drivers should bear the true cost of their options (Verhoef et al., 1995; Ferreira, 2010) and the underlying benefits derived from soft modes within a metropolitan area should be enhanced (Dorsey, 2005; Holmgren et al., 2008). Special emphasis should be placed on the reduction of traffic congestion, pollution, environmental degradation and infrastructure use, while continuing efforts to match other ambitions of transport users such as comfort, speed and service reliability (Barata et al., 2011).

In transport management, other studies (Dorsey, 2005; Marsden, 2006) add that consideration should be given to cutting public transport tariffs, e.g. through subsidies, to try and increase their use. Indeed, public transport companies benefit from public subsidies in many countries, from either central or local governments (Gwilliam, 2008). According to data from the American

Public Transportation Association (Borck and Wrede, 2009), in 2006 the tariffs charged by public transport companies in the US cover only 33 per cent of transport costs and 28 per cent of operating costs plus capital costs.

In transport management, institutional analysis, network concepts are used to illustrate and help understand why and in what ways stakeholders unite around particular discourses. Network concepts thus provide a way of categorizing both the important linkages between actors within and between policy systems, and also provide means of identifying the importance of such relations in the determination of policy (Vigar, 2002) within the transport management process. Thus, the way policy discourses gain support and momentum is partly explained by looking at the networks that bind stakeholders together especially those in the transport management process. The fact that some groups are absent from the policymaking can clearly have a significant influence on policy outcomes (Vigar, 2002). Network concepts also provide a way of examining how discourses are transmitted, understood, and gathered momentum, and how arguments pervade and become embedded into cultural practices in the transport management process.

Transport management process involves an intelligent Transport Systems (ITS) which are a key tool for traffic management, but especially for interurban networks, where congestion is less recurrent (as in urban areas) and can be caused by seasonal traffic peaks, incidents, closures, road works, weather and where in many cases diversionary routes, traffic demand and capacity management solutions exist (Vigar, 2002). In the transport management process, interurban traffic management includes traffic control centers, tactical management (such as lane control, variable speed limits, hard shoulder running and automatic incident detection), as well as strategic management (longer distance diversions or re-routing, data exchange and common approaches such as traffic management plans involving neighboring road authorities, etc).

Litman, (2011) explain that regarding road traffic management in urban areas, the policy context is rather different. Although many traffic management and control techniques used on interurban networks are valid, with some traffic management plans near key conurbations integrating the interface to urban networks, urban traffic management principally involves traffic signal management and co-ordination, priority and improvements to public transport and a more comprehensive mobility management approach, given in particular that a much greater proportion of trips in urban areas are regular journeys.

2.3 Resource management factors and transport management.

In transport management the availability and usage of funds is significantly important. Many developing cities have limited funds and planning expertise, and inexperienced local institutions to implement plans and enforce policies. For these cities, transportation planning, infrastructure development, and policy implementation is difficult. Tembele et al (2008) explain that the experience of the last two decades in Sub-Saharan Africa shows that the big problem is not lack of good ideas about how the urban transport situation can be improved. The real bottleneck is the absence of a capable and dedicated urban government, therefore it is not lack of money, expenditures on transport are actually far too high already (Turco & Arcusin, 2008)

In many cities, the problem lies in the lack of coordination among the many institutions that are jointly responsible for maintaining the city's transportation system. The scale of the problem is illustrated by the following small example. In New Delhi, the Public Works Department constructed pedestrian tunnels under a number of busy streets in the city but failed to coordinate with the government agencies that jointly determine the location of bus stops. As a result, pedestrians made little use of the tunnels. After the mismatch was identified, the bus stops were

eventually moved, but most failures of this type are not so easily resolved (Ministry of Surface Transport, 2007).

Resource management plays a significant role in transportation management in cities. Transportation plays a central role in economic, social, and environmental development. The goal of transportation is to move goods and passengers efficiently, while limiting negative impacts on the environment and society. Although simple to state, the goal is difficult to achieve. It requires a variety of resources, organizations and institutions in the public and private sectors and at the local, regional, national, and sometimes even international levels to operate in concert. It requires continuous balancing of desires and needs within the context of existing institutions and shifting political and economic interests (Amsler, 2006).

Lucas, (2006) in the transport management process, there are resource management factors that determine urban transport demand and these include large increase in urban population, leading to a proportional increase in transport trips, spread of urban areas, longer journeys and more fuel consumption, greater availability of motorized transport, regulating in more motorized trips and increases in fuel consumption; increases in household incomes, creating a greater propensity for travel, increases in commercial and industrial activities; leading to increased volumes of service vehicles and freight traffic. Taken together, these factors result in a substantial increase in transport demand, which in turn has significant implications for city efficiency. The most notable effect is widespread traffic congestion, resulting in greatly increased costs particularly in fuel consumption and a serious loss of productivity, in commerce and industry. The necessary basic expansion of road networks and transport systems to meet these demands, and the more complex and costly solutions that prevail, place a considerable burden on city budgets. Furthermore,

household in urban communities are devoting increasingly large proportions of their incomes to transport, the budget implications being highest for low income groups in particular.

Gwilliam (2008) argues resource management associated with public financial support for public transport networks include overall costs reduction of using a transport system in a given metropolitan area, and says that they have an instrumental nature through a long-term influence on transport mode choices. However, the allocation of subsidies has been the subject of intense debate. Parshigian (2006) argue that subsidies lead to a fall in the performance indicators due to higher staff costs and lower productivity per worker or per bus.

In some countries transport management includes considering that the net impacts of subsidization on the provision of public transportation services are still contested, and that the information available on different companies and countries is extremely diverse, the analysis of performance indicators is critical. The literature shows that studies might target the capture of different features. However, with respect to this debate, interesting similarities can be found (Karlaftis and McCarthy, 2008).

In resource management resource-efficiency (service output against resource input) measures service inputs per amount of service produced; resource-effectiveness (service consumption against resource input) measures the service inputs per the exact service provided for commuters; and service effectiveness (service consumption against service output) measures the extent to which passengers consume outputs. Other studies (Castillo and Benitez, 2012), add that the use of indicators for the quality of the service is also relevant. The indicators analyzed in this study to assess the performance in urban public transportation services in Portugal were therefore chosen according to publicly available information. The analysis of cost-efficiency per passenger

reveals better efficiency, in relative terms, of the municipally integrated services followed by the companies owned by government. The municipal-owned companies indicate that these transport services are not so cost efficient and it is not possible to conclude for the existence of economies of scale.

Castillo and Benitez, (2012) explain that in transport management, the economic well-being of citizens and businesses and social cohesion in Europe are to a considerable extent based on an efficient, accessible and competitive transport system which reconciles the need for mobility meeting users' needs using advanced traffic management systems, helping travelers, freight distributors and transport operators make a more efficient use of the networks.

2.4 Planning factors and transport management.

Transportation planning is integrated with urban life as an action paving the way to reach economical, social and cultural resources. It is difficult to formulize all the needs, demands and trends that are to be satisfied by the transportation system. Thus, transportation planning is, first of all, a political issue. It is important to define the often-conflicting benefits of different groups in realising this issue (Finn, 2005). Therefore planning of transport systems cannot be regarded as processes other than a decision-making process that develops through the interactive influences of different sides and their exchange of ideas. These sides consist of individuals and benefit groups, planners, and decision-makers (Finn & Nelson, 2003).

Planning in transportation can have a quality of meaningfulness, realism, applicability and aim fullness if it is realized by taking the different conditions of each case into consideration. In this context, the validity of planning made in the USA and the European countries is in question for the developing countries (Finn, 2005). The problems faced during application prove that this

doubt is realistic. It is impossible to improve transportation through the conventional passive approach, in which the future demands are predicted by utilizing the past trends. Planning the transportation system in a directive and active way would be a logical approach. It is difficult to realise this approach, but it has become obligatory (Bruggeman, 2009).

Transport management Planning approaches are criticized also in developed countries, where there is a planning tradition and where planned development is under operation (Genton, 2011; Wachs, 2005). Some say that instrumental approach should be replaced by the communicative approach (Willson, 2001). Most of the criticism focuses on demand predictions, which lie in the centre of the classical planning processes. He proposes that the utility function should be should be expanded beyond the limits of economical behavior in the transport management process.

