

**DETERMINANTS OF PROFITABILITY IN PUBLIC TRANSPORT: A
CASE OF SAVINGS AND CREDIT COOPERATIVES (SACCOS) IN
ELDORET, KENYA**

BY

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DECLARATION

I declare that this research project report is my original work and has not been presented for a degree or any other award in any other University.

Signed **Date**

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L50 / 61981/2013

This research project report was carried out by the above student, to fulfill academic requirement, under my supervision as university supervisor.

Signed **Date**

MR. STEPHEN OKELLO

DEDICATION

The project report is dedicated to my late Dad Mr. John Luvala who gave me the motivation and encouragement to do this masters degree.

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ABSTRACT

Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important. Profitability is earned by carrying out business activities such as Transport business. Public Transport is perceived to be the most important sector of economy that provides transport services to the public. In Public Transport, profitability is realized through daily transport services offered to the general public. The purpose of this study was to establish the determinants of profitability in Public Transport. The study was steered by the following objectives: to establish how infrastructural factor is determinant of profitability on Public transport, to establish how the service route factor is determinants of profitability on Public Transport and to establish how urban mobility factor is determinant of profitability in Public Transport. The study was conducted through a survey research design. The study targeted the management and drivers from different SACCOs in Eldoret town. The study selected four SACCOs operating within Eldoret namely: Chepkoilel SACCO, Mailinne SACCO, North Rift SACCO and Eldoret SACCO. The study employed the use of purposive sampling to select the management staff while stratified sampling was employed to select the various Public transport operators in the various routes. The study used the Krejcie and Morgan formulae (1970) which gave a sample size of 165 respondents when a researcher targets 294 respondents. The study used both questionnaires and interview schedules to collect data. The study adopted both quantitative and qualitative analysis in order to achieve the objective of the study. In quantitative techniques the researcher used descriptive statistics such as frequencies and percentages to analyze the data. The data was coded using the statistical package for social scientist (SPSS), analyzed and presented in form of tables, frequencies and percentages. The study findings revealed that government regulation, infrastructure, service route and urban mobility patterns determined the profitability in the Public Transport. These factors were found to have a direct effect of the profitability. The study based on the findings recommended that government as a regulator should involve the entire stakeholder in formulation of policies so as to ensure fairness to all parties involved; introduction of e-payment in the Public transport to curb corruption and national and county government should invest more in road infrastructure so as to enhance Public transport business.

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ACRONYMS AND ABBREVIATIONS

FBT:	Fringe Benefits Tax
ISI:	Import Substitution Industrialization
NGO:	Non-Governmental Organizations
SPSS:	Statistical Package for Social Sciences

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important. Profitability is measured with income and expenses. Income is money generated from the activities of the business. An Income Statement is traditionally used to measure profitability of the business for the past accounting period. However, a “pro forma income statement” measures projected profitability of the business for the upcoming accounting period. A budget may be used when you want to project profitability for a particular project or a portion of a business (Cervero, 2000)

Public transport industries are businesses offering transport services to the public. As businesses they are privately owned, with the aim of generating profits for their owners. They enjoy no government subsidies and are required to be registered and pay taxes. Furthermore, they must comply with both ordinary traffic laws and specific regulations governing their operations. One might therefore expect public transport to form a modern public transport system for the country. Instead Public transports often violate traffic regulations, and ignore at least some of the specific regulations. At times, they appear to be a law unto themselves. History offers some insight into how this situation developed and points to the need for a better understanding of the day-to-day operations of public transport businesses (The International Co-operative Alliance, 1995).

In United Kingdom, many cities allow small operators to operate without hindrance, and in some cases, small operators are responsible for all service provision. The modes of transport are the passenger bus and privately owned motor vehicles. However, alternative forms, like bicycles and horse-drawn vehicles are widely used and are seen even on major routes although they pose hazards. Traveling after dark outside city centers poses great danger because of animals and roadworthy vehicles (Golub, 2007). Informal minibus operators began circulating illegally in the 1960s (Lee, 1990). They were neither licensed nor insured for transit operations, and competed directly with other formal transit services.

Other examples of informal transport in the developed world include the black cabs of Belfast, Ireland; the Little Cuba cabs of Miami; and Pittsburgh's grocery store station-wagon services (Cervero, 1997). Cervero and Golub (2007), these unlicensed informal operations compete directly with municipal bus services. They also note that in the developed world, Public transport welfare association services ply their trades in niche market in low-income neighborhoods that are ignored and sometimes outrightly redlined by authorized taxicab operators. The literature on Public transport welfare association presumes some uniformity in their operations, and the differences in business characteristics, operations, and strategies do not seem to be taken into consideration.

In Asia, the growing Asian cities have experienced rapid economic development and urbanization since the latter half of last century. This development has resulted in a significant increase in the mobility of people and goods that are highly automobile-dependent. Most major cities, except Hong Kong and Singapore, have exhibited a high rate of increase in car ownership. Capital cities in Korea and the ASEAN (Association of

Southeast Asian Nations) countries have shown the highest increase over the last two decades. Due to the higher rate of increase in car ownership than in road supply, the present carrying capacity of the road network cannot cope with a further increase in traffic demand. In the case of Seoul, car ownership per thousand people has increased more than 10 times, from 15.6 in 1980 to 181.6 in 2000, resulting in a drastic decrease in road length per passenger car. Tokyo and Nagoya show similar trends with data showing a level of 5 km/passenger car. This trend has caused a deterioration of road network conditions, which in turn has brought about the reduction in the average travel time along major corridors within big cities (Cervero, 1997)

Currently, numerous Asian models are known, particularly those concerning passenger transport. Among them, well-known examples are the dense urban and interurban railway networks of Japan, Korea and Singapore's advanced systems of demand management, including road pricing. In some Asian countries, public transport systems can provide seamless, almost door-to-door service for large numbers of residents. In other countries, a variety of non-motorized and economical transport systems provide essential service. Public transport has been developed in close connection with urban development for a relatively long time, since the early twentieth century. In Bangkok, Metro Manila, and Singapore, horse drawn tramways and streetcars were introduced earlier than in OECD countries. In Tokyo, railway construction had already begun in the late nineteenth century. These transport systems were formed, having competitive and complementary relationships with earlier modes of transport such as horse drawn carriages and rickshaws. They played a specific role in urban expansion and the formation of cities.

When motor vehicles were imported around the middle of the twentieth century, buses and taxis began operating. Although the transport systems continued to be developed and enhanced, traffic became congested in central areas and consequently the streetcars declined. Thereafter, motor vehicle-based public transport systems were developed along with the progress of motorization in the second half of the twentieth century. However, public transport has not been able to bridge the gaps between demand and supply. In each city, these systems continue to be developed according to the city's own particular characteristics. Asian transport systems have the following features in common: high reliance on road public transport, well-developed public transport systems to provide almost door-to-door service, and mixed transport by diverse transport modes

In Africa, Public transport is the majority means of public transportation. Most countries in Africa have devoted for public transport due to its flexibility and also the general perception of being cheap and readily available. Cervero and Golub (2007) suggest that in much of Africa and in smaller Asian cities where municipal budgets are stretched thin and where technical capacities for planning, administration and regulation are insufficient, informal transport is almost by default the only dependable available service.

In Uganda, following the divestiture of the Uganda Transport Corporation in 1990, public passenger transport competition is among the private sector buses, mini-buses and cars that compete among themselves. However, the mini-vans dominate the city service, while buses that operate alongside mini vans, dominate the long distance

routes. Conversely, an earlier study by Golub (2005) confirmed that, in many African cities and towns, regular public transportation systems do not meet all of the demands of the marketplace and thus small- scale operators, legally or illegally enter the market to fill these gaps. They tend to complement regular transit services or serve areas or populations not traditionally serviced by regular services, and they can be extremely efficient and responsive to market demands and changes.

In Tanzania, just like in Kenya and Uganda, Public transports are the informal industry that provide service to millions of people each day and are essentially the backbone of the transportation system in Tanzania. Public transport plays an important role in incorporating the various sectors in the economy. Public transport's account for 60% of the total public transport in the country (Republic of Tanzania, 2004). During this time, public transport system was well organized, well coordinated and regulated. Bus companies were licensed and paid taxes to the Government. Buses were assigned specific routes and travelled on a strict time-table. Travelers knew when a bus would arrive and leave a given station. Public transports in Tanzania commonly referred to as daladala is a mode of transport that operates parallel to an organized, usually large scale government or government subsidized transport system (Strashok *et al.*, 2006).

In Kenya, Public transport transport enters the public transport system early 1950s but first as pirate taxis, these were not licensed but they were tolerated. Public transport is the main mode of transport for people and goods in Kenya, it has been asserted that this is because the majority of citizens cannot afford to buy and maintain their own private vehicles. This is true for both urban and rural areas. Studies indicate that from the early 1900s, until 1973, the public transport landscape in Kenya was dominated by a few

multinational bus companies such as the Overseas Trading Company (OTC) and Kenya Bus Services (KBS); these had their roots in Britain, the colonial power. During this time, public transport system was well organized, well-coordinated and regulated. Bus companies were licensed and paid taxes to the Government. Buses were assigned specific routes and travelled on a strict time-table (Scalar, 2007).

Travelers knew when a bus would arrive and leave a given station. In a nutshell, the Kenyan public transport system was orderly and disciplined during this period. In Kenya, parallel to this organized public transport system, individual entrepreneurs operated an informal public transport system, using cheaper vans and minibuses to ferry people along much less regulated routes to, from, and through the city. Historically, Public transport operators have lower overheads and operating costs and therefore, charge relatively low fares, have no strict travel schedules, travel faster on both designated and non-designated routes, pick up and drop passengers at designated and non-designated stop points, and operate nearest to where majority of the low income population lives. They are therefore popular modes of transport, particularly in the urban and peri-urban areas, where they serve low income earners (Scalar, 2007).

In Eldoret, as well as in many towns in the country, rapid urbanization, high operational costs crumbling infrastructure and weak institutions result in depleted public transportation services and service voids. To fill this void, informal and mostly private transport services have cropped up as there are often few alternatives. In many of the routes serving the town, the informal Public transport industry is generally described as dangerous, profit driven and environmentally unfriendly, while at the same time, necessary for mobility. This is the case in Eldoret, where the public transport industry is

comprised of 14-seater vehicles, minibus taxis called Public transports. Conversely, the town has most inter-regional transport routes that are served by Public service Vehicle (PSV) commonly 14-seater Public transports. Public transport services are available in all routes of the town. Special hire taxis are found in the town but this offers limited competition. The town is served by inadequate bus services and therefore an investment opportunity exists in this town. Road transport in Eldoret is by far the most dominant mode of transport and it plays a pivotal role in supporting the economic and social development of the town.

1.2 Problem Statement

Ideally, profitability is the main target of all business ventures. Without profitability the industry is likely not to survive in the long run. Public Transport like any other investment deserves to be working hard to make profits in their capacity. They have to build on strategies that ensures profitability, to offer reliable services that assures them of customer confidence, act in accordance to the laws and regulations of the land and ensure they earn an integral reputation and above all for a welfare that will agitate for their rights and ensure they are not abused in their course of operation. This should be the guideline which they need to follow to ensure they achieve their main objectives as profitability.

However, in most urban areas, it is increasingly becoming difficult for public transport to compete with the private car. An increase in real income has resulted in a higher level of private car ownership and use. The ongoing process of residential suburbanization and employment decentralization experienced in the large cities has generated a pattern of travel more suited to the private car than public transport. To reverse this trend, authorities have implemented several strategies to promote public

transport use. The supply of an integrated and high-quality public transport system has been one of the most favored options. Clear examples of such a policy are integrated regional public transport systems in Germany, Austria and Switzerland (Chitere, 2004). In so doing, the level of competitiveness amongst various transport modes has increased, with the basis of competition being cost, convenience, profit, margin, reliability, comfort and other qualitative and quantitative considerations.

Currently, the Public transport business has been in the middle of any other kind of criticism starting from the abuse of the customers to reckless driving. Cases of bribes and arrest over irregularities have been on the rampant yet the rates of accidents are also visible and at this state their umbrella welfare bodies have been complaining of losing a lot of money out of different circumstances (Cliffe, 2004). It is on this note that the study sought to investigate on the determinants of profitability in public transport in Kenya.