Cook & Lawrie, (2004) transport management requires proper planning in the long run. There is little doubt that the primary barriers to sustainable urban transport development are institutional planning. Certainly, there are technical and operational barriers to the creation of infrastructure, organization of the traffic, but most of these are well understood over short and intermediate time span and involve fairly routine actions for execution once institutional impediments are overcome.

Its experience in urban transport planning, policy making and implementation is a valuable resource, which can guide decision makers elsewhere towards development of a sustainable transport system. Overcoming planning and implementation barriers in sustainable urban transport development Transport and spatial policies present an arena of many potential conflicting interests and complexity together with often uncertain outcomes. Five framework

conditions need to be addressed so that successful and consistent policy implementation can take place (Banister, 2005).

Urban transport planners and managers identify alternative sources of funding, since the financial resources are dwindling and may continue in to the 21st century if strategic means at reversing the situation is not critically looked into. Sources of financing urban transport could be seen as public, private, and NGO sources. These are mainly fiscal allocations from government and those of funding from parastatals. To achieve success in the creation of a new process and a new way of operation, the following factors are essential: To make extensive, daily use of services for which there is responsibility not just in the morning and evening, but any time and any day.

2.5 Literature review summary

In literature review presents a compressive of secondary data analysis in regard to the theory and objectives that guided the study. The study reviewed Fayols administrative theory, which is a management theory that analyses and synthesises the role of management in organizations. In this theory managerial practices are the key to predictability and efficiency in organizations. There are various policies that are in place to manage transport especially in towns, however the proper implantation and functionality of these is significantly very challenged. Proper policies in transport management in urban areas are a key route to development of such areas. The availability and usage of funds is significantly important. Many developing cities have limited funds and planning expertise, and inexperienced local institutions to implement plans and enforce policies. Many resource management factors result in a substantial increase in transport demand, which in turn has significant implications for city efficiency. Transportation planning is

integrated with urban life as an action paving the way to reach economical, social and cultural resources. Hence when there is poor planning in the transportation management.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The chapter presents the methodology that was used to carry out the study. It presents the research design, study population, sample size, sampling methods, data collection methods and instruments, pretesting of instruments, procedure for data collection validity and reliability, data management and analysis, measurement of variables, ethical considerations and limitations of the study.

3.1 Research design

The study utilized a cross-sectional descriptive survey design that used both qualitative and quantitative approaches. Cross sectional descriptive survey design is the selection of a small sample of people from a bigger population to act as an inference. Surveys are designed to provide a snapshot of how things are at a specific time. In survey research, independent and dependent variables are used to define the scope of study (Nachmias, 1981). In this study, survey methodology helped in measuring variables and examining relationships as recommended by Fowler (1993). Cross sectional survey design was adopted because it helped the researcher gather data from a sample of a bigger population at a particular time and used such data to make inference about the wider population.

3.2 Study population

The study was carried out in Kampala City. The study population included employees of KCCA in the directorate of physical planning, Uganda Transport Board organ members (UTODA, UBOA, BodaBoda 2010) Traffic Officers (traffic officers per division).

3.3 Sample Size and selection.

According to Mugenda and Mugenda (2003), it's impossible to study the whole targeted population and therefore the researcher has to decide on a sampled population. The sample size of the study was 153 as presented below in the table and it was determined using Israel (1992) adopted from Yamane 1967 simplified formula as shown below.

$$n = \frac{N}{1 + N(e)^2}$$

Where n= sample size

N= population size

e= level of precision (0.05)

Table 1: Number of participants per category

Category	Population	Sample size	Sampling Strategy
Uganda transport board organ members (UTODA 26, UBOA 10, BodaBoda 2010, 30)	66	57	Purposive
Traffic Officers(5 traffic officers per division)	25	24	Purposive
Directorate of physical planning employees KCCA	89	72	Simple random sampling
Total respondents	180	153	

Source: Uganda National Transport Board records.

3.4 Sampling Methods

The study used simple random sampling to select KCCA employees. Simple random sampling is a form of respondents' selection which is done in order to avoid bias (Mugenda and Mugenda, 2003). Lottery method was used to select samples to participate in the study where a list of

employees' from physical planning directorate at KCCA was sought from the Human Resource Department to help in determining the respondents. Names of respondents of each category were written on pieces of papers and contacted to be involved in the study. The study then used purposive sampling to select Uganda transport board organ members (UTODA, UBOA and BodaBodaa 2010, 30) and traffic officers. Purposive sampling was used to select respondents who had specific knowledge about transport management.

3.5 Data Collection methods

The study utilized both qualitative and quantitative data collection methods. Primary data was obtained using questionnaires as well as interviews. Secondary data was sourced from reading literature.

3.5.1 Quantitative methods

The questionnaire was the method used to generate quantitative data.

Questionnaire method

This involved the use of self administered questionnaires to respondents in relation to factors that affect transport management which was given to KCCA staff members and majority of road users. The study used closed ended questionnaires in a five likert scale form to get quantitative data. Questionnaire method was used because it helped to investigate motives and feelings in likert scaling (Creswell, 1994).

3.5.2 Qualitative methods

To obtain qualitative data, interview and document review were applied.

Interview method

The interview method was used to explore qualitatively factors that affect transport management, that were given to some of the employees in the directorate of physical planning at KCCA. This

method used face to face interviews provided the required data. Interview method was used because it provided an excellent opportunity to probe and explore questions (Cress well 1994).

Document review method

A document review method was used in sourcing for secondary data in all relevant documents in relation the factors that affect transport management. These were sourced from journals, text books and other relevant reliable sources.

3.6 Data collection instruments

Data collection instruments included questionnaires, interview guide and the documentary review checklist

3.6.1 Questionnaires

The study used a five-likert scale questionnaire which was administered to some KCCA staff members and Uganda transport board organ members. The study also had one set of questionnaires that was constructed strategically to capture all the necessary information from all categories of respondents in respect to the themes of the study and each objective had at least 10 questions for purposes of intensive analysis of these objectives. The questionnaire was administered door to door since most of the respondents in this category were known. The likert scale was used since they are very flexible and can be constructed more easily than most other types of attitude scales (Amin, 2005).

3.6.2 Interview guide

Face to face interviews with the help of an interview guide were conducted among some of KCCA staff members to establish their side of the story on the factors that affect transport management in Kampala City. The researcher believed that these people could provide rich

information in regard to the study. Interviews were used, since they were appropriate in providing in-depth data, data required to meet specific objectives, allows clarity in questioning and quite flexible compared to questionnaires.

3.6.3 Document review checklist

The study also carried out reviews of existing documents primarily the transport management reports, strategic plans, minutes and data by other scholars in relation to factors that affect transport management. This gave an overview of how much has been addressed in this line.

3.7 Validity and Reliability

The data collection tools were pretested on a smaller number of respondents from each category of the population to ensure that the questions were accurate and clear in line with each objective of the study thus ensuring validity and reliability.

3.7.1 Validity

Validity is the accuracy and meaningfulness of inferences, which are based on research results. It is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study. Therefore validity looks at how accurately represented are the variables of the study (Mugenda, Mugenda 2003). The study adopted content validity which is the degree to which data collected using particular instruments represents a specific domain of indicators or content of a particular concept. To ensure content validity of instruments the researcher constructed the instruments with all the items that measured variables of the study. The researcher also consulted the supervisor for proper guidance after which the researcher pre-tested the instruments and after pre-testing ambiguous questions were removed or polished so as to remain with the finest data required.

3.7.2 Reliability

According to Mugenda and Mugenda (2003), Reliability refers to the measure of the degree to which research instruments yield consistent results after repeated trials. To test the reliability of instruments, the study adopted cronbach alpha reliability coefficient measured at 0.7 as a standard measure as recommended by Mugenda and Mugenda (2003) after measuring reliability was 0.92 hence the instrument were considered reliable.