1.3 Purpose of the Study

The purpose of the study was to investigate on the determinants of profitability in the public transport in Kenya

1.4 Research Objectives

1. To establish how government regulation determines profitability in Public Transport
2. To assess how infrastructural factor determines profitability in Public transport
3. To establish how service route factor determines profitability in Public Transport
4. To assess how urban mobility factor determines profitability in Public Transport

1.5 Research Questions

1. How does regulatory factor determine profitability in Public transport?
2. How infrastructural factor determinant profitability in Public transport?
3. How does service route factor determinant profitability in Public Transport?
4. How does urban mobility factor determinant profitability in Public transport?

1.6 Significance of the study

The study was deemed beneficial to different stakeholders in the Transport sector. The Public transport welfare Sacco was benefit from the findings of the study as they were to gain insights from the recommendations on how to improve, sustain and ensure they gain profitability. They were to use the findings of the study to organize their organizations as the study provided guidelines on how the industry is supposed to be managed for effective profitability.

The Public transport owners was also to benefit from the study as they were likely to operate on the guidelines and procedures set by the study to improve their profitability. The Public transport crew and employees were also expected to understand how to operate on standard guidelines and regulations in order to improve on the study. The findings of the study are likely to also help the government and the ministry of transport on how to formulate the policies and guidelines that help to improve the management of Public Transport. It was to help other SACCOS in the country and outside the country that have not implemented proper operational management of their association for realization of profitability. The study benefited the future researchers as it acted as a base for the literature as well as also gave them suggestions for further studies.

1.7 Assumptions of the Study

The study assumed that all the respondents filled the questionnaires that were distributed to them and that they were knowledgeable enough and gave credible information. It further assumed that all the target population was competent to know what entails profitability and what determines profitability in the Public Transport.

1.8 Limitations of the Study

During research, there were several drawbacks that were encountered by the researcher which include; lack of co-operation from respondents who were the employees being questioned could not be able to give appropriate answers to the questions asked. Also those employees who were given questionnaires could not be willing to fill using the correct information. The researcher however assured them that the research was solely for academic purpose and thus therefore be treated with utmost confidentiality. The researcher was affected with time constrains as employees were not willing to answer to the questions within the short time. The researcher however found an appropriate time to interview them as well as administer the questionnaires with the help of research assistants.

1.9 Delimitation of the study

Geographically, the scope of this study critically covered the public transport saving and Credit Cooperatives (SACCOs) operating in various routes in Eldoret town. The study specifically examined the following SACCOs: Malaba SACCO, Mainline main stage SACCO, North Rift SACCO and Langas SACCO. Basically, this study was delimited to investigating the determinants of profitability on Public Transport and was guided by the objectives which are; to establish how infrastructural factor is determinant

of profitability on Public Transport, to find out how stakeholders' input factor is determinant of profitability on Public Transport, to establish the service route factor is determinants of profitability on Public Transport and to establish how urban mobility factor is determinant of profitability in a Public Transport.

1.11 Operational Definition of Terms

Matatu: Public transport is taken from the Kikuyu term mang-otore. Matatu which translates into “thirty cents,” which was the standard fare when Public transports emerged on the transport scene in the late 1950s.

SACCO: This stands for Savings and Credit Cooperative and extends to any type of industry, not exclusively transport. A group must register at the Ministry of Co-operative Development and Marketing to become a recognized SACCO. In the case of public transport, a group will register to become a SACCO by identifying itself mainly with the route where it is operating. Thus many people also refer to the SACCOs as route association

Public transport: Public transport is a shared passenger transport service which is available for use by the general public, as distinct from modes such as taxicab, car pooling or hired buses which are not shared by strangers without private arrangement. In this study the term has been operationalized to mean businesses that are offering transport services to the public. As businesses they are privately owned, with the aim of generating profits for their owners.

1.12 Organization of the study

This research project report is organized into five chapters. Chapter one consists of the background of the study, statement of the problem , purpose of the study, research objectives, research questions, significance of the study, delimitations of the study, limitations of the study, and basic assumptions of the study. Chapter two covers literature review which is divided into various topics in accordance with the objectives. The theoretical and conceptual framework is provided at the end of the chapter linking the independent and the dependent variables of the study. Chapter three constitutes the research methodology which is divided into eleven subthemes: research design, study area, target population, sample size and sampling technique, research instruments, data collection procedure, validity of instruments, reliability of instruments, data analysis procedure and ethical considerations. Chapter four constitutes of data analysis, presentation, and interpretation. The sections are organized as per the objectives of the study. Finally chapter five constitutes of the discussion, conclusions drawn, recommendations and suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will present the concept of profitability in public transport, the objectives of the study, the theoretical framework and the conceptual framework of the study.

2.2 Concept of Profitability in the Public Transport

Profitability depends on how efficiently scarce resources are utilized. The relevant measure of efficiency depends on the economic objective. In a private company, the objective is to maximize its contribution to the income and wealth of the owners in the short or long term. The economic profit in each period is given by the maximum distribution to the owners, without reducing the firm's market value. The value concept is forward-looking, in the sense that the market value of the company is the present value of the future cash flow that it is expected to generate for the owners. A positive present value means that the enterprise is yielding an average rate of the return on invested capital that is at least as large as the owners could have achieved by reinvesting the financial capital in the external financial market, assuming this to be the alternative investment opportunity. Hence, profitability is defined in relation to the external rate of return opportunity for the capital required to operate the company (Strashok, 2006)

The rate of return in the alternative investment opportunity will therefore be a benchmark which the profitability of the company is measured against. Usually, the rate

of return in the financial market is used as a hurdle rate for the internal profitability, and may be modified in order to take into account the risk the owners have to bear. The alternative rate of return opportunity is an opportunity cost for investing capital in the company. The concept of opportunity cost is central for the analysis of economic profitability. This is the case not only for capital, but also for all resources required for running an enterprise, or for undertaking a particular project. Scarcity values are often called shadow prices and are related to opportunity costs in the sense that allocating a resource to a specific purpose entails an economic sacrifice as given by the opportunity cost. Hence, the opportunity cost is an implicit price that the value generated by the resource in a given enterprise has to match. For a private company, the economic sacrifice is what the firm has to pay for labour and other necessary factors of production (Strashok, 2006)

When the difference between a company's sales revenue and opportunity costs is positive, it is run at an economic profit. The opportunity costs are not necessarily what the company has actually paid for its factor inputs, but the values they might have generated in an external opportunity. This means that even if the difference between its revenues and payable costs is positive, it may not be profitable in the economic sense of being the most profitable way the owners could have used their scarce resources. It depends on the relevant opportunity cost. If relocating the company to another country leads to a higher capital return, the return on this external opportunity will be the relevant benchmark for its profitability. The company's book profit is based on actual costs, which can be different from opportunity costs. Hence, a firm may be unprofitable in an economic sense, even though it is run at a positive book profit (Dale, 2006).

In principle, the same sort of reasoning applies to the concept of profitability to society. The perspective may, however, be different, as there are more stakeholders with an interest in the social surplus. Society's stakeholders are those affected by the enterprise's operations in different roles and various arenas. In addition to the owners, the main stakeholders are consumers, workers and taxpayers. Hence, society's stakes in the company are broader than that of its owners. This difference in perspective has implications for how profitability to society relates to company profitability. Customers are important for the firm's profitability, as they contribute to its revenue. From society's perspective, customers contribute to the social profitability of the company through the social value derived from the consumption of goods it has produced. This implies that for domestic companies producing only for export, the business and social valuation of the firm's revenue coincide, since the export revenue accrues to the country's citizens, whereas the consumption takes place abroad (Strashok, Dale 2006)

2.3 Government Regulation and Profitability in Public Transport

The main goals of public transport regulation are to: ensure that services are operated in line with government policy, satisfy demand for public transport as much as possible, maintain standards of quality and safety and control fares at affordable levels. Regulation may also be considered necessary to prevent operators from abusing a monopoly position, or, in a competitive situation, to control undesirable or potentially dangerous aspects of competition between operators (Chitere, 2004).

Government intervention in transport operation is often misguided or irrational, and can do more harm than good. Regulation might stifle enterprise on the part of the operators. They frequently have a better idea of what services are required than

bureaucrats, who are often unqualified political appointees. In fact, it is debatable whether poor regulation is preferable to no regulation at all (Chitere, 2004)

Weak regulation may result in inadequate service capacity, if available resources are inefficiently utilized due to a regulatory regime that permits inefficient operating practices. It may result in the use of inappropriate or poor quality vehicles, or poor safety performance, if construction and use regulations are poorly framed, or poorly enforced. Inappropriate vehicle types, or inefficient operating practices, may in turn result in buses contributing unnecessarily to traffic congestion.

Inappropriate fare control may result in excessive fares or create financial difficulties for bus operators. The most appropriate regulatory regime in any particular situation is determined mainly by the structure of the passenger transport industry. Conversely, the regulatory regime has a strong influence on the nature of the industry, and the way that it operates. A change in the structure or nature of the industry might be engineered by modifying regulations to encourage the industry to develop in the desired way. Ideally, the regulatory system should create an environment where efficient transport operators, whether in the private or public sector, can develop naturally. This development should take the form that is most appropriate in the circumstances, in terms of fleet size and composition, routes, and fares. Operators should be able to co-operate or compete with one another on an equal basis in ways that provide the best possible service to riders (Chitere, 2004).

In October 2003, Kenya's Minister for Transport and Communications issued Legal Notice No. 161 that sought to regulate the Public Service Vehicle sub-sector. The objectives of the Legal Notice were to: reduce accidents caused by over speeding;

enhance safety of commuters; ensure responsibility, accountability and competence of drivers and conductors; eliminate illegal drivers, conductors and criminals that had infiltrated the industry; and facilitate identification of vehicles and restrict their operation to authorized routes. (Chitere, 2004)

The provisions that were to be observed with effect from 1st February 2004 are: Fitting of speed governors in all PSVs and commercial vehicles whose weight exceeded 3,048 Kgs. These are to limit speed to 80 kph; Fitting of seat belts on all vehicles (both public, commercial and private); Employment of drivers and conductors on permanent basis; Issuing of badges to PSV drivers and conductors; Issuing of uniforms to PSV drivers and conductors; Indication of route details and painting of yellow band on Public transports for purposes of easy identification; Re-testing of drivers after every two years; Every driver shall prominently display his/her photograph of postcard size of the head and shoulders taken full without a hat. The photograph together with particulars of the driver's identity card shall be approved by a police officer of or above the rank of a superintendent; and The Legal Notice required that vehicles meeting these conditions be inspected by the government motor vehicle inspection centers in different parts of the country for testing and certification. It indicated that any person who contravenes or fails to comply with these provisions, owns, drives or has charge of the taxicab or Public transport, shall be guilty of an offense and could pay a specified fine or face imprisonment. A passenger found not wearing seat belt was also to pay a specified fine. (Chitere, 2004)

With such provisions in place, there a number of criticisms of the Legal Notice are not new. First, Olela (2005) observes that the provisions were not new since the

Traffic Act 403 section 42 (1) and (3) of 1975 specified speed limits for PSV vehicles. He observes further that it has always been mandatory for all motor vehicles to fit seat belts for the driver and front passenger seats. Similarly, Act No.10 of 1984 set out rules for drivers and conductors. He concludes that whereas the rules exist, a main weakness has been lack of their enforcement by the government. (Olela. 2005)

Secondly, Olela noted further that the rules were discriminatory in so far as they targeted only public transport. He argued that the rules should be applied to all vehicles including private ones. The reason for his argument was that whereas public transport vehicles caused about 19% of the accidents on Kenyan roads, private vehicles caused 25% of the accidents. He emphasized the need for a national road safety policy that applies to all road users without discrimination. (Olela. 2005)

Thirdly, the provisions were expensive to adopt owing to their estimated cost of about Ksh 60,000 (US\$ 750) (seat belts about Ksh 10,000, refurbishing Ksh 25,000, speed governors about Ksh 25,000 and government inspection Ksh 1,200 (Daily Nation, 30th Jan, 2004). It was pointed out that part of this high cost would be recovered from reduced insurance premiums. (Olela. 2005)

Fourthly, reduced income for the operators owing to the fact that the seating capacity of the smaller Nissan vehicles was reduced from 18 to 14 passengers (13 passengers and a conductor); Thus whereas in the past passengers were squeezed in the vehicles including standing or leaning or some seating on others, the new law required each passenger to occupy his/her own seat and wear a seat belt. (Olela. 2005)

Fifthly, there were additional monetary and time costs owing to the fact that each PSV vehicle had to be inspected by the vehicle Inspection Unit once the seating capacity

was modified and the gadgets had been fitted. Those not meeting the specified standards would not be licensed by the Registrar of Motor Vehicles. Finally, the enhanced regulatory requirements increased the possibility of extortion for bribery by the principal agents of the government. (Olela. 2005)

A viable case can be made to support the position that the level of subsidization afforded private transport users is (at least) comparable (if not more generous) than that afforded public transport users. Further, it may be the case that perceived costs associated with private transport use are more relevant than actual costs when seeking to understand how any subsidization provided may influence commuters' decisions as to the mode of transport (private or public) that they use to travel from home to work.