3.8 Procedure for data Collection

The researcher obtained a letter of introduction from Uganda Management Institute (UMI) to help with introductions to various respondents. After the construction of instruments the researcher took them for approval to the supervisor and there after they were taken for pretesting in selected few respondents. The researcher carried out a pilot run on a participating group in the study. Pretesting was done by picking 25 respondents from the study and giving them the same approved questionnaires. Pretesting helped to know whether respondents interpreted phrases and questions as the researcher wanted them, it also helps to obtain a general assessment of respondents' ability to perform required tasks (e.g. recall relevant information, estimate frequency of specific behaviors, etc.) and it also helps to obtain ideas for question wording in case rephrasing of the original statements is needed.

3.9 Data Management and Analysis

In the study, the instruments that were used yielded both qualitative and quantitative data. After respondents answered questionnaires and interviews, raw data was cleaned, sorted and condensed into systematically comparable data. Data analysis was done using the Statistical Package for Social Scientists (SPSS), which helped to summarize the coded data and produced the required statistics in the study.

3.9.1 Quantitative data

In the study, the researcher used a computer package SPSS where data was entered, edited, cleaned and sorted. This program was used to do univariate and bi-variate analysis. Uni-variate analysis of these objectives were used to obtain descriptive data in form of mean and standard deviations since it was a five likert questionnaire and this helped give the general response towards each question in the likert scale through the mean values. In establishing the relationships among variables, bi-variate multivariate analysis in form of correlation and regression analysis was used to ascertain the magnitude of effect the dependent variable has on independent variable. In correlation and regression analysis, the level of significance was $P=0.05$.

3.9.2 Qualitative data

Data analysis of qualitative data in the three objectives of the study used content analysis where each piece of work answered in the interview guide was read through thoroughly to identify themes where it belongs. The number of times each answer appears were counted to obtain the number of responses in each respect.

3.10 Measurement of variables.

The independent variable in the study was factors and dependent variable was transport management. The nominal scale was used in the measurement of variables in a likert scale format which ranged from 1 to 5, strongly disagree, disagree, not sure, agree and strongly agree respectively.

3.11 Conclusion

This chapter presents the methods that were used to carry out the study, it provides the design, sample selection procedures, data collection and data analysis and management that provided findings which were used to do the next chapter.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

The study examined factors that influence transport management in Kampala Capital City Authority (KCCA). The chapter specifically looked at the influence of policy factors on transport management, planning factors and resource management factors on transport management in Kampala City (KCCA). The study presents descriptive results from questionnaire in form of mean to show the central tendency of responses in the likert scale questions. These results are then triangulated with qualitative results from interviews, which are presented in quotations and narrative statements as per respondents' views in regard to each objective of the study. The study also presents inferential statistics in form of correlations and regressions which show the nature of relationship between variables and the magnitude of effect the independent variables has on dependent variable. The chapter also presents the response rate, which shows the actual number of respondents that participated in the study from the anticipated number of respondents. The study also presents the background information of respondents which shows the common respondents characteristics who participated in the study.

4.2 Response rate

Table 2: Summary of study response rates

Category	Targeted respondents	No. actually involved	Percentage of response rate
Questionnaire			
Uganda transport board organ members	57	46	80.7%
Directorate of physical planning employees KCCA	72	62	86.1%
Sub Total	129	108	
Interviews			
Traffic Officers	24	16	66.7%
Some Employees at KCCA	8	8	
Subtotal	24		
Total	153	132	86.2%

Source: Primary data

In the study as reflected in the table above, a total number of 153 respondents were expected to participate in the study, but 132 respondents actually participated, representing an overall response rate of 86.2%. Others did not participate in interviews sighting reasons for being busy some were reported out of the country. This response rate is above the 60-70% response rate as recommended by the Guttmacher Institute, (2006) for a study to be considered with satisfactory results. Therefore, the study results can be relied upon for academic and non academic purposes.

4.3 Background Information

In establishing the background characteristics of respondents, their gender was established because it would help in establishing the majority sex of respondents that participated in the

study and the level of education helped to establish whether respondents would give views that are relevant and useful to the study and results are presented below.

Table 3: Gender of Respondent

		Frequency	Valid Percent
Valid	Male	70	64.8
	Female	38	35.2
	Total	108	100.0

In the study, the gender of respondents was established and from the findings it was revealed that 64.8% of respondents that participated in the study were male where as 35.2% were female. This gave an opportunity to views for both men and women to give representativeness of responses.

4.3.1 Education Level

The study found out the level of education of respondents that participated in the study and the results are presented in table below.

Table 4: Education Level

		Frequency	Valid Percent
Valid	Secondary level	34	31.5
	Diploma	46	42.6
	Degree	21	19.4
	Masters	7	6.5
	Total	108	100.0

In the education level, 31.5% of the respondents that participated in the study had secondary level of education, 42.6% had diploma level of education, 19.4% had bachelors level of education and 6.5% had masters' degree level of education. Therefore majority respondents had

diploma level of education and this implies that they had a level of education to know key aspects that influence transport management in Kampala City.

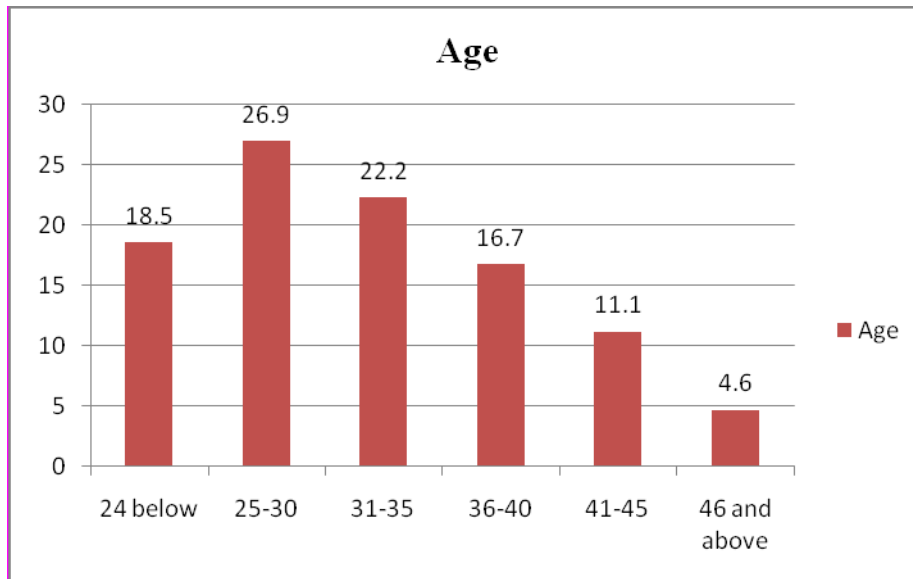


Figure 2: Age of Respondent

4.3.2 Age of Respondents

From the figure above, it was revealed that 26.9% of respondents were aged between 25-30 years, 22.2% were aged between 31-35 years, 16.7% were aged between 36-40 years, 11.1% were aged between 41-45 years and only 4.6% were aged above 46 years of age and 18.5% were aged 24 years and below. From the findings, majority respondents were above the aged above 30 years of age and their maturity coupled with other factors could affect transport management in the city.

4.4 The effect of policy factors on transport management in Kampala Capital City Authority (KCCA).

The study examined how policy factors affect transport management in Kampala Capital City Authority (KCCA). Respondents were involved in answering questionnaires and interviews.

The variable policy factors were looked at in regard to traffic management policies, road expansion policies, driving education policies.

4.4.2 Descriptive results

In questionnaires, the mean were computed in each question to show the mean responses that ranged between 1-5 where; 1-2.4= disagreed, 2.5-3.4=neutral, 3.5-5=agree. In interviews, using thematic content analysis, results were analyzed according to the themes of study. From interviews, expressions and narrations that were relevant to the objectives of the study were captured and presented in their respective themes. Descriptive results are presented first and then triangulated with results from interviews and inferential statistics with correlations and regressions.