In addition, it can be demonstrated that (in certain circumstances) employees are afforded concessional FBT treatment in relation to salary packaged cars. As no similar concession is available in respect of public transport, a bias exists in the tax system which favours private over public transport.

Once employees have made the decision to salary package a car (and to use that car to drive from home to work) any subsequent decision to use public transport may result in a reduction in their take home cash. That is (in certain circumstances) commuters who have salary packaged cars will be penalized for choosing public transport. Further, these commuters will be made very well aware of this penalty when their employers provide them with details in relation to how their package has been calculated each year. This being the case, the FBT bias may encourage commuters to drive rather than use public transport.

While merits exist in relation to various forms of public transport tax incentives that may be provided to redress this bias (e.g. tax deductions, FBT exemptions and tax rebates), on balance, the provision of an FBT exemption would appear to have a number of advantages. One of the key merits of this type of incentive is that, as the provision of an FBT exemption requires some level of employer buy-in, this may provide an opportunity to influence commuter's behaviour through their employer. This assertion is borne out by studies that have been conducted into the experience in other countries who have sought to introduce transport incentives to encourage a modal shift from private to public transport (The International Co-operative Alliance, 1995).

Although no study (or group of studies) is definitive, the findings of most studies seem to indicate that countries that have sought to provide some form of employer sponsored incentive (which is one of the advantages of an FBT exemption) have been more successful in achieving a modal shift from private to public transport than those that have sought to provide broad based tax incentives alone.

On the basis of the analysis in past research work Ernst & young (2006), including the experience of other countries, there would be merit in giving further consideration to, and undertaking more detailed analysis on, the option of providing an FBT exemption for employer sponsored programs aimed at encouraging public transport use for travel to and from work. This would benefit both the owner and the operators as profitability will increase expeditiously with such provisions.

Operating practices can have a significant impact on operating costs, and hence profitability, fare levels, service capacity, reliability and frequency. Scheduling procedures are particularly significant. If bus services are operating on schedules, which

are designed to ensure that service frequencies are commensurate with demand at different times, services can be operated with a minimum of excess capacity, thus maximizing revenue per kilometer (Khayesi, 1999)

Sophisticated scheduling techniques can maximize bus utilization, by deploying a bus on more than one route during the course of the day. In certain circumstances, particularly with routes operating at low frequencies, this can significantly reduce idle time. A major problem with a scheduled operation, however, is difficulty in adhering to schedules when there are frequent and significant, but unpredictable, delays caused by traffic conditions (Khayesi, 1999)

In many cities, public transport vehicles are not operating on a schedule. They operate on the full-vehicle-dispatching principle. This means they wait at the terminal until they have a full load of passengers, and then depart. This ensures a good load factor, but results in long periods of waiting, particularly at off-peak times, and reduces capacity along the route. Full-vehicle dispatching can increase costs by reducing the proportion of running time to idle time. It also usually reduces revenue, since there is insufficient capacity to carry all the passengers wishing to board along the route. Many of these passengers end up walking instead of using the bus or Public transport. This generally reduces on the profitability in the public transport (Khayesi, 1999)

2.4 Infrastructural Factor and Profitability in Public Transport

All public transport runs on infrastructure, either on roads, rail, airways or seaways; all consist of interchanges and way. The infrastructure can be shared with other modes of transport, freight and private transport, or it can be dedicated to public transport. The latter is especially true in cases where there are capacity problems for

private transport. Investments in infrastructure are high and make up a substantial part of the total costs in systems that are expanding. Once built, the infrastructure will further require operating and maintenance costs, adding to the total costs of public transport. Sometimes governments subsidize infrastructure by providing it free of charge, just like is common with roads for automobile (Scalar, 2002)

One of the most relevant yet staggering challenges facing cities in both developed and developing nations is meeting increasing demand for transportation services. The lack of a functional public transportation system is problematic as it is through an organized system that passengers are able to structure a daily routine. A well-planned and organized transportation system allows for a mobile town in which inhabitants can fluidly move in a timely manner. When urban transport systems do not adequately function to effectively serve the population, such as in the capital city of Nairobi Kenya or any other town in the country, daily life becomes more complicated and ultimately, the true economic potential of the country cannot be realized. A reliable transport system is especially important in developing countries, where many people are poor and easy access to a city, where there is greater economic opportunity, is essential to growth (Chitere, 2004)

In Kenya and other developing world, rapid urbanization, high operational costs crumbling infrastructure and weak institutions result in depleted public transportation services and service voids. To fill this void, informal and mostly private transport services have cropped up as there are often few alternatives. In many of these countries, the informal Public transport industry is generally described as dangerous, profit driven and environmentally unfriendly, while at the same time, necessary for mobility. This is the

case in Kenya, where the Public transport industry is largely dependent by the public sector. (Preston, 2004)

There is a movement occurring in Sub-Saharan Africa, however, to reform these Public transport systems, most notably in the form of Bus Rapid Transit (BRT). Countries such as Tanzania and South Africa are currently both looking to effectively operate BRT systems. BRT is an attractive option for cities of the developing world as it is a flexible system that is more affordable than other mass transit options. It also seeks to integrate various modes of existing transport systems, many which are informal, into a larger formal system. Despite the attractiveness of the BRT system, the informal transit industry is one stakeholder that is often most resistant to reform. One reason for this resistance is often the lack of engagement and involvement of Public transport welfare association by authorities leading discussions concerning developing future transit systems. To that end, it is the responsibility of each country to strive to understand the organizational capacity of their informal transit industry and to vigorously include it in planning. (Olela, 2005)

Attempting to address rapid urbanization through transport reform requires a holistic vision incorporating the entire ministry of transport and its transport networks. This is an opportune time to be thinking about a transportation system for the country, in its capacity as the Ministry of transport, has recently prepared a vision, a World Class African Metropolis that shares a vision for the future development of the country's infrastructure (The International Co-operative Alliance, 1995). A comprehensive transit system connecting satellite cities and Nairobi is essential as the entire metropolitan region is impacted by rapid urbanization. This study will consider the role of Public transports in country's future transit system, where traditionally, master plans and comprehensive

transport plans have either ignored or neglected to incorporate Public transports into a larger transit system (Masinde, 2004)

A public transport system must accommodate a very large number of individual trips. It's not possible to provide direct public transport routes to meet all requirements but it's possible to go a long way towards achieving this by providing a network of routes, so that passengers can make complex journeys by using a combination of routes (Muyundo, 2004)

Many transport systems consist of routes planned in isolation rather than as parts of coordinated networks. This is usually unsatisfactory for meeting the requirements of a significant proportion of travelers. Poor route planning may result in poor route coverage, an excessive requirement for interchange between routes, and irregular frequencies. Others route networks have been designed to provide convenient links between all points where there is demand. Some have been designed to meet predetermined standards or criteria such as a maximum number of interchanges between routes on any journey (Muyundo, 2004)

However, in theory, market forces will eventually lead to an optimal transport system. But in practice this evolution, which effectively is by trial and error, would take considerable time. And since most towns particularly in developing countries are constantly growing and changing, the ideal route pattern will never evolve. Indeed, even with a sophisticated planning capability, development of transport services will always tend to lag behind changes in demand. Transport planning in towns in developing countries is especially difficult, because of the rapid pace of change. Plans must be kept under regular review, and revised as necessary (Wanyama, 2001)

Public transport planning may be based on transport demand and supply data, derived from operators' own internal systems, and from surveys. Other planning data available to transport authorities may include overall transport plans and projections, land use plans, plans for private and public sector developments, traffic demand forecasts, and economic forecasts. Proper plan routes enhance decongestion in towns. This helps in reducing time wastage by public vehicles which in the long run make high number of trips thus increasing the profitability for Public transport owners as well as the operators (Muyundo, 2004)

Non-radial passenger trips can be handled in various ways. In a large city for instance, it is often appropriate to operate a number of routes linking various suburbs, and not reaching the city centre, perhaps including circular routes linking outer points. Often these are operated by smaller vehicles than those used on routes serving the city centre. Sometimes inter-suburban movement can be catered for by extensions or diversions from the main radial routes. A transport network may include a number of feeder bus/ public transport routes, which feed passengers into trunk bus/ public transport routes and to rail lines. These offer an alternative to operating a large number of different routes along a common corridor, each branching off to serve points off the main route (Cliffe, 2004)

Through bus/ public transport services should normally be operated where demand from the outlying points is sufficient to justify them, but where demand is low, it is often more economical to operate feeder services, using smaller vehicles. Also, where road conditions prevent the use of larger vehicles over part of a route, it is usually preferable to operate small vehicles on this section, feeding into a service using larger buses for the main section. This eliminates the need for small buses operating alongside

larger buses on main urban routes. However, non-radial routes at times increases profitability in the Public Transport but only the town is less congested (Strashok Chris and Dale Ann, 2006).

The bus routes themselves may take various forms. The basic and most common type of route is the end-to-end route, which operates between two points, following the same roads in both directions, except where one-way street systems necessitate minor deviations. Alternatively, a route may be circular, returning to the point of origin without traversing the same roads twice (Scalar, 2002). Circular routes are often found in suburban areas, sometimes circling an entire city. Inner-circle routes around city center areas are also common. Another option is a route combining straight and circular sections. At the end of the route the bus/ public transport, instead of turning and returning by the inward route, operates in a loop. It rejoins the inward route after completing the loop, stopping in the central area for no longer than is required to set down and pick up passengers (Kinney, 2007)

Such an arrangement can be particularly effective for a central business district as an alternative to operating across the city center. It can provide better service coverage than a terminal operation since passengers are able both to join and leave the bus throughout the circuit. This enables buses to serve a wider area than would otherwise be the case, and eliminates the need for city-centre terminal or turning facilities. Loops are also common at the suburban ends of routes, where buses/Public transports operate in a circuit around a residential area to provide better coverage (Kinney, 2007)

Another variation of the straight route is one that forks near one or both ends to serve different terminal points. These are sometimes regarded as separate routes, even

though they operate in common for most of their length. Some routes may be dumbbell shaped, with a loop at each end. These are normally found where buses operate across the city center from one suburb to another, and operate in a loop around the residential areas at the outer ends. Some routes are easier to operate on especially in congested towns. The Public transports that operate on less congested routes always make more revenue in terms of profitability (Kinney, 2007)

2.5 Service Route Factor and Profitability in Public Transport

Getting on and off vehicles is an integral part of public transport journeys. The time taken to board and alight is not normally a significant fraction of an overall journey time, but the individual passenger may be adversely affected by the cumulative boarding and alighting times of other passengers (Kinney, 2007). This is more likely to hold for bus rather than rail services, since bus stops are more closely spaced, and bus fares are more commonly collected by bus drivers as passengers' board. Longer boarding and alighting times lead to: Greater average journey times, greater variability in journey time increased in dwell time at stops causing additional delays under high-density operating conditions, since following buses are unable to enter the stop area. This may also affect the potential peak flows that can be accommodated (Novkovic, 2006)

There are few studies available which document the ridership impacts of different fare collection systems. Experience in London in the early 1970s indicated losses of about 10% on individual routes converted from conductor-operated Route masters (with open rear platforms) to one-person-operated buses (with front entrance doors). However, a substantial part of this represented a diversion to other parallel routes, the net loss of

passengers being 3% to 4%. In this case the convenience of boarding and alighting at points other than official stops may also have been an element. Similar conversions were made in most other British cities (often of all services) in the 1970s and early 1980s. Hence, such conversion, which generally retained a high proportion of cash fare payment, was probably an element in the decline in bus usage. If not made explicit, it would aggravate 'trend' decline factors, or, where correlated with changes in vehicle-kilometers and/or real fares, the elasticities associated with them (Novkovic, 2006)

It also follows that a shift to simplified off-vehicle ticketing such as travel cards may cause a growth in demand not only due to the convenience element and financial savings to individual users, but also through reducing total boarding times. This will affect journey times of all users (i.e. including those still paying in cash). Alighting time will also have some effect on total journey time, but displays much less variation with ticketing type, typically averaging around 1.0 - 1.5 seconds per passenger. Total dwell time at stops may be reduced by separating boarding and alighting movements, for example through a separate doorway for alighting, but the benefits of this will only be evident at stops where there are substantial numbers of both boarders and alighters (Novkovic, 2006)

The question of access to vehicles is one that has been addressed over the last ten years by the introduction of low-floor buses. Once regarded as a novelty, such vehicle are now becoming the norm, with all buses licensed since 2000 being required to meet the new standards (although it will take over ten years for all the older vehicles not complying with the new regulations to be phased out (Novkovic, 2006)

Where headways of around 10-12 minutes or less are offered, passengers tend to arrive randomly at stops. The effort needed to consult a timetable is greater than the time savings it would produce, and in many cases service reliability is such that passengers may allow a margin of about 5 minutes or more to ensure catching a specific journey. Bus networks typically provide a much greater density than rail systems, such that the greater majority of the population is within 500 metres (around 6 minutes' walk) of the nearest bus stop. However this can result in very complex networks, with low frequencies on each route (Khayesi, 1999). Concentrating provision on fewer high-frequency routes, while retaining lower-frequency services to provide local access, enables a more attractive service to be offered overall. This in general reduces time wastage. Time is necessary for profit realization. The Public transport transport therefore should ensure proper service networks in order to maximize on the profitability and at the same time providing adequate services to the public (Kimani, 2004)

The question of access to bus services can be most problematical particularly in rural areas where demand density tends to be lowest. Over the last twenty years there has been considerable experimentation with various forms of community bus services, designed to provide journeys appropriate urban areas at times suitable for shopping and some personal business. (Gerlach, 2009)

Where the rural population is clustered into compact villages fixed route services may be appropriate; where the population is more dispersed accessibility may be improved by demand responsive operation. Service frequencies tend to be limited because of low overall demand levels, and this in turn can limit usefulness of services for schoolchildren and adults needing to get to and from work. However, other experimental

rural transport schemes have involved subsidized taxis or post buses. The economics of such services are strongly dependent on local circumstance. This means the Public transports operating in such routes will not make much profits based on low accessibility for Public transport or bus services. In the long run the business may not run well probing many not to venture in the industry (Gerlach, 2009)

2.6 Urban Mobility Factor and Profitability in Public Transport

Movements are linked to specific urban activities and their land use. Each type of land use involves the generation and attraction of a particular array of movements. This relationship is complex, but is linked to factors such as recurrence, income, urban form, spatial accumulation, level of development and technology (Kumar, 2008). Urban movements are either obligatory, when they are linked to scheduled activities (such as home-to-work movements), or voluntary, when those generating it are free to decide of their scheduling (such as leisure). The most common types of urban movements are:

Pendulum movements; these are obligatory movements involving commuting between locations of residence and work. They are highly cyclical since they are predictable and recurring on a regular basis, most of the time a daily occurrence, thus the term pendulum. Such movements are profitable to Public transport operators because of the guaranteed services they will provide to the public on such kind of movements (Gerlach, 2009).

Professional movements; these are movements linked to professional, work-based, activities such as meetings and customer services, dominantly taking place during work hours. Professional movements are less profitable to public Public transport

operators since most of such group of individual use private means to commute and rarely on public means (Gikandi, 2009)

Personal movements; these are voluntary movements linked to the location of commercial activities, which includes shopping and recreation. These are movements that rarely benefit public transport industry particularly Public transport because of its irregular nature. The groups of individual under this category are similar to those on professional movements as majority of them operate on private transport system. However, the consideration of urban movements involves their generation, the modes and routes used and their destination which are all the determinants of profitability in the Public Transport and other public sector (Gikandi, 2009)

On average, an urban resident undertakes between 3 and 4 trips per day. Moving in an urban area is usually done to satisfy a purpose such as employment, leisure or access to goods and services. Each time a purpose is satisfied, a trip is generated. Important temporal variations of the number of trips by purpose are observed with the most prevalent pattern being pendulum movements (Grava, 2009)

Implies which transportation mode is used for urban trips and is the outcome of a modal choice. Modal choice depends on a number of factors such as technology, availability, preference, travel time (distance) and income. For instance, everything within five minutes of walking is considered to be readily accessible to pedestrians (Gikandi, 2009).

Involves which routes will be used for journeys within the city. For instance, a commuter driving a car has most of the time a fixed route. This route may be modified if there is congestion or if another activity (such as shopping) is linked with that trip; a

practice often known as trip chaining. Several factors influence trip assignment, the two most important being transport costs and availability (Febrina, 2009).

2.7 Theoretical Framework

The study was based on The Dynamic Theory of Profits. The Dynamic Theory of Profit was given by J.B. Clark (1893). According to him profit accrues because the society is dynamic by nature. Since the dynamic nature of society makes future uncertain and any act, the result of which has to come in future, involves risk. Thus profit is the price of risk taking and risk bearing. It arises only in a dynamic society which means in a society where changes does not occur i.e. it is static by nature the risk element disappears and hence the profit element does not exist there. Actually, a society is said to be dynamic when there is a change in its population, change in trends of the people, change in stock of the capital, change in the supply of entrepreneurs etc. when all these factors becomes constant, the future also becomes certain and the risk element disappears from the society (Clark, 1893).

According to Clark, profit is the result of an adjustment, which is brought about by the entrepreneurs themselves. They may find new techniques of production by inventing new machines. Their use reduces the cost of production and reduces the course of time as well and gives the entrepreneur higher profits. But when the use of machinery and production becomes common and used by the other entrepreneur operating in the economy. The supply of goods increases and the prices fall. Hence the profit margin also goes down. Under this situation the profit is determined by the demand and supply of enterprise at a point where they are equal (Cliffe, 2004).

In the world of reality, according to J.B. Clark (1893): "Profit arises only in a dynamic economy. An economy is said to be dynamic when there is a change in the population growth or a change in the method of production or a change in the consumers wants, etc., A society which is without these changes is called a static society. In a static society only monopoly profits continue to exist. All other economic profits are gradually eliminated by competition".

In a dynamic society, an entrepreneur is always confronted with continuous unpredictable changes in demand for his product. The variation in demand may take place due to change in fashions, tastes, standard of living, distribution of income, population, new inventions, international repercussion and technological advances, etc. A prudent entrepreneur will always keep an eye on the future demand for his products (Cervero, 1997). If he succeeds in increasing his sale by lowering the cost of production or by adoption of an innovation, then he can secure profits. Thus, we find that profits are a reward, of progress; Alexander (2002) calls it the reward of innovation.

In a dynamic economy, if an entrepreneur produces a new thing and creates demand for his products, then he is likely to obtain big profits. But the profits of the entrepreneur cannot continue to exist for long period. The other entrepreneurs also adopt the innovation and produce similar products. As total output increases, the profits, gradually come down. Thus, we find that perpetual profits are the result of perpetual new successful innovations (Alexander, 2002)

The dynamic theory of profit is relevant to the study as it relates the change in the society with profitability. Entrepreneurs particularly in Public Transport, have to understand the changes in the society that determines the profitability of the entire

business. Profit is only realized in a dynamic environment and the industry has the environment for making profit has to cope with the changes in the modern society. The Public transport users for instance may demand for use of vehicles and the association must comply with such demands by the customers in order for profitability to be realized (Alexander, 2002).

2.8 Conceptual framework

The conceptual framework for this study shows the link between the predictor variables (determinants) on the dependent variable (profitability) as illustrated in Figure 1.1.

Independent variable

Dependent variable

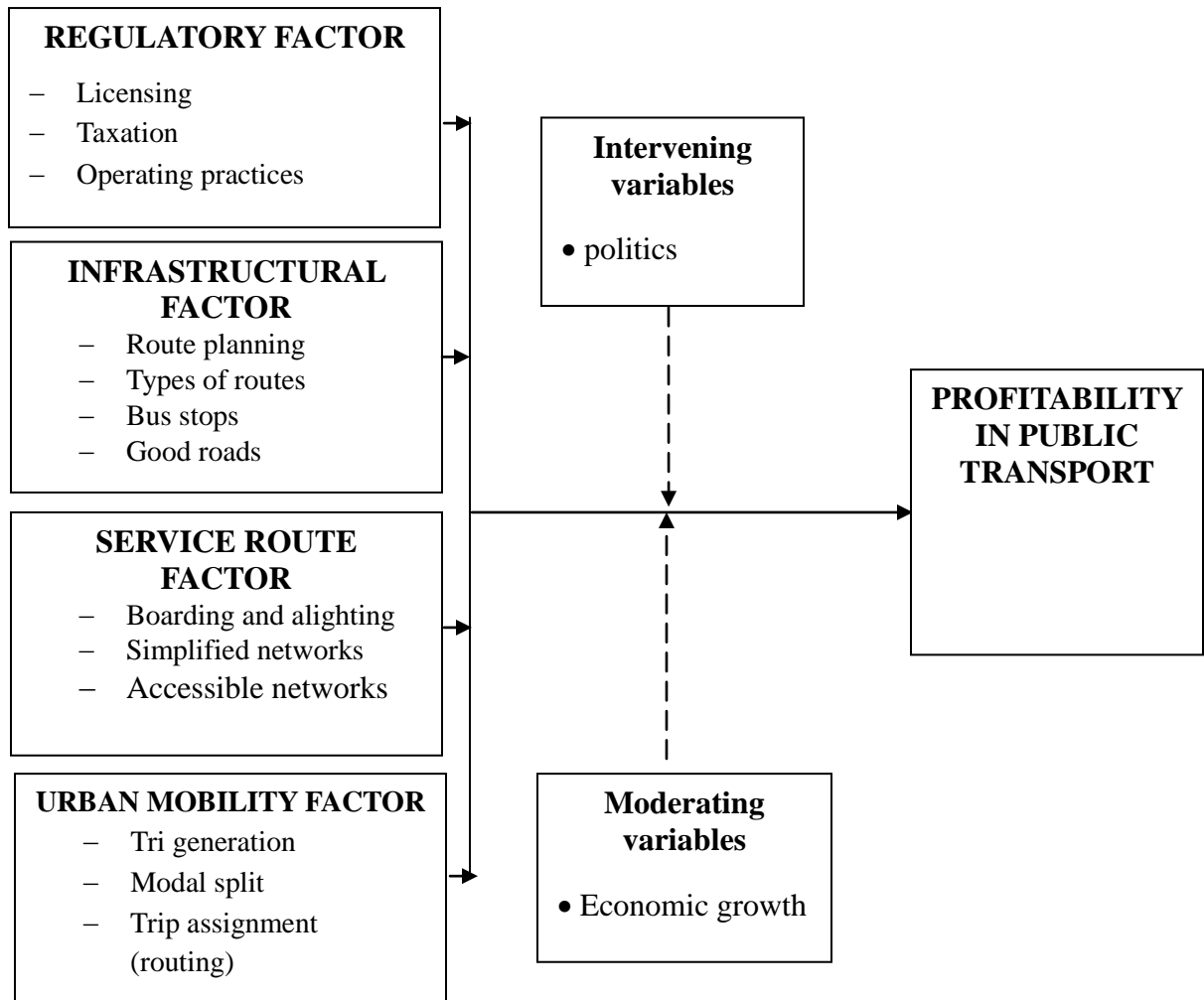


Figure 2.1 Conceptual framework

The model in figure 2.1 shows the relationship between the independent variables (regulation, infrastructure, service route and urban mobility) and dependent variable which is denoted profitability. Depending on the kind of variations that might exist in the independent variable, the profitability will change.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology of the study, target population, sample size and sampling techniques, data collection tools, reliability and validity of research instrument and data analysis.

3.2 Research Design

The study adopted a survey design based on a sample drawn from Public transport SACCOs in Eldoret Town. Survey design enabled large amount of data to be collected from an ideal population and in a highly economical way. Often, questionnaires are used and data are standardized, it is easily understood and easy to compare (Saunders et al. 2009). This method helps to gain a deeper understanding for the problems investigated through different sources of information, as well as to be able to describe a general picture of the reliability in which the problem is involved (Walliman, 2005).