Table 5: Policy factors on transport Management in Kampala Capital City Authority

	Mean	Std. Deviation	N
KCCA has traffic management policies in place	3.76	1.143	108
The traffic management policies are well functioning on all roads of Kampala	2.25	1.560	108
The authority has sensitized road users on key traffic rules	2.24	1.478	108
KCCA has functional road expansion policies	3.93	1.074	108
KCCA has endeavored to improve most road infrastructure in place	4.25	1.112	108
KCCA has improved all its lighting systems on roads in the city	2.16	1.492	108
All roads in Kampala City have been widened	2.45	1.370	108
All roads are well marked by KCCA	1.95	1.307	108
KCCA has functional road user policies	2.08	1.382	108
Road user traffic rules are fully implemented by KCCA personnel	2.16	1.492	108

KCCA has enough personnel to enforce traffic rules on all road users	2.04	1.207	108
KCCA endeavored to sensitize people on road usage rules in Kampala	2.37	1.337	108
Valid N (listwise)			108

In the study, it was agreed that KCCA has traffic management policies in place (mean=3.76) though it was disagreed that traffic management policies are well functioning on all roads of Kampala (mean=2.25). In the transport management process KCCA has all the necessary transport management policies in place that are meant to govern the cities transport system. However, despite the existence these policies they are not fully functional on roads of the city since a lot of challenges and weaknesses are seen on the roads of Kampala city. The actual implementation of these policies remains a big challenge in the road transport management process since a lot of poor infrastructure remains to be seen in the city.

In the study, it was disagreed that the authority has sensitized road users of on key traffic rules (mean=2.24). As a mandate of the authority, all road users are supposed to be sensitized on road usage, the different signage and other road usage patterns. This helps to create order and easy flow of traffic on city roads, there by paving way to an effectively managed transport system in the city.

In the study, it was agreed by respondents participated in the study that KCCA has functional road expansion policies (mean=3.93) that have been put in place to improve the city's traffic and general transport management. In the effort to improve its road transport system, it was agreed that KCCA has endeavored to improve most road infrastructure in place (mean=4.25), though it was disagreed that it has improved all its lighting systems on roads in the city (mean=2.16). KCCA has endeavored to put in place expansion policies that are supposed to see roads look

wider, user friendly and spacious to all road users. However, KCCA in its transport management endeavors has not been able to install lights on all roads of the city, which lighting helps road usage to all road users and also effectively expand all roads in city centre.

In the study, it was disagreed that KCCA road user traffic rules are fully implemented by KCCA personnel (mean=2.16). Also as a transport management mode in Kampala city, it was disagreed that all roads are well marked by KCCA (mean=1.95). The presence of personnel to ensure adherence to traffic rules and regulations would imply that there is effective transport management meant to improve transport systems in the city.

Interview results on policy factors and transport management in Kampala Capital City Authority (KCCA).

In interviews it was revealed by a KCCA top management officer that KCCA has a number of transport management policies in place that ensure effective transport management in the city. One of the top managers at KCCA explained that major policies in place so far are about decongesting the city traffic and one of the top managers elaborated that

“.....KCCA has a lot of policies in place that are supposed to handle the key transport challenges in our city especially towards decongesting the city with alternative means of transport.....”

This implies that a number of policies in place on transport management currently are meant to decongest the city by providing alternative means of transport in the city that largely reduces vehicle and human traffic in the city centre and other parts of the town. This would help ease

transport in the city centre and also put the city in a more organized way if effectively implemented.

In interviews, it was revealed that in the traffic management policies, there are new policies in place to spear head traffic control in the city centre through non-motorized means as one of respondents explained that

“.....the city intends to introduce non motorized transport means like bicycles, walk ways among others will help reduce traffic and congestion in the city centre.....”

The city intends to implement non-motorized transport management policies like bicycles, and encouraging walking through walk ways that are supposed to reduce on the number of vehicles in the city centre that bring about a lot of traffic that is quite unnecessary. However the full implementation of these policies have been hampered by a lot bureaucracy and other political factors that hinder full and effective implementation of these policies to fully functionalize for effective transport in the city.

It was also revealed that KCCA has traffic policies in place that are meant to help guide the traffic process in the city and one of the respondents explained that

“.....traffic policies are enforced through the main stream police traffic officers and KCCA traffic wardens who help in streamlining the city traffic flow.....”

In the traffic enforcement process officers ensure that traffic rules and regulations on the road are effectively observed by all motorists. These help on the traffic flow on the road as traffic jam is largely reduced and controlled by the presence of these wardens. Most people however do

not follow most of traffic rules on the road as others ignorant of the existence of such rules and regulations or other choose to just ignore them.

In the transport management process, it was also revealed that KCCA has road expansion policies in place that were embarked on in recent years, which is geared towards ensuring that all roads in the city centre and other surrounding areas are effectively expanded in fact one of the officers at KCCA explained that

“.....KCCA has a policy in place to expand and rehabilitate all roads in the city authority geographical areas and its surrounds, this will help reduce congestion in the city as well as bring about easy flow of traffic though such policies have not been effectively implemented.....”

Therefore this implies that the city has policies in place that are mean to ensure expansion and rehabilitation of all the roads in the city so as to ensure easy traffic flow as well as ensure that there is reduced traffic congestion in the city centre and its surroundings. Despite their existence though they have not been effectively implemented since most of the infrastructures, especially the roads have not been well completed or expanded and this has largely compromised transport management in Kampala city.

It was revealed that through the main stream traffic police, those without valid driving permits are regular checked and apprehended accordingly to ensure that only those with experience and learnt how to drive can use the road. This helps to reduce traffic accidents on the roads and ensure that there is effective transport management in the city.

4.4.3 Testing hypothesis one: There is a positive significant relationship between policy factors and transport management in Kampala city.

Results from a correlation analysis between policy factors and transport management are presented in the table below.

Table 6: Correlation between Policy factors and Transport Management

Correlations			
		Policy factors	Transport mgt
Policy factors	Pearson Correlation	1	.743**
	Sig. (2-tailed)		.000
	N	108	108
Transport mgt	Pearson Correlation	.743**	1
	Sig. (2-tailed)	.000	
	N	108	108
**. Correlation is significant at the 0.01 level (2-tailed).			

From the above results, it's clear that there is a positive significant relationship between policy factors and transport management at Kampala capital city authority. The correlation coefficient of .743 (**) with a significance value of .000 explain the nature of the relationship in this situation. Since the p.value is 0.000 higher than 0.01 the relationship is significant hence supporting hypothesis one which states that “There is a positive significant relationship between policy factors and transport management in Kampala city”. This implies that in policy factors where there are effective traffic management policies, road expansion policies, learners driving

learners policies, then the nature of road management is likely to improve in regard to traffic control and traffic service management in the city.

4.4.3.1 Regression analysis

A single regression analysis was run between policy factors and transport management and results are presented in the table below.

Table 7: A single regression analysis policy factors and transport management.

R= .743 R ² = .552						
Model		Un standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.749	.083		9.067	.000
	Policy factors	.273	.024	.743	11.424	.000
a. Dependent Variable: transport mgt						

The results of the regression analysis in the table above indicate the coefficient of determination $R^2=0.552$ which shows that 55.2 % variation in transport management is explained by changes in transport policy factors. This implies that any changes in transport policy factors would lead to 55.2% change in the transport management if policies were well and effectively implemented. The results also show that road transport policies are significantly related with improved transport management in the city ($\beta=0.749$, $p<0.01$). This supports hypothesis one which stated that there is a positive significant relationship between transport policy factors and transport management. This means that improvement in policy factors is significantly and positively associated with improved transport management in the city. This implies that improved transport

management can be attained when there are effective and functional road transport policies in Kampala capital city authority.

4.5 Examine the effect of planning factors on transport management in Kampala Capital City.

The study examined how planning factors on transport management in Kampala Capital City. Respondents were involved in answering questionnaires and interviews. The variable planning factors was looked at in regard to nature of plans by KCCA and implementation of such plans.

4.5.2 Descriptive Results

In questionnaires, the mean were computed in each question to show the mean responses that ranged between 1-5 where; 1-2.4= disagreed, 2.5-3.4=neutral, 3.5-5=agree. In interviews, using thematic content analysis, results were analyzed according to the themes of study. From interviews, expressions and narrations that were relevant to the objectives of the study were captured and presented in their respective themes. Descriptive results are presented first and then triangulated with results from interviews and inferential statistics with correlations and regressions.

Table 8: Planning factors on Transport Management in Kampala Capital City Authority

	Mean	Std. Deviation	N
All stakeholders are involved in the planning process	2.16	1.448	108
KCCA has well functioning transport management plans	2.16	1.276	108
KCCA traffic plans cover traffic concerns of all road users	2.07	1.243	108
Transport management plans cover all transport issues	1.71	.948	108
All plans are implemented in time to users benefit	2.49	1.322	108

Plans are fully implemented in all divisions of Kampala City.	2.22	1.410	108
Implementation is done by right personnel in the authority	1.86	1.036	108
There is significant commitment in the implementation of transport management plans	2.38	1.483	108
All plans are implemented as per plan and budgets	2.21	1.368	108
Valid N (listwise)			108

In the study, it was disagreed that all stakeholders are involved in the planning process of transport management in Kampala City (mean=2.16). It should be noted that in the planning process not all stakeholders are involved especially road users. This implies that most of their concerns are not incorporated in the road management process by Kampala capital city authority. This could be the reason as to why poor infrastructures remain to be seen in Kampala city and a multitude of challenges in road transport management process in the city.

In the study, respondents disagreed that KCCA has well functioning transport management plans (mean=2.16). This implies that despite the existence of well functioning road management plans in place they are very functional as some of them just appear on paper and not implemented. This implies that very good plans are in place at KCCA but their implementation is not effectively done. This does not only compromise on the quality of services delivered to people in the city but it also hampers the long term development of the town and the country at large.

In the study, it was disagreed that KCCA traffic plans cover traffic concerns of all road users (mean=2.07). In the transport management process, it was revealed that KCCA does not actually critically address traffic concerns of all road users in the city. This could be the reason why all road users needs are not effectively addressed in the transport system of the city given the heavy traffic congestion in the city.

In the study it was disagreed that transport management plans are fully implemented in all divisions of Kampala City (mean=2.22). This implies that despite the existence of very many well developed plans in KCCA, their implementation remains a significant challenge to be fully functionalized. Implementation of such plans would help solve some of the many challenges that face the transport system in the city.

In the study, it was disagreed that there is significant commitment in the implementation of transport management plans (mean=2.38) and all plans are implemented as per plan and budgets (mean=2.21). This implies that despite the existence of well qualified employees at KCCA in the transport management process there are no committed employees who to ensure that all plans are implemented in time and as per the budget. This implies employees are not committed to fully functionalize the transport plans in place for effective and well delivered transport services in the city.

4.5.1 Interview Results on the effect of planning factors and transport management in Kampala Capital City.

In interviews, it was revealed that KCCA has a number of plans that are meant to improve transport management in Kampala capital city authority. These are largely short term and long term plans. In fact one of the respondents explained that some of the long term plans of the city authority involve expanding, constructing and rehabilitating roads. Plans on road works will help reduce congestion on the city roads and ease traffic flow in the city.

In regard to short term plans, interviews revealed that lighting of the city is among the short term plans that the city authority has done and intends to do and in fact one of the respondents explained that,

“..... in our plans we intend to light up all road in Kampala city for both new roads and old roads....”

In this, it was revealed that the city plans on putting street lights on all roads in Kampala Capital city authority jurisdiction. This will allow ease the flow of traffic especially at night and also reduce on traffic accidents especially on invisible sports as well as reduce on crime rates in city. However very few roads have street lights on them an aspect that makes them almost un usable especially at night by pedestrians.

It was also revealed that on construction of new roads the city authority looks at improving all the road signage in the city centre. In fact one of the respondents explained that

“.....improving on the signage in the capital city is one of the plans that city authority has in place to improve transport management in the city.....”

Improving city signage, imply that different roads are well marked with clear and visible directions to show particular directions and key features on the city roads. This will help reduce accidents on the road and also ease traffic on the road and reduce traffic jam in Kampala. However the signage has not been done since most of the roads do not even have any mark on them guiding road users on different aspects like zebra crossings among others.

In the study, it was revealed that implementation of these plans is a significant challenge to functionalization of the plans in place at KCCA. In fact one of the respondents lamented that

“....we make so many plans at KCCA for each single financial year but the actual implementation of these plans is a significant challenge since almost all of them are not implemented....”

This implies that despite the many plans that are drafted and shelved regarding effective transport management in Kampala capital city authority, many of them are not implemented. This affects effective transport management in the city that is reflected in poor roads, congestion in the city among other transport challenges.

4.5.3 Testing hypothesis Two: There is a positive significant relationship between planning factors and transport management in Kampala city.

Results from a correlation analysis between planning factors and transport management are presented in the table below.

Table 9: Correlation between planning factors and transport management

Correlations			
		Transport mgt	Planning factors
Transport mgt	Pearson Correlation	1	.730**
	Sig. (2-tailed)		.000
	N	108	108
Planning factors	Pearson Correlation	.730**	1
	Sig. (2-tailed)	.000	
	N	108	108
**. Correlation is significant at the 0.01 level (2-tailed).			

In the study, it was revealed that there is a positive significant relationship between planning factors and transport management at Kampala capital city authority. The correlation coefficient of .730 (**) with a significance value of .000 explain the nature of the relationship between the two variables. Since the p.value is 0.000 higher than 0.01 the relationship is significant hence supporting hypothesis one which states that “There is a positive significant relationship between planning factors and transport management in Kampala city”. This implies that in planning factors that outline the nature of plans that are put forward to manage transport in Kampala city

and whether such plans are implemented significantly influence the nature of transport management in Kampala City.

4.5.3.1 Regression analysis

A single regression analysis was run between planning factors and transport management and results are presented in the table below.

Table 10: A single regression analysis planning factors and transport management.

R= .730 R² = .533						
Model		Un standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.679	.091		7.435	.000
	Planning factors	.262	.024	.730	11.009	.000
a. Dependent Variable: transport mgt						

From the table above, regression results were obtained with a coefficient of determination $R^2=0.533$ which shows that 53.3 % variation in transport management is explained by changes in transport planning factors. This implies that any changes in transport planning factors would lead to 53.3% chance change in the transport management if all plans were addressing people’s needs and were well implemented. In the study results confirm that road transport planning factors are significantly related to improved transport management in the city ($\beta =0.730$, $p<0.01$). This supports hypothesis one which stated that there is “a positive significant relationship between transport planning factors and transport management”. Therefore this implies that improvement in planning factors is significantly and positively associated with

improved transport management in the city. This implies that improved transport management can be attained when transport plans are effectively implemented.

4.6 Effects of resource management factors on transport management in Kampala City (KCCA).

In the study, results from questionnaires were computed to obtain means that shows the average responses in each question of the likert scale and results are presented below. The study examined the influence of resource management factors on transport management in Kampala City (KCCA). Respondents were involved in answering questionnaires and interviews.

4.6.2 Descriptive Results

The variable resource management was looked in regard to resource availability, resource amounts and resource usage. In questionnaires, the mean were computed in each question to show the mean responses that ranged between 1-5 where; 1-2.4= disagreed, 2.5-3.4=neutral, 3.5-5=agree. Using thematic content analysis interview, results were analyzed according to the themes of study. From interviews, expressions and narrations that were relevant to the objectives of the study were captured and presented in their respective themes. Descriptive results are presented first and then triangulated with results from interviews.

Table 11: Descriptive results on resource management factors

	Mean	Std. Deviation	N
There are enough resources to carry out infrastructure improvement at KCCA	2.45	1.293	108
Available resources are enough to cover all budget activities	3.34	1.193	108

KCCA internally generates resource that helps in execution of some activities	3.77	1.107	108
Available resources are enough all activities of the authority	3.53	1.093	107
Resource amounts fetched from government and other sources are always big	3.89	4.772	108
All available resources are fully utilized in KCCA	2.01	1.450	108
The available personnel ensure transparency on resource usage	1.33	.580	108
Each department at KCCA has enough resources to run its activities	1.50	.604	108
Finances are handled with utmost efficiency	1.50	.755	108
All resources are committed according to plan	2.06	1.134	108
Valid N (listwise)			107

In the study it was disagreed that there is enough resources to carry out infrastructure improvement at KCCA (mean=2.45). Though others were not sure whether available resources are enough to cover all budget activities (mean=3.34). Respondents believe that the city authority doesn't have enough resources to carry out thorough infrastructure improvement. It should be noted that availability of resources enables to carry out effective infrastructure developments in the city. This allows well built sewage systems in place and other infrastructural developments that make the city more habitable.

In the study, it was agreed that KCCA internally generates resource that help in execution of some activities (mean=3.77). It should be noted that the authority is mandated to collect city trading revenues and taxes in all city businesses; this gives it chance to raise internally generated funds which can be used to do infrastructural developments in the city. However such funds have not been effectively or utilized by those in authority and in its management.

In the study, it was disagreed that all available resources are fully utilized in KCCA (mean=2.01). In the study respondents believe that KCCAs resources in the transport management process have not been fully and effectively utilized by those managed as respondents believe the available personnel ensure does not ensure transparency on resource usage (mean=1.33). This largely implies that respondents believe the city authority resources are not effectively and transparently utilized since there are a number of malpractices in the city transport management process. This leaves resource usage by Kampala Capital City Authority with a lot of weaknesses.

It was further disagreed by respondents in the study that each department at KCCA has enough resources to run its activities (mean=1.50) and finances are handled with utmost efficiency (mean=1.60). In the study respondents believe that not all departments have enough resources at KCCA to fully run its activities especially in the transport management process. Also respondents believe there is no efficiency in managing the finances of the authority. This therefore implies that even the little available resources are not fully and effectively utilized.

In the study, it was further disagreed that all resources are committed according to plan (mean=2.06). Respondents in the study believe that resources are not committed according to plan since some resources are committed to non priority areas especially as the result of political influence or any other pressures from other sources. Implementing activities away from plans leads to misappropriation of such resources in place which leads to less or no achievement of the intended development objectives.

4.6.1 Interview Results on resource management factors and transport management in Kampala City (KCCA).

In the study, it was revealed that the city has enough resources that can afford to effectively sort out transport management challenges in the city centre in fact one of the respondents at KCCA explained that

“.... We have enough funds that can afford to solve all the city transport problem...; we also collect a lot of revenue from city businesses and get a lot of funding from different agencies for city development.....”

This implies that the city has a large pull of resources that is generated internally as well as from other development partners. The pull of these funds can effectively help the KCCA effectively and fully implement its road transport management activities.

However it was revealed that despite the existence of a large pulls of resources from various sources the revenues are not effectively utilized as one of the respondents explained that

“....resource usage is a big challenge at KCCA, despite the large pull of resources that we have less of such resources are effectively Utilized....”

This implies that despite the big pull of resources that KCCA manages to collect from various sources, the resources are not effectively used by different stakeholders in different departments in the organization. Corruption and other malpractices dominate resource utilization in the resource usage process in the road management process at Kampala capital city authority. This does not only impend transport management in Kampala but it also prevents the social economic development of the city and the country at large.

4.6.3 Testing hypothesis Three: Resource management factors significantly affect transport management in Kampala City.

Results from a correlation analysis between resource management factors and transport management and results are presented in the tables below.

Table 12: Correlation between resource management factors transport management

Correlations			
		Transport mgt	Resource mgt
Transport mgt	Pearson Correlation	1	.707**
	Sig. (2-tailed)		.000
	N	108	108
resourcemgt	Pearson Correlation	.707**	1
	Sig. (2-tailed)	.000	
	N	108	108
**. Correlation is significant at the 0.01 level (2-tailed).			

As indicated in the table above there is a positive significant relationship between resource management factors and transport management. The obtained correlation co-efficiency of .707 (**) with a significance value of .000, explains the positive nature of relationship that exists between resource management factors and road transport management. Since the p.value is 0.000 is smaller than 0.01 the relationship is significant hence supporting hypothesis three that “Resource management factors significantly influence transport management in Kampala City”. This implies that in situations where available resources are managed well this significantly

influences transport management in Kampala City. Therefore improved efficiency in resource management may lead to positive improvement in road transport management in KCCA.

4.6.3.1 Regression Analysis

A single regression analysis was run between resource management and road transport management results are presented in the table below.

Table 13: A single regression analysis resource management and transport management.

		R=707		R² =500		
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.815	.085		9.588	.000
	Resource mgt	.231	.022	.707	10.292	.000
a. Dependent Variable: transport mgt						

Results in the regression table above was obtained with a coefficient of determination $R^2=0.500$ which shows that 50% variation in transport management is explained by changes in transport resource management factors. This implies that any changes in resource management factors would lead to 50% chance change in the transport management if all resources are available, in required amounts and such resources are effectively used. In the study results confirm that resource usage factors are significantly related to improved transport management in the city ($\beta =0.707$, $p<0.01$). This supports hypothesis three which stated that resource management factors significantly influence transport management. This implies that well usage of resources is significantly and positively associated with improved transport management in the city.

4.7 Chapter Summary

The chapter presents the findings of the study which were done according to the objectives of the study. The findings are presented in descriptive form and inferential statistics form as well as

descriptive results from interviews. The finds in chapter formed a basis for summary and discussion of results in the next chapter.

CHAPTER FIVE

SUMMARY, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study examined factors that affect transport management in Kampala Capital City Authority (KCCA). The study specifically looked at policy factors, planning factors and resource management factors and how they affect road transport management in Kampala Capital City Authority (KCCA). This chapter presents the summary, discussion, conclusions, and recommendations of the study and these are presented according to the findings in chapter four.

5.2 Summary of Findings

The study, examined the factors that affect transport management in Kampala Capital City Authority (KCCA). The study adopted cross sectional survey design to carry out the research with both qualitative and quantitative approaches. The study looked at how policy factors, planning factors and resource management factors affect road transport management.

In objective one; there was a positive significant relationship between policy factors and transport management in Kampala Capital City Authority (KCCA) ($r=0.743$, $p=0.000$) with a regression R^2 of .552. This implies that with functional traffic management policies, road expansion policies and driving policies that are effectively implemented and well functioning directly relates to transport management system in the city that allows easy and quick flow of traffic.

In objective 2; there was a positive significant relationship between planning factors ($r=.730$, $p=0.000$) and transport management in Kampala Capital City Authority (KCCA) with a

regression R^2 of .533. This implies that in a situation where there are a number of good plans in place and such plans are well implemented, it implies road transport management will be effectively done.

In objective three study findings, revealed a positive significant relationship between resource management factors and road transport management ($r=0.707$, $p=0.000$) and regression R^2 of .500. This implies that improvement in resource management factors is significantly and positively associated with improved transport management in the Kampala City.

5.3 Discussion of Findings

The findings are discussed according to the objectives of the study and details are presented below.

5.3.1 Policy factors on transport Management.

In the study it was revealed that there is a positive significant relationship between policy factors and transport management at Kampala capital city authority. This implies that in policy factors where there are traffic management policies, road expansion policies and learners driving policies, then the nature of road management is likely to improve in regard to traffic control and traffic service management in the city. This finding is in line with Dominic, (2006) who assert that transport management involves sustainable infrastructure investments and travel policies that serve multiple goals of economic development, environmental stewardship and social equity. A sustainable transportation system has its goal service output and stewardship of the landscape and resource base, not simply the efficiency of the highway system.

In a regression analysis, 55.2 % variation in transport management is explained by changes in transport policy factors. This implies that any changes in transport policy factors would lead to

55.2% change in the transport management if policies were well and effectively implemented. Therefore improvement in policy factors is significantly and positively associated with improved transport management in the city. This finding is in line with Cook & Lawrie, (2004) who explain that effective transport policies lead to an effectively managed transport policy in the country. Some of the transport management policies cover the management of traffic and transport services for all modes, covering both passenger and freight transport.

Having a number of policies in place on transport management that are to decongest the city by providing alternative means of transport in the city that largely reduces vehicle and human traffic in the city centre and other parts of the town is a very significant aspect in transport management process. In line with this finding Ferreira and Cruz, (2009) explain that concerns about the limitations of transport infrastructure and the emergence of significant environmental externalities have strengthened the role of alternative transport modes in promoting more efficient and sustainable development

Decongesting the city is one important aspects in transport management like introducing non-motorized transport management policies like bicycles, and encouraging walking through walk ways that are supposed to reduce on the number of vehicles in the city centre that bring about a lot of traffic that is quite un necessary. However the full implementation of these polices have been hampered by a lot bureaucracy and other political factors that hinder full and effective implementation of these policies to fully functionalize for effective transport in the city.

The city has policies in place that are meant to ensure expansion and rehabilitation of all the roads in the city so as to ensure easy traffic flow as well as ensure that there is reduced traffic congestion in the city centre and its surroundings. Despite their existence, they have not been

effectively implemented since most of the infrastructures, especially the roads have not been well completed or expanded and this has largely compromised transport management in Kampala city.

Sensitization of road users on road usage is an important aspect that can help improve on transport management in the city. As a mandate of the authority, all road users are supposed to be sensitized on road usage, the different signage and other road usage patterns. This helps to create order and easy flow of traffic on city roads, there by paving way to an effectively managed transport system in the city. This is in line with Turco, (2008) who assert that strong transport management policies are more needed in urban areas than anywhere else especially in transport infrastructure usage. This borrowed from the fact that the complexities in urban infrastructure and the need for greater integration in providing, maintaining and managing urban public utilities require stronger transport policies.

5.3.2 Planning factors on transport management in Kampala Capital City.

In the study it was revealed there is a positive significant relationship between planning factors and transport management. This implies that in planning factors that outline the nature of plans that are put forward to manage transport in Kampala city and whether such plans are implemented significantly influence the nature of transport management in Kampala City. This finding is in line with Finn, (2005) who explain that transportation planning is integrated with urban life as an action paving the way to reach economical, social and cultural resources. It is difficult to formulize all the needs, demands and trends that are to be satisfied by the transportation system. Thus, transportation planning is, first of all, a political issue. Therefore planning of transport systems cannot be regarded as processes other than a decision-making

process that develops through the interactive influences of different sides and their exchange of ideas. These sides consist of individuals and benefit groups, planners, and decision-makers.

In a regression analysis, there is 53.3% chance change in the transport management if all plans were addressing people's needs were well implemented. Therefore this implies that improvement in planning factors is significantly and positively associated with improved transport management in the city. This implies that improved transport management can be attained when transport plans are effectively implemented. This is in line with Finn, (2005) who explain that Planning in transportation can have a quality of meaningfulness, realism, applicability and aim fullness if it is realized by taking the different conditions of each case into consideration. It is impossible to improve transportation through the conventional passive approach, in which the future demands are predicted by utilizing the past trends. Planning the transportation system in a directive and active way would be a logical approach. It is difficult to realize this approach, but it has become obligatory (Bruggeman, 2009).

Providing lighting to roads is an important aspect in the transport management process. City plans on putting street lights on all roads in Kampala Capital city authority jurisdiction. This will allow ease the flow of traffic especially at night and also reduce on traffic accidents especially on invisible sports as well as reduce on crime rates in city. However very roads have street lights on them an aspect that makes them almost un usable especially at night by pedestrians. This is in line with Genton, (2011) who explain that transport management Planning approaches are criticized also in developed countries, where there is a planning tradition and where planned development is under operation. Some say that instrumental approach should be replaced by the communicative approach (Willson, 2001). Most of the criticism focuses on demand predictions,

which lie in the centre of the classical planning processes. He proposes that the utility function should be expanded beyond the limits of economical behavior in the transport management process.

Improving city signage, imply that different roads are well marked with clear and visible directions to show particular directions and key features on the city roads. This will help reduce accidents on the road and also ease traffic on the road and reduce traffic jam in Kampala. However the signage has not been done since most of the roads do not even have any mark on them guiding road users on different aspects like zebra crossings among others.

Despite the many plans that are drafted and shelved regarding effective transport management in Kampala capital city authority, many of them are not implemented. This affects effective transport management in the city that is reflected in poor roads, congestion in the city among other transport challenges.

It should be noted that in the planning process not all stakeholders are involved especially road users. This implies that most of their concerns are not incorporated in the road management process by Kampala capital city authority, which may be the reason as poor infrastructure remain to be seen in Kampala and challenges remain to be seen in the road management process in the city.

The existence of well qualified employees at KCCA in the transport management process there are no committed employees who to ensure that all plans are implemented in time and as per the budget. This implies employees are not committed to fully functionalize the transport plans in place for effective and well delivered transport services in the city.

5.3.3 Resource management factors on transport management.

Resource management is significantly related to transport management. This implies that in situations where available resources are managed well this significantly affect transport management in Kampala City. Therefore improved efficiency in resource management may lead to positive improvement in road transport management in KCCA. This is in line with Tembele et al (2008) who explain that in transport management the availability and usage of funds is significantly important. Many developing cities have limited funds and planning expertise, and inexperienced local institutions to implement plans and enforce policies. For these cities, transportation planning, infrastructure development, and policy implementation is difficult. explain that the experience of the last two decades in Sub-Saharan Africa shows that the big problem is not a lack of good ideas about how the urban transport situation can be improved. The real bottleneck is the absence of a capable and dedicated urban government, therefore it is not lack of money, expenditures on transport are actually far too high already (Turco & Arcusin, 2008)

In the regression analysis, 50% variation in transport management is explained by changes in transport resource management factors. Meaning that, any changes in resource management factors would lead to 50% chance change in the transport management if all resources are available, in required amounts and such resources are effectively used. This is in line with Amsler, (2006) that resource management plays a significant role in transportation management in cities. Transportation plays a central role in economic, social, and environmental development. The goal of transportation is to move goods and passengers efficiently, while limiting negative impacts on the environment and society. Although simple to state, the goal is difficult to achieve.

It requires a variety of resources, organizations and institutions in the public and private sectors and at the local, regional, national, and sometimes even international levels to operate in concert. It requires continuous balancing of desires and needs within the context of existing institutions and shifting political and economic interests.

Despite the big pull of resources that KCCA manages to collect from various sources, the resources are not effectively used by different stakeholders in different departments in the organization. Corruption and other malpractices dominate resource utilization in the resource usage process in the road management process. This is in line with Castillo and Benitez, (2012) who explain that in resource management resource-efficiency (service output against resource input) measures service inputs per amount of service produced; resource-effectiveness (service consumption against resource input) measures the service inputs per the exact service provided for commuters; and service effectiveness (service consumption against service output) measures the extent to which passengers consume outputs. Other studies, add that the use of indicators for the quality of the service is also relevant.

Resources in the transport management process have not been fully and effectively utilized by those managed as respondents believe the available personnel ensure does not ensure transparency on resource usage. This largely implies that respondents believe the city authority resources are not effectively and transparently utilized since there are a number of malpractices in the city transport management process. This leaves resource usage by Kampala Capital City Authority with a lot of weaknesses.

In resource management not all departments have enough resources at KCCA to fully run its activities especially in the transport management process. Also respondents believe there is no

efficiency in managing the finances of the authority. This therefore implies that even the little available resources are not fully and effectively utilized.

In resource management resources are not committed according to plan since some resources are committed to non priority areas especially as the result of political influence or any other pressures from other sources. Implementing activities away from plans leads to miss-use of resources in place less or no achievement of the intended development objectives.

5.3.4 Chapter Summary

This chapter presents the discussion of results from the study and also presents the key conclusions that were drawn from the study. This chapter helps to draw key lessons learnt from the study and draws recommendations for further action.

5.4 Conclusions

From the findings of the study, the following conclusions for each objective were reached as presented below.

The affect of policy factors on transport management in Kampala Capital City Authority (KCCA).

Kampala Capital City Authority policies are not fully implemented but largely appear on paper on paper like the bicycle and pedestrian policies, all these are kept in shelves and have not been implemented. This leaves transport management in Kampala City a big challenge.

Road expansion policies are in place to help widen all the roads in the city geographical boundaries. Despite their existence however these policies have not been effectively implemented since the city remain to be seen with poor infrastructure in form of roads hence compromising the road management process.

The effects of planning factors on transport management in Kampala Capital City (KCCA).

The majority of plans are not effectively implemented for example the city authority had the plan of providing street lights on every road but this has not been done. This does only put effective transport management in the city at a stake but also affects the overall transport system in the city.

In the short term road management plans, KCCA has not been able to fully implement policies on road usage like that involve road signage to help road properly use the road. Most roads do

not have any road signs on them and this renders road users not to effectively use these roads as it also causes a lot of traffic jam in the city.

The effects of resource management factors on transport management in Kampala City (KCCA).

The city authority collects a lot of revenue from different sources both internally and others from other development partners. However these resources are not effectively utilized or used as malpractices in form of corruption and other forms dominate the situation in the road management process.

5.5 Recommendations

From the findings of the study, the following recommendations were made.

The effects of policy factors on transport management in Kampala Capital City Authority (KCCA).

The number of policies on road transport should be effectively implemented by KCCA especially the bicycle policies. A simple and dedicated lane can be constructed particularly for bicycles and another for pedestrians or designate particular roads for pedestrians or cyclists this will help reduce on the heavy traffic jam that has hampered transport management in Kampala.

Road expansion in Kampala city should be emphasized by different bodies like Parliament, the donors and other development agencies with strict time lines and strict targets should be emphasized by these bodies, such that all roads are mapped, expanded and finished in time. This can be done by suggesting heavy penalties for those failing the project through corruption or any other way.

The effects of planning factors on transport management in Kampala Capital City Authority (KCCA).

Planning for KCCA should be channeled through a consultant that is supposed to carry out feasibility studies and bring on board only such plans that have been thoroughly studied and well articulated for implementation each financial year. This will help prioritize some of the plans in place and make sure that such priority plans are effectively implemented.

KCCA needs to hire an independent consultant to follow up on the implementation of all projects by KCCA. These should be empowered by the parliament of Uganda as well as donors. These

consultants should be mandated to carry out evaluations on whether all the proposed plans like installing lights on all roads, marking all roads were made among others were done. With such a serious and more stringent audit system those involved in malpractices will fear fully implement plans as though put.

The effects of resource management factors on transport management in Kampala City (KCCA).

KCCA needs to set up an independent committee comprising of government, senior citizens of this country, and members of the donor community to supervise the disbursement and usage of all the resources owned by the city authority. This should be done by first declaring how much is in their treasury and these people should supervise such resources up to when projects are put in place and effectively functioning.

Areas for further research

The following areas can be addressed by future research;

1. The effect of political influence on effective service delivery in the transport sector in Uganda
2. The effect of corruption on service delivery in the transport sector in Uganda
3. The influence of leadership styles on service delivery quality in the service delivery in Uganda

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APPENDIX I: QUESTIONNAIRE FOR RESPONDENTS.

Questionnaire Number.....

Dear respondent,

I am requesting you to fill this questionnaire, which is aimed at collecting data on the factors that affect transport management in Kampala Capital City Authority (KCCA). You have been selected to be one of our respondents in this study. The information provided will be treated with strict confidentiality and shall not be used for any other purpose except for academic purposes. The study will ensure your anonymity and confidentiality. Thank you very much for your cooperation

Instructions

Mark with a tick or an X against the response you think is the most appropriate to you.

SECTION A.

Gender of the respondent.

- 1. Male
- 2. Female

Education level.

- 1. Primary level
- 2. Secondary level
- 3. Diploma
- 4. Degree
- 5. Masters degree
- 6. Others specify.....

Age of respondent.

- 1. Below 20 years
- 2. 20-25
- 3. 26-30

4. 31-35
5. 36-40
6. 41-45
7. 46-above

For the following questions please tick the number of your choice

Key

- 1. Strongly Disagree**
- 2. Disagree**
- 3. Not Sure**
- 4. Agree**
- 5. Strongly Agree**

SECTION B

POLICY FACTORS ON TRANSPORT MANAGEMENT IN KAMPALA CAPITAL CITY AUTHORITY (KCCA).

Traffic Management Policies						
1.	KCCA has traffic management policies in place	1	2	3	4	5
2.	The traffic management policies are well functioning on all roads of Kampala	1	2	3	4	5
3.	Policies in place provide for enough traffic personnel to manage road transport systems in KCCA	1	2	3	4	5
4.	The authority has sensitized road users of on key traffic rules	1	2	3	4	5
Road Expansion Policies						
6.	KCCA has functional road expansion policies	1	2	3	4	5
7.	KCCA has endeavored to improve most road infrastructure in place	1	2	3	4	5
8.	KCCA has improved all its lighting systems on roads in the city	1	2	3	4	5
9.	All roads in Kampala City have been widened	1	2	3	4	5
10.	All roads are well marked by KCCA	1	2	3	4	5
Driving Policies						
	KCCA has functional road user policies					

	Road user traffic rules are fully implemented by KCCA personnel					
	KCCA has enough personnel to enforce traffic rules on all road users					
	KCCA endeavored to sensitize people on road usage rules in Kampala					

SECTION C.

THE EFFECT OF PLANNING FACTORS ON TRANSPORT MANAGEMENT IN KAMPALA CAPITAL CITY.

Nature of Plans						
1	All stakeholders (technical and road users) are involved in the planning process of transport management in Kampala City	1	2	3	4	5
2.	KCCA has well functioning transport management plans	1	2	3	4	5
3.	KCCA traffic plans cover traffic concerns of all road users	1	2	3	4	5
4.	Transport management plans cover all transport issues	1	2	3	4	5
Plan Implementation						
6.	All plans are implemented in time to users benefit	1	2	3	4	5
7.	Transport management plans are fully implemented in all divisions of Kampala City.	1	2	3	4	5
8.	Implementation is done by right personnel in the authority	1	2	3	4	5
9.	There is significant commitment in the implementation transport management plans	1	2	3	4	5
	All plans are implemented as per plan and budgets					

SECTION D.

THE EFFECTS OF RESOURCE MANAGEMENT FACTORS ON TRANSPORT MANAGEMENT IN KAMPALA CITY.

1.	There enough resources to carry out infrastructure improvement at KCCA	1	2	3	4	5
2.	Available resources are enough to cover all budget activities	1	2	3	4	5
3.	KCCA internally generates resource that help in execution of some activities	1	2	3	4	5
4.	Available resources are all activities of the authority	1	2	3	4	5
5.	Resource amounts fetched from government and other sources are always big	1	2	3	4	5
6.	All available resources are fully utilized in KCCA	1	2	3	4	5
7.	The available personnel ensure transparency on resource usage	1	2	3	4	5
8.	Each department at KCCA has enough resources to run its activities	1	2	3	4	5
9.	Finances are handled with utmost efficiency	1	2	3	4	5
10.	All resources are committed according to plan	1	2	3	4	5

SECTION E.

TRANSPORT MANAGEMENT.

1	Kampala city has well functioning roads	1	2	3	4	5
2.	All roads are well marked	1	2	3	4	5
3.	Traffic rules are well followed by all road users	1	2	3	4	5
4.	Traffic is well managed in Kampala city	1	2	3	4	5
5.	all traffic lights are fully functioning on all roads of the city	1	2	3	4	5

6.	All roads in Kampala city are well organized and orderly	1	2	3	4	5
7.	all roads are well improved and expanded	1	2	3	4	5

APPENDIX II: INTERVIEW GUIDE TRAFFIC OFFICERS AND SOME ROAD USERS.

1. How do you understand transport management?

.....
.....

2. In what ways has transport been managed in Kampala city by KCCA

.....
.....

3. How do Policy factors affect transport management in KCCA

.....
.....

How do the following aspects affect transport management at KCCA

Traffic management policies

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Road expansion policies

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Driving Education policies

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.....

Planning factors

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Nature of plans

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.....

Plan implementation

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Resource management factors

.....
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Resource availability

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Resource amounts

.....
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Resource usage

.....
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APPENDIX III: DOCUMENT REVIEW CHECK LIST

The following headings will be used in the document review checking process

Transport management

Traffic management policies

Road expansion policies

Driving Education policies

Planning factors

Nature of plans

Plan implementation

Resource management factors

Resource availability

Resource amounts

Resource usage