3.3 Target Population

Target population is the entire group of individuals or objects taken from the general population who share a common characteristic such as age, sex or profession. Target population about which information is desired for the study is derived from the population (Kinney and Vliet, 2007). The study targeted the management and drivers from different SACCOs in Eldoret town. The study selected drivers and operators from four SACCOs operating within Eldoret namely: Chepkoilel SACCO, Mailinne SACCO,

North Rift SACCO and Eldoret SACCO. In order to get the in depth information the researcher interviews the respondents of the various SACCO Managers. The study targeted 294 drivers in these SACCOs.

Table 3.1: Target Population

RESPONDENTS	TARGET POPULATION
Mailinne SACCO	65
Chepkoilel SACCO	77
North Rift SACCO	98
Eldoret SACCO	54
TOTAL	294

Source: North Rift Sacco, Eldoret Sacco, Chepkoilel Sacco, Mailinne Sacco (2014)

3.4 Description of the Sample Size and Sampling Techniques

3.4.1 Sample size

Sampling is that part of statistical practice which concerns the selection of individual observations intended to yield some knowledge about a population of concern, especially for the purposes of statistical inference (Strashok Chris and Dale Ann, 2006).

The study employed the Krejcie and Morgan formulae (1970) which give a sample size of 165 respondents when a researcher targets 294 items. The distribution will be as shown in table 3.2.

Table 3.2 Sample size

RESPONDENTS	TARGET POPULATION	SAMPLE SIZE
Mailinne SACCO	65	37
Chepkoilel SACCO	77	43
North Rift SACCO	98	55
Eldoret SACCO	54	30
TOTAL	294	165

Source: Authors (2014)

3.4.2 Sampling Techniques

Sampling technique is the procedure a researcher uses to gather people, places or things to study (Kombo & Tromp, 2006). The study employed the use of purposive sampling to select the management staff while stratified sampling was employed to select the various Public transport operators in the various routes. Using a stratified sampling was decided upon because it achieves greater precision than a simple random sample, provided that the strata have been chosen so that members of the same stratum are as similar as possible in terms of the characteristic of interest. The greater the differences between the strata, the greater the gain in precision. For the case of management purposive sampling was envisaged to be very useful because the management staff possess information that is vital to the study due to their position in the organization.

3.5 Data Collection Methods

3.5.1 Questionnaire

The main research instrument that was used in this study was the questionnaires for the drivers and conductors. A questionnaire is a research instrument that gathers data over

a large sample Mugenda and Mugenda, (2009). In developing the questionnaire items, the fixed choice and open-ended formats of the item was used. This format was used in all categories of the questionnaires.

However, in the fixed choice item, it involved guiding the respondents' answers, especially when providing acceptable answers, there was temptation to avoid serious thinking on the part of the respondent. The respondent ended up choosing the easiest alternative and provided fewer opportunities for self-expression. It is because of these reasons that it was necessary to combine this format of items with a few open – ended response items. The researcher acquired permission from the respective SACCO managers so as to administer the questionnaires to respondents. The researcher distributed the questionnaires and collected them immediately after the exercise to ensure efficiency in collection of the data.

3.5.2 Interview Schedule

Interview is a method of collecting data that involves presentation of oral verbal stimuli and reply in terms of oral verbal responses (Kothari 2003, Oson and Onen 2005). The study employed the respondent type of interview where the interviewer retains all control throughout the process. The researcher used the interview schedule for guidance during the interview process. The interview schedule designed was meant for the manager. It enabled the researcher to collect the information based on the objective of the study and balance between quality and quantity of data collected and also access more information that cannot be directly observed or is difficult to put down in writing.

3.6 Validity and Reliability of Research instruments

3.6.1 Validity of the Study

Validity submits to the degree which a test measures what we actually wish to measure. Yin's (1994) solution for assuring construct validity that is: the use of multiple sources of information, a chain of evidence, and key informants review the report were applied to the study. For the validity of this instrument the researcher consulted an expert who is the supervisor. The study employed the use of pilot study to test the validity of the research instruments.

3.6.2 Reliability of the Study

Orodho (2004) notes that reliability of research instruments concerns with the degree to which a particular measuring procedure gives similar results of a number of repeated trials. Reliability is a measure of how consistent the results from a test are Kombo and Tromp, (2006). According to Mugenda & Mugenda (2003), the reliability of an instrument is the measure of the degree to which a research instrument yields consistent results or data after repeated trials. The study employed the Cronbach's alpha coefficient to measure the internal consistency of the questionnaire. As a general rule a value of $\alpha > 0.7$ was determined reliable enough for each of the data sets where α is the item being tested for reliability.

3.7 Description of the Data Collection Procedures

The researcher obtained a letter of introduction from the University of Nairobi. A permit from the National Council of Science Technology and Innovation was obtained, before proceeding with the data collection. The researcher booked an appointment with

the management of the Public transport Saving and Credit Societies in Eldoret to visit and administer the questionnaires. The researcher thereafter visited the station and personally administered the questionnaires. The respondents were guided on how to respond and were assured of confidentiality after which they were given the questionnaires to fill. The researcher also booked an appointment with the management staff to carry out the interviews.

3.8 Data Analysis Procedures

The study adopted both quantitative and qualitative analysis in order to achieve the objective of the study. In quantitative techniques the researcher used descriptive statistics such as frequencies and percentages to analyze the data. In qualitative techniques thematic analysis were employed where responses from questionnaires were discussed in themes that relates to the objectives of the study. Numerical values were assigned to respondents in the questionnaire to represent measurement of variables. The data was coded, analyzed and presented in form of tables, frequencies and percentages.

3.9 Operational Definition of Variables

To achieve the objectives of the study the researcher investigated the determinants of profitability in public transport. The objectives of the study include how the regulatory factor was a determinant of profitability in the Public Transport, how infrastructure is a determinant of profitability in the Public Transport, how the service route factor is a determinant of profitability in the Public Transport and how urban mobility is a determinant of profitability in the Public Transport. To achieve these objectives questionnaires were used each with specific questions for each objective.

Table 3.3 Operational Definition of Variables

Objective	Variables	Indicators	Measurement scale	Tools of analysis	Types of tools
To establish how the regulatory factor is a determinant of profitability in the Public Transport	Dependent Profitability in the Public Transport Independent Regulatory factors	Licensing Taxation Operating practices	Nominal Ordinal	Descriptive statistics. tables and pictures	Frequency distribution tables
To establish how infrastructural factor is a determinant of profitability in the Public Transport	Dependent Profitability in the Public Transport Independent Infrastructure factors	Route planning Types of routes	Nominal Ordinal	Descriptive statistics Tables and pictures	Frequency distribution tables
To establish how the service route factor is a determinant of profitability in the Public Transport	Dependent Profitability in the Public Transport Independent Vehicle specific factors	Boarding and alighting Simplified networks Accessible networks	Nominal Ordinal	Descriptive statistics. tables and pictures	Frequency distribution tables
To establish how urban mobility factor is a determinant of profitability in the Public Transport	Dependent Profitability in the Public Transport Independent Urban mobility factors	Tri generation Modal split Trip assignment (routing)	Nominal Ordinal	Descriptive statistics. tables and pictures	Frequency distribution tables

3.10 Ethical considerations.

Researchers whose subjects are people or animals must consider the conduct of their research, and give attention to the ethical issues associated with carrying out their

research. This study dealt with people as respondents hence the researcher assured the respondents of confidentiality. The researcher considered the fact that participation in research is voluntary. This is why the researcher took time to explain to the respondents the importance of the study and therefore request the respondents to participate in the study by giving information relevant for the study. To establish good working relationship with the participants, the researcher endeavoured to develop a rapport with them (Kombo and Tromp, 2006).

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION OF
FINDINGS

4.0 Introduction

This chapter presents an analysis and interpretation of the results from the data collected from the field. The response rate was at 97%; out of the 165 respondents to whom the questionnaires were administered 158 were returned well filled. Data was cleaned, coded and entered into Statistical Package for Social Sciences (SPSS) which aided in analysis of the data.

The analysis of the data was guided by the study objectives which include;

1. To establish how the regulatory determines profitability on Public Transport.
2. To establish how infrastructural factor determines profitability on Public Transport.
3. To establish how the service route factor determines profitability on Public Transport.
4. To establish how urban mobility factor determines profitability on Public Transport.

4.1 Demographic factors

Table 4.1 showing the characteristics of Respondents

Characteristics		Frequency	Percent (%)
Gender	Male	85	53.8
	Female	73	46.2
	Total	158	100.0
Age	Below 18 years	10	6.3
	18-25 years	62	39.2
	26-35 years	75	47.5
	36-45 years	11	7.0
	Total	158	100.0
Experience in the Industry	Below a year	34	21.5
	1-2 years	60	38.0
	3-4 years	41	25.9
	Above 4 years	23	14.6
	Total	158	100.0
Education Level	Primary	4	2.5
	Secondary	76	48.1
	college	63	39.9
	University	15	9.5
	Total	158	100.0

Source: Research Data (2014)

In table 4.1 the researcher was out to explore the characteristics of the respondents in the study. The representation of males was at about 54% while the female formed 46% of the respondents. The results further show that most of the respondents were aged between 18 and 35 years. However there were about 6% of the respondents who were below 18 years and 7% who were between the 36 and 45 years of age. This denotes youthful respondents that were likely to be well vast with the issues under discussion. About 38% of the respondents had experience between 1 and 2 years while those with experience between 3 and 4 years were represented by 25%. About 21% and 14% of the

respondents represented those with experience below a year and above 4 years respectively.

Majority of the respondents had attained secondary and college education which was represented by 48% and 39% respectively. This background information provided a strong ground on which analysis was done owing to the fact that the respondents constituted qualified respondents.

4.2 Government Regulation and profitability in Public Transport

The first objective aimed at establishing how government regulation influences profitability in Public Transport. The response results were as shown in table 4.2.

Table 4.2: Government Regulation and profitability in Public Transport

	Strongly agree	Agree	Undecided	Disagree	Strongly Disagree
Night travel ban affected the industry negatively	87.3%(138)	2.5%(4)	3.2%(5)	3.8%(6)	3.2%(5)
Fares and safety control by the government creates financial difficulties	55.7%(88)	20.9%(33)	3.8%(6)	12.7%(20)	7.0%(11)
Regulation by the government reduces road accidents	49.4%(78)	24.1%(38)	13.9%(22)	10.1%(16)	2.5%(4)
Provisions on licensing and regulation are expensive to adopt by many Public transport owners	72.8%(115)	20.3%(32)	2.5%(4)	2.5%(4)	1.9%(3)
Regulations leads to reduced income for the operators owing to the limited seating capacity	66.5%(105)	12.0(19)	1.3%(2)	13.3%(21)	7%(11)
Regulation leads to increased possibility of extortion for bribery by the principal agents of the government	38.6%(61)	40.5(64)	5.1%(8)	12.0%(19)	3.8%(6)
Regulation has led to responsible behaviour and extinction of criminals from the industry	44.9%(71)	14.6(23)	19.6%(31)	15.2%(24)	5.7%(9)

Source: Research Data (2014)

In table 4.2 the results show that respondents accounting for about 87% were of the opinion that night travel ban that was introduced by the government affected the Public Transport negatively. Nevertheless about 7% of the respondents were of a contrary opinion. When asked whether fares and safety control by the government creates financial difficulties about 70% of the respondents agreed to this allusion while 19% were of a contrary opinion. This shows that the respondents viewed regulation of fares as well as the operations as a deterrent to their ability to make profits. This could be a pointer to the possibility of consumers' exploitation. In a contrasting response from the above response about 74% of the respondents' agreed that regulation by the government reduces road accidents. This implies that road accidents are likely to be mostly caused by unruly drivers.

Majority of the respondents accounting for about 92% agreed that provisions on licensing and regulation are expensive to adopt by many Public transport owners. Nevertheless, a few about 4% were of a contrary opinion. Moreover, most of the respondents who accounted for about 78% were of the opinion that regulations leads to reduced income for the operators owing to the limited seating capacity. This implies that the respondents desired to be left to determine the seating capacity which is likely to be higher than the standard owing to their quest for more profits at the expense of the passengers. Only 20% disagreed to this notion.

The results further show that the respondents in the study accounting for about 78% agreed that regulation leads to increased possibility of extortion for bribery by the principal agents of the government while only 15% were of a contrary opinion. Corruption seems to be anticipated to increase likely due to the road culture where

motorist would prefer bribes to the possible penalties assigned to their offences. These will in the long run affect profitability due to consumer shift of choices in relation to safety. They are likely to take up on the motor cycles, flights or train for long distance travels.

When the respondents were asked whether regulation has led to responsible behaviour and extinction of criminals from the industry, 58% agreed while about 20% seem to be uncertain over the issue. It was apparent that only 20% were of a contrary opinion.

Table 4.3: Experience in the Public Transport versus effect of regulation on road accidents

		Regulation by the government reduces road accidents					Total
		Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
Experience in the Public Transport	Below a year	14 41.2%	9 26.5%	2 5.9%	7 20.6%	2 5.9%	34 100.0%
	1-2 years	31 51.7%	11 18.3%	12 20.0%	5 8.3%	1 1.7%	60 100.0%
	3-4 years	22 53.7%	12 29.3%	5 12.2%	1 2.4%	1 2.4%	41 100.0%
	Above 4 years	11 47.8%	6 26.1%	3 13.0%	3 13.0%	0 .0%	23 100.0%
Total		78 49.4%	38 24.1%	22 13.9%	16 10.1%	4 2.5%	158 100.0%

Source: Research Data (2014)

In table 4.3 the researcher sought to know how respondents with different experience responded on the question about regulation's effect on road accidents. It was clear from the results that majority of respondents across all the years of experience agreed that government regulation reduces road accidents. Those with below a year of

experience had 67% agreeing and 25% disagreeing while those with 1-2 years of experience had 69% agreeing and only 9% disagreed. It was further noted that those with 3-4 years experience had 82% agreeing while those with above 4 years experience had 73% agreeing while only 13% disagreed.

Table 4.4: Experience in the Public Transport versus extortion for bribery by the principal agents of the government

		Regulation leads to increased possibility of extortion for bribery by the principal agents of the government					Total
		Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
Experience in the Public Transport	Below a year	14 41.2%	17 50.0%	1 2.9%	2 5.9%	0 .0%	34 100.0%
	1-2 years	21 35.0%	25 41.7%	3 5.0%	9 15.0%	2 3.3%	60 100.0%
	3-4 years	17 41.5%	15 36.6%	4 9.8%	3 7.3%	2 4.9%	41 100.0%
	Above 4 years	9 39.1%	7 30.4%	0 .0%	5 21.7%	2 8.7%	23 100.0%
Total		61 38.6%	64 40.5%	8 5.1%	19 12.0%	6 3.8%	158 100.0%

Source: Research Data (2014)

In table 4.4, about 90% of those with experience below a year agreed that regulation leads to increased possibility of extortion for bribery by the principal agents of the government. Those with 1-2 years experience had 76% agreeing and 18% disagreeing. 77% of the respondents with 3-4 years of experience also agreed while 69% of those with experience of above 4 years agreed to this allusion.

4.3 Infrastructural Factors and Profitability in Public Transport

The study also sought to establish the effect of infrastructural factors on profitability in Public Transport. The results are as follows;

Table 4.5: Infrastructure and profitability in Public Transport

	Strongly agree	Agree	Undecided	Disagree	Strongly Disagree
Public transport industry is affected by Cargo transport vehicles	36.1%(57)	33.5%(53)	5.1%(8)	13.3%(21)	12.0%(19)
Revenue collection methods are efficient hence no losses	47.5%(75)	20.9%(33)	18.4%(29)	7.6%(12)	5.7%(9)
Good road networks increases the profitability	62.7%(99)	15.8%(25)	12.7%(20)	5.1%(8)	3.8%(6)
There exist frequent road traffic jam due to poor road networks	41.8%(66)	39.2%(62)	0%(0)	14.6%(23)	4.4%(7)
Poor route planning has result to poor route coverage	43.0%(68)	30.4(48)	13.9%(22)	8.2%(13)	4.4%(7)
Traffic lights slow down traffic and hence affects the Public Transport	38.6%(61)	32.9(52)	14.6%(23)	8.2%(13)	5.7%(9)
Road signage assist us much to avoid accidents	31.0%(49)	22.2(35)	17.1%(27)	17.1%(27)	12.7%(20)

Source: Research Data (2014)

In table 4.5 the results show that 69% of the respondents agree that the Public Transport is affected by Cargo transport vehicles while only 25% were of a contrary opinion. This was further elaborated by the stage managers interviewees who noted;

“ ...the cargo vehicles carrying goods to Uganda have been a great challenge...they sometimes carry passengers, become unruly on road, or even cause avoidable accidents to happen because we share with them the small roads” Maina (Northrift Driver)

This comment meant that the Public transport profitability is affected by these lorries in that they cause delays, accidents, carry would be passengers at a cheaper prices and probably cause road damages.

When asked whether the revenue collection methods in Public Transport are efficient, 67% of the respondents agreed while 18 seem not to be sure of this. It was also clear that about 13% objected this view. These implies that the current revenue collection method seem to be viewed as efficient probably due to the ability of the respondents to collect and manage the funds to their convenience without much restriction. The minority who disagreed could be probably advocates of a cashless or e-payment for the services offered.

The Respondents interview supported the view that the revenue collection methods in Public Transport were efficient by saying;

“.....it enables every stakeholder to get his or her share without one oppressing the other.....” Stage Manager

About 78% of the respondents agree that good road networks increases the profitability while only 9% are of a contrary opinion. Only 13% were undecided on the issue. This implies that most of the respondents value good roads as a component to enhance their operations.

Majority of the respondent accounting for about 81% agree that there exist frequent road traffic jam due to poor road networks while a few (18%) believe contrary. The results further indicate that most (73%) of the respondents believe that poor route planning has resulted to poor route coverage while only 12% are of contrary opinion.

This could mean that the routes especially short distance routes are not well matched to the dispersal of populations or short distance routes but rather poorly done.

About 70% of the respondents agreed that traffic lights slow down traffic and hence affects the Public Transport. However, 14% and 13% were undecided and disagreed respectively. This implies that the respondents were not comfortable with the automated system of lights that somehow gives all road users a right of pass in intervals. There a tendency to suggest that they are the only users that dominate the road hence be given express right without considering other users. However, the respondents seem to value the road signage where 53% agree that road signage assist in avoiding accidents while 17% were undecided and 30% disagreed. The respondents imply that the value of sign cannot be over looked but others still feel that the signs are not of great importance at the roads.

Table 4.6 Experience in the Public Transport versus Effect of Cargo transport Vehicles

		Public Transport is affected by Cargo transport vehicles					Total
		Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
Experience in the Public Transport	Below a year	12 35.3%	9 26.5%	4 11.8%	4 11.8%	5 14.7%	34 100.0%
	1-2 years	24 40.0%	17 28.3%	2 3.3%	7 11.7%	10 16.7%	60 100.0%
	3-4 years	14 34.1%	15 36.6%	1 2.4%	7 17.1%	4 9.8%	41 100.0%
	Above 4 years	7 30.4%	12 52.2%	1 4.3%	3 13.0%	0 .0%	23 100.0%
Total		57 36.1%	53 33.5%	8 5.1%	21 13.3%	19 12.0%	158 100.0%

Source: Research Data (2014)

It was evident in table 4.6 that more than half (60%) of the respondents with less than a year of experience felt that Public Transport is highly affected by the cargo vehicles on the roads. The same trend is witnessed in those with more than 1 year experience in the industry. This implies that it is almost certain that there exist a strain for a road as a resource by the two kinds of traders; cargo transporters and Public transport operators.

4.4 Service Route Factors and Profitability in Public Transport

The study sought to establish how service route affect profitability in Public Transport and the responses were as follows;

Table 4.7 Service Route and Profitability

	Strongly agree	Agree	Undecided	Disagree	Strongly Disagree
Good conditioned Public transports ply specific routes and hence increased fare hence profitability	34.8%(55)	48.1%(76)	6.3%(10)	5.7%(9)	5.1%(8)
Longer boarding and alighting times lead to greater average journey times	48.7%(77)	24.1%(38)	19.6%(31)	5.1%(8)	2.5%(4)
Routes with less people are more costly to operate	44.9%(71)	40.5%(64)	1.9%(3)	12.7%(20)	0%(0)
Routes with high number of Public transports are less profitable since competition is high	43.0%(68)	36.1(57)	13.9%(22)	3.8%(6)	3.2%(5)
End-to-end route are preferred over circular routes due to ability to predict demand	41.1%(65)	34.8(55)	17.7%(28)	3.2%(5)	3.2%(5)
Inner circle routes are not profitable for Public transports hence better plied by cyclists	39.2%(62)	24.1(38)	8.9%(14)	19.0%(30)	8.9%(14)
Greater variability in journey time increases dwell time at stops causing additional delays hence less profitability	25.9%(41)	38.6(61)	8.2%(13)	25.3%(40)	1.9%(3)

Source: Research Data (2014)

The results as shown in table 4.7 show that majority of the respondents 82% agreed that good conditioned Public transports ply specific routes and hence increased fare hence profitability. Only 10% think otherwise over the issue. This implies that the respondents believe that for profitability there are two components that are necessary, well conditioned vehicles and an appropriate route. Routes with passengers who can withstand high fares attract well conditioned vehicles.

Majority of the respondents accounting for 82% agree that longer boarding and alighting times lead to greater average journey time. However, it is also apparent that 19% are undecided over the issue while only 8% are of a contrary opinion. This explains why there are many Public transport operators who prefer routes with youthful passengers than those with older people. Their major aim is to meet the targets of the day as set by their employers regardless of the dynamics involved.

About 85% of the respondents felt that routes with less people are more costly to operate. Nevertheless, 12% were of a contrary opinion. This implied that the routes with less people could make the Public transport run without full capacity. However such routes are highly priced to cater for the possible losses that might occur. The results show that 79% of the respondents agree that routes with high number of Public transports are less profitable since competition is high while 13% and 7% are undecided and disagreed respectively. This trend implies that the higher the supply of the Public transport services on a route the higher the competition and therefore reduced profitability comparatively.

End-to-end route are preferred over circular routes due to ability to predict demand as shown with support from 75% of the respondents. Nevertheless 17% of the respondents are undecided while 6% remain opposed to this statement. The results further

show that 60% of the respondents agree that Inner circle routes are not profitable for Public transports hence better plied by cyclists as supported by 73% of the respondents in the study while 27% held a contrary opinion. About 63% of the respondents agree that greater variability in journey time increases dwell time at stops causing additional delays hence less profitability while 26% held a contrary opinion.

Table 4.8: Experience in the Public Transport versus preference of End-to-end route

		End-to-end route are preferred over circular routes due to ability to predict demand					Total
		Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
Experience in the Public Transport	Below a year	12 35.3%	13 38.2%	6 17.6%	1 2.9%	2 5.9%	34 100.0%
	1-2 years	28 46.7%	15 25.0%	11 18.3%	3 5.0%	3 5.0%	60 100.0%
	3-4 years	18 43.9%	16 39.0%	6 14.6%	1 2.4%	0 .0%	41 100.0%
	Above 4 years	7 30.4%	11 47.8%	5 21.7%	0 .0%	0 .0%	23 100.0%
	Total	65 41.1%	55 34.8%	28 17.7%	5 3.2%	5 3.2%	158 100.0%

Source: Research Data (2014)

In table 4.8 it was evident that among respondents with experience less than a year, 73% agreed that end-to-end routes are preferred over circular routes due to ability to predict demand. Only 8% of these group disagreed. The same trend was witnessed in all the categories of the experience. This implies that the Public Transport players prefer end to end routes. End to end routes seem to be more popular than circular routes.

4.5 Urban Mobility Factors and Profitability in Public Transport

The study sought to establish how urban mobility patterns affect the profitability in the Public Transport and the results are as shown in the table 4.9.

Table 4.9: Urban mobility factors and Profitability

	Strongly agree	Agree	Undecided	Disagree	Strongly Disagree
Public transport is the modal transport for most urban residents	44.9%(71)	17.7%(28)	20.9%(33)	12.7%(20)	3.8%(6)
Income of people determine the mobility in urban areas	36.1%(57)	50.6%(80)	8.2%(13)	2.5%(4)	2.5%(4)
Most urban residents mostly make home-to-work –to -home movements	45.6%(75)	24.1%(38)	21.5%(34)	6.3%(10)	2.5%(4)
Regular movements on daily basis is considered significant for Public transport operators to earn their daily income	57.7%(107)	20.9%(33)	1.3%(2)	5.1%(8)	5.1%(8)
Professionals’ movements are less profitable to public Public transport operators since most of such group of individual use private means to commute and rarely on public means	62.7%(99)	15.8(25)	1.9%(3)	12.0%(19)	7.6%(12)
Transport costs and availability are key determinants of profitability to Public transport operators	37.3%(59)	27.8(44)	8.9%(14)	15.2%(24)	10.8%(17)
Towns with high population is considered market hub for Public transport operators	23.4%(37)	40.5(64)	11.4%(18)	20.3%(32)	4.4%(7)
Routes with poor accessibility reduces the overall profits per day	51.9%(82)	16.5(26)	20.9%(33)	10.8%(17)	0%(0)

Source: Research Data (2014)

The results in table 4.9 show that 61% of the respondents believe that Public transport is the modal transport for most urban residents while almost 20% are not sure of whether it is modal means. However, about 15% of the respondents were of a contrary

opinion. About 86% of the respondents agreed that income of people determine the mobility in urban areas while only 8% and 5% were undecided and disagreed respectively.

It was further evident that most respondents accounting for 69% were of the opinion that most of the urban residents mostly make home-to-work –to -home movements. This is a contrary view from that of 8% of the respondents who disagreed while 21% were undecided over the issue.

Majority of the respondents (77%) agreed that regular movements on daily basis are considered significant for Public transport operators to earn their daily income. This is considered so because the Public transport business is dependent on the frequency of trips as well as number of clients. It could further mean that the more frequent passengers want to move the more the profits they are likely to gain. Only 10% were of a contrary opinion. This view could mean that the frequency of movement was not so much a determinant of profitability, there could be more other factors that must be considered.

Most of the respondents (77%) held the opinion that professionals' movements are less profitable to public Public transport operators since most of such group of individual use private means to commute and rarely on public means. This view could be attributed to the fact that most of the professionals use other means including; private cars especially for short distances, flights for long distances or even motorcycles in remote areas due to the convenience. Nevertheless, 19% are of contrary opinion. They still believe that professionals are more profitable. These could be attributed to the North Rift and Eldoret SACCOs because of their upgraded services. They attract the professionals who prefer being driven to and fro Nairobi rather than driving themselves around which

might be more costly. They also prefer the Public transport because of the time management aspect that improved since the inception of these SACCOs.

About 64% of the respondents agreed that transport costs and availability are key determinants of profitability to Public transport operators while 25% held a contrary opinion. The results further indicate that 63% of the respondents feel that towns with high population is considered market hub for Public transport operators while 24% felt it was not so. The respondents who are agreeing could be basing their argument on the fact that most people in towns are faced with so much challenges ranging from health, security and time hence are likely to use Public transports in most of their movements. The disagreement could be attributed to the fact that some of the densely populated areas are adjacent to the working places hence most people prefer to walk to work.

The results further show that about 67% of the respondents are of the opinion that routes with poor accessibility reduce the overall profits per day. This could be probably due to wastage in time and fuel, high maintenance costs due to probably poor roads. Nevertheless, 20% seem to be uncertain on this issue while 10% are of a contrary opinion.

Table 4.10: Experience in the Public Transport versus Home to work Movements

		Most urban residents mostly make home-to-work – to -home movements					Total
		Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
Experience in the Public Transport	Below a year	14 41.2%	10 29.4%	8 23.5%	2 5.9%	0 .0%	34 100.0%
	1-2 years	28 46.7%	15 25.0%	13 21.7%	3 5.0%	1 1.7%	60 100.0%
	3-4 years	20 48.8%	7 17.1%	7 17.1%	4 9.8%	3 7.3%	41 100.0%
	Above 4 years	10 43.5%	6 26.1%	6 26.1%	1 4.3%	0 .0%	23 100.0%
Total		72 45.6%	38 24.1%	34 21.5%	10 6.3%	4 2.5%	158 100.0%

Source: Research Data (2014)

In table 4.10, it is evident that more than half of the respondents at all the levels of experience agree that most urban residents mostly make home to work to home movements. The Public transport operators seem to be certain because of the frequency and patterns that are characteristic to their clients. These applies to the short distance Public transport while the long distance agreed that most of their clients are business people who work for 1-3 days and return home as well as make such frequent trips. This requires them to maintain good service because of the likelihood of them losing such regular clients.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND
RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the summary of the study findings, conclusions and recommendations. Suggestions for further research are also enumerated. The study set out to investigate on determinants of profitability in Public Transport.

5.2 Summary of Findings.

A background check was done on the respondents to ascertain their ability to respond to the questions. There were almost as many females as males in the study. It was also evident that majority of the respondents were aged between 18 and 35 years. This meant youthful respondents who were likely to be well vast with the issues under discussion. Most of the respondents had experience between 1 and 2 years. Majority of the respondents had attained secondary and college education.

5.2.1 Government Regulation and profitability in Public Transport

The study in line with the first objective sought to establish government regulation affect profitability in the Public Transport. To accomplish this, the respondents were asked to indicate their opinion on particular statements.

Most of the respondents felt that night travel ban that was introduced by the government affected the Public transport industry negatively. It was also established that majority of the respondents felt that fares and safety control by the government creates

financial difficulties. This shows that the respondents viewed regulation of fares as well as the operations as a deterrent to their ability to make profits. This could be a pointer to the possibility of consumers' exploitation. This view agrees with what Chitere, (2004) established. Chitere (2004) alludes that regulation may also be considered necessary to prevent operators from abusing a monopoly position, or, in a competitive situation, to control undesirable or potentially dangerous aspects of competition between operators. Nevertheless respondents' agreed that regulation by the government reduces road accidents. This implies that road accidents are likely to be mostly caused by unruly drivers that aim to bypass the laws that have been put in place.

Majority of the respondents agreed that provisions on licensing and regulation are expensive to adopt by many Public transport operators. Moreover, most of the respondents were of the opinion that regulations leads to reduced income for the operators owing to the limited seating capacity. This implies that the respondents desired to be left to determine the seating capacity which is likely to be higher than the standard owing to their quest for more profits at the expense of the passengers.

The results showed that the respondents in the study agreed that regulation leads to increased possibility of extortion for bribery by the principal agents of the government.

Corruption seems to be anticipated to increase likely due to the road culture where motorist would prefer bribes to the possible penalties assigned to their offences. These will in the long run affect profitability due to consumer shift of choices in relation to safety. They are likely to take up on the motor cycles, flights or train for long distance travels.

5.2.2 Infrastructural Factors and Profitability in Public Transport

The study also sought to establish the effect of infrastructural factors on profitability in Public Transport. The results show that most of the respondents agree that the Public transport industry is affected by Cargo transport vehicles. This was further elaborated by the stage managers interviewees who noted that cargo vehicles carrying goods to Uganda have been a great challenge because they sometimes carry passengers, become unruly on road, or even cause avoidable accidents to happen because we share with them the small roads. The Public transport profitability is affected by these lorries in that they cause delays, accidents, carry would be passengers at a cheaper prices and probably cause road damages.

Respondents seem to agree that revenue collection methods in Public Transport are efficient, while some are not to be sure of this besides those who objected this view. These implies that the current revenue collection method seem to be viewed as efficient probably due to the ability of the respondents to collect and manage the funds to their convenience without much restriction. The minority who disagreed could be probably advocates of a cashless or e-payment for the services offered. It was further noticed that most of the respondents agree that good road networks increases the profitability. This could be interpreted to mean that most of the respondents value good roads as a component to enhance their operations. This finding agree with Scalar, (2002) who posit that sometimes governments subsidize infrastructure by providing it free of charge, just like is common with roads for automobile.

Majority of the respondent agree that there exist frequent road traffic jam due to poor road networks while a few believe contrary. The results further indicate that most of the respondents believe that poor route planning has resulted to poor route coverage. This could mean that the routes especially short distance routes are not well matched to the dispersal of populations or short distance routes but rather poorly done.

Most of the respondents agreed that traffic lights slow down traffic and hence affects the Public Transport. This implies that the respondents were not comfortable with the automated system of lights that somehow gives all road users a right of pass in intervals. There a tendency to suggest that they are the only users that dominate the road hence be given express right without considering other users. However, the respondents seem to value the road signage where which imply that the value of sign cannot be over looked but others still feel that the signs are not of great importance at the roads.

5.2.3 Service Route Factors and Profitability in Public Transport

The study in line with the third objective sought to establish how service route factors affect profitability of the Public Transport. To accomplish this, the respondents were asked to indicate their opinion on particular statements.

Majority of the respondents agreed that good conditioned Public transports ply specific routes and the fares for such routes are higher hence higher profits. The respondents believe that for profitability in Public transport business there are two components that are necessary, well conditioned vehicles and an appropriate route. Routes with passengers who can withstand high fares attract well conditioned vehicles while routes with low income earners attract old vehicles and less fare.

Majority of the respondents accounting for agree that longer boarding and alighting times lead to greater average journey time. However, it was also apparent that some respondents were undecided over the issue. This explains why there are many Public transport operators who prefer routes with youthful passengers than those with older people. Their major aim is to meet the targets of the day as set by their employers regardless of the dynamics involved.

Majority of the respondents felt that routes with less people are more costly to operate. This implied that the routes with less people could make the Public transport run without full capacity. However such routes are highly priced to cater for the possible losses that might occur. The results show that most of the respondents agree that routes with high number of Public transports are less profitable since competition is high. This trend implies that the higher the supply of the Public transport services on a route the higher the competition and therefore reduced profitability comparatively.

End-to-end routes are preferred over circular routes due to ability to predict demand. The results further indicated that the respondents agree that inner circle routes are not profitable for Public transports hence better plied by cyclists. Most of the respondents agree that greater variability in journey time increases dwell time at stops causing additional delays hence less profitability.

5.2.4 Urban Mobility Factors and Profitability in Public Transport

The study sought to establish how urban mobility patterns affect the profitability in the Public Transport. Majority of the respondents believe that Public transport is the modal transport for most urban residents. Most of the respondents agreed that income of

people determine the mobility in urban areas. It was further evident that most respondents were of the opinion that most of the urban residents mostly make home-to-work –to - home movements.

Majority of the respondents agreed that regular movements on daily basis are considered significant for Public transport operators to earn their daily income. This is considered so because the Public transport business is dependent on the frequency of trips as well as number of clients. It could further mean that the more frequent passengers want to move the more the profits they are likely to gain. This view could mean that the frequency of movement was not so much a determinant of profitability, there could be more other factors that must be considered.

Most of the respondents held the opinion that professionals' movements are less profitable to public transport operators since most of such group of individual use private means to commute and rarely on public means. This view could be attributed to the fact that most of the professionals use other means including; private cars especially for short distances, flights for long distances or even motorcycles in remote areas due to the convenience. They still believe that professionals are more profitable. These could be attributed to the North Rift and Eldoret SACCOs because of their upgraded services. They attract the professionals who prefer being driven to and fro Nairobi rather than driving themselves around which might be more costly. They also prefer the Public transport because of the time management aspect that improved since the inception of these SACCOs.

The results further indicate that most of the respondents feel that towns with high population are considered market hub for Public transport operators which is in line with

Gikandi, (2009) findings. The respondents who are agreeing could be basing their argument on the fact that most people in towns are faced with so much challenges ranging from health, security and time hence are likely to use Public transports in most of their movements. The disagreement could be attributed to the fact that some of the densely populated areas are adjacent to the working places hence most people prefer to walk to work.

5.3 Conclusion of the Study

In conclusion, this study posits that government regulation, infrastructural factors, service route and urban mobility determines profitability in Public Transport. Even though government regulations are meant to streamline the Public Transport, it was evident that many respondents felt that they constrain their business environment reducing the ability to get profits. The study further concludes infrastructural constraints in the Public Transport are a major hindrance to the profitability due to traffic jam and limited alighting and boarding points. It is also apparent that the kind of service route a Public transport operates determines the profits likely to be made. Further, it was concluded that the nature and pattern or urban mobility factor determines profitability on Public Transport.

5.4 Recommendations

The study makes the following recommendations based on the findings;

1. The study recommends that the government as a regulator should involve the entire stakeholder in formulation of policies so as to ensure fairness to all parties involved.

2. The study recommends introduction of e-payment in the Public Transport to curb corruption as well as
3. The national and county government should invest more in road infrastructure so as to enhance Public transport business.
4. The Public Transport operator should do regular training to the staff to ensure high quality service delivery to the customers.

5.5 Suggestion for Further Research

This study recommends that further research should be done to establish how technology can be used by Public Transport operators to improve their operations.

REFERENCES

- Alexander (2002) *Dynamic Economy in Dynamic Change*, New York.
- Cervero, (1997) .Legal Notice NO.161 of 2003 *The Standard Newspaper* (2011, Feb23, pg 26-27)
- Chitere, P .O. (2004) ‘Public transport Industry in Kenya: A Study of the Performance of Owners, Workers, and the Associations and Potential for Improvement’. Institute of Policy Analysis and Research Discussion
- Chitere, Preston. O. and Kibua, Thomas. N. (2004) ‘Efforts to Improve Road Safety in Kenya: Concentrations in sub-Saharan Africa: New Evidence from Nairobi, Kenya Environmental Research
- Cliffe (2004): *Impact of Socio-economic Characteristics on Formal and Informal Public Transport Demands in Kwara State, Nigeria*
- Clark (1893): *Dynamic Theory of change*.
- Ernst & Young (2006) *Tax Incentives for Public Transport Users*. New York
- Febrina (2009): *Actors and Technology in the Shaping of Urban Transport* Aworemi et al.
- Gikandi, B., Ombati, C., &Opiyo, P., (2009). *Why Public transport Operators Went on Strike*. Standard
- Golub E. M. (1963). *The Cooperators Annual Report: We Are Evolving*. Ontario, Canada.
- Grava (2003). *Urban Transportation Systems: Choices for Communities*, United States: McGraw-Hill,
- Gerlach (2009): *How We Get Around: Tuk Tuks and Microbuse*
- Hoel et al (2004).*Transport Networks in Developing world*.
- Kumar et al. (2008): *Stuck in Traffic: Urban Transport in Africa* Magubane et al. (2003): *Taxi- Owners Perceptions of the Government’* Magubane et al. (2003): *Taxi-Owners Perceptions of the Government’*
- Kumar et al. (2008): *Stuck in Traffic: Urban Transport in Africa*

- Kenya: Economic Costs, Benefits and Policy Concerns'. IPAR Discussion Paper Series, Discussion Paper
- Khayesi M, (1999). The Struggle for Regulatory and Economic Sphere of Influence in the Public transport Means
- Kimani, Ndugu P, Kibua, Thomas, and Masinde, Muyundo (2004) 'The Role of the Public transport industry in Republic of Tanzania 19-23 September (2004)
- Kinney, P. and van Vliet, E. (2007). Impacts of Roadway Emissions on Urban Particulate Matter
- Lee (1990): The Study on Master Plan for Urban Transport in the Nairobi Metropolitan Area in the Republic of Kenya: Interim Report.
- Novkovic, S (2006).Cooperative Business: The Role of Cooperative Principles an
Olela (2005) 'Urban Public Transport Patterns in Kenya: A Case Study of Nairobi City Survey Report
- Preston (2004), Kenya Institute of Policy Analysis and Research, Kenya: Regal Press, 2004
- Regal (2004) Achievements and Limitation of Reforms in the Public transport Industry' Institute of Policy Analysis and Research, Kenya:
- Republic of Kenya (2002): Values Journal of Cooperative Studies of Transport in Kenya: A Stakeholder Analysis. Department of Geography at Kenyatta University,
- Scalar, E., J.Touber and C. Alexander (2002).Rethinking Privatization: The Cases of Urban Transportation in Nairobi, Kenya'. Association of Collegiate Schools of Planning Annual
- Special Report No. 5 Kenya Institute for Public Policy Research and Analysis, Nairobi, Kenya, April (2005)
- Strashok Chris and Dale Ann (2006).The Cooperators Group Limited: A Cooperative Business Model

The International Co-operative Alliance (1995): Statement on Co-op Identity adopted at the 1995 Congress General Assembly Wanyama F.O (2009): Surviving liberalization: the cooperative movement in Kenya, ILO Coop Africa

APPENDICES

APPENDIX 1: TRANSMITTAL LETTER

Dear sir/madam.

The questionnaire is meant to help in the collection of data on the topic “Determination of profitability in Public Transport”, which will be important in the attainment of a master’s degree of University of Nairobi. It should be clear therefore that the information given will be treated with the highest level of confidentiality since this research is an academic exercise. The name of the institution or your name will not appear anywhere in the study as a source unless your permission or the institution’s permission is sought for and granted.

Kindly answer the question below by either ticking and/or writing brief statements on the spaces provided.

Yours sincerely

PAULINE LUVALA

APPENDIX II : QUESTIONNAIRE FOR THE PUBLIC TRANSPORT

OPERATORS/DRIVERS

My name is **Pauline Luvala**. I am a postgraduate student of University of Nairobi, Eldoret, carrying out a study on “**Determinants of Profitability in Public Transport in Kenya: A Case of Savings and Credit Cooperatives (SACCOS) in Eldoret**”. This research is purely academic and any information provided shall be treated with confidentiality. Your contributions are highly appreciated. Thank you very much in advance.

Yours sincerely,

Pauline Luvala

SECTION A: GENERAL INFORMATION

1. Which of these is your position in Public Transport?

Driver [] SACCO official [] Stage manager [] Conductor []

2. What is your **gender**?

Male [] Female []

3. What is your **age bracket**?

Below 18 [] 18– 25 [] 26 – 35 [] 36 – 45 [] above 45 []

4. What is your highest level of **education**?

Primary [] Secondary [] College [] University []

5. What is your working experience in the Public Transport?

Below a year [] 1-2 years [] 3-4 years [] Above 4 years []

SECTION B: REGULATORY FACTOR AND PROFITABILITY IN PUBLIC TRANSPORT

6. Please rate the statements below as to the extent to which you agree with them on the regulatory factors as determinants of profitability on Public Transport

Key :- SA-Strongly agree, A-agree, U-Undecided, D-disagree and SD-Strongly disagree.

Regulatory factor	SA	A	U	D	SD
The night travel ban affected the industry negatively					
Fares and safety control by the government is creates financial difficulties in the industry					
Regulation by the government reduces road accidents					
The provisions on licensing and regulation are expensive to adopt by many Public transport owners					
Regulations leads to reduced income for the operators owing to the limited seating capacity					
Regulation leads to increased possibility of extortion for bribery by the principal agents of the government					
Sophisticated scheduling techniques can maximize Public transport utilization, by deploying a bus on more than one route during the course of the day					
Regulation has led to responsible behaviour and extinction of criminals from the industry					

SECTION C: INFRASTRUCTURAL FACTOR AND PROFITABILITY ON PUBLIC TRANSPORT

7. Please rate the statements below as to the extent to which you agree with them on the infrastructural factors as determinants of profitability on Public Transport.

Key: - SA-Strongly agree, A-agree, U-Undecided, D-disagree and SD-Strongly disagree.

Infrastructure factor	SA	A	U	D	SD
Public transport industry is affected by Cargo transport lorries					
Revenue collection methods are efficient hence no losses					
Good road networks increases the profitability					
There exist frequent road traffic jam due to poor road networks					
Poor route planning has result to poor route coverage					
Traffic lights slow down traffic and hence affects the Public Transport					
Road signage assist us much to avoid accidents					

SECTION D: SERVICE ROUTE FACTOR AND PROFITABILITY IN PUBLIC TRANSPORT

Kindly rate the following statements as to the extent to which you agree with them on the service route factors as determinants of profitability in Public Transport

Key: - SA-Strongly agree, A-agree, U-Undecided, D-disagree and SD-Strongly disagree.

Service Route Factor	SA	A	U	D	SD
good condition Public transports ply specific routes and hence increased fare hence profitability					

Longer boarding and alighting times lead to greater average journey times					
Vehicle accessibility is key to profit maximization					
Routes with less people are more costly to operate					
Routes with high number of Public transports are less profitable since completion is high					
End-to-end route are preferred over circular routes due to ability to predict demand					
Inner circle routes are not profitable for public transports hence better plied by cyclists					
Greater variability in journey time increased in dwell time at stops causing additional delays hence less profitability					

SECTION E: URBAN MOBILITY FACTOR AND PROFITABILITY IN PUBLIC TRANSPORT

Kindly rate the following statements as to the extent to which you agree with them on the urban mobility factor is determinant of profitability in a Public Transport

Key: - SA-Strongly agree, A-agree, U-Undecided, D-disagree and SD-Strongly disagree.

Urban mobility factor	SA	A	U	D	SD
Public transport is the modal transport for most urban residents					
Income in of people determine the mobility in urban areas					
Most urban residents mostly make home-to-work –to -home movements					
Regular movements on daily basis is considered significant for Public					

transport operators to earn their daily income					
Professionals' movements are less profitable to public Public transport operators since most of such group of individual use private means to commute and rarely on public means					
Transport costs and availability are key determinants of profitability to Public transport operators					
Towns with high population is considered market hub for Public transport operators					
Routes with poor accessibility reduces the overall cost per day					

Thank you for your contribution

APPENDIX III: INTERVIEW SCHEDULES FOR MANAGERS

Kindly respond to the following questions appropriately

- 1. Name
- 2. Gender Male () Female ()
- 3. Marital status Single () Married ()
- 4. Professional background Degree () Masters () Certificate ()

Section B: Specific Information

- 5. How does infrastructure development impacts on profitability in Public Transport?

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

- 6. How does regulatory factors impacts on profitability in Public transport?.....
.....
.....

- 7. Briefly comment on stakeholders input factors as determinants of profitability on PublicTransport?.....
.....
.....

- 8. How does service route factors affects on profitability in Public Transport?

.....
.....

9. How does urban mobility influences on profitability in the Public Transport?

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

10. Briefly state how profitability is earned in Public Transport

.....
.....

11. How is profitability in the transport sector?

.....
.....

APPENDIX VII: KREJCIE AND MORGAN FORMULA TABLE

Required Sample Size [†]										
from: The Research Advisors										
			Confidence =	95.0%	3.841459		Confidence =	99.0%	6.634897	
Population Size	Probability of Success	Degree of Accuracy/Margin of Error				Degree of Accuracy/Margin of Error				
		0.05	0.035	0.025	0.01	0.05	0.035	0.025	0.01	
10	10	10	10	10	10	10	10	10	10	
20	19	20	20	20	20	19	20	20	20	
30	28	29	29	30	30	29	29	30	30	
50	44	47	48	50	50	47	48	49	50	
75	63	69	72	74	74	67	71	73	75	
100	80	89	94	99	99	87	93	96	99	
150	108	126	137	148	148	122	135	142	149	
200	132	160	177	196	196	154	174	186	198	
250	152	190	215	244	244	182	211	229	246	
300	169	217	251	291	291	207	246	270	295	
400	196	265	318	384	384	250	309	348	391	
500	217	306	377	475	475	285	365	421	485	
600	234	340	432	565	565	315	416	490	579	
700	248	370	481	653	653	341	462	554	672	
800	260	396	526	739	739	363	503	615	763	
900	269	419	568	823	823	382	541	672	854	
1,000	278	440	606	906	906	399	575	727	943	
1,200	291	474	674	1067	1067	427	636	827	1119	

1,500		306	515	759	1297		460	712	959	1376
2,000		322	563	869	1655		498	808	1141	1785
2,500		333	597	952	1984		524	879	1288	2173
3,500		346	641	1068	2565		558	977	1510	2890
5,000		357	678	1176	3288		586	1066	1734	3842
7,500		365	710	1275	4211		610	1147	1960	5165
10,000		370	727	1332	4899		622	1193	2098	6239
25,000		378	760	1448	6939		646	1285	2399	9972
50,000		381	772	1491	8056		655	1318	2520	12455
75,000		382	776	1506	8514		658	1330	2563	13583
100,000		383	778	1513	8762		659	1336	2585	14227
250,000		384	782	1527	9248		662	1347	2626	15555
500,000		384	783	1532	9423		663	1350	2640	16055
1,000,000		384	783	1534	9512		663	1352	2647	16317
2,500,000		384	784	1536	9567		663	1353	2651	16478
10,000,000		384	784	1536	9594		663	1354	2653	16560
100,000,000		384	784	1537	9603		663	1354	2654	16584
264,000,000		384	784	1537	9603		663	1354	2654	16586
